Housing Authority of the City of Pittsburgh
Contracting Officer
412 Boulevard of the Allies, 6th Floor
Pittsburgh, PA 15219
(412) 456-5116
www.hacp.org

April 8, 2025

Renovation of 10 Scattered Site Homes Rebid
IFB #600-31-24-REBID

ADDENDUM NO. 4

This addendum issued April 8, 2025, becomes in its entirety a part of the Invitation for Bid IFB #600-31-24-REBID as is fully set forth herein:

Item 1: Q: Is there money for materials?

A: Please refer to Attachment A for the updated wage determination, which supersedes the version included in the current IFB. The cost of materials should be included in your overall bid, based on your assessment of the project's value.

Item 2: Q: Payment time frame?

A: Please refer to Attachment B, "Form of Agreement," which replaces all previous versions within the IFB and includes the correct address: 412 Boulevard of the Allies, 6th Floor, Pittsburgh, PA 15219. Please refer to IFB page 142, line 27, for payment details. The Housing Authority will make progress payments every 30 days based on completed work meeting contract standards. Contractors must submit request for payment on the forms provided by the Housing Authority no later than 45 days in advance of the payment date.

Item 3: Q: Do I have to have a 100% bid bond of contract available?

A: For construction contracts over $100,000, bidders must provide a bid guarantee equal to 5% of the bid price.

Item 4: Q: I would like to bid on vacant property. If I bid on vacant property and someone bids on all 10, if their bid is the lowest bid will it supersede my lowest individual bid?

A: The 10 scattered sites are to be bid on only by prime contractors specializing in general contracting, electrical, and mechanical work. Bidding must be for all sites, not individual properties. The Housing Authority will award contracts to lowest responsible bidder

Item 5: Q: I was wondering if you could send a new link to the virtual tour?

A: Please refer to Addendum Number 1 for the updated Matterport links to the virtual tour of each home included in the project. Though not all of the homes call for new cabinets but the ones that do just say to

Item 6: Q: Though not all of the homes call for new cabinets but the ones that do just say to replace cabinets and match existing layout. Can you provide elevations for the kitchens that need new cabinets and tops?

A: Please refer to Attachment C for the revised Construction Documents, dated April 1, 2025, which now include the updated kitchen elevations.

Item 7: Q: Are these units occupied with tenants?

A: All homes are occupied except for Vidette and Wolford, which are vacant

Item 8: Q: Is the price negotiable if there are cost overruns?

A: The proposed bid price submitted by the contractor is a firm-fixed price, meaning it covers all specified work as outlined in the scope and drawings.

Item 9: Q: Can we schedule a site visit next week for the 10 scattered sites that are being renovated?

A: Please refer to Addendum #1 for the Matterport links, which provide the virtual tour for each home.

Item 10: The due date, time, and location remain unchanged on April 22, 2025, at 10:00 a.m., at the HACP Procurement Dept., 412 Boulevard of the Allies 6th Floor, Pittsburgh, PA 15219.

Item 11: The Housing Authority of the City of Pittsburgh will **only accept physical bids dropped off in person from 8:00 AM until the closing time of 10:00 A.M. on April 22, 2025**, in the lobby of the One Stop Shop at 412 Boulevard of the Allies, Pittsburgh, PA 15219.

Bids may still be submitted electronically via:
https://www.dropbox.com/request/aLQM7NXxgUWtbfE9oRBJ

Sealed bids may still be mailed via USPS at which time they will be Time and Date Stamped at 412 Boulevard of the Allies, 6th Floor - Procurement, Pittsburgh, PA 15219. All bids must be received at the above address no later than April 22, 2025, at 10:00 a.m. regardless of the selected delivery mechanism.

END OF ADDENDUM NO. 4

Brandon Havranek

Mr. Brandon Havranek
Associate Director of Procurement/Contracting Officer

04/08/2025
Date

ATTACHMENT A

"General Decision Number: PA20250012 03/07/2025

Superseded General Decision Number: PA20240012

State: Pennsylvania

Construction Type: Residential

County: Allegheny County in Pennsylvania.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	01/10/2025

2 03/07/2025

BRPA0009-039 12/01/2022

	Rates	Fringes
BRICKLAYER	$ 36.99	24.67

CARP0142-004 06/01/2023

	Rates	Fringes
CARPENTER (Including Drywall Hanging and Asphalt Roofing)	$ 32.29	15.27

CARP1759-007 06/01/2017

	Rates	Fringes
SOFT FLOOR LAYER	$ 33.01	16.45

ELEC0005-013 12/27/2024

	Rates	Fringes
ELECTRICIAN	$ 30.20	19.14

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* ELEV0006-004 01/01/2025

	Rates	Fringes
ELEVATOR MECHANIC	$ 61.07	38.435+a+b

FOOTNOTE:

A. Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.

B. Eight Paid Holidays (provided employee has worked 5 consecutive days before and the working day after the holiday): New Years's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day and the Friday after Thanksgiving Day, and Christmas Day.

IRON0003-006 06/01/2023

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 38.89	34.54

PLUM0027-005 06/01/2023

	Rates	Fringes
PLUMBER	$ 48.65	25.47

SHEE0012-006 07/01/2018

	Rates	Fringes
Sheet metal worker Excluding HVAC Duct Work	$ 19.49	10.08

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* SUPA2003-001 10/31/2003

	Rates	Fringes
Drywall Finishers	$ 15.08 **	3.40
Laborers, Unskilled	$ 12.70 **	2.12
PAINTER (Brush and Roller)	$ 15.90 **	4.35
PLASTERER	$ 18.20	5.16
Power equipment operators: (Backhoe)	$ 17.34 **	4.06
Roofer (Excluding Asphalt Roofing)	$ 18.70	5.19
Sheet Metal Worker (HVAC Duct Only)	$ 16.00 **	3.08

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the

type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the

interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

ATTACHMENT B

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

FORM OF AGREEMENT

THIS AGREEMENT, made this ____ day of _____ in the year Two Thousand _____(20) by and between:

_____

_____

_____

[ ] An individual doing business in his/her own name
[ ] An individual doing business under a fictitious or assumed name
[ ] A partnership
[ ] A Corporation

(Hereinafter called the Contractor)

AND

The Housing Authority of the City of Pittsburgh (hereinafter called the Authority)
412 Boulevard of the Allies, 6th Floor,
Pittsburgh, PA 15219

WITNESSETH: That the Contractor and the Authority, for the consideration stated herein, mutually agree as follows:

ARTICLE 1, STATEMENT OF WORK

The Contractor shall provide all labor, materials and equipment, and services necessary to perform and complete all work required in accordance with _____ drawings for _____ _____ dated _____and Project Manual dated _____ regarding:

CONTRACT NO. _____

and addenda thereto numbered _____, all as prepared by _____, which said specifications, drawings, and addenda are incorporated herein by reference and are a part hereof.

The work shall begin at the time stipulated in the NOTICE TO PROCEED and in no event exceeding _____ consecutive calendar days from notice to proceed.

ARTICLE 2, THE CONTRACT PRICE

The Authority shall pay the contractor for the performance of the Contract in current fund, subject to additions and deductions as provided in the specifications.

_____ ($_____)

ATTACHMENT C

Renovation of 10 Scattered Sites

10 Scattered Sites - Wayside St
Single Family Residence, Minor Alteration
221 Wayside Street,
Pittsburgh, Pennsylvania 15210

Drawing Index

Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 262 sqft + Garage 270 sqft
	1st Floor 532 sqft
	2nd Floor 532 sqft

1 Site Location
SCALE: 1" = 30'

UPDATED CONSTRUCTION DRAWING SET 04.01.2025.
NEW KITCHEN ELEVATIONS ADDED FOR CLARIFICATION ON A5. ALL NEW ITEMS HAVE BEEN BUBBLED.

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
℄	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- T.O. FINISH FLOOR / ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 / A1 — ELEVATION MARKER

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

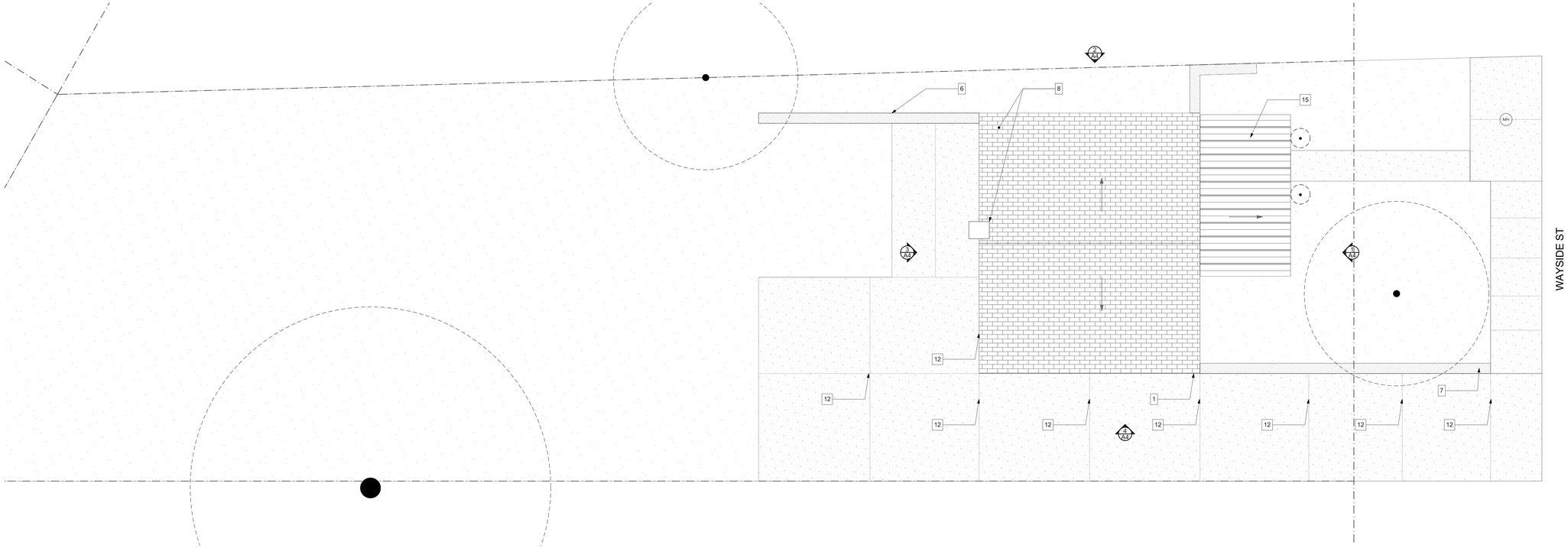
Drawing Index, Code Conformance Information, Abbreviations and Materials, Site Location

scale	As Noted
date	August 20th, 2024
no.	1
of.	9

Sheet No.

A1

Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 221 Wayside St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages.
3. SMOKE/CO DETECTORS (E) : In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC) : Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. REAR RETAINING WALL (GC): At this location remove existing short retaining wall (approx. 2 ft high x 20 ft long). Remove topsoil and re-slope soil to gradually blend two grades. Restore topsoil and reseed. See Specifications.
7. FRONT RETAINING WALL (GC): Repair small area of existing short retaining wall (approx. 3ft high x 3 ft long) using new concrete masonry units to match. See Specifications.
8. ROOF (GC): Remove existing shingles (approx. 600 sf), flashing, roof vent caps, roof pipe boots flashing, etc. Re-roof using new materials. Replace sloped mortar chimney cap with new. See Specifications.
9. BRICK WINDOW SILLS (GC): Repoint window sills at this location. See Specifications.
10. BRICK WALL (GC): Clean and repoint brick in area and in quantity indicated. See Specifications.
11. STEEL LINTELS AT BRICK OPENINGS (GC): At this location, sandblast and scrape to clean existing steel lintel above opening. Prime and paint with zinc rich primer, paint and caulk to finish. See Specifications.
12. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
13. GARAGE DOOR LINTEL (GC): Replace steel lintel with new. See Specifications.
14. CONCRETE FRONT PORCH (GC): Grind down raised edge.
15. ALUMINUM AWNING (GC): Power wash, prep and paint existing aluminum awning.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing breakers with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE TO INTERIOR DOOR (GC): Remove (2) existing doors and frames between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door and frame. Paint to finish with new threshold and all door hardware. See specifications.
18. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand, and paint new GWB to finish. See Specifications.
19. REPLACE EXISTING FURNACE (M): Remove existing furnace from this location. locate new furnace within the existing basement envelope. Connect the furnace to the existing main supply and return ductwork, gas and electrical connections. At ductwork located within the garage envelope, seal per the above. See Specifications.
20. MASONRY WORK IN GARAGE/BASEMENT (GC): Provide new concrete block infill wall to rebuild garage wall and completely seal garage from basement (approx. 60 sf of wall).

Interior Basement

21. WATER HEATER (P): Water Heater installation dated appears to be 12.31.2013 and does not show signs of failure. Service only.
22. FURNACE (M): Furnace installation date appears to be December of 12.22.2004, making the furnace 20 years old. Replace per specifications.
23. DUCTWORK (M): Seam seal all exposed duct seams within basement. See Specifications.
24. BASEMENT ACCESS STAIR (GC): Provide new vinyl non-slip tread covers at each tread. See Specifications
25. BASEMENT FLOOR TILE (GC): Apply new vinyl tile flooring over existing tile flooring (approx. 200 sf). See Specifications. NOTE: Take care to not disturb the existing basement asbestos flooring in a way so as to cause any of the existing flooring to become airborne.
26. GLASS BLOCK WINDOWS (GC): Remove all 4 glass block windows, casing, and caulk and replace with new. See Specifications.
27. DRYER DUCT (M): Run new dryer duct through new glass block window.

Interior First Floor

28. FRONT ENTRY DOOR (GC): Remove existing storm door frame. Provide new storm door with chain limiter and closer. Scrape and caulk existing door frame and trim. See Specifications.
29. FLOOR FINISH (GC): Remove existing carpet (approx. 303 sf) and VCT (approx. 103 sf) floor finish throughout first floor. Prep subfloor and provide new LVT floor finish throughout first floor. See Specification.
30. KITCHEN CEILING (GC): Remove and repair section of existing kitchen ceiling and bulkhead damaged by water from bathroom above (approx. 50 sf). Repair any plumbing pipes found to be leaking above the ceiling prior to closing ceiling. See Specifications.
31. KITCHEN CABINETS / COUNTER and BACKSPLASH (GC): Replace existing kitchen upper and lower cabinets and countertop with new. Provide new tiled backsplash behind stove and below vent hood. Run tile below top of stove 6". See Specifications.
32. KITCHEN APPLIANCES (GC/E/M/P): Provide new stove/oven combination. Provide new sink, sink faucet and drain assembly. Provide new refrigerator. Provide new kitchen exhaust hood ventilated to the exterior. See Specifications.

Second Floor / Attic

33. WINDOWS (GC): At this location, remove existing caulk and recaulk window to seal. See Specifications
34. FLOOR FINISH (GC): Remove carpet flooring throughout. Provide new LVT floors on top of existing hardwood floors. Provide new painted ¼ Rd trim at wall base. See Specification.
35. BATHROOM (GC/P): In second floor bathroom: Remove existing VCT flooring, provide new LVT flooring per Specifications. Remove shower rod and replace it with new. Remove existing shutters at window and patch paint wall to match. Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. See Specifications.
36. CEILING (GC): Remove and repair crack in section of existing ceiling (approx. 12 linear ft). See Specifications.
37. ATTIC ACCESS DOOR (GC): Insulate attic door. See Specifications.

PLAN NORTH

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

Site Plan, Site Plan Legend, Keynotes

scale: As Noted
date: August 20th, 2024
no. 2 of. 9

Sheet No.
A2
Project #2326

FLOOR COVERING PLAN LEGEND

VCT FLOORING

CONCRETE FLOORING

CARPET FLOORING

LVT FLOORING

WOOD FLOORING

GENERAL FLOOR PLAN NOTES

1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE. PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.

10 Scattered Sites Keynotes – 221 Wayside St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages.
3. SMOKE/CO DETECTORS (E) : In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC) : Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. REAR RETAINING WALL (GC): At this location remove existing short retaining wall (approx. 2 ft high x 20 ft long). Remove topsoil and re-slope soil to gradually blend two grades. Restore topsoil and reseed. See Specifications.
7. FRONT RETAINING WALL (GC): Repair small area of existing short retaining wall (approx. 3ft high x 3 ft long) using new concrete masonry units to match. See Specifications.
8. ROOF (GC): Remove existing shingles (approx. 600 sf), flashing, roof vent caps, roof pipe boots flashing, etc. Re-roof using new materials. Replace sloped mortar chimney cap with new. See Specifications.
9. BRICK WINDOW SILLS (GC): Repoint window sills at this location. See Specifications.
10. BRICK WALL (GC): Clean and repoint brick in area and in quantity indicated. See Specifications.
11. STEEL LINTELS AT BRICK OPENINGS (GC): At this location, sandblast and scrape to clean existing steel lintel above opening. Prime and paint with zinc rich primer, paint and caulk to finish. See Specifications.
12. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
13. GARAGE DOOR LINTEL (GC): Replace steel lintel with new. See Specifications.
14. CONCRETE FRONT PORCH (GC): Grind down raised edge.
15. ALUMINUM AWNING (GC): Power wash, prep and paint existing aluminum awning.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing breakers with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE TO INTERIOR DOOR (GC): Remove (2) existing doors and frames between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door and frame. Paint to finish with new threshold and all door hardware. See specifications.
18. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand, and paint new GWB to finish. See Specifications.
19. REPLACE EXISTING FURNACE (M): Remove existing furnace from this location. locate new furnace within the existing basement envelope. Connect the furnace to the existing main supply and return ductwork, gas and electrical connections. At ductwork located within the garage envelope, seal per the above. See Specifications.
20. MASONRY WORK IN GARAGE/BASEMENT (GC): Provide new concrete block infill wall to rebuild garage wall and completely seal garage from basement (approx. 60 sf of wall).

Interior Basement

21. WATER HEATER (P): Water Heater installation dated appears to be 12.31.2013 and does not show signs of failure. Service only.
22. FURNACE (M): Furnace installation date appears to be December of 12.22.2004, making the furnace 20 years old. Replace per specifications.
23. DUCTWORK (M): Seam seal all exposed duct seams within basement. See Specifications.
24. BASEMENT ACCESS STAIR (GC): Provide new vinyl non-slip tread covers at each tread. See Specifications
25. BASEMENT FLOOR TILE (GC): Apply new vinyl tile flooring over existing tile flooring (approx. 200 sf). See Specifications. NOTE: Take care to not disturb the existing basement asbestos flooring in a way so as to cause any of the existing flooring to become airborne.
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Interior First Floor

28. FRONT ENTRY DOOR (GC): Remove existing storm door frame. Provide new storm door with chain limiter and closer. Scrape and caulk existing door frame and trim. See Specifications.
29. FLOOR FINISH (GC): Remove existing carpet (approx. 303 sf) and VCT (approx. 103 sf) floor finish throughout first floor. Prep subfloor and provide new LVT floor finish throughout first floor. See Specification.
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Second Floor / Attic

33. WINDOWS (GC): At this location, remove existing caulk and recaulk window to seal. See Specifications
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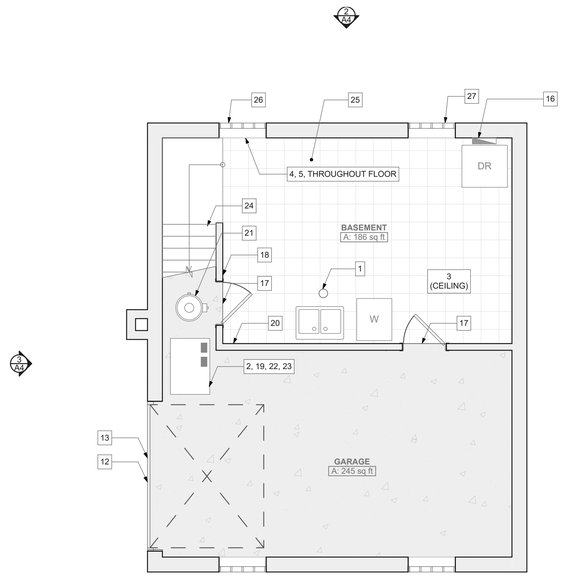
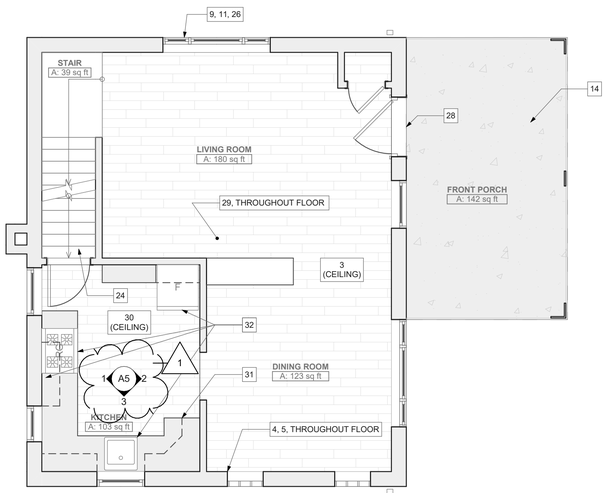


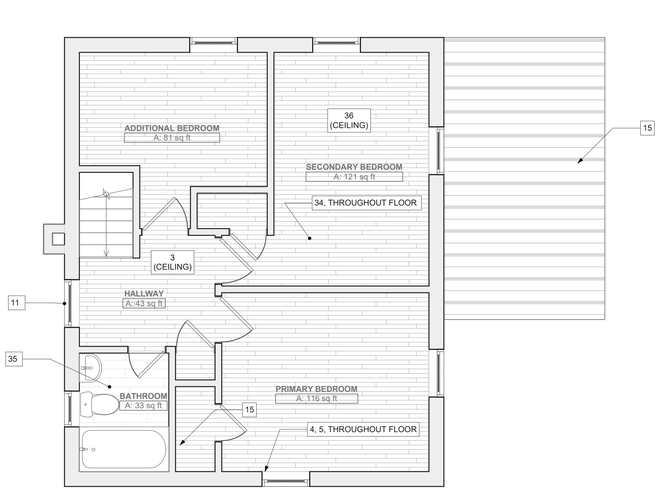
1 Basement
SCALE: 1/4" = 1'-0"

PLAN NORTH



2 First Floor
SCALE: 1/4" = 1'-0"

PLAN NORTH



3 Second Floor
SCALE: 1/4" = 1'-0"

PLAN NORTH

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

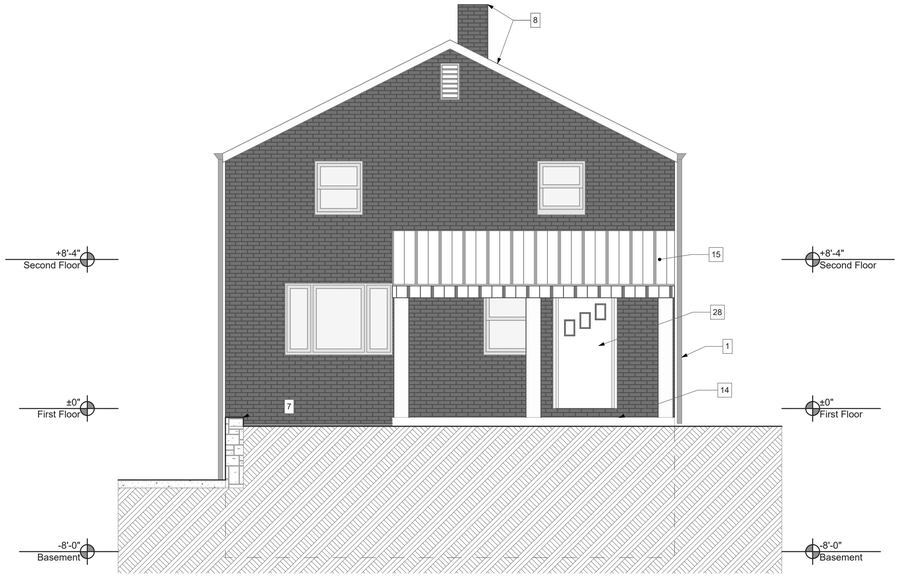
Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

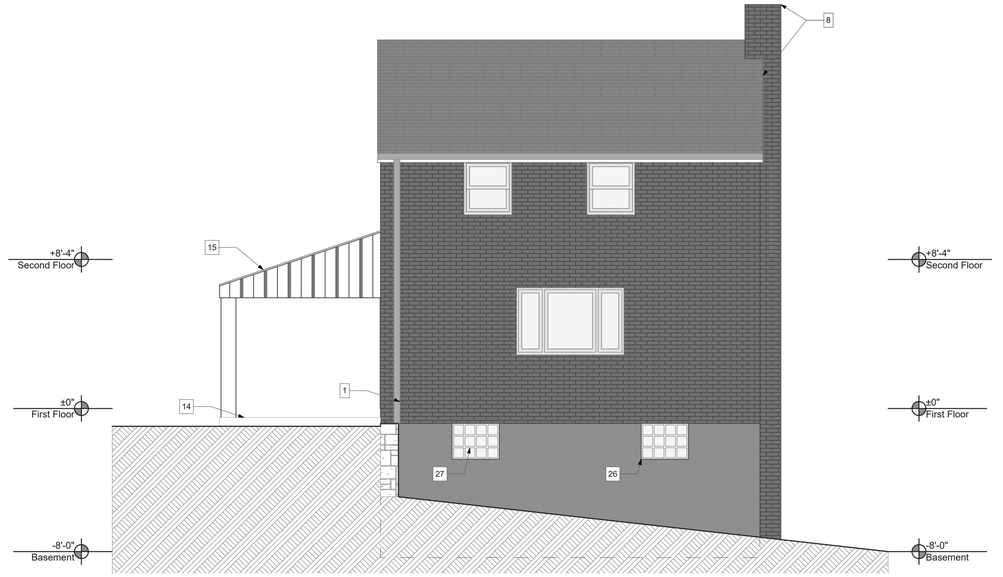
Basement, First Floor, Second Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

scale: As Noted
date: August 20th, 2024
no. 3 of. 9

Sheet No.
A3
Project #2326



1 South Elevation
SCALE: 1/4" = 1'-0"



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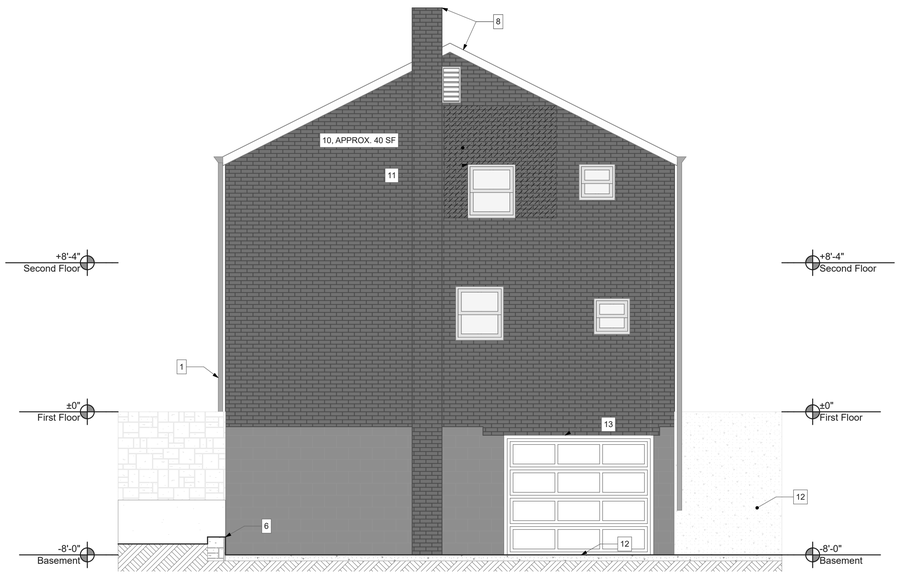
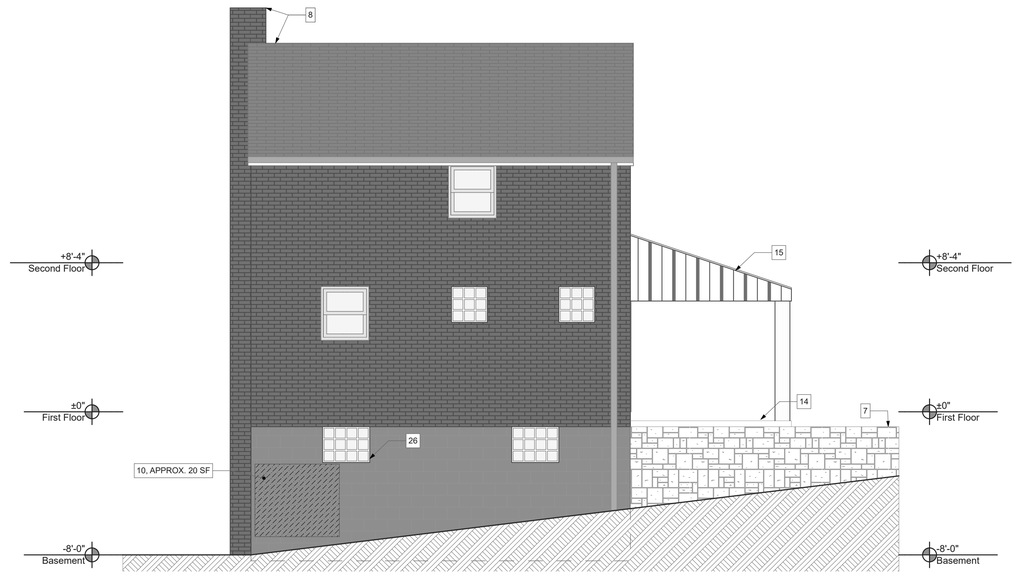


3 North Elevation
SCALE: 1/4" = 1'-0"



4 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 221 Wayside St

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1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
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seal

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Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

South Elevation, East Elevation, West Elevation, North Elevation, Keynotes

scale	
As Noted	
date	
August 20th, 2024	
no.	of.
4	9

Sheet No.

A4

Project #2326

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

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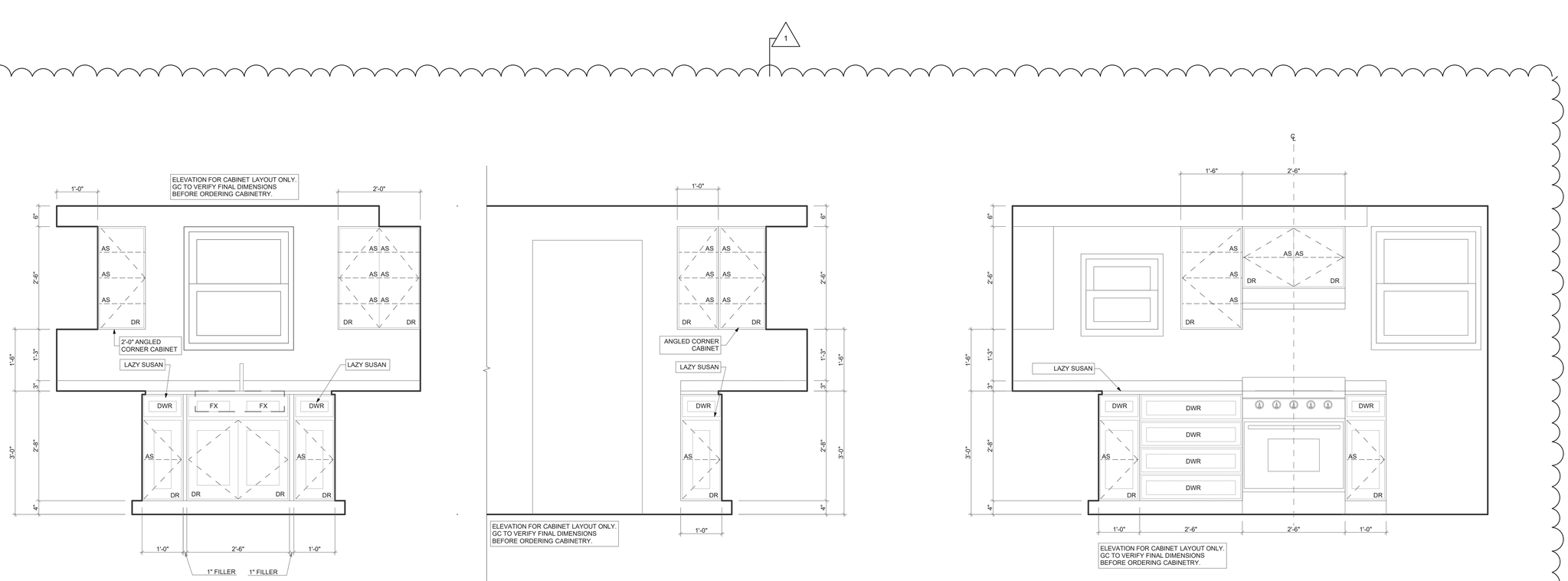
drawing title

Kitchen Elevation



3 Kitchen Elevation
SCALE: 3/4" = 1'-0"

2 Kitchen Elevation
SCALE: 3/4" = 1'-0"

1 Kitchen Elevation
SCALE: 3/4" = 1'-0"

scale: As Noted
date: August 20th, 2024
no. 5 of. 9

Sheet No.
A5
Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT

WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT

WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXTURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT

WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT

WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY, EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

2024-08-19 Specifications

scale: As Noted
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no.: 6
of: 9
Sheet No. A6
Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    A. SOLID COLORS, MATTE FINISH.
    B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    C. WOOD GRAINS, MATTE FINISH.
    D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
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Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

2024-08-19 Specifications

scale	Sheet No.
As Noted	A7
date August 20th, 2024	
no. 7 of. 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAUST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.

- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.

- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:

- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:

- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:

- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:

- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:

- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.

- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:

- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:

- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS.
INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc

205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A8**
no. 8 **of.** 9	Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.

ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS

RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.

STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.

FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION

MINIMUM SIZE CONDUIT IS 3/4 INCHES.

INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.

DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS

ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.

CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION

USE THREADED CONNECTORS ON GRS CONDUIT.

USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.

USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL

FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.

USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS

FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.

FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.

USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.

USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS

CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:

A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.

WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.

CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.

MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.

ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.

WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.

WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION

COLOR CODE ALL WIRES PER NEC REQUIREMENTS:

A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.

THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.

EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.

CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.

THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.

MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.

1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR.

USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:

- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS

ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS. DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES

SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE

THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.

20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES

ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.

CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE

THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.

20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES

USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.

ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.

DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.

OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL

PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.

FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.

A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.

B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.

1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS

PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION

USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.

PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.

USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.

USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.

USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.

USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.

USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.

USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.

THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.

SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.

INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.

USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.

TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION

VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.

PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.

INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.

MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.

CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.

BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.

DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).

ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE

ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.

1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.

2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.

3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL

ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA

ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM

ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION

TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
221 Wayside Street
Pittsburgh, Pennsylvania 15210

drawing title

2024-08-19 Specifications

scale	Sheet No.
As Noted	A9
date	
August 20th, 2024	
no. 9 of. 9	Project #2326

Renovation of 10 Scattered Sites

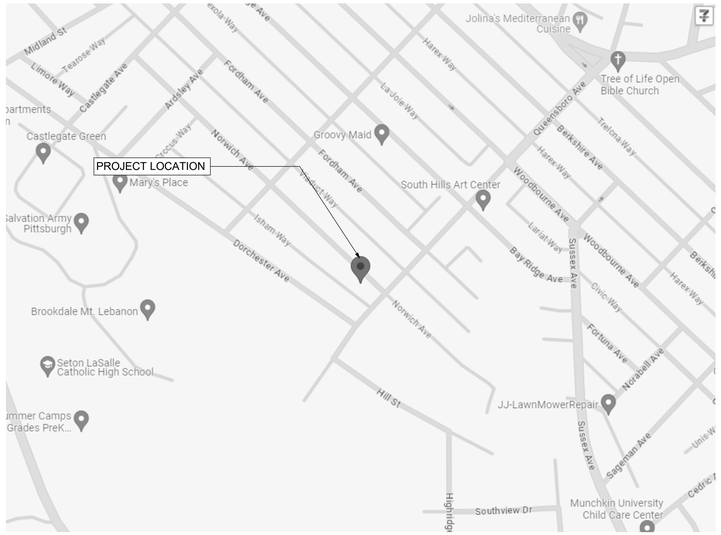
10 Scattered Sites - Norwich Avenue
Single Family Residence, Minor Alteration
958 Norwich Avenue,
Pittsburgh, Pennsylvania 15226

Drawing Index

Code Conformance Information

Applicable Codes	
General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information	
Stories:	2 Stories
Building Gross Area:	Basement 304 sqft + 293 sqft Garage
	1st Floor 597 sqft
	2nd Floor 597 sqft



1 Site Location
SCALE: 1" = 30'

UPDATED CONSTRUCTION DRAWING SET 04.01.2025.
NEW KITCHEN ELEVATIONS ADDED FOR CLARIFICATION ON A6. ALL NEW ITEMS HAVE BEEN BUBBLED.

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
$\frac{C}{L}$	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- T.O. FINISH FLOOR / ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 / A1 — ELEVATION MARKER

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

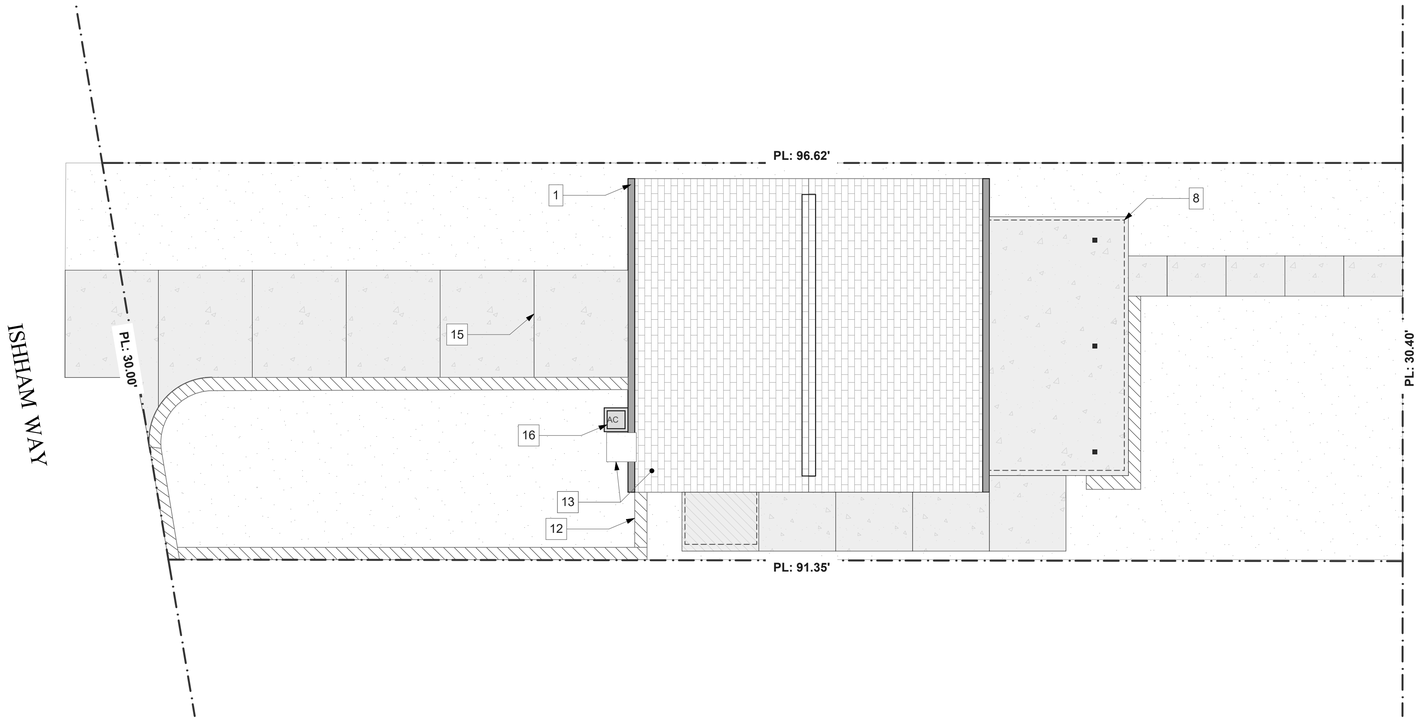
Drawing Index, Code Conformance Information, Abbreviations and Materials, Site Location

scale	As Noted
date	August 20th, 2024
no.	1
of.	10

Sheet No.

A1

Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 958 Norwich Ave

GC: General Contract; E: Electrical Con ract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work mus be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

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1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
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Site Plan, Site Plan Legend, Keynotes

scale: As Noted
date: August 20th, 2024
no. 2 of. 10

Sheet No.
A2
Project #2326

FLOOR COVERING PLAN LEGEND

VCT FLOORING
CONCRETE FLOORING
CARPET FLOORING
LVT FLOORING
WOOD FLOORING

10 Scattered Sites Keynotes – 958 Norwich Ave

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GENERAL FLOOR PLAN NOTES

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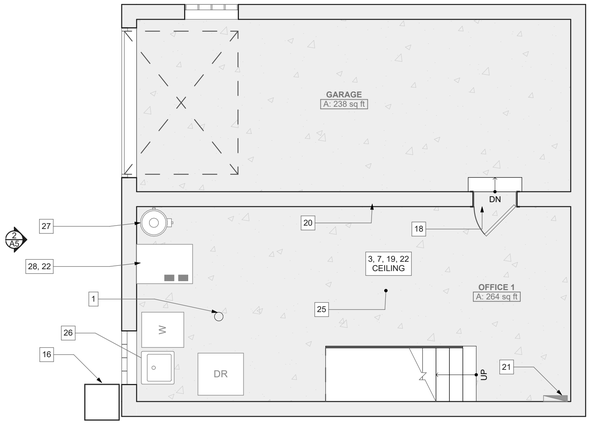
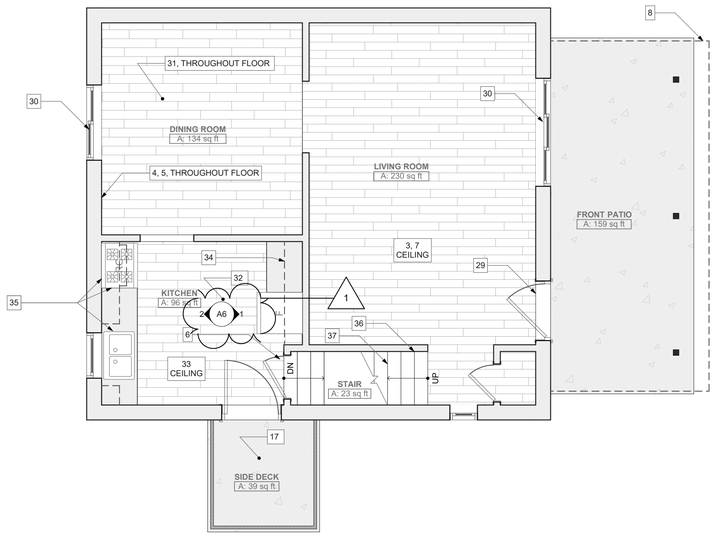
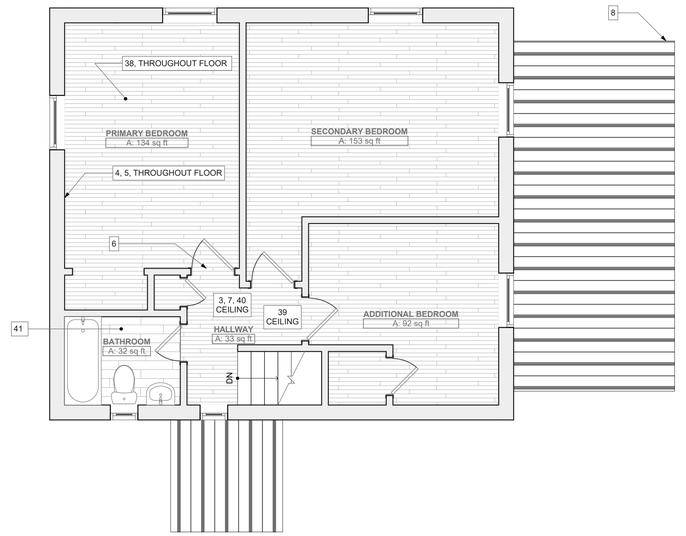
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE. PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



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SCALE: 1/4" = 1'-0"

PLAN NORTH

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Basement, First Floor, Second Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

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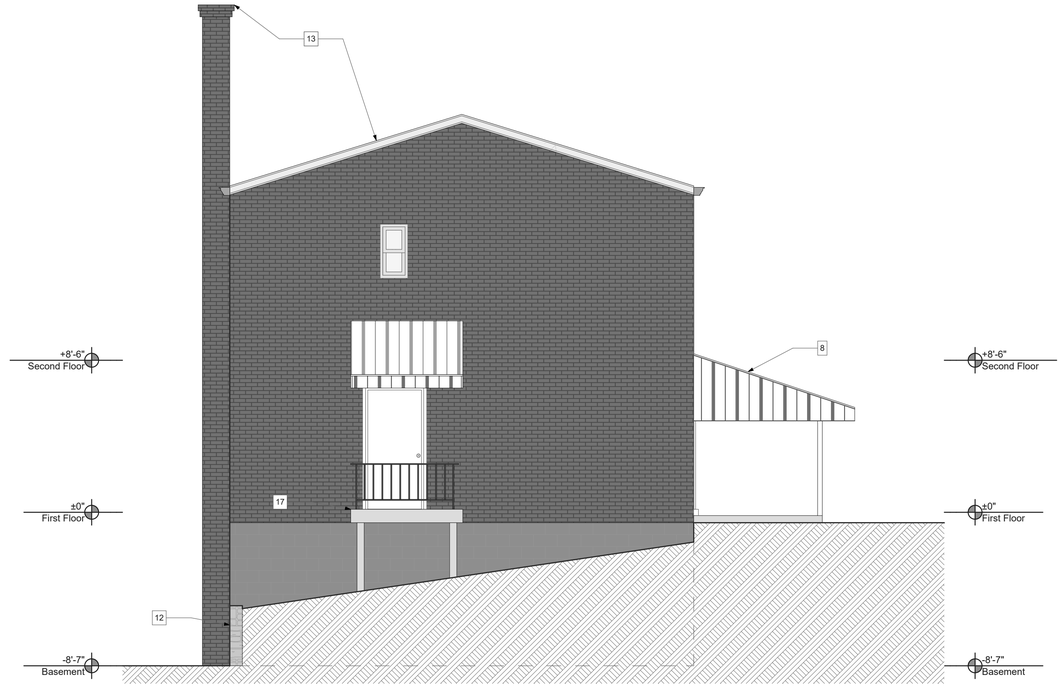
Sheet No.

A3

Project #2326



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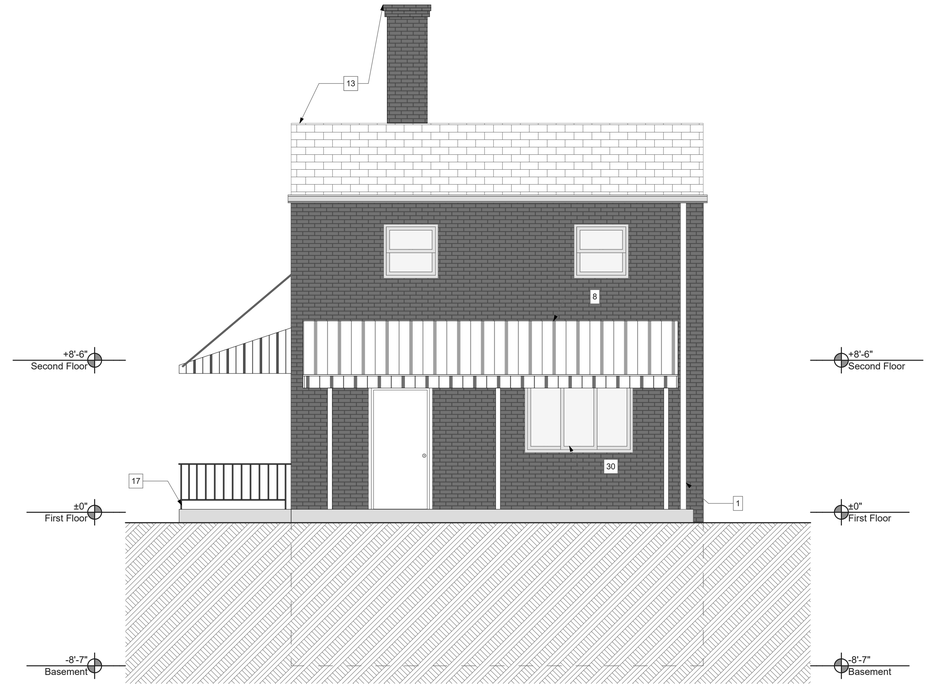

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10 Scattered Sites Keynotes – 958 Norwich Ave

GC: General Contract; E: Electrical Con ract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work mus be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

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4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.
6. INTERIOR DOORS (GC): Remove existing interior doors and provide new interior doors and hardware in all existing door openings throughout. At second floor closet location provide missing closer door and door hardware. See Specifications.
7. LIGHTING FIXTURES (E): Provide new energy efficient lighting fixtures in existing locations throughout the interior.

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Interior Garage

18. GARA E TO INTERIOR DOOR) R mov xisting door and fram b tw n garag and r sid nc . Provid n w min. 3/8" thick, 20 minut rat d insulat d m tal door and fram . Paint to finish with n w thr shold and all door hardwar . S sp cifications.
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34. KIT H N BIN TS / OUNT R and B KSPLASH (GC): Replace existing kitchen upper and lower cabinets and countertop with new. Provide new tiled backsplash behind stove and below vent hood. Run tile below top of stove 6". See Specifications.
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Second Floor / Attic

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ph 412.281.6001 fx 412.281.6002

seal

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
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Pittsburgh,Pennsylvania,15219

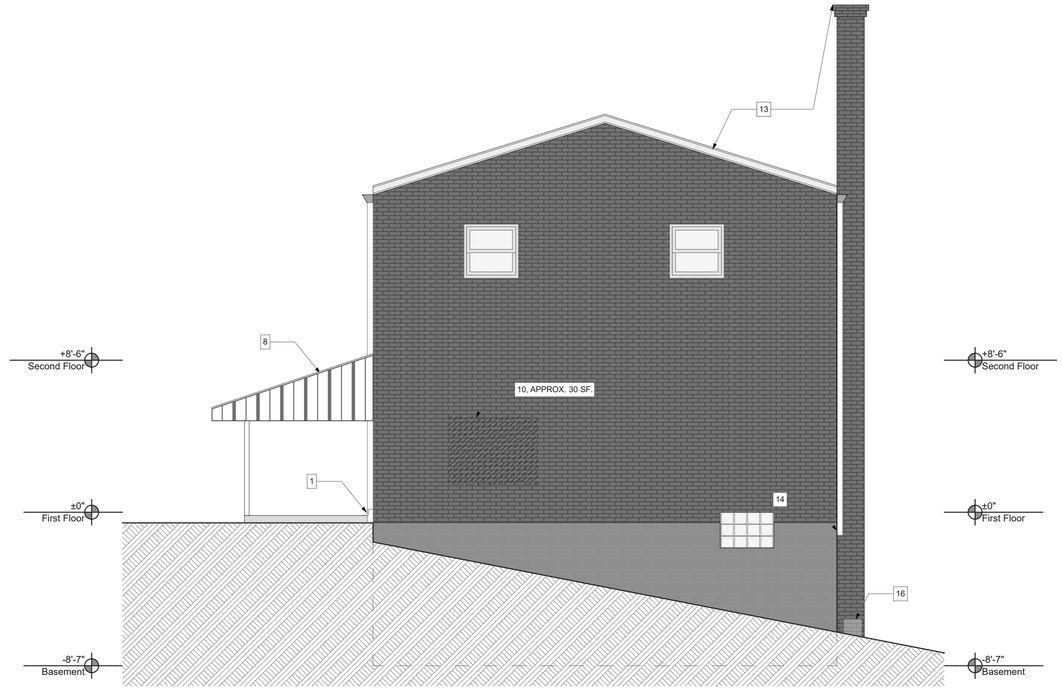
Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

South Elevation, East Elevation, Keynotes

scale: As Noted
date: August 20th, 2024
no. 4 of. 10

Sheet No.
A4
Project #2326



1 North Elevation
SCALE: 1/4" = 1'-0"

2 West Elevation
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Project Location:
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Pittsburgh, Pennsylvania 15226

drawing title

North Elevation, West Elevation, Keynotes

scale: As Noted
date: August 20th, 2024
no. 5 of. 10

Sheet No.
A5
Project #2326

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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seal

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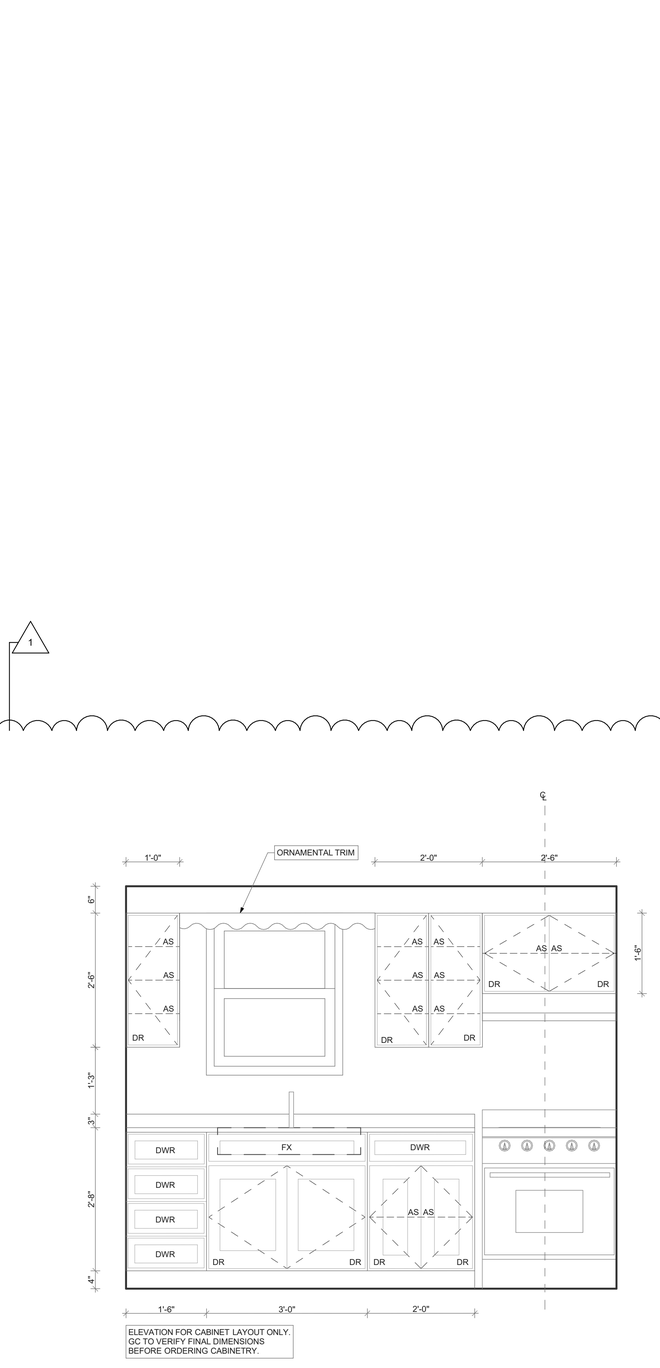
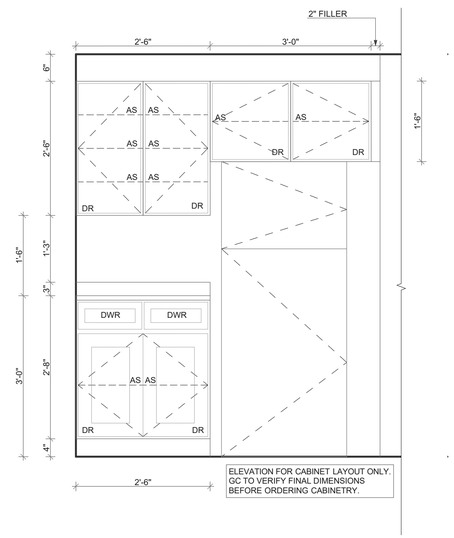
Kitchen Elevation



2 Kitchen Elevation
SCALE: 3/4" = 1'-0"



1 Kitchen Elevation
SCALE: 3/4" = 1'-0"

scale	As Noted
date	August 20th, 2024
no.	6
of.	10

Sheet No.

A6

Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT

WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT

WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT

WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT

WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A7**
no. 7 **of.** 10	Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:

A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:

1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.

1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:

1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
   A. SOLID COLORS, MATTE FINISH.
   B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
   C. WOOD GRAINS, MATTE FINISH.
   D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A8**
no. 8 **of.** 10	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
  - CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
  - LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
  - FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
  - AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
  - FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
  - SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
  - GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
  - IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
  - ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
  - FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
  - LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
  - TYPE: NATURAL.
  - VENTING TYPE: WITH COMBUSTION-AIR INTAKE
  - MINIMUM EFFICIENCY AFUE: 80 PERCENT.
  - INPUT: SEE SCHEDULE ON DRAWINGS.
  - HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
  - GAS CONNECTION SIZE: 1/2" NPS.
  - VENT SIZE: 4 INCHES.

FAN:
  - MOTOR: SIZE: 1/3 HP.
  - SPEED: SEE SCHEDULE ON DRAWINGS.
  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
  - TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
  - ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
  - FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
  - VOLTS: 208 V.
  - PHASE: 1.
  - HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc
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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no. 9 of. 10

Sheet No.
A9
Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR.
USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE "DOOR IN A DOOR" HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE "MC" CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.

USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR'S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12") BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE "HUMPS" OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4" [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4" [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16" [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
958 Norwich Avenue
Pittsburgh, Pennsylvania 15226

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A10**
no. 10 of. 10	Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Chelton Avenue
Single Family Residence, Minor Alteration
1541 Chelton Avenue,
Pittsburgh, Pennsylvania 15216

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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Drawing Index

Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 461 sqft + 279 sqft Garage
	1st Floor 624 sqft
	2nd Floor 624 sqft

1 Site Location
SCALE: 1" = 30'

UPDATED CONSTRUCTION DRAWING SET 04.01.2025.
NEW KITCHEN ELEVATIONS ADDED FOR CLARIFICATION ON A5. ALL NEW ITEMS HAVE BEEN BUBBLED.

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
℄	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- T.O. FINISH FLOOR / ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 / A1 — ELEVATION MARKER

seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Drawing Index, Code Conformance Information, Abbreviations and Materials, Site Location

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date	August 20th, 2024
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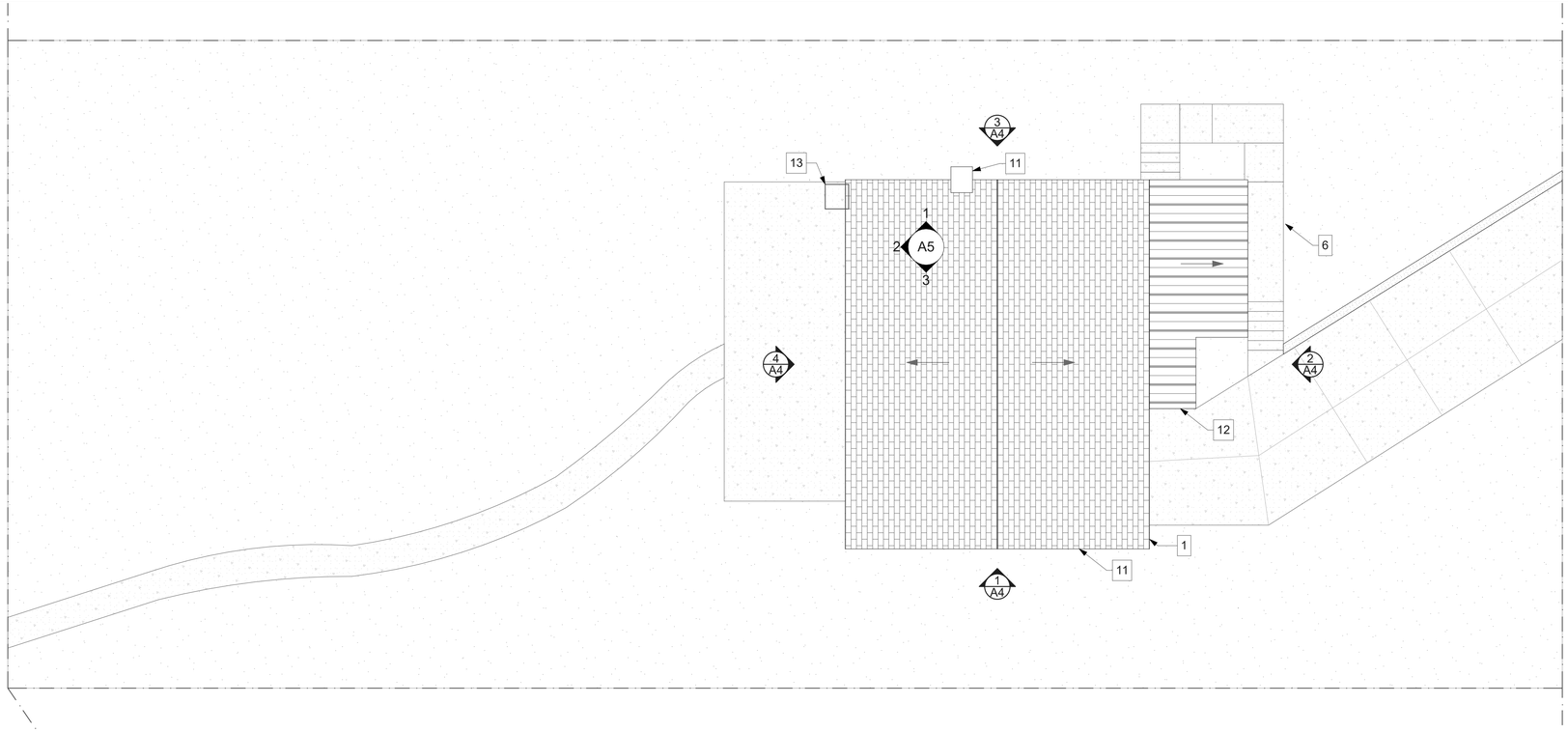
Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 1541 Chelton Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages.
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. EXTERIOR CONCRETE WALKWAY (GC): At this location remove section of concrete walkway, steps and railing that has subsided and cracked (Approx. 90 sf with 15 steps). Provide new well compacted gravel fill to level subgrade. Pour new concrete walkway, steps section, doweled into existing and adjacent block wall, Caulk joint between wall and new step/walkway to seal. Provide new galvanized metal railing to match existing. See Specifications.
7. BRICK WINDOWSILLS (GC): Repoint window sills at this location. See Specifications.
8. BRICK WALL (GC): Clean and repoint brick in area and in quantity indicated. See Specifications.
9. STEEL LINTELS (GC): Scrape or sand blast clean all existing steel lintels, repaint and caulk per Specifications.
10. WINDOWS (GC): Remove existing exterior caulk and re-caulk at all windows per Specifications.
11. ROOF(GC): Remove existing shingles (approx. 700 sf), flashing, roof vent caps, roof pipe boots flashing, gutters, etc. Re-roof using new materials per Specifications. In this location provide leaf guard gutters on new gutters.
12. ENTRANCE CANOPY (GC): At this location, the existing entrance awning appears to be pulling away from wall. Remove brick both above and below awning attachment in order to insure that Awning is fastened to structural wall studs. If it is not attached, attach awning to wall studs using 12-14 ea. 3/8" Galvanized lag bolts and wood blocking as required. Once awning is firmly attached, re-install brick with new aluminum wall flashing tucked into mortar joint with counter flashing. Caulk tight. Clean debris from awning and re-create proper roof drainage. Repair awning and drains as necessary. Provide new drain inlet baskets. Re-route existing data cable laid loosely on top of awning to tuck neatly under awning. Follow building lines. NOTE: At General Contractor's Option replace entire awning (approx. 120 sf) with new, properly installed per the above). See Specifications.

Garage

14. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly hand written. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
15. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
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17. GARAGE DOOR (GC): Provide new surface mounted electrical duplex outlet proximal to garage door to supply power to garage door.

Basement

18. WATER HEATER (P): Water heater is 9 years old, provide service and check operation. See Specifications.
19. BASEMENT FLOOR (GC): Paint concrete floor. See Specifications.
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25. LAUNDRY (P): Provide new laundry sink and faucet and washing machine drain kit. See Specifications.

First Floor

26. WALL FINISH (GC): At wall around front window. Remove existing plaster, insulation, and damaged studs. Provide new materials to restore wall to finished condition. At minimum, provide new wood stud splice, insulation, vapor barrier, and finished GWB. Sand, prepare and paint wall surface (approx. 100 sf).
27. KITCHEN TO OUTSIDE DOOR (GC): Provide new replacement door stops and door edge and bottom seals, as well as new thermally broken door threshold. Provide new Storm Door with chain limiter and closer. Paint frame to finish and trim with new synthetic wood trim, re-caulk to seal. See Specifications.
28. THROUGH WALL KITCHEN EXHAUST FAN (M): Remove existing through wall kitchen exhaust fan and non-venting hood. Provide new kitchen vent type hood vented to exterior with damper. Seal old exhaust fan penetration in exterior wall using similar materials and details to match surrounding wall finish. See specifications.
29. KITCHEN CABINETS (GC/E/M/P): Remove and provide new kitchen counter, upper and lower cabinets to match existing layout. Provide new stove/oven combination and new lighted vent hood (see below). Provide new refrigerator, kitchen sink /faucet/drain assembly. See Specifications.
30. GFI OUTLET (E): Provide new GFI Outlet above stove. See Specifications.
31. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting (approx. 130 sf). Repair leaking plumbing line above. Provide new finished and painted GWB ceiling and new lighting per Specifications.
32. MAIN STAIRWAY (GC): Remove and replace main stair vinyl treads covers. Provide new vinyl tread and riser covers. Typ. 11 treads and 12 risers x 3'-0" Wide (VIF).
33. FLOOR FINISH (GC): Remove existing VCT floor finish throughout first floor (approx. 530 sf). Prep subfloor and provide new LVT floor finish and wall base. See Specification.
34. THERMOSTAT (M): Replace thermostat with a programmable thermostat. See Specifications.

Second Floor / Attic

35. FLOOR FINISH (GC): Remove existing VCT floor finish throughout second floor including the bathroom (approx. 540 sf. Prep subfloor and provide new LVT floor finish and wall base. See Specification.
36. ATTIC ACCESS DOOR (GC): At this location, provide new insulated hinged attic access door in existing opening.
37. ATTIC INSULATION (GC): Provide new min R-38 blown in Attic Insulation (approx. 540 sf). Verified with depth indices. Take care not to cover air circulation channels. See Specifications.

38. BATHROOM (GC/P): In second floor bathroom: Remove and replace entirely existing tub tile surround, medicine cabinet, tub/shower faucet and drain, sink faucet and drain, and toilet. Provide new rod and shower curtain. Repair rotten wood subfloor (approx. 50 sf). Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. Provide new towel bar/s. Robe Hook, Grab bar and toilet roll holder. See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Site Plan, Site Plan Legend, Keynotes

scale	As Noted
date	August 20th, 2024
no.	2
of.	9

Sheet No.

A2

Project #2326

FLOOR COVERING PLAN LEGEND

VCT FLOORING
CONCRETE FLOORING
CARPET FLOORING
LVT FLOORING
WOOD FLOORING

10 Scattered Sites Keynotes – 1541 Chelton Ave

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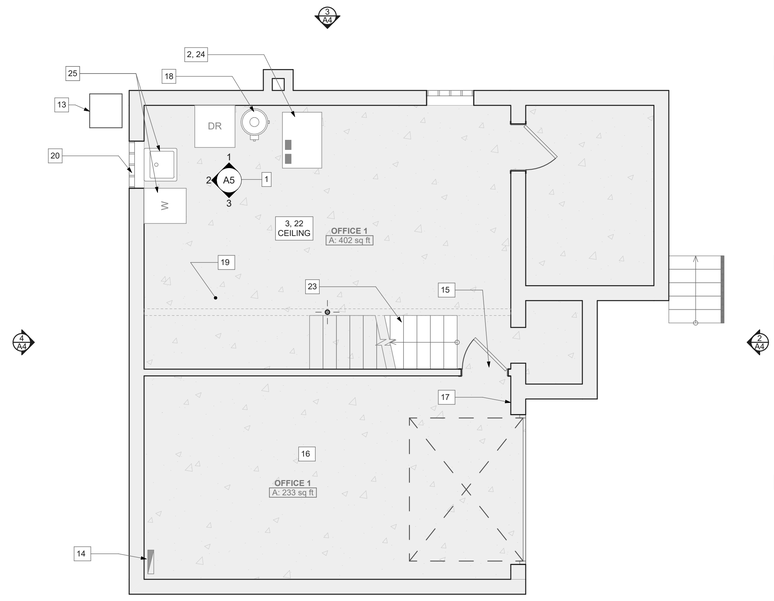
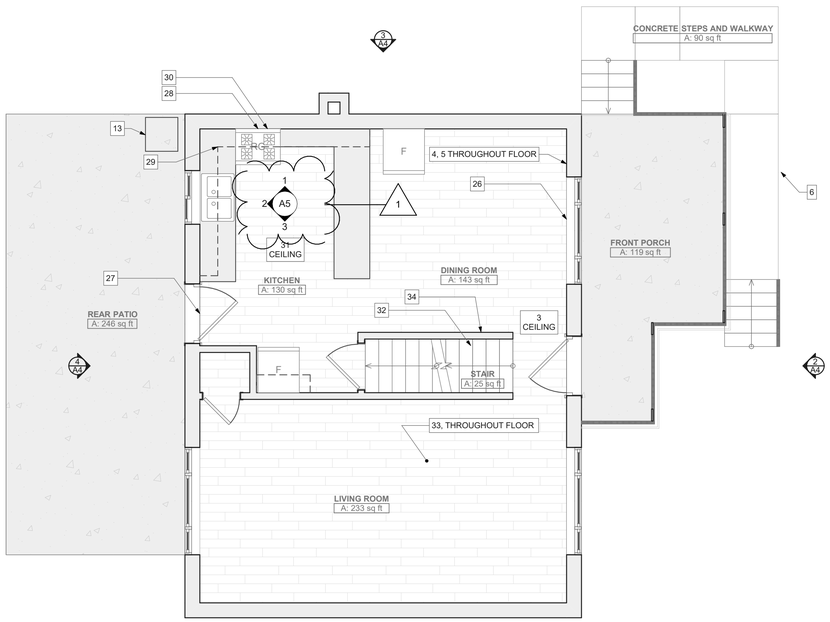
GENERAL FLOOR PLAN NOTES

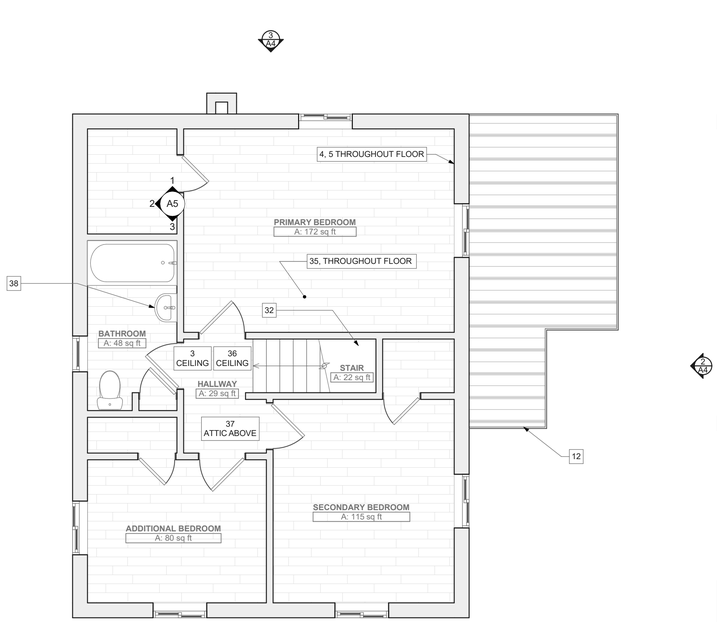
1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc
205 Ross Street
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ph 412.281.6001 fx 412.281.6002

seal

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

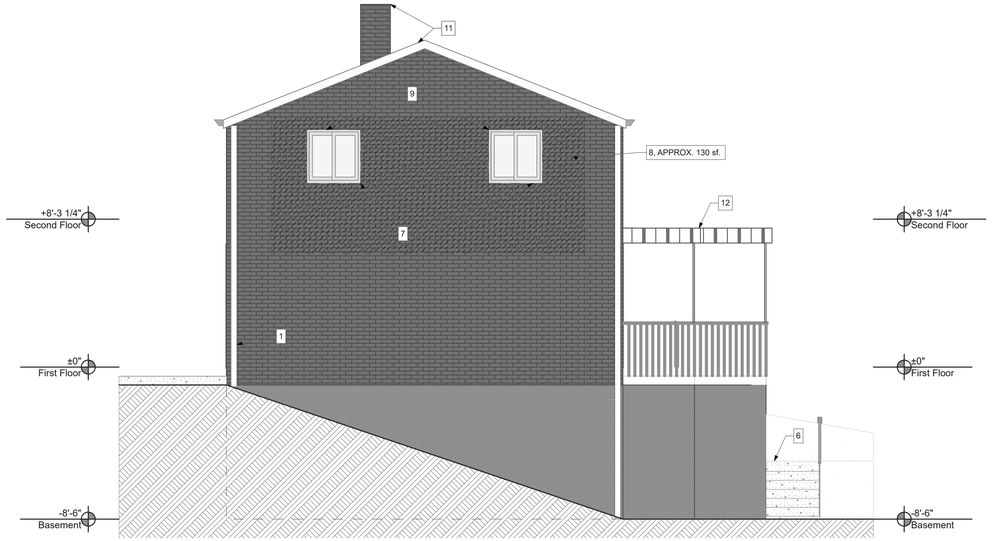
Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Basement, Second Floor, First Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

scale: As Noted
date: August 20th, 2024
no. 3 of. 9

Sheet No.
A3
Project #2326



1 South Elevation
SCALE: 1/4" = 1'-0"

2 East Elevation
SCALE: 1/4" = 1'-0"

3 North Elevation
SCALE: 1/4" = 1'-0"

4 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 1541 Chelton Ave

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27. KITCHEN TO OUTSIDE DOOR (GC): Provide new replacement door stops and door edge and bottom seals, as well as new thermally broken door threshold. Provide new Storm Door with chain limiter and closer. Paint frame to finish and trim with new synthetic wood trim, re-caulk to seal. See Specifications.
28. THROUGH WALL KITCHEN EXHAUST FAN (M): Remove existing through wall kitchen exhaust fan and non-venting hood. Provide new kitchen vent type hood vented to exterior with damper. Seal old exhaust fan penetration in exterior wall using similar materials and details to match surrounding wall finish. See specifications.
29. KITCHEN CABINETS (GC/E/M/P): Remove and provide new kitchen counter, upper and lower cabinets to match existing layout. Provide new stove/oven combination and new lighted vent hood (see below). Provide new refrigerator, kitchen sink /faucet/drain assembly. See Specifications.
30. GFI OUTLET (E): Provide new GFI Outlet above stove. See Specifications.
31. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting (approx. 130 sf). Repair leaking plumbing line above. Provide new finished and painted GWB ceiling and new lighting per Specifications.
32. MAIN STAIRWAY (GC): Remove and replace main stair vinyl treads covers. Provide new vinyl tread and riser covers. Typ. 11 treads and 12 risers x 3'-0" Wide (VIF).
33. FLOOR FINISH (GC): Remove existing VCT floor finish throughout first floor (approx. 530 sf). Prep subfloor and provide new LVT floor finish and wall base. See Specification.
34. THERMOSTAT (M): Replace thermostat with a programmable thermostat. See Specifications.

Second Floor / Attic

35. FLOOR FINISH (GC): Remove existing VCT floor finish throughout second floor including the bathroom (approx. 540 sf. Prep subfloor and provide new LVT floor finish and wall base. See Specification.
36. ATTIC ACCESS DOOR (GC): At this location, provide new insulated hinged attic access door in existing opening.
37. ATTIC INSULATION (GC): Provide new min R-38 blown in Attic Insulation (approx. 540 sf). Verified with depth indices. Take care not to cover air circulation channels. See Specifications.
38. BATHROOM (GC/P): In second floor bathroom: Remove and replace entirely existing tub tile surround, medicine cabinet, tub/shower faucet and drain, sink faucet and drain, and toilet. Provide new rod and shower curtain. Repair rotten wood subfloor (approx. 50 sf). Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. Provide new towel bar/s. Robe Hook, Grab bar and toilet roll holder. See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

South Elevation, East Elevation, West Elevation, North Elevation, Keynotes

scale: As Noted
date: August 20th, 2024
no. 4 of. 9

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Project #2326

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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seal

CONSTRUCTION DOCUMENTATION

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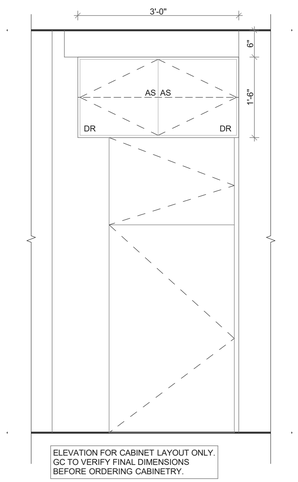
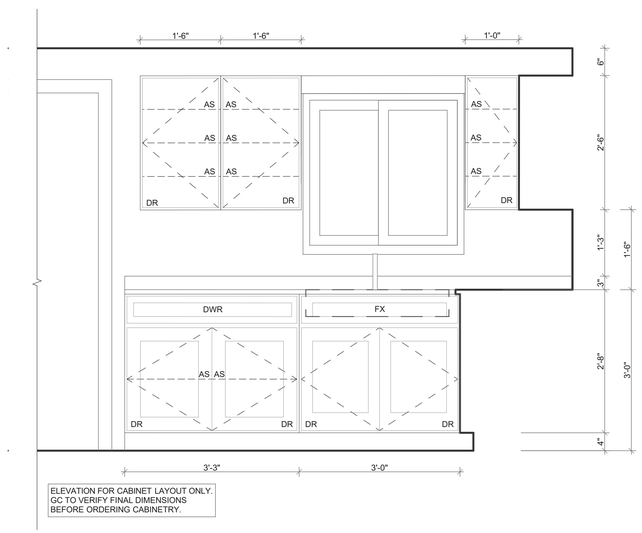
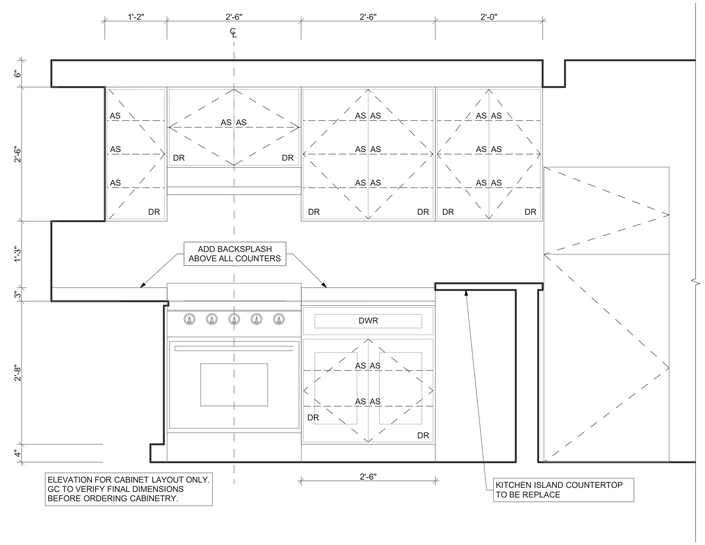
Kitchen Elevations



3 Kitchen Elevations
SCALE: 3/4" = 1'-0"



2 Kitchen Elevations
SCALE: 3/4" = 1'-0"



1 Kitchen Elevations
SCALE: 3/4" = 1'-0"

scale	As Noted
date	August 20th, 2024
no.	5
of.	9

Sheet No.

A5

Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT
WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT
WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT
WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT
WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no.: 6
of.: 9

Sheet No.
A6
Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    A. SOLID COLORS, MATTE FINISH.
    B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    C. WOOD GRAINS, MATTE FINISH.
    D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB

FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET

PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES

VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED

GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale
As Noted

date
August 20th, 2024

no. 7 of. 9

Sheet No.
A7
Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:
- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:

1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc
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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted
date August 20th, 2024
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MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:

- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE

ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL

ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM

ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

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seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1541 Chelton Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted

date August 20th, 2024

no. 9 **of.** 9

Sheet No. A9

Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Palm Beach Avenue
Single Family Residence, Minor Alteration
2344 Palm Beach Avenue,
Pittsburgh, Pennsylvania 15216

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

Drawing Index

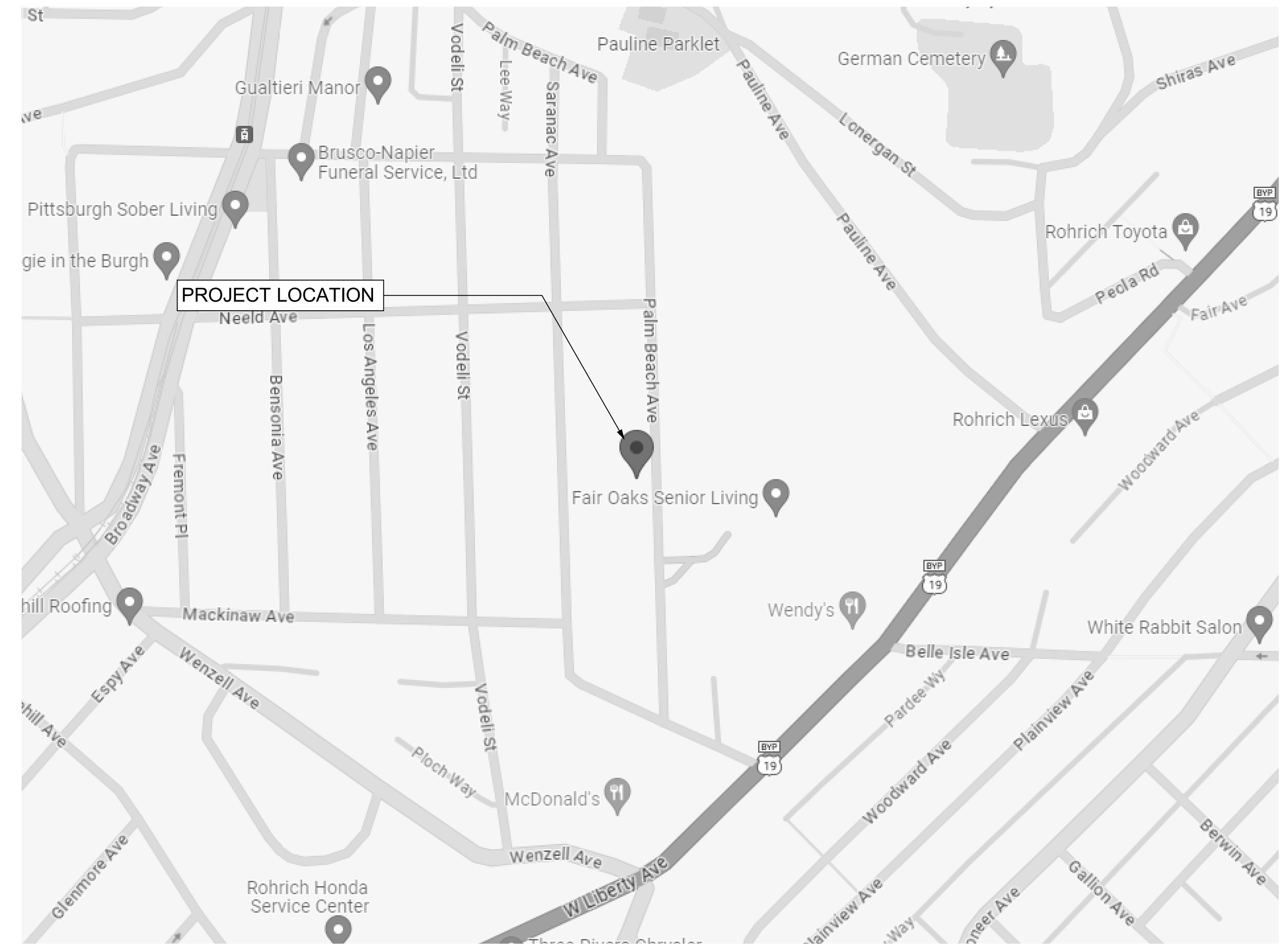
Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 354 sqft + Garage 263 sqft
	1st Floor 617 sqft
	2nd Floor 617 sqft



1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
℄	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

T.O. FINISH FLOOR ELEV: 0'-0"	ELEVATION HEIGHT
PLAN NORTH	NORTH ARROW
1 A1	ELEVATION MARKER

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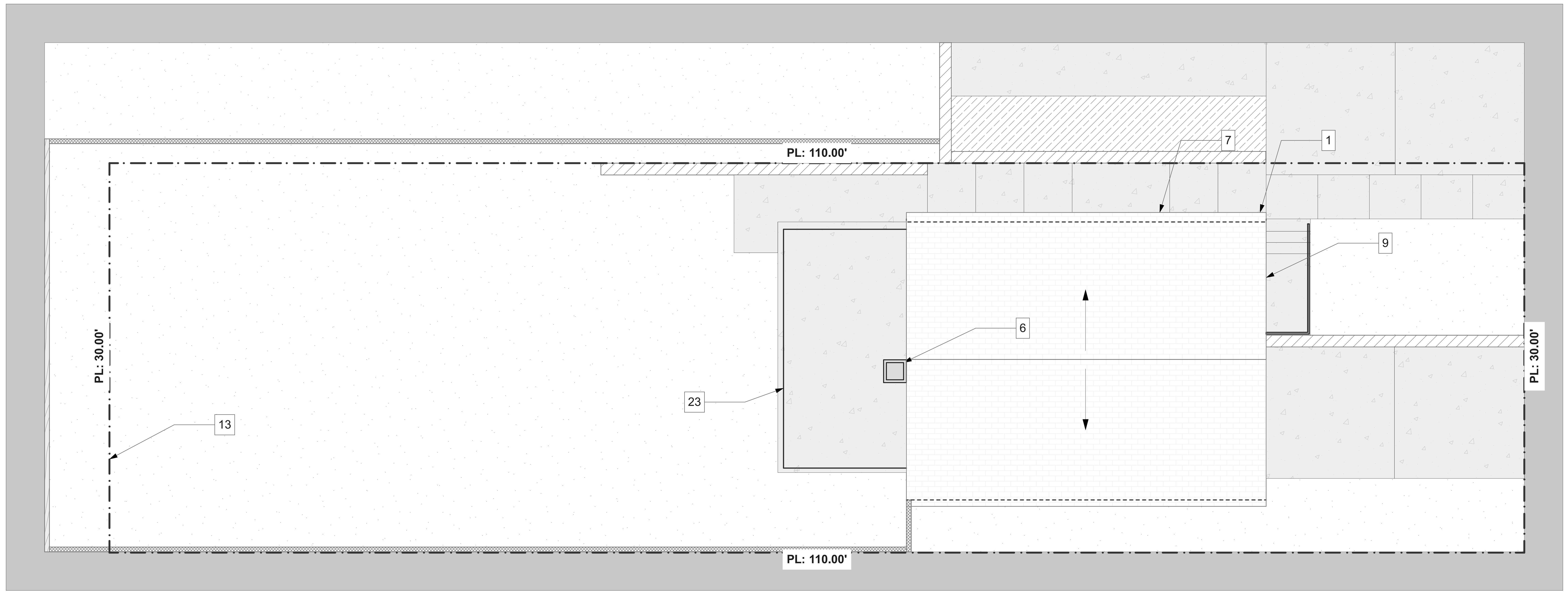
Pittsburgh, Pennsylvania 15216

drawing title

Drawing Index, Code Conformance Information, Site Location, Abbreviations and Materials

scale	As Noted
date	August 20th, 2024
no.	1
of.	9

Sheet No.
A1
Project #2326



PLAN NORTH

1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 2344 Palm Beach Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. CHIMNEY TOP (GC): Remove existing mortar cap and top section of terra cotta flue liner. Provide new flue liner section and new sloped mortar cap. See Specifications
7. BACKYARD ACCESS WALK (GC): At edge of walk to house, provide new backer rod and caulk to seal, approximately 60 lf. See Specifications
8. FRONT DOOR (GC): Remove existing front exterior door, frame and threshold, provide new 1 3/4" insulated wood look fiberglass door (with 3 lites sim. to existing), door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
9. ENTRANCE CANOPY (GC): At this location, provide new 52" wide x 36" deep, concave style aluminum entrance canopy properly fastened, flashed and sealed to exterior.
10. CONCRETE BLOCK ADDITION AT REAR (GC): At entire façade (3 SIDES) of block addition, strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the decorative block railing above.
11. RAILING AT ENTRY (GC): Sandblast to clean railing and remove all rust. Prime with zinc rich primer and repaint railing. See Specifications.
12. EXISTING BRICK VENEER (GC): At brick area noted, strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the entire chimney stack.
13. REAR FENCE (GC): Replace approximately 30' of stockade fence along rear property line. See Specifications.
14. ATTIC GRILLE (M): Replace ventilation grille with new.
15. MAILBOX (GC): Provide new mailbox mounted to exterior wall.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope and at plywood cover, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. See Specifications.
18. GARAGE DOOR TO HOUSE (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.

Interior Basement & Addition

19. WATER HEATER (P): Water Heater AO Smith 40 Gal. with a 6 Yr Warranty. The Water Heater appears to be in good condition and does not show signs of failure. Provide Inspection of unit by a qualified Plumbing Contractor. See Specifications.
20. FURNACE (M): Furnace is a Carrier Weathermaker 9200 and has an efficiency rating of 95.5%. The last year of manufacture of this unit is 2001, making this unit at a minimum 23 years old. Replace unit with new. Seam seal all exposed duct seams within basement. Seam seal and insulate all ductwork running in unconditioned space, e.g. Garage. See Specifications.
21. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 305 sf). See Specification.
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Interior First Floor

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32. LIVING ROOM (M): Replace thermostat with programable thermostat.

Second Floor / Attic

33. MAIN STAIRWAY (GC): At main stairway, remove existing handrail, sand, stain and refinish handrail. Patch and paint existing and old mounting holes. Re-fasten handrail to studs to assure solid mounting. See Specifications
34. BATHROOM (M): Provide new exhaust fan wired to light circuit and vented to the exterior.

Fukui Architects Pc
205 Ross Street
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seal

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Site Plan, Site Plan Legend, Keynotes

scale: As Noted	**Sheet No.**
date: August 20th, 2024	**A2**
no. 2 / of. 9	Project #2326

FLOOR COVERING PLAN LEGEND

- VCT FLOORING
- CONCRETE FLOORING
- CARPET FLOORING
- LVT FLOORING
- WOOD FLOORING

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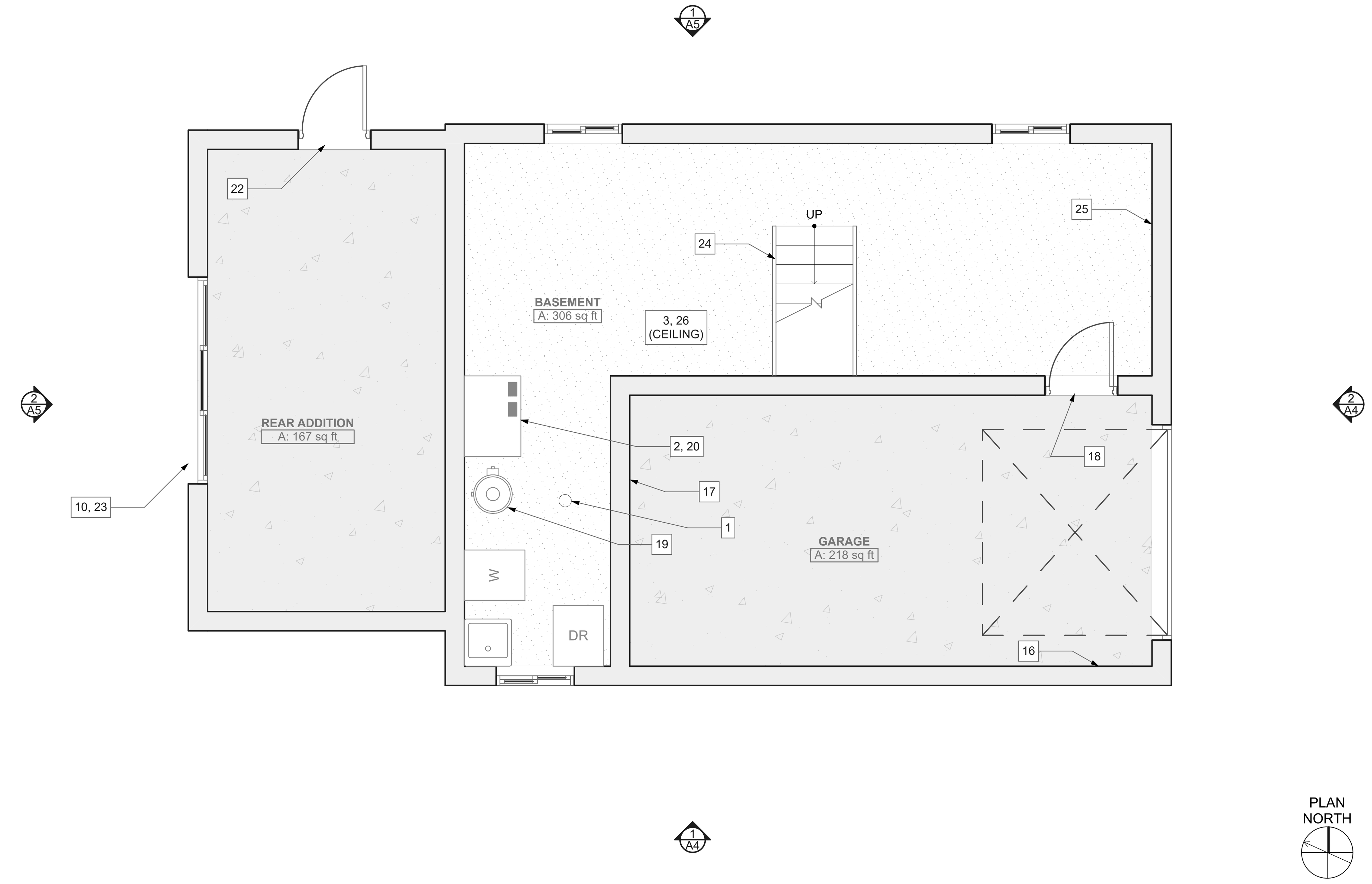
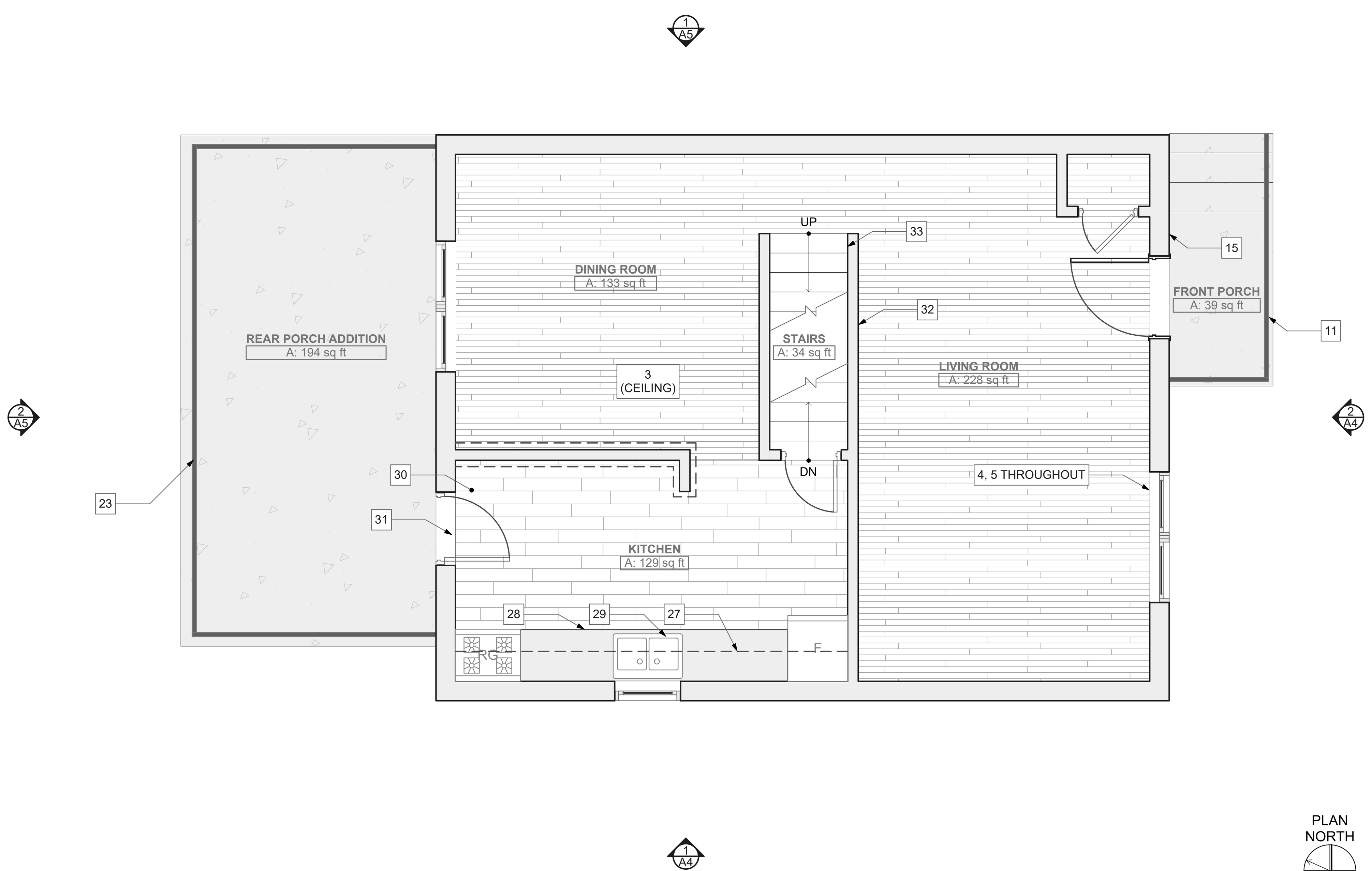
GENERAL FLOOR PLAN NOTES

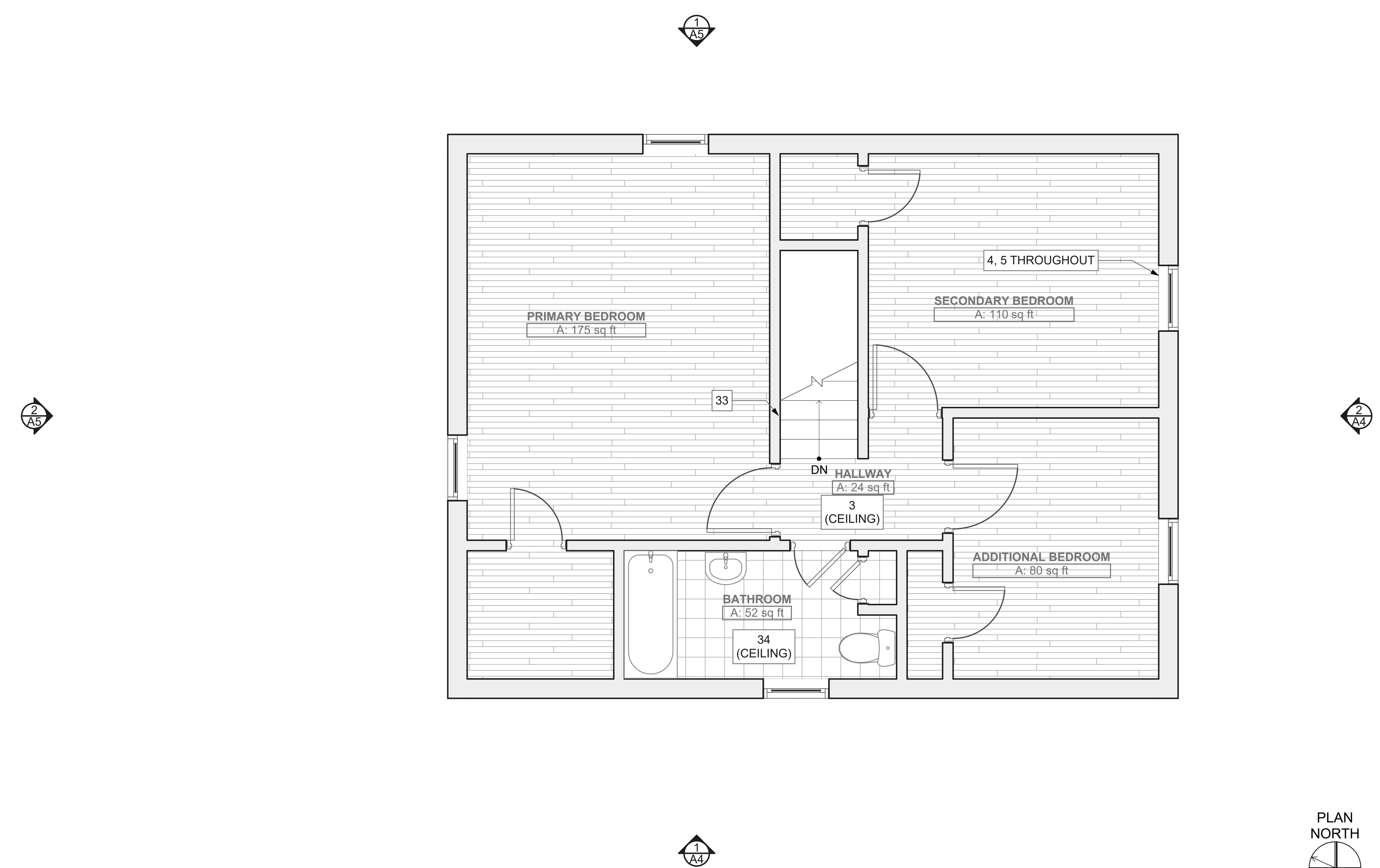
1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



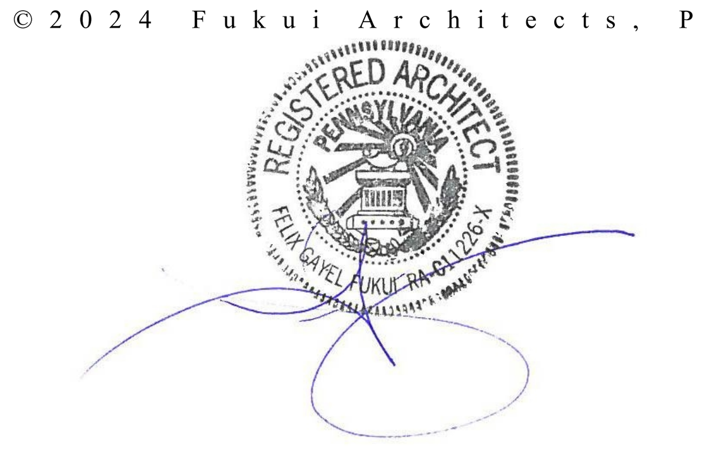
2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc

205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002



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6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

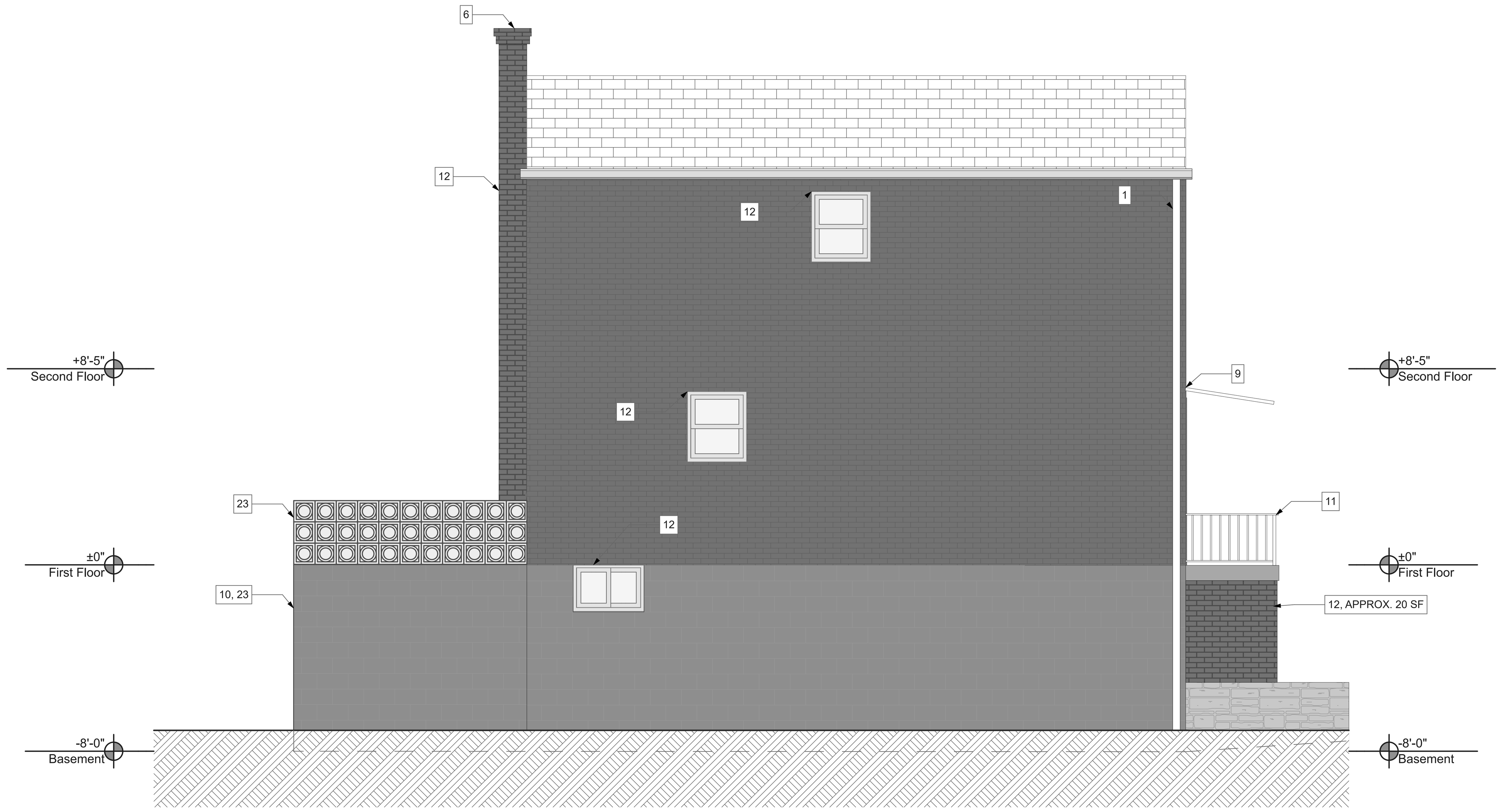
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2344 Palm Beach Avenue
Pittsburgh, Pennsylvania 15216

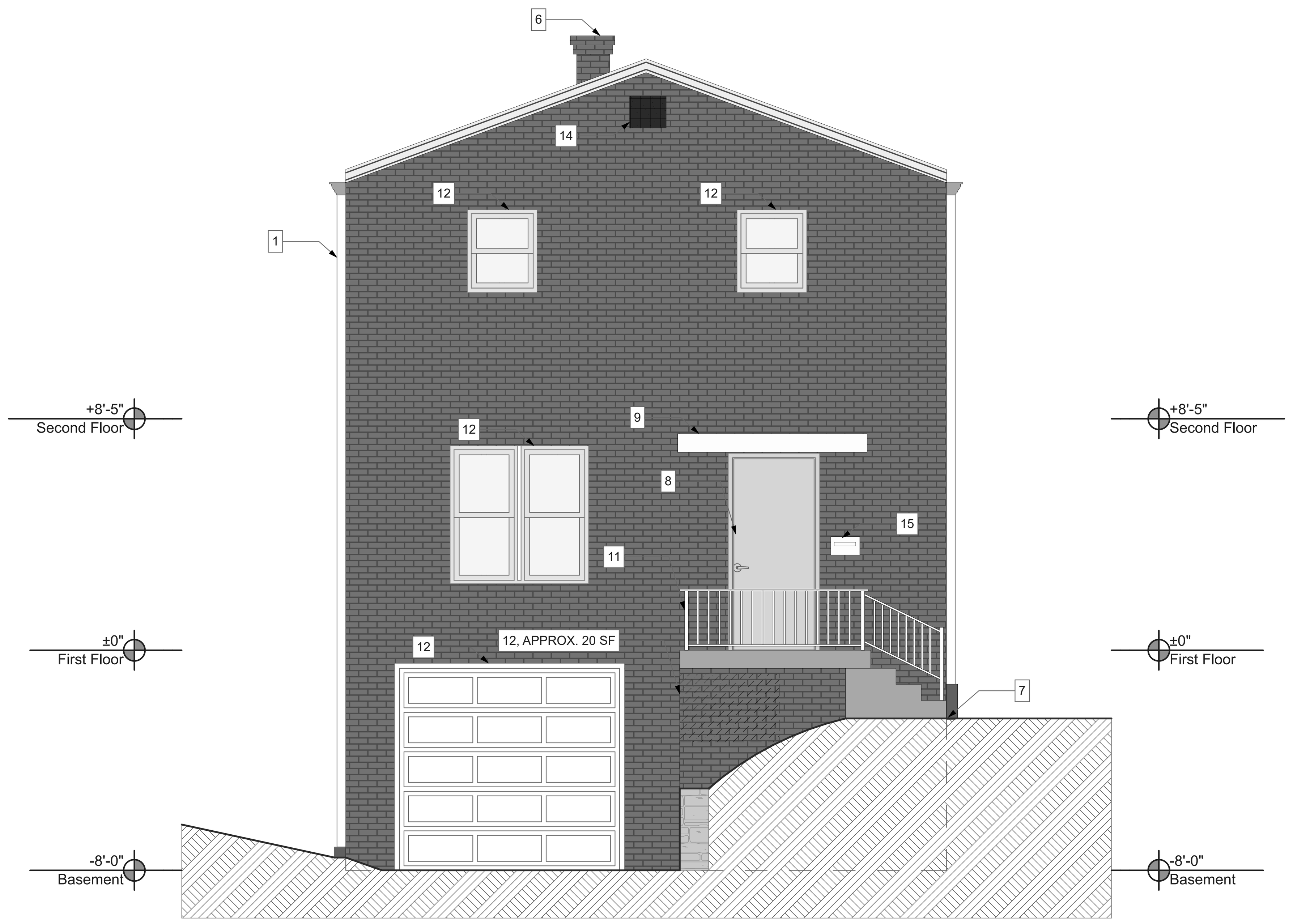
drawing title

Basement, First Floor, Second Floor, Renovation Plan Legend, Keynotes, Floor Plan Legend

scale: As Noted	Sheet No.
date: August 20th, 2024	A3
no. 3 of. 9	Project #2326



1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 2344 Palm Beach Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. CHIMNEY TOP (GC): Remove existing mortar cap and top section of terra cotta flue liner. Provide new flue liner section and new sloped mortar cap. See Specifications
7. BACKYARD ACCESS WALK (GC): At edge of walk to house, provide new backer rod and caulk to seal, approximately 60 lf. See Specifications
8. FRONT DOOR (GC): Remove existing front exterior door, frame and threshold, provide new 1 3/4" insulated wood look fiberglass door (with 3 lites sim. to existing), door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
9. ENTRANCE CANOPY (GC): At this location, provide new 52" wide x 36" deep, concave style aluminum entrance canopy properly fastened, flashed and sealed to exterior.
10. CONCRETE BLOCK ADDITION AT REAR (GC): At entire façade (3 SIDES) of block addition, strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the decorative block railing above.
11. RAILING AT ENTRY (GC): Sandblast to clean railing and remove all rust. Prime with zinc rich primer and repaint railing. See Specifications.
12. EXISTING BRICK VENEER (GC): At brick area noted, strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the entire chimney stack.
13. REAR FENCE (GC): Replace approximately 30' of stockade fence along rear property line. See Specifications.
14. ATTIC GRILLE (M): Replace ventilation grille with new.
15. MAILBOX (GC): Provide new mailbox mounted to exterior wall.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope and at plywood cover, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. See Specifications.
18. GARAGE DOOR TO HOUSE (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.

Interior Basement & Addition

19. WATER HEATER (P): Water Heater AO Smith 40 Gal. with a 6 Yr Warranty. The Water Heater appears to be in good condition and does not show signs of failure. Provide Inspection of unit by a qualified Plumbing Contractor. See Specifications.
20. FURNACE (M): Furnace is a Carrier Weathermaker 9200 and has an efficiency rating of 95.5%. The last year of manufacture of this unit is 2001, making this unit at a minimum 23 years old. Replace unit with new. Seam seal all exposed duct seams within basement. Seam seal and insulate all ductwork running in unconditioned space, e.g. Garage. See Specifications.
21. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 305 sf). See Specification.
22. ADDITION TO OUTSIDE DOOR (GC): Remove existing exterior door, frame and threshold, provide new 1 3/4" insulated metal door, door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
23. REAR PORCH ADDITION (GC): Clean and repoint concrete block (approx. 200 sf), provide new block for filler (approx. 10 sf). Reset concrete block railing entirely (approx. 40 linear ft). See Specifications.
24. BASEMENT STAIR (GC): Remove worn carpeted stair and stringer carpet. Sand and paint existing exterior wood stair, treads, risers, stringers and railing. Provide new non-slip rubber treads covering full width and depth of tread as well as nosing. Re-attach handrail. See Specifications.
25. WALLS (GC): Replace damaged paneling on front wall.
26. CEILING (GC): Install new grid and ceiling tile (approx. 305 sf).

Interior First Floor

27. KITCHEN BULKHEAD LIGHTING (E): At existing bulkhead recessed fluorescent lighting, remove lighting and properly dispose of. Patch and paint bulkhead to match. Provide new LED surface mounted strop lights. Remove exhaust fan and patch ceiling. See Specifications.
28. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Adjust doors and drawers to level and ensure smooth operation. Install new cabinet handles. See Specifications.
29. KITCHEN SINK AND FAUCETS (P): Provide new Kitchen sink faucet and drain.
30. KITCHEN FLOORING (GC): Kitchen flooring: Remove and replace kitchen flooring and wall base. Prep subfloor, smooth and level. Provide new LVT finish flooring and 4" rubber cove base.
31. KITCHEN TO OUTSIDE DOOR (GC): Paint frame to finish and trim with new synthetic wood trim, re-caulk to seal. See Specifications.
32. LIVING ROOM (M): Replace thermostat with programable thermostat.

Second Floor / Attic

33. MAIN STAIRWAY (GC): At main stairway, remove existing handrail, sand, stain and refinish handrail. Patch and paint existing and old mounting holes. Re-fasten handrail to studs to assure solid mounting. See Specifications
34. BATHROOM (M): Provide new exhaust fan wired to light circuit and vented to the exterior.

Fukui Architects Pc
205 Ross Street
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ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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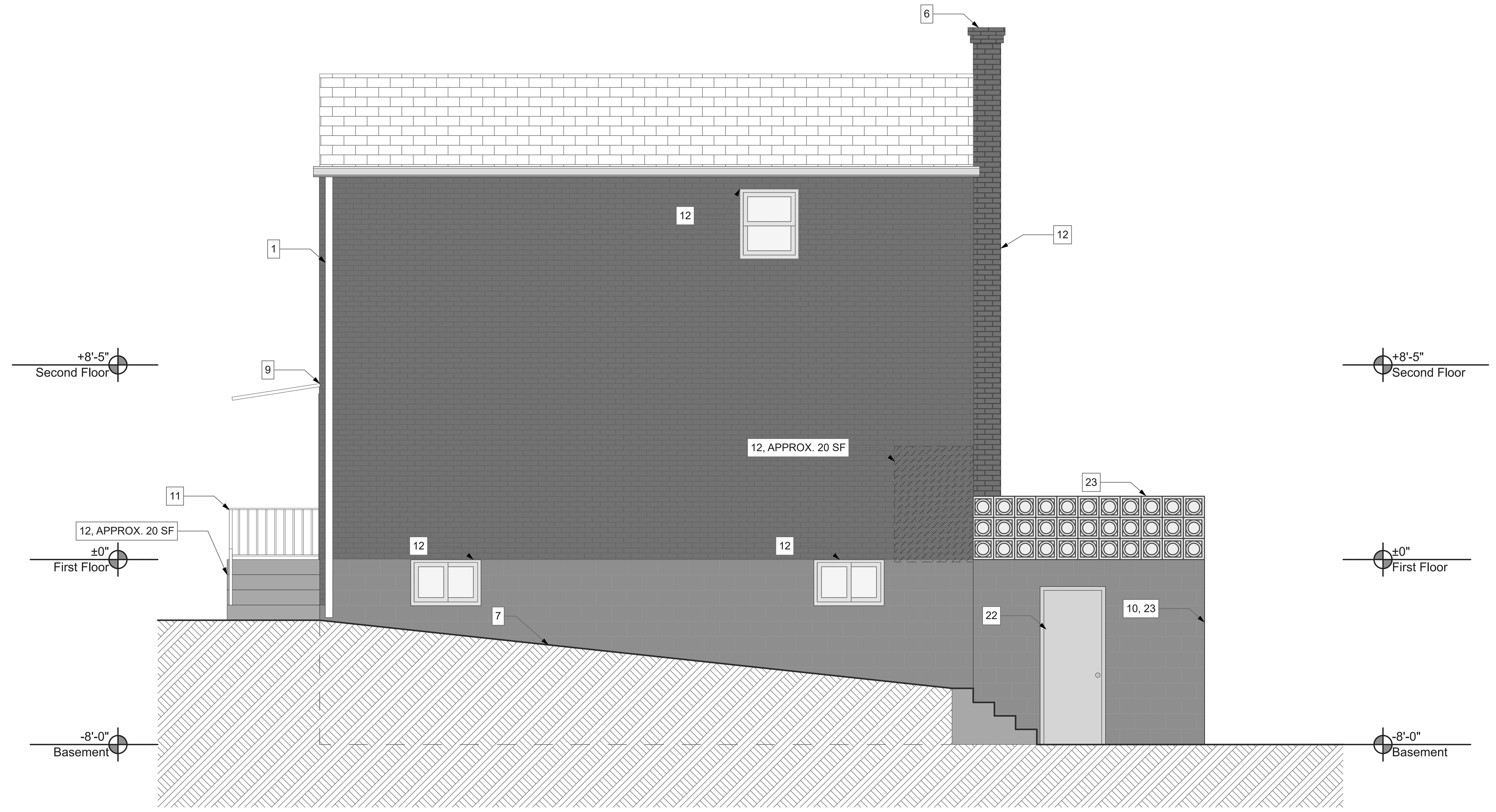
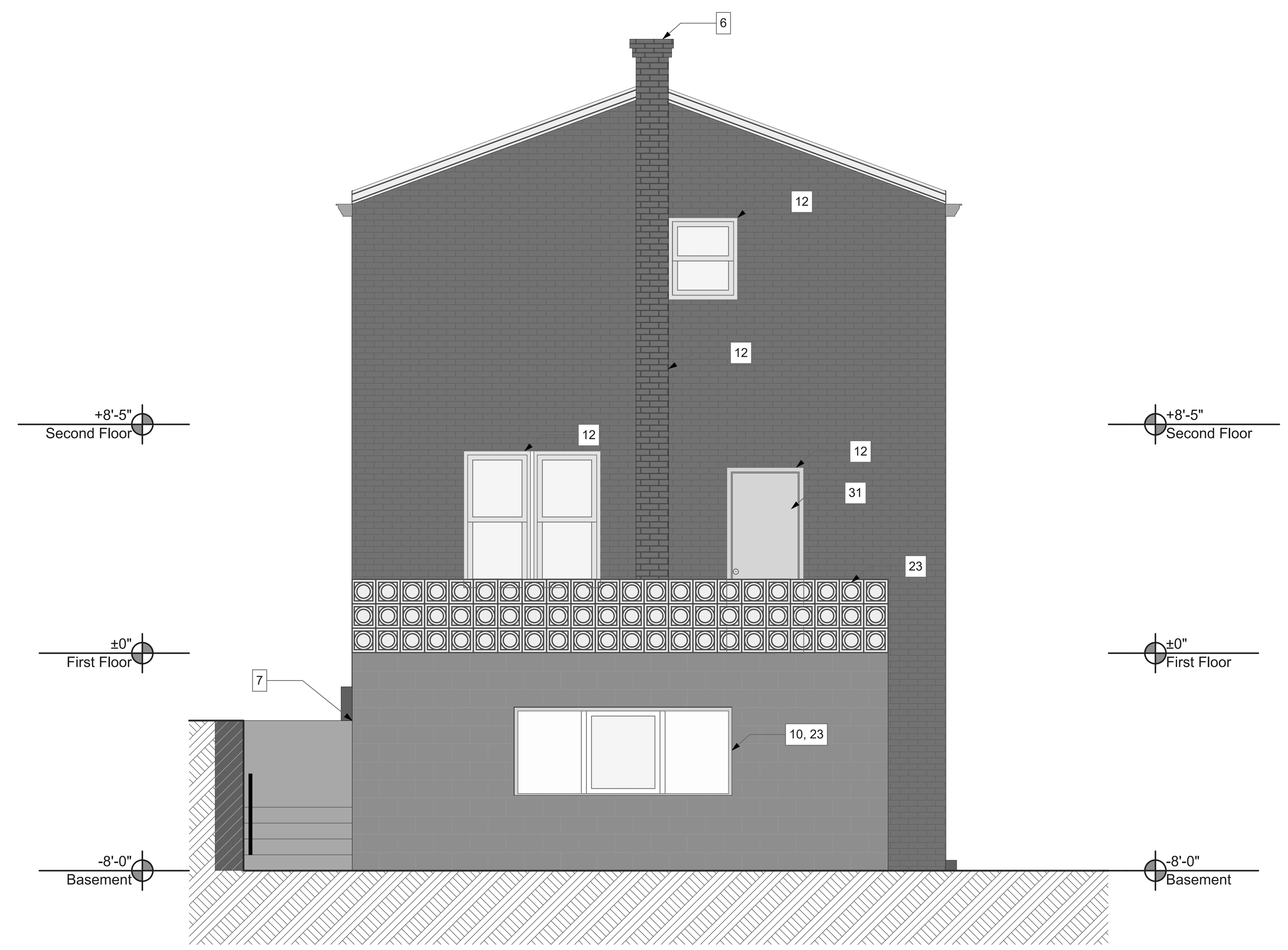
drawing title

South Elevation, East Elevation, Keynotes

scale	Sheet No.
As Noted	A4
date: August 20th, 2024	
no. 4 of. 9	Project #2326



1 North Elevation
SCALE: 1/4" = 1'-0"



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SCALE: 1/4" = 1'-0"

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seal

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North Elevation, West Elevation, Keynotes

scale	Sheet No.
As Noted	
date	A5
August 20th, 2024	
no. 5 of. 9	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT
WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT
WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT
WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT
WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2344 Palm Beach Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A6**
no. 6	of. 9
	Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL
WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES
WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK
SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES
SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS
PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING
EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING
SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS
PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS
FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS
ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS
QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    A. SOLID COLORS, MATTE FINISH.
    B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    C. WOOD GRAINS, MATTE FINISH.
    D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS
BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM
GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION
GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS
INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING
VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE
BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE
INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS
SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS
REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING
ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS
BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS
PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP
GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING
BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX
NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT
RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2344 Palm Beach Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A7**
no. 7 **of.** 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAUST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:
- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2344 Palm Beach Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no. 8 of. 9

Sheet No.
A8
Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:

- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.

USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.

2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**

3. All work shall be installed in accordance with applicable codes and regulations.

4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.

5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.

6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2344 Palm Beach Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted
date August 20th, 2024
no. 9 **of.** 9

Sheet No.
A9
Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Dagmar Avenue
Single Family Residence, Minor Alteration
1630 Dagmar Avenue,
Pittsburgh, Pennsylvania 15216

Drawing Index

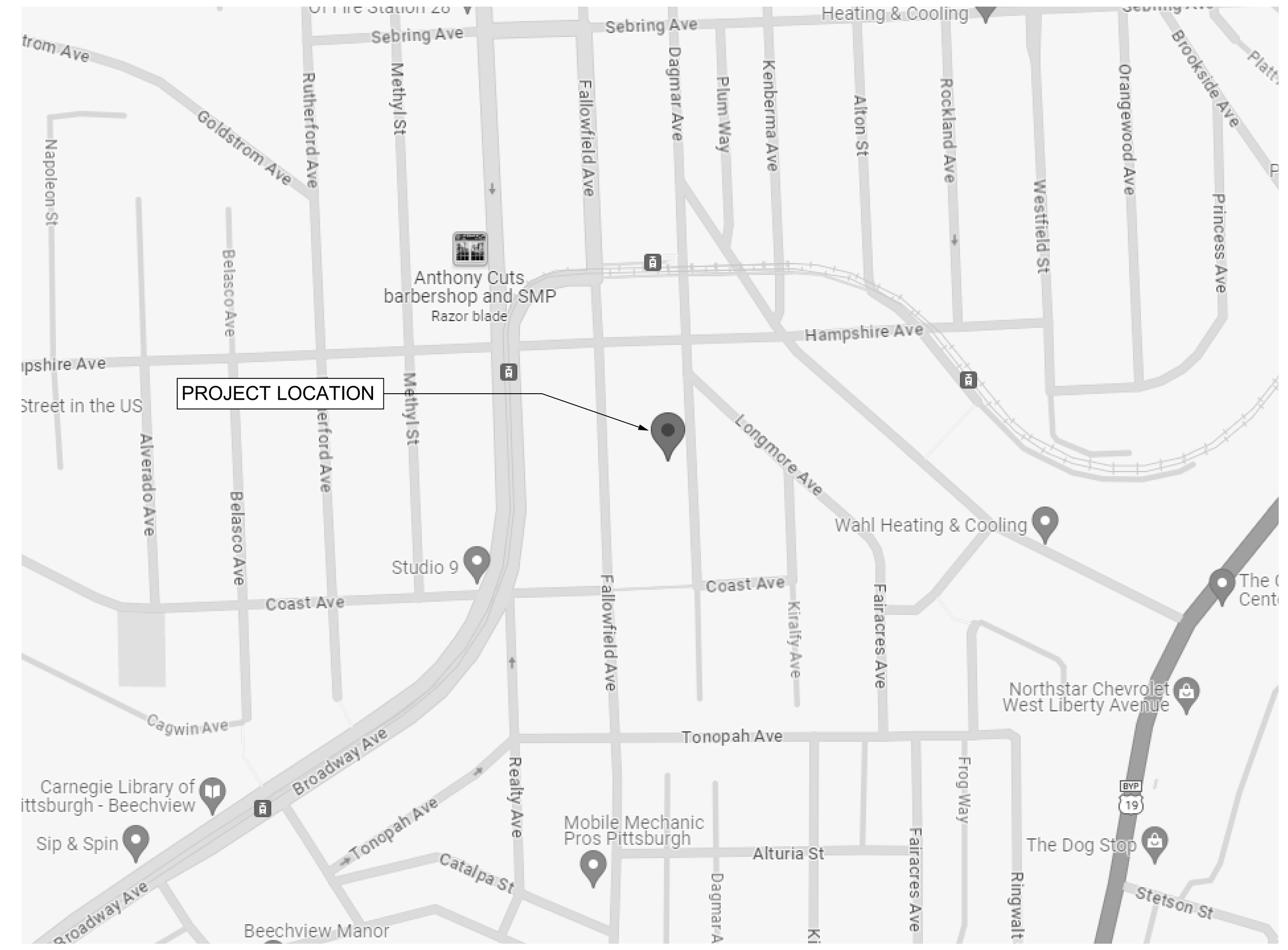
Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 390 sqft + Garage 234 sqft
	1st Floor 625 sqft
	2nd Floor 625 sqft



1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor	EQUIP.	Equipment	MISC.	Miscellaneous
A.P.	Access Panel	E.F.	Exhaust Fan	N.I.C.	Not In Contract
ACOUST.	Acoustical	EXIST.	Existing	N.T.S.	Not To Scale
A.C.T.	Acoustical Ceiling Tile	EXP.	Expansion	O.C.	On Center
ADH.	Adhesive	E.J.	Expansion Joint	OPP.	Opposite
ADJUST.	Adjustable	ESH	Exterior Sheathing	O.H.	Overhead
A/C	Air Conditioning	EXIST.	Existing	PR.	Pair
ALT.	Alteration	EXP.	Exposed	PLAS.	Plaster
ALTN.	Alternate	EXT.	Exterior	PLAS.LAM.	Plastic Laminate
ALUM.	Aluminum	E.I.F.S.	Exterior Insulation & Finish System	P.C.	Plumbing Contractor
A.O.R.	Area of Refuge	F.R.P.	Fiberglass Reinforced Polyester	PLYWD.	Plywood
APPROX.	Approximate	F.F.	Finish Floor	POLY.	Polyethylene
ARCH.	Architectural	FIN.FLR.	Finish Floor	P.V.C.	Polyvinyl Chloride
ASB.	Asbestos	F.A.C.P.	Fire Alarm Control Panel	PRE-FAB.	Prefabricated
ASPH.	Asphalt	F.E.	Fire Extinguisher	RE.	Refer To
AUTO.	Automatic	FLR.	Floor	REF.	Refrigerator
AVG.	Average	F.D.	Floor Drain	R.C.P.	Reinforced Concrete Pipe
BLK.	Block	FTG.	Footing	REINF.	Reinforcement
BD.	Board	GA.	Gauge	RD.	Roof Drain
BOT	Bottom	G.C.	General Contractor	RM.	Room
BLDG	Building	G.F.I.	Ground Fault Interrupter	S.A.T.	Suspended Acoustical Tile
C.I.P.	Cast In Place	GYP.	Gypsum	SCHED.	Schedule
C.B.	Catch Basin	G.W.B.	Gypsum Wall Board	SHT.	Sheet
CEM.	Cement	GSH	Gypsum Sheathing	SIM.	Similar
CER.	Ceramic	H/C	Handicap	S.C.	Solid Core
CG	Corner Guard	H.V.A.C.	Heating, Ventilation &	SPECS.	Specifications
C.M.T.	Ceramic Mosaic Tile	HT	Height	SQ.	Square
C.W.T.	Ceramic Wall Tile	HC	Hollow Core	S.F.	Square Foot
C.O.	Cleanout	H.M.	Hollow Metal	S.S.	Stainless Steel
℄	Center Line	HORIZ.	Horizontal	STL.	Steel
CLO.	Closet	HR.	Hour	STOR.	Storage
C.W.	Cold Water	H.W.	Hot Water	STRUCT.	Structural
CLG.	Ceiling	IN.	Inch	TEL.	Telephone
COL.	Column	I.M.	Insulated Metal	THK.	Thick
CONC.	Concrete	INSUL.	Insulation or Insulated	T.B.D.	To Be Determined
C.M.U.	Concrete Masonry Unit	INT.	Interior	T&G	Tongue & Groove
CONT.	Continuous	INV.	Invert	T.O.	Top Of
CORR.	Corridor	ISO.	Isolation	T.G.	Top Of Grade
C.M.P.	Corrigated Metal Pipe	JAN.	Janitor's Closet	T.O.S.	Top Of Steel
CRS.	Courses	J.T.	Joint	TYP.	Typical
DIA.	Diameter	LAM.	Laminate	UNFIN.	Unfinished
DET	Detail	LAV.	Lavatory	U.N.O.	Unless Noted Otherwise
DGL	Dens Glass Gold	LG.	Long	V.B.	Vapor Barrier
DR.	Door	M.D.F.	Medium Density Fiberboard	VERT.	Vertical
DN.	Down	M.D.H.	Magnetic Door Holder	VEST.	Vestibule
D.S.	Downspout	M.H.	Manhole	V.C.T.	Vinyl Composition Tile
DWG.	Drawing	MFGR.	Manufacturer	W.H.	Water Heater
D.F.	Drinking Fountain	MAX.	Maximum	W.W.F.	Welded Wire Fabric
D.I.P.	Ductile Iron Pipe	MECH.	Mechanical	WIN.	Window
EA.	Each	MET.	Metal	W/	With
E.W.	Each Way	MIN.	Minimum	W/O	Without
ELEC.	Electrical			WD.	Wood
E.C.	Electrical Contractor				
EL.	Elevation				
ELEV.	Elevation				

Symbols

NOT ALL SYMBOLS USED

Symbol	Description
T.O. FINISH FLOOR ELEV: 0'-0"	ELEVATION HEIGHT
PLAN NORTH	NORTH ARROW
0 4' 8' 16'	GRAPHIC SCALE
1 A-000	BUILDING/ WALL SECTION MARKER
1 A1	ELEVATION MARKER
1 / 4 A-000 2 / 3	INTERIOR ELEVATION MARKER
1 A1	DETAIL REFERENCE
XXX-X	FINISH MATERIAL DESIGNATOR

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Pittsburgh, Pennsylvania 15219
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seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

⚠1 Bidding Addendum 04.01.2025

project title

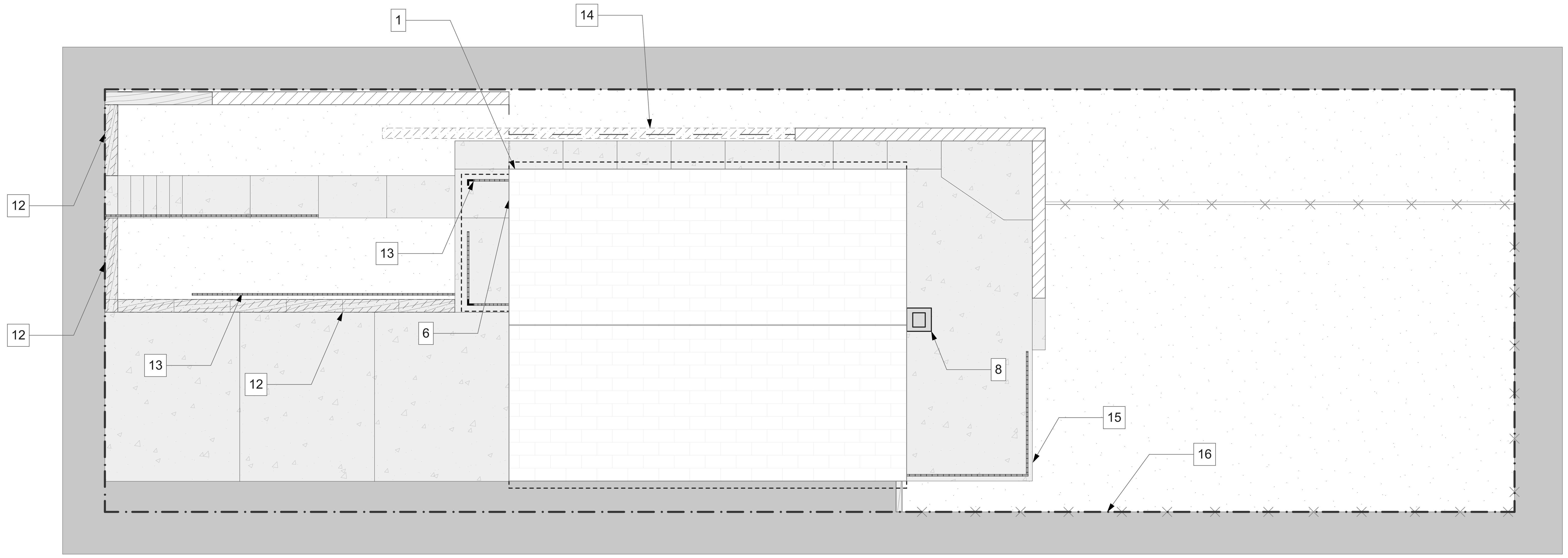
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Drawing Index, Code Conformance Information, Site Location, Abbreviations and Materials

scale: As Noted	**Sheet No.**
date: August 20th, 2024	**A1**
no. 1 of. 9	Project #2326



PLAN NORTH

1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND				
GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

<u>10 Scattered Sites Keynotes – 1630 Dagmar Ave</u>

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. NEW MAILBOX (GC): Provide and install new mailbox per Specifications.
7. EXISTING ENTRANCE CANOPY (GC): Clean and repair portico soffit. Provide new extend perimeter track 1 ½". Remove wall flashing, install new properly installed aluminum step flashing tucked into mortar joints. Caulk to seal. See Specifications.
8. CHIMNEY TOP (GC): Remove existing cracked mortar chimney cap. Provide new sloped mortar cap. See Specifications
9. BRICK SILLS (GC): Repoint and replace missing bricks on front window sills. See Specifications.
10. BRICK WALL (GC): Power wash brick wall in this area (approx. 20 sf).
11. BRICK WALL LINTELS (GC): Scrape and paint lintels over garage and all windows.
12. DRIVEWAY RETAINING WALL (GC): Replace deteriorated wood 6x6 retaining wall with new (approx. 30 linear ft x 3ft high). Provide gravel backfill and weeps. Remove yellow jackets next within existing wood wall. See Specifications.
13. ENTRANCE RAILING (GC): Scrape clean and repaint existing metal railing. Re-set in concrete patio to fasten securely.
14. SIDE WALKWAY (GC): At this location remove disintegrated stone rubble from walkway. At this end of existing retaining wall, for approximately 12 ft, remove and restack existing retaining wall approximately 4 course high. Continue 4 course high dry stack retaining wall for approximately 30 ft towards the street.
15. WATERPROOFING (GC): Pull back soil from porch. Repoint and prep block wall to receive new foundation waterproofing (approx. 50 sf). Provide waterproofing and restore soil to slope away from structure. See specifications.
16. FLORA (GC): Pull overgrown vegetation and debris away from wooden fence to create break between decaying material, soil and fence boards.

Interior Garage

17. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand, and paint new GWB to finish. See Specifications.
18. GARAGE CEILING (E): Provide new light over garage door.
19. SOIL STACK (P): Remove and replace cast iron soil stack at this location with new cast iron with all connections to existing sanitary sewer system and clean-out at base. See Specifications.
20. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
21. SEAL GARAGE WALL (GC): At this location, provide new caulk to seal non-structural crack at corner of garage wall, approximately 8'-0" in length.

Interior Basement

22. WATER HEATER (P): Water Heater 2021 AO Smith 40 Gal. with a 6 Yr Warranty the Water Heater appears to be appears to be in good condition and does not show signs of failure. Service.
23. FURNACE (M): Existing Furnace is +/-34 years old. Replace furnace with new per Specifications. Seam seal all exposed duct seams within basement. Seam seal and insulate all ductwork running in unconditioned space, e.g. Garage. See Specifications.
24. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 310 sf). See Specification.
25. BASEMENT CEILING (GC): Replace existing ceiling tile w/ new (approx. 310 sf).
26. BASEMENT WALLS (GC): Clean wall paneling (approx. 800 sf).
27. BASEMENT WALL BY FURNACE (GC): Provide new painted moisture resistant GWB finish on back of this wall (approx. 50 sf).
28. BASEMENT LIGHTING (E): Provide new replacement ceiling lighting and new Smoke/CO sensors. Add three new lighting locations. Locations to be determined. See Specifications.
29. BASEMENT ACCESS STAIR (GC): Clean and paint basement stair handrail. Remove existing and provide new vinyl non-slip tread covers at each tread. See Specifications
30. GLASS BLOCK WINDOW (GC): Clean and re-seal existing glass block window.

Interior First Floor

31. KITCHEN KNEE WALL (GC/M): Repair existing knee wall. Provide new white grille/register properly installed.
32. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Adjust doors and drawers to level and ensure smooth operation, Provide new door and drawer pulls. See Specifications.
33. KITCHEN STOVE/OVEN VENT HOOD (GC/E/M): Remove and replace the existing stove/oven and kitchen vent hood. Provide new kitchen exhaust vent hood ventilated to exterior. See Specifications.
34. FLOOR FINISH (GC): Remove existing carpet and VCT floor finish throughout first floor and stairs. Prep subfloor and provide new LVT floor finish and wall base in kitchen. Sand and re-finish existing wood floors in previously carpeted areas. See Specification.
35. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting. Repair leaking plumbing line above. Provide new finished and painted GWB ceiling (approx. 140 sf) and new lighting per Specifications.
36. LIVING ROOM (M): Replace thermostat with programable thermostat.
37. WINDOWS (GC): Clean tape residue from window's interior.

Second Floor / Attic

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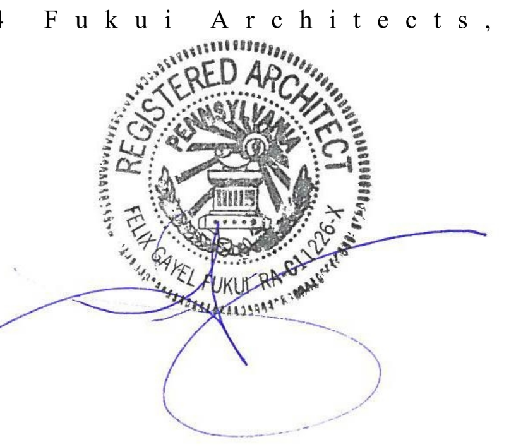

seal

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revisions

1 Bidding Addendum 04.01.2025

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Pittsburgh,Pennsylvania,15219

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1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Site Plan, Site Plan Legend, Keynotes

scale	Sheet No.
As Noted	A2
date: August 20th, 2024	
no. 2 of. 9	Project #2326

FLOOR COVERING PLAN LEGEND

VCT FLOORING — CONCRETE FLOORING — CARPET FLOORING

LVT FLOORING — WOOD FLOORING

10 Scattered Sites Keynotes – 1630 Dagmar Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

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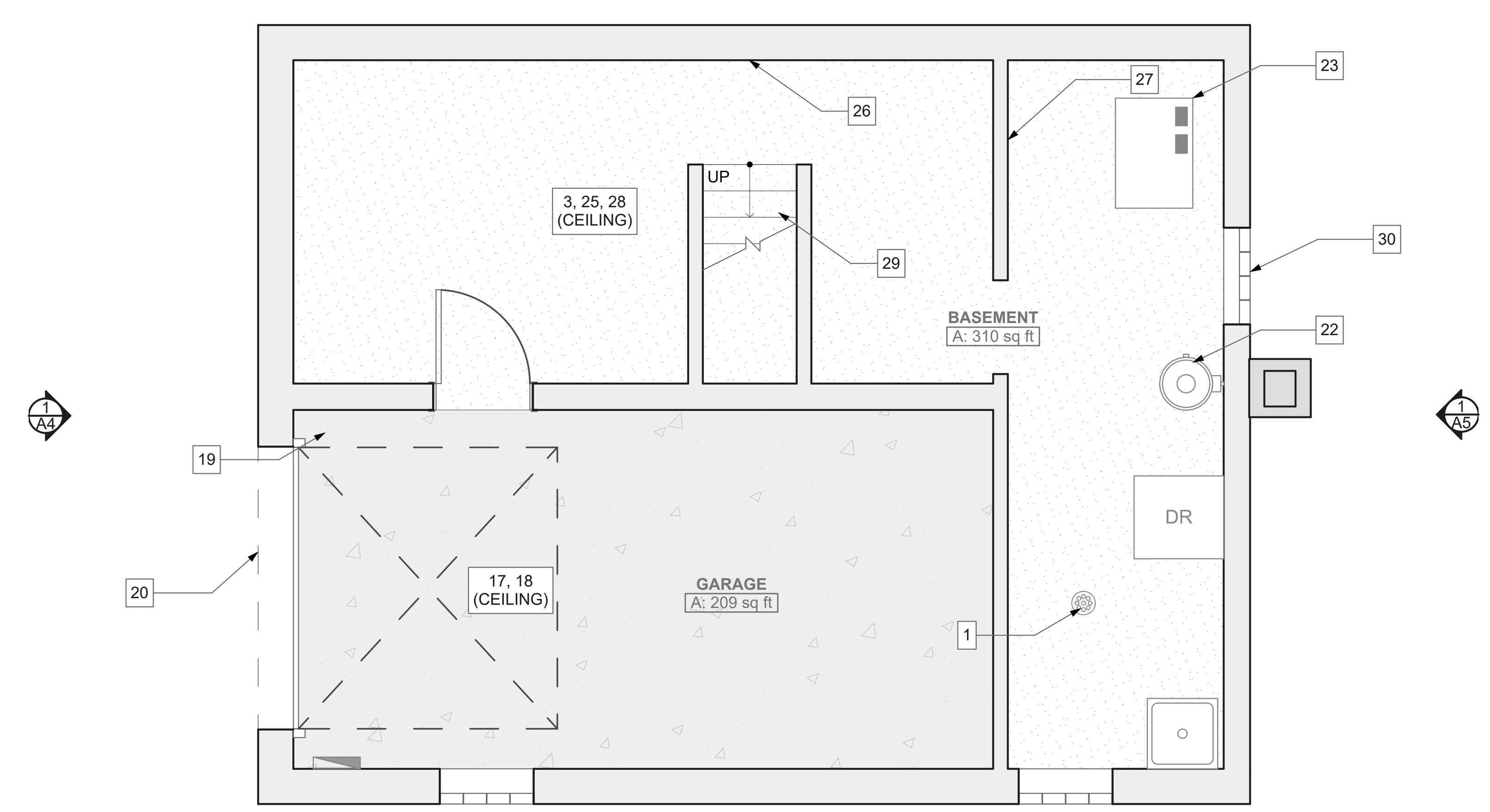
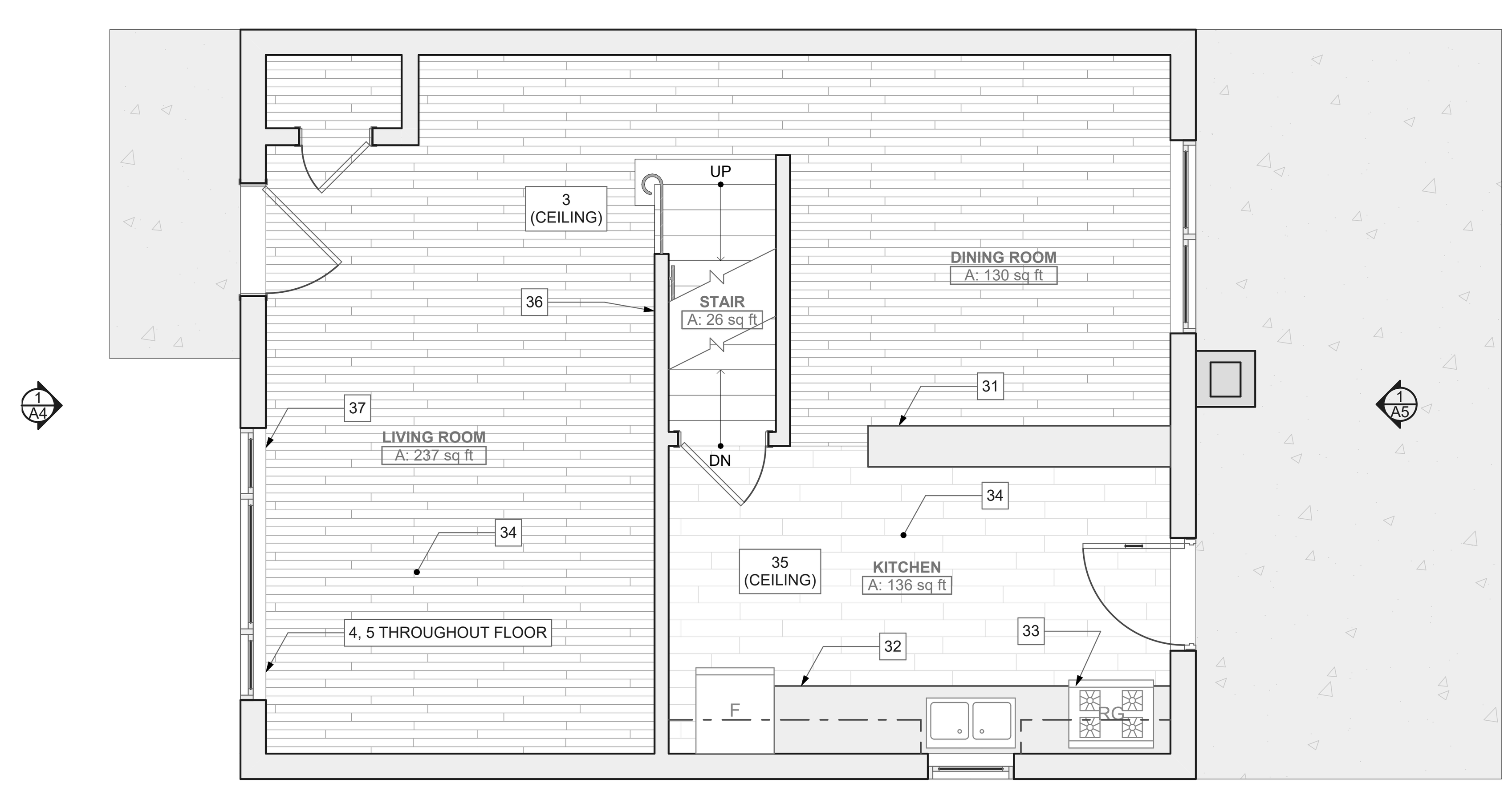
GENERAL FLOOR PLAN NOTES

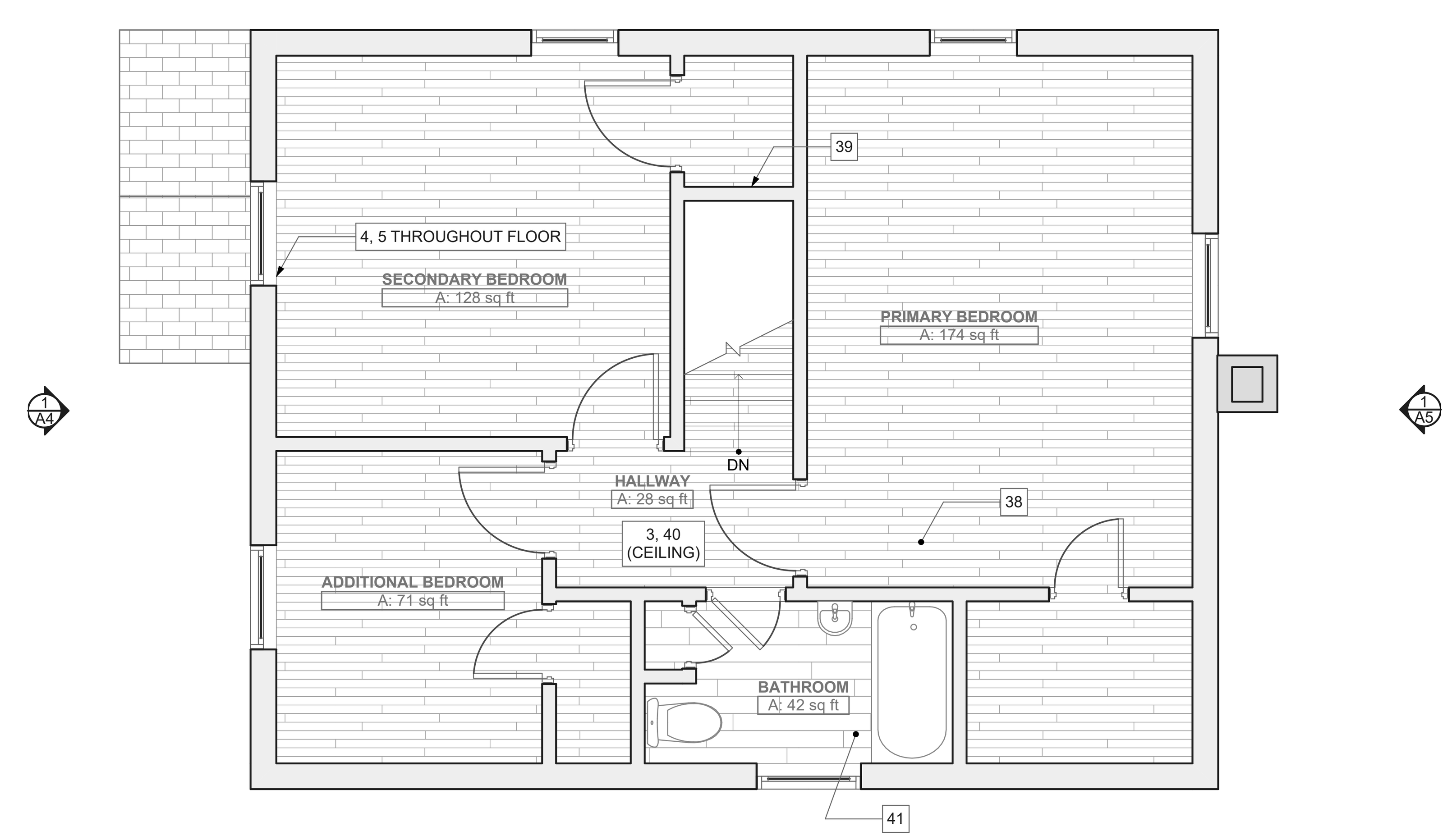
1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc
205 Ross Street
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ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT PENNSYLVANIA

seal

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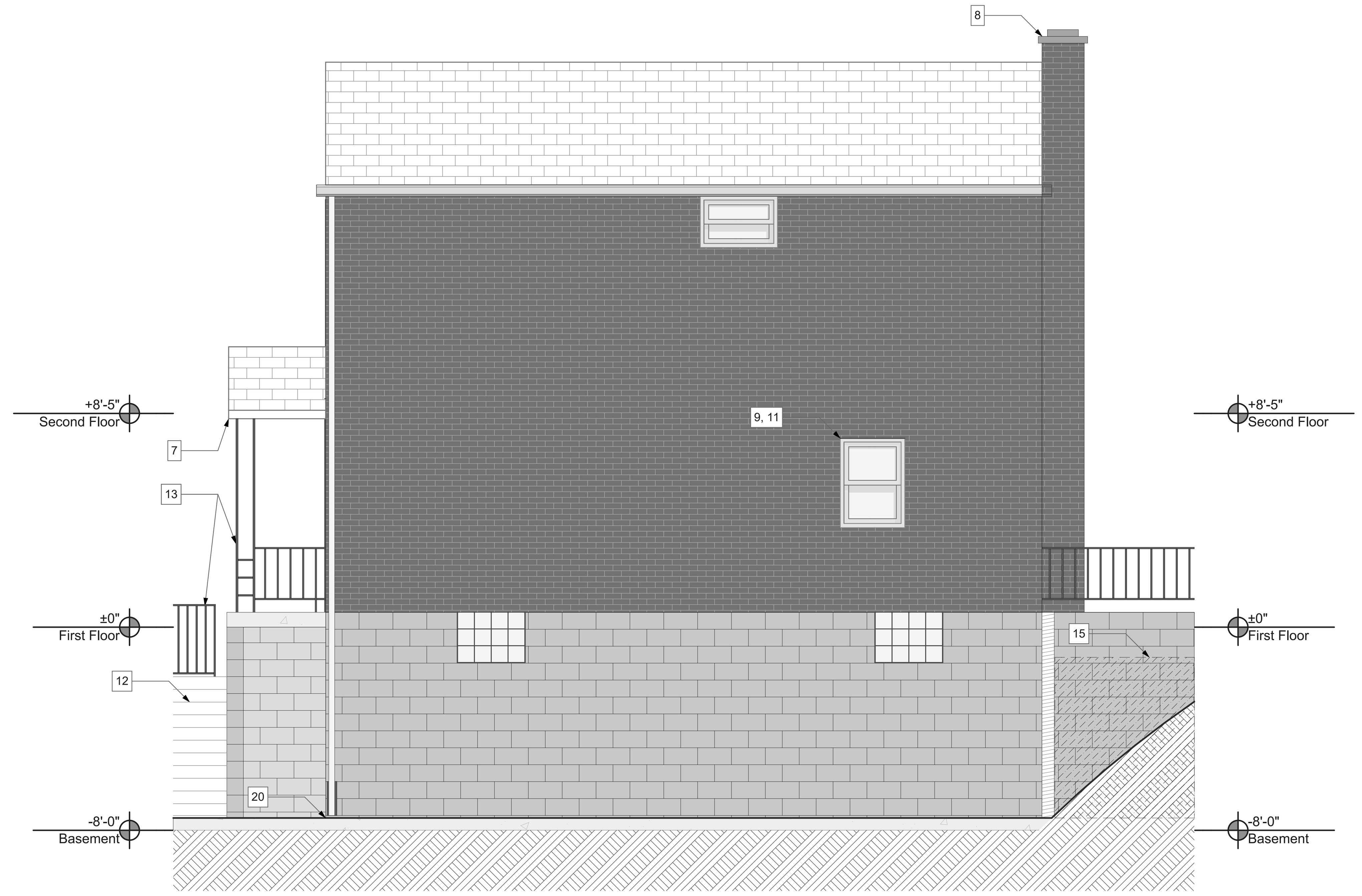
drawing title

Basement, First Floor, Second Floor, Demolition Plan Legend, Floor Plan Legend, Keynotes

scale	Sheet No.
As Noted	A3
date: August 20th, 2024	
no. 3 of. 9	Project #2326



1 South Elevation
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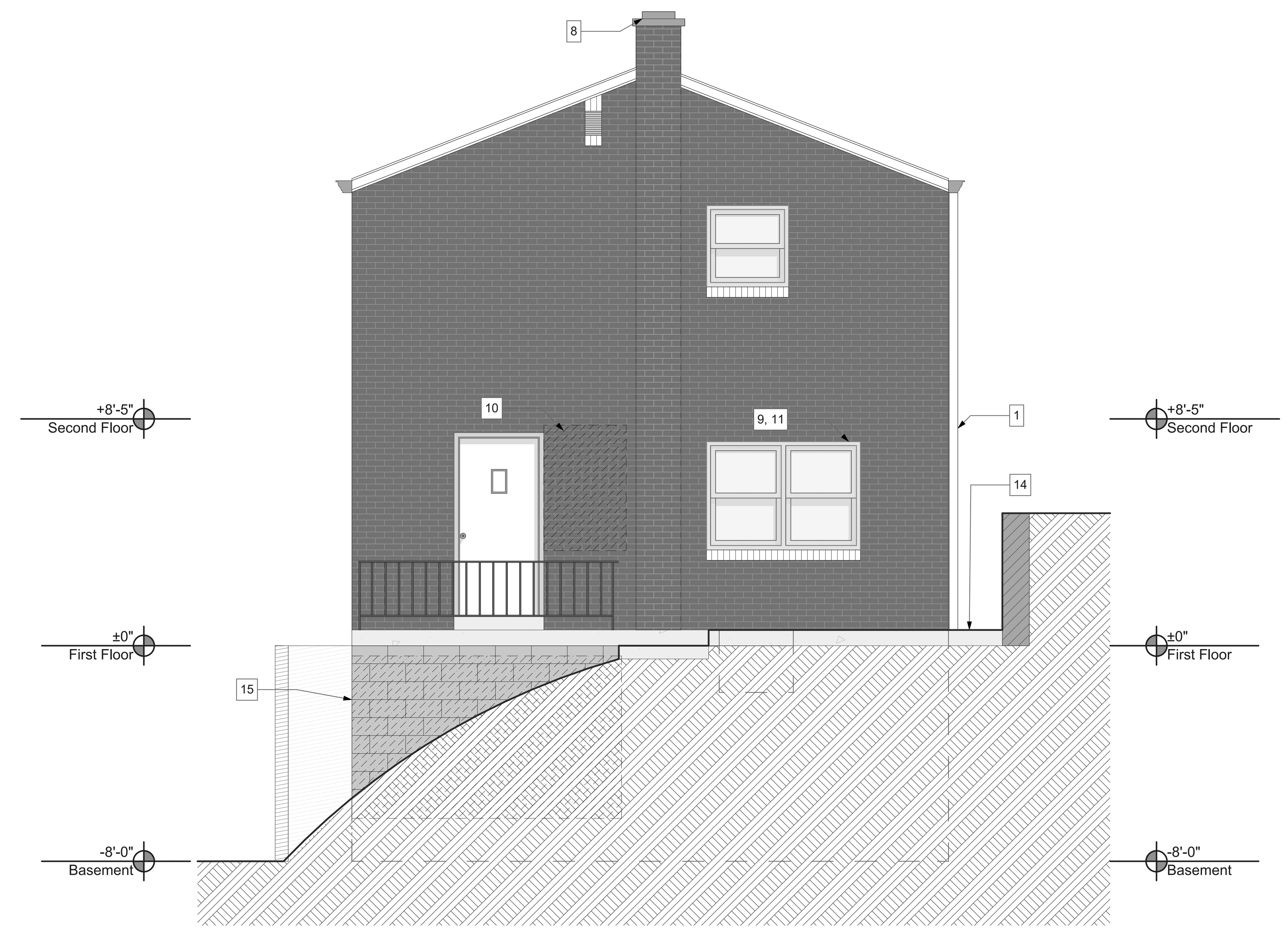

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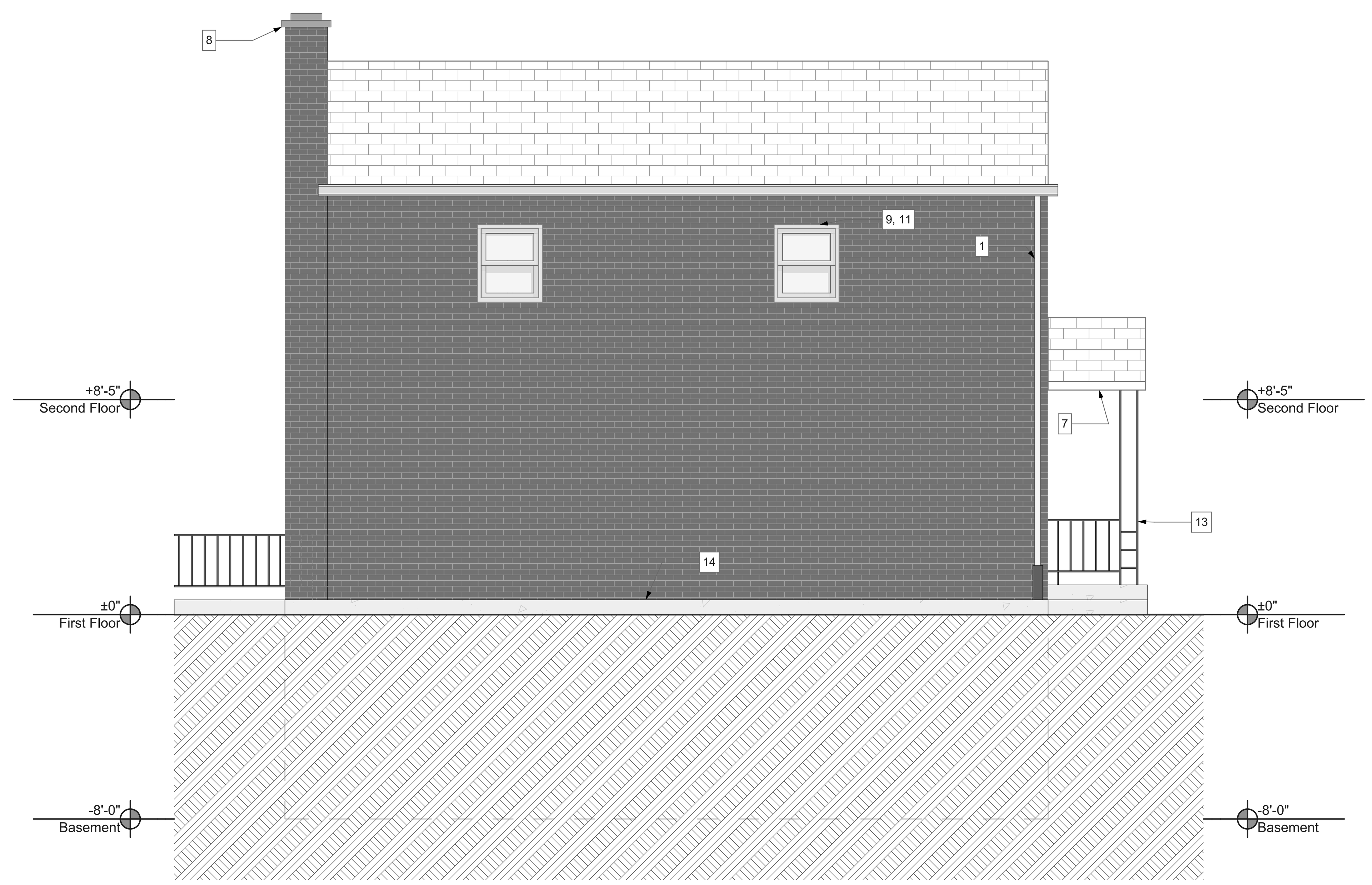
South Elevation, East Elevation, Keynotes

scale: As Noted	**Sheet No.**
date: August 20th, 2024	**A4**
no. 4 / of. 9	Project #2326



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25. BASEMENT CEILING (GC): Replace existing ceiling tile w/ new (approx. 310 sf).
26. BASEMENT WALLS (GC): Clean wall paneling (approx. 800 sf).
27. BASEMENT WALL BY FURNACE (GC): Provide new painted moisture resistant GWB finish on back of this wall (approx. 50 sf).
28. BASEMENT LIGHTING (E): Provide new replacement ceiling lighting and new Smoke/CO sensors. Add three new lighting locations. Locations to be determined. See Specifications.
29. BASEMENT ACCESS STAIR (GC): Clean and paint basement stair handrail. Remove existing and provide new vinyl non-slip tread covers at each tread. See Specifications
30. GLASS BLOCK WINDOW (GC): Clean and re-seal existing glass block window.

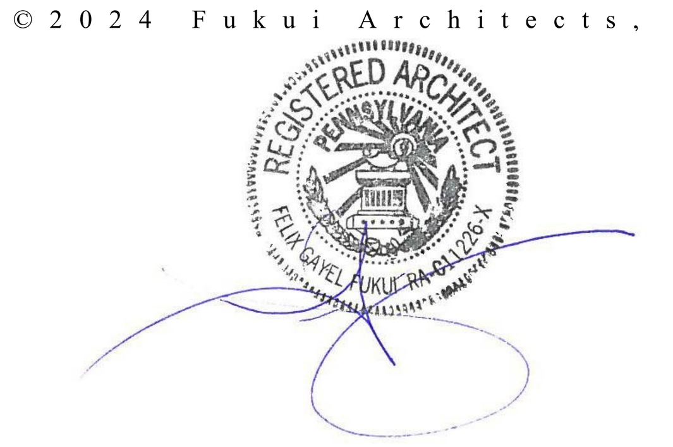
Interior First Floor

31. KITCHEN KNEE WALL (GC/M): Repair existing knee wall. Provide new white grille/register properly installed.
32. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Adjust doors and drawers to level and ensure smooth operation, Provide new door and drawer pulls. See Specifications.
33. KITCHEN STOVE/OVEN VENT HOOD (GC/E/M): Remove and replace the existing stove/oven and kitchen vent hood. Provide new kitchen exhaust vent hood ventilated to exterior. See Specifications.
34. FLOOR FINISH (GC): Remove existing carpet and VCT floor finish throughout first floor and stairs. Prep subfloor and provide new LVT floor finish and wall base in kitchen. Sand and re-finish existing wood floors in previously carpeted areas. See Specification.
35. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting. Repair leaking plumbing line above. Provide new finished and painted GWB ceiling (approx. 140 sf) and new lighting per Specifications.
36. LIVING ROOM (M): Replace thermostat with programable thermostat.
37. WINDOWS (GC): Clean tape residue from window's interior.

Second Floor / Attic

38. FLOOR FINISH (GC): Remove existing Carpet floor finish throughout second floor. Provide new LVT floors over existing hardwood floors. With new stained or painted ¼ round at wall base. At bathroom provide new LVT flooring, wall base and threshold. See Specification.
39. ATTIC ACCESS DOOR (GC): At this location, provide new insulated hinged attic access door in existing opening.
40. ATTIC INSULATION (GC): Provide new min R-38 blown in Attic Insulation (approx. 450 sf). Verified with initial depth. Take care not to cover air circulation channels. See Specifications.
41. BATHROOM (GC/E/P/M): In second floor bathroom: Remove and replace entirely existing tub tile surround, medicine cabinet, tub/shower faucet and drain, sink faucet and drain, and toilet. Provide new rod and shower curtain. Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. Provide new towel bar/s. Robe Hook, Grab bar and toilet roll holder. See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002



seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

North Elevation, West Elevation, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	A5
no. 5 / of. 9	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT
WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT
WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT
WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT
WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.

(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.

(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.

(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.

(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.

(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.

(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.

(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.

(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.

(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".

(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.

(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.

(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.

(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.

(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."

(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.

(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.

(B)APPROVAL OF EQUIPMENT AND MATERIALS.

(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.

(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.

(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.

(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.

(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.

(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.

(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.

(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.

(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.

(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.

(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.

(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.

(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.

(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.

(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.

(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.

(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.

(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.

(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.

(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.

(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.

(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.

(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.

(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.

(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.

(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.

(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.

(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.

(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.

(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.

(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.

(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.

(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.

(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.

(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.

(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.

(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.

(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.

(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.

(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.

(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.

(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.

(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.

(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.

(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.

(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.

(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.

(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	Sheet No.
date August 20th, 2024	A6
no. 6 of. 9	Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL
WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES
WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK
SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES
SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS
PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING
EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING
SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS
PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS
FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS
ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS
QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    A. SOLID COLORS, MATTE FINISH.
    B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    C. WOOD GRAINS, MATTE FINISH.
    D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS
BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM
GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION
GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS
INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING
VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE
BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE
INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS
SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS
REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING
ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS
BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS
PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP
GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING
BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX
NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT
RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted
date August 20th, 2024
no. 7 **of.** 9

Sheet No.
A7
Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED

STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED

GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED

FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK

FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB

FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES

SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS

PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS

ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS

ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS

UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS

ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING

SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING

POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING

DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES

VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION

ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION

ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING

ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS

FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT

THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.

  - CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
  - LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
  - FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
  - AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.

  - FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
  - SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:

  - GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
  - IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:

  - ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
  - FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
  - LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:

  - TYPE: NATURAL.
  - VENTING TYPE: WITH COMBUSTION-AIR INTAKE
  - MINIMUM EFFICIENCY AFUE: 80 PERCENT.
  - INPUT: SEE SCHEDULE ON DRAWINGS.
  - HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
  - GAS CONNECTION SIZE: 1/2" NPS.
  - VENT SIZE: 4 INCHES.

FAN:

  - MOTOR: SIZE: 1/3 HP.
  - SPEED: SEE SCHEDULE ON DRAWINGS.
  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:

  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS

DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.

  - TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
  - ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:

  - FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:

  - VOLTS: 208 V.
  - PHASE: 1.
  - HERTZ: 60 HZ.

SHEET METAL

DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS

FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS

DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS

SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES

GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS

THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION

ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS

THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE

THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS

SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS

THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK

FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:

1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS

THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS

DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE

SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP

ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY

PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE

FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE

VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER

PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION

BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING

PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS

DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS

SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES

IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION

CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP

PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS

UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING

PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL

FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL

MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no.: 8
of.: 9

Sheet No.
A8
Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS
1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS
1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS
1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS
1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES
MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS
CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES
1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS
FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM
USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS.
USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS
1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE
METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION
USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.

USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL
ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION
PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS
1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1630 Dagmar Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale
As Noted
date
August 20th, 2024
no.
9
of.
9

Sheet No.
A9
Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Wolford St
Single Family Residence, Minor Alteration
2337 Wolford Street,
Pittsburgh, Pennsylvania 15216

Drawing Index

Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 372 sqft + 253 Garage
	1st Floor 624 sqft
	2nd Floor 624 sqft

1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
C̶L	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- T.O. FINISH FLOOR ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 A1 — ELEVATION MARKER

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

Site Location, Drawing Index, Code Conformance Information, Abbreviations and Materials

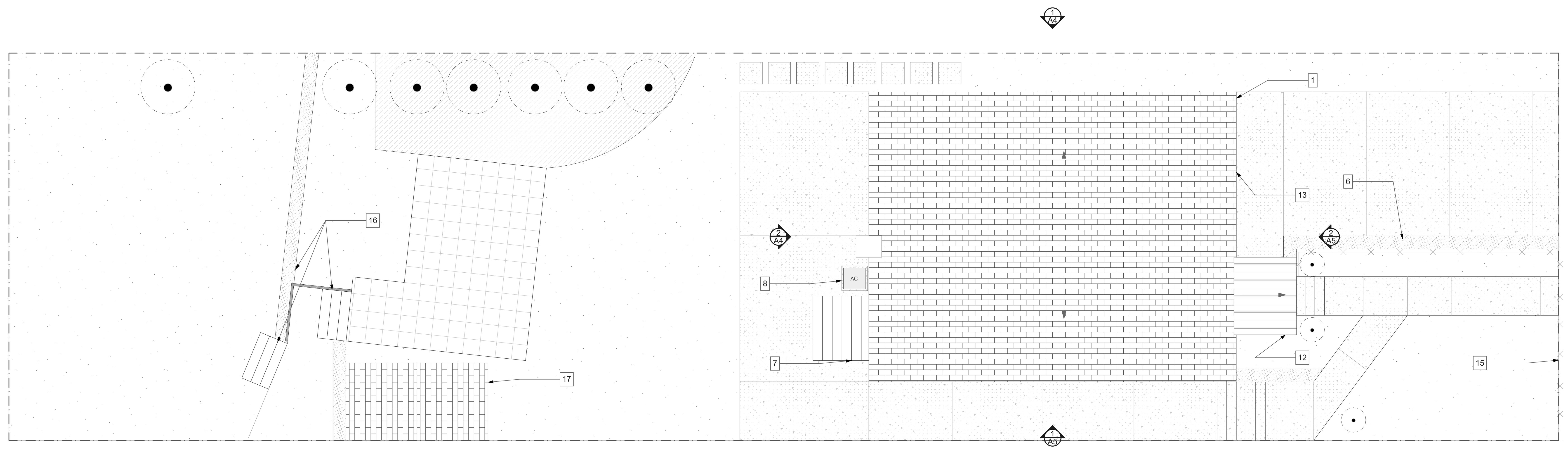
scale	As Noted
date	August 20th, 2024
no. 1	of. 9

Sheet No.

A1

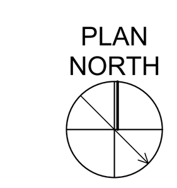
Project #2326

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002



seal

CONSTRUCTION DOCUMENTATION



1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

- GRASS
- MISC. BRICK
- AC CONDENSER
- RAILING
- TRUE ROOF OUTLINE
- LIGHTWEIGHT CONCRETE
- MULCHED AREA
- TREE / SHRUB
- TACTILE PAVING
- APPROX. PROPERTY LINE
- CONCRETE BLOCK
- STREET SIGNAGE
- STREET SIGNAGE
- MAN HOLE
- WINDOW WELL

10 Scattered Sites Keynotes - 2337 Wolford St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages.
3. SMOKE/CO DETECTORS: In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. EXTERIOR TIMBER RETAINING WALL (GC): At this location existing Pressure Treated Timber retaining wall is failing. Completely remove the existing wall and replace with new segmented concrete block retaining wall installed per Specifications (approx. 24 linear ft x 2 ft high).
7. EXTERIOR REAR STEPS (GC): Clean and paint exterior wood stairs. See Specifications.
8. EXTERIOR CONDENSER (M): Remove existing DX line insulation. Provide new insulation on both lines with aluminum jacketing to protect from solar degradation. See Specifications.
9. BRICK WINDOW SILLS (GC): Repoint window all sills. See Specifications.
10. BRICK WALL LINTELS (GC): Scrape and paint lintels over garage door and all windows.
11. BRICK WALL (GC): Clean and repoint brick in area and in quantity indicated. See Specifications.
12. ENTRANCE RAILING (GC): At this location, remove existing metal railing. Provide new entrance railing and securely fasten, similar to existing. See Specifications.
13. GARAGE TO DRIVEWAY SLAB JOINT (GC): Scrape to remove organic growth from existing joint down 1". Provide new backer rod and caulk to seal. See Specifications.
14. REAR EXTERIOR DOOR (GC): Remove caulking around back door and install new caulk.
15. FRONT FENCE (GC): Remove portion of chain-link fence (approx. 30 linear ft x 3 ft high) along sidewalk and replace with new including gate.
16. BACKYARD STEPS (GC): Replace existing landscape steps using new concrete dry laid steps. Rebuilding dry stack wall using new dry stack masonry units. See Specifications.
17. BACKYARD SHED (GC): Remove existing garden shed and wood platform (approx. 6 ft x 10 ft). Restore grading and reseed. See Specifications.

Garage

18. CLEAN OUT (P): Clean out miscellaneous shelves and properly dispose of. See Specifications.
19. SOIL STACK (P): Remove and replace cast iron soil stack at this location with new cast iron with all connections to existing sanitary sewer system and clean-out at base. See Specifications.
20. FLOOR DRAIN (P): Remove and replace garage floor drain grate with new automotive rated grate. Snake drain to clear.
21. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
22. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
23. GARAGE ENVELOPE (GC): At this location, where interior stair or beam penetrates garage wall, provide new spray foam insulation (neatly trimmed) to seal air infiltration between garage and residence. Provide finished 5/8" type "X" GWB finish to fully enclose opening with all edge and corner beads. Spackle, sand and paint new GWB to finish. See Specifications.
24. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. See Specifications.

Basement

25. WATER HEATER (P): Water Heater appears to be manufactured dated April of 2019 and does not show signs of failure. Service.
26. BASEMENT WALL FINISH (GC): At exterior basement walls, remove interior existing finish paneling and wall covering (approx. 500 sf). Provide new 2"x pressure treated kiln dried furring at 16" OC with 1 ½" closed cell rigid insulation between furring strips from floor to ceiling. Over furring, provide new 5/8" MR GWB finish, taped, spackled, sanded and painted with 4" rubber or vinyl cove base. See Specifications.
27. BASEMENT INTERIOR WALL (GC): Rebuild wall by furnace (approx. 20 sf).
28. BASEMENT TO OUTSIDE DOOR (GC): Remove existing basement to exterior door, frame and threshold, provide new 1 3/4" insulated metal door, door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
29. BASEMENT FINISHED CEILING (GC): Remove and replace existing suspended ceiling tiles (approx. 320 sf). Provide new moisture resistant tiles in existing suspended grid. Clean, prep and paint exposed ductwork and suspended grid to match tile color.
30. BASEMENT LIGHTING (E): Provide new replacement ceiling lighting and new Smoke/CO sensors. See Specifications.
31. BASEMENT FLOOR (GC): Completely remove existing finish flooring carpet and tile. Clean, prep and paint concrete floor. See Specifications.
32. BASEMENT EXTERIOR STAIR (GC): Sand and paint existing exterior wood stair, treads, risers, stringers and railing. See Specifications.
33. BASEMENT ACCESS STAIR (GC): At stair to Basement, re-attach existing handrail to secure. Remove existing carpeted tread covers. Provide new vinyl non-slip tread covers covering full width and depth of tread surface and nosing. Sand and repaint risers and handrail.
34. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
35. FURNACE (M): Furnace manufacture date appears to be October of 1993, making the furnace 31 years old. Replace furnace. See Specifications.
36. MISC. WIRING (E): Trace and remove remnant low voltage and line voltage electrical wires back to nearest junction box, source or panel.

First Floor

37. WALL FINISH (GC): Remove existing wall covering, curtain rods, mirror, or other finish on this wall down to the wall board. Sand, prepare and paint wall surface. See Finish Schedule.
38. DINING ROOM CEILING (E): Remove and replace lighting fixture with new.
39. DINING ROOM (GC): Remove and replace countertop on half wall with new. Remove phone box on wall and patch wall.
40. DINING ROOM WINDOW (GC): Replace missing window screen with new.
41. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Provide new door/drawer knobs. See Specifications.
42. GFI OUTLET (E): Provide new GFI Outlet above stove. See Specifications.
43. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting. Repair leaking plumbing line above. Provide new finished and painted GWB ceiling (approx. 20 sf) and new lighting per Specifications.
44. KITCHEN FLOORING (GC): Remove, prep subfloor and replace existing Kitchen flooring (approx. 145 sf) and wall base with new waterproof LVT flooring and 4" rubber base. See Specifications.
45. REMOVE RESIDENT INSTALLED WALL COVERING (GC): Remove wall finishes on this wall. Prep and paint wall to finish with new wall base. See Specifications.
46. MAIN STAIRWAY (GC): Remove and replace main stair carpet at treads and risers.
47. FLOOR FINISH (GC): Remove existing carpet finish in Living Room (approx. 235 sf) and Dining Room (approx. 120 sf), tack strips and thresholds. Provide new LVT floors over existing hardwood floors. See Specification.
48. THROUGH WALL KITCHEN EXHAUST FAN (M): Remove existing through wall kitchen exhaust fan and non-venting hood. Provide new kitchen vent type hood vented to exterior with damper. Seal old exhaust fan penetration in exterior wall using similar materials and details to match surrounding wall finish. See specifications.
49. KITCHEN STOVE BACKSPASH (GC): Provide new tile behind stove. See specifications.
50. FRONT DOOR (GC): Replace deadbolt with new and install new screen door.
51. LIVING ROOM THERMOSTAT (M): Provide new programable thermostat.

Second Floor / Attic

52. REMOVE SHELVES (GC): In this location, remove existing shelving standards and shelves. Patch, sand and paint wall finish to match. See Specifications.
53. ATTIC ACCESS DOOR (GC): At this location, provide new insulated hinged attic access door in existing opening.
54. ATTIC INSULATION (GC): Provide new min R-38 blown in Attic Insulation (approx. 550 sf). Verified with depth indicials. Take care not to cover air circulation channels. See Specifications.
55. PRIMARY BEDROOM FLOORING (GC): Remove existing loose laid carpet flooring. Provide new LVT floors over existing hardwood floors. See Specifications.
56. BEDROOMS (GC): Remove drapery rods, patch and paint.
57. COAT CLOSET (GC): At this location, remove existing coat rods and replace with new coat rod. See Specification.
58. BATHROOM (GC/P/M/E): In second floor bathroom: Remove and replace entirely existing tub tile surround, medicine cabinet, tub/shower faucet and drain, sink faucet and drain. Provide new rod and shower curtain. Provide new bathroom exhaust fan ventilated to exterior wired to light circuit Tighten loose towel bar (1). Provide new vanity light. See Specifications.

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
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3. All work shall be installed in accordance with applicable codes and regulations.
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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

Site Plan, Site Plan Legend, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	A2
no. 2 of. 9	Project #2326

FLOOR COVERING PLAN LEGEND

- VCT FLOORING
- CONCRETE FLOORING
- CARPET FLOORING
- LVT FLOORING
- WOOD FLOORING

GENERAL FLOOR PLAN NOTES

1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.

10 Scattered Sites Keynotes - 2337 Wolford St

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32. BASEMENT EXTERIOR STAIR (GC): Sand and paint existing exterior wood stair, treads, risers, stringers and railing. See Specifications.
33. BASEMENT ACCESS STAIR (GC): At stair to Basement, re-attach existing handrail to secure. Remove existing carpeted tread covers. Provide new vinyl non-slip tread covers covering full width and depth of tread surface and nosing. Sand and repaint risers and handrail.
34. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
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First Floor

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47. FLOOR FINISH (GC): Remove existing carpet finish in Living Room (approx. 235 sf) and Dining Room (approx. 120 sf), tack strips and thresholds. Provide new LVT floors over existing hardwood floors. See Specification.
48. THROUGH WALL KITCHEN EXHAUST FAN (M): Remove existing through wall kitchen exhaust fan and non-venting hood. Provide new kitchen vent type hood vented to exterior with damper. Seal old exhaust fan penetration in exterior wall using similar materials and details to match surrounding wall finish. See specifications.
49. KITCHEN STOVE BACKSPASH (GC): Provide new tile behind stove. See specifications.
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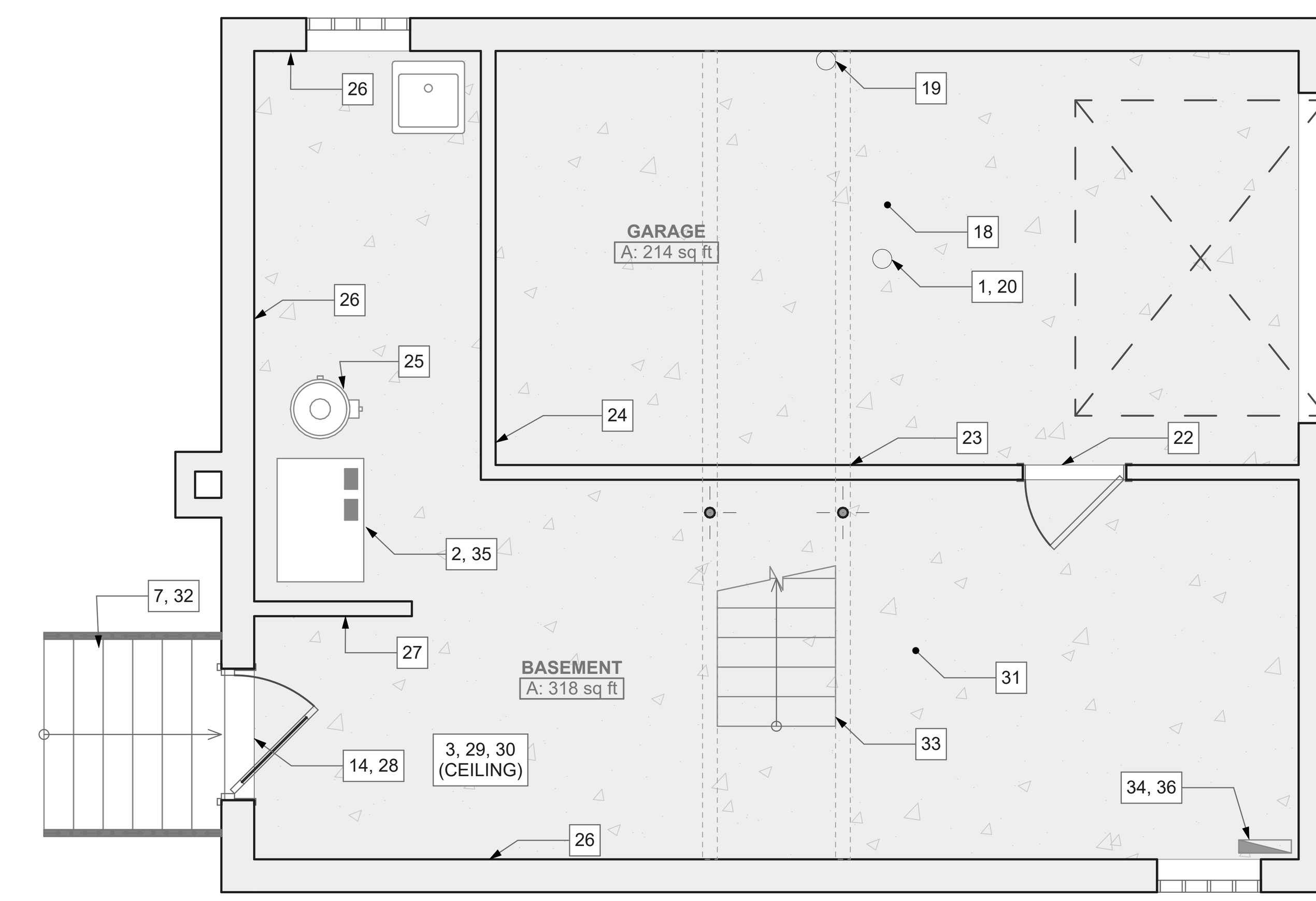
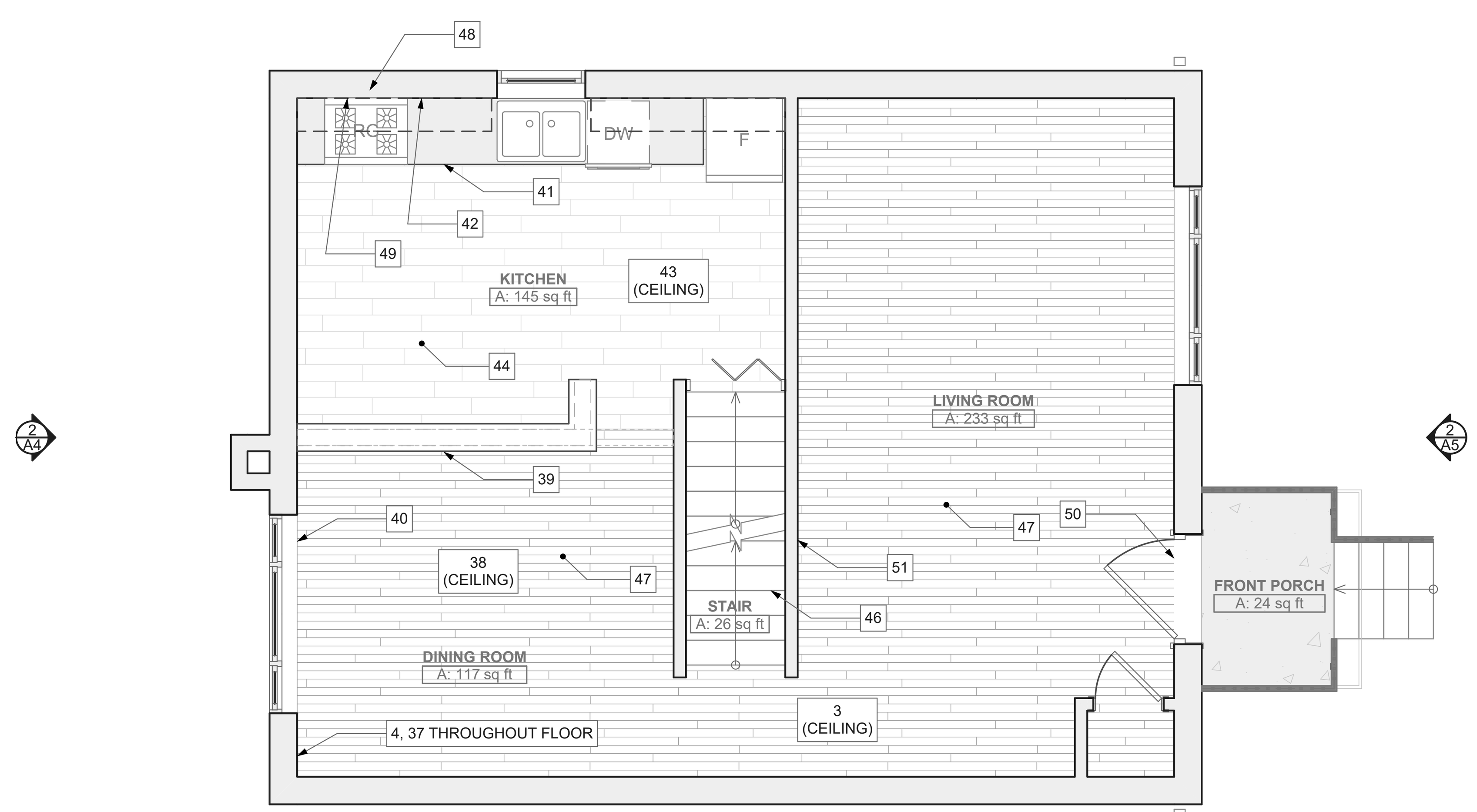
Second Floor / Attic

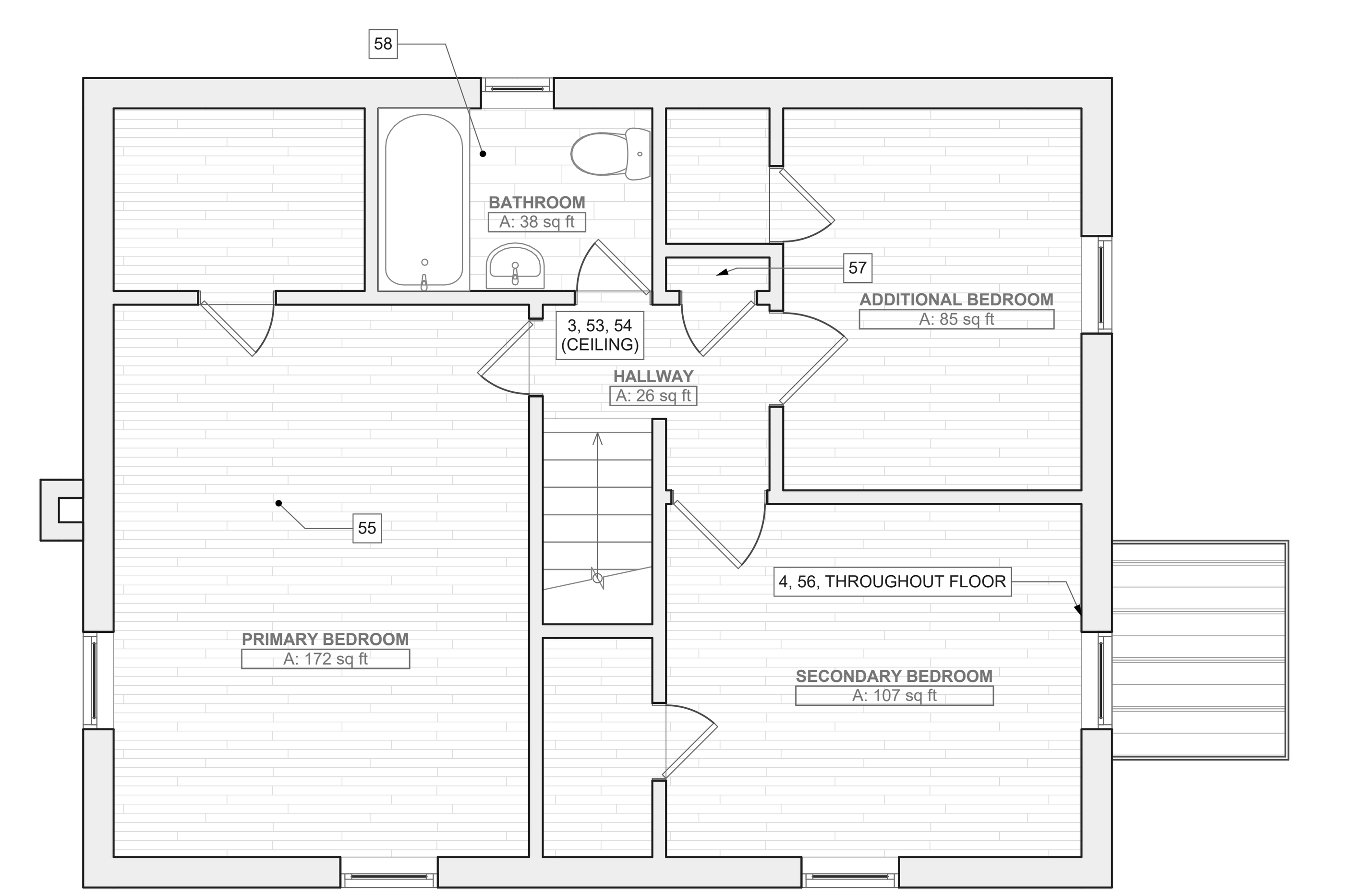
52. REMOVE SHELVES (GC): In this location, remove existing shelving standards and shelves. Patch, sand and paint wall finish to match. See Specifications.
53. ATTIC ACCESS DOOR (GC): At this location, provide new insulated hinged attic access door in existing opening.
54. ATTIC INSULATION (GC): Provide new min R-38 blown in Attic Insulation (approx. 550 sf). Verified with depth indicials. Take care not to cover air circulation channels. See Specifications.
55. PRIMARY BEDROOM FLOORING (GC): Remove existing loose laid carpet flooring. Provide new LVT floors over existing hardwood floors. See Specifications.
56. BEDROOMS (GC): Remove drapery rods, patch and paint.
57. COAT CLOSET (GC): At this location, remove existing coat rods and replace with new coat rod. See Specification.
58. BATHROOM (GC/P/M/E): In second floor bathroom: Remove and replace entirely existing tub tile surround, medicine cabinet, tub/shower faucet and drain, sink faucet and drain. Provide new rod and shower curtain. Provide new bathroom exhaust fan ventilated to exterior wired to light circuit Tighten loose towel bar (1). Provide new vanity light. See Specifications.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc
205 Ross Street
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seal

CONSTRUCTION DOCUMENTATION

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revisions

1 Bidding Addendum 04.01.2025

project title

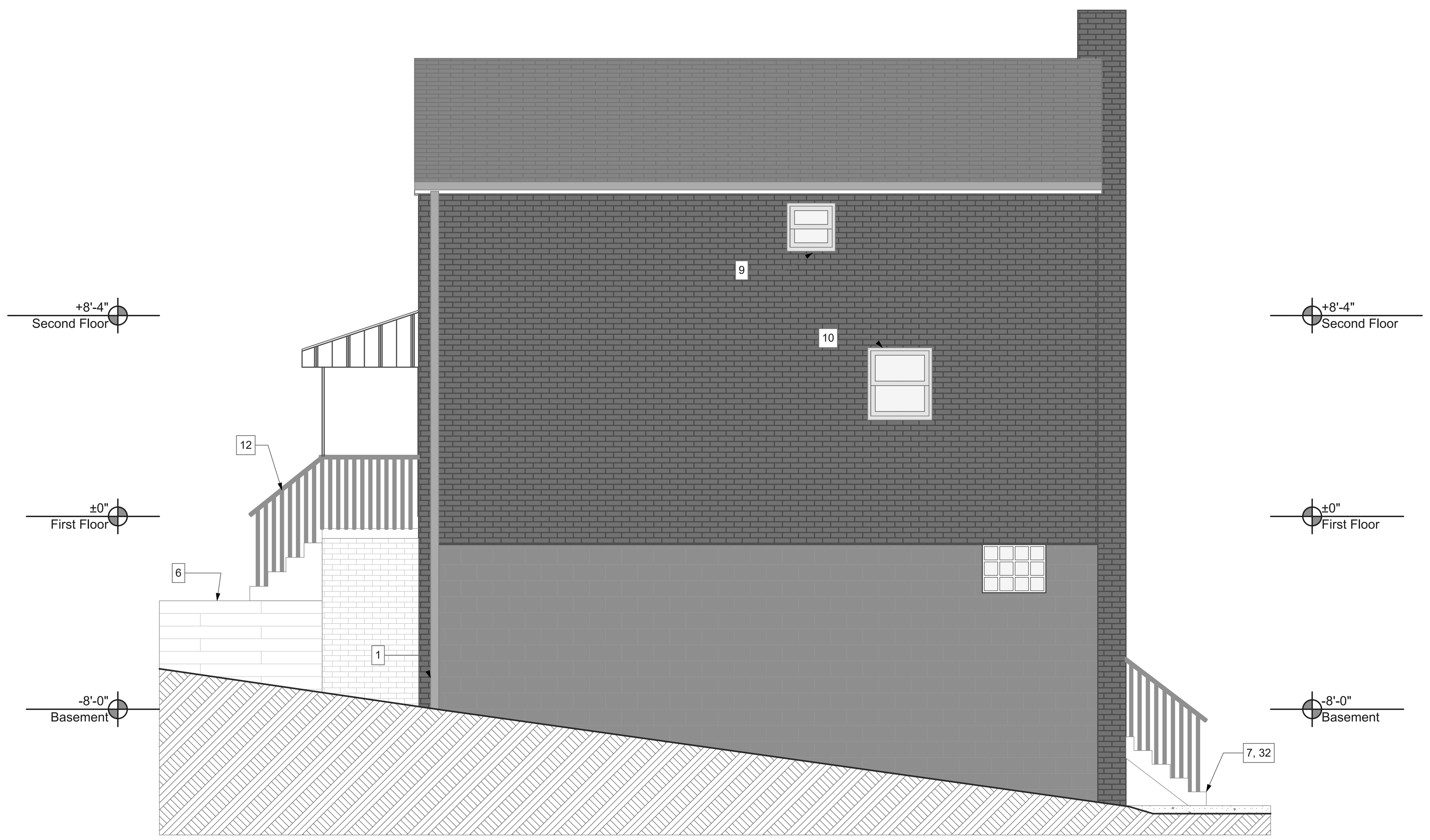
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

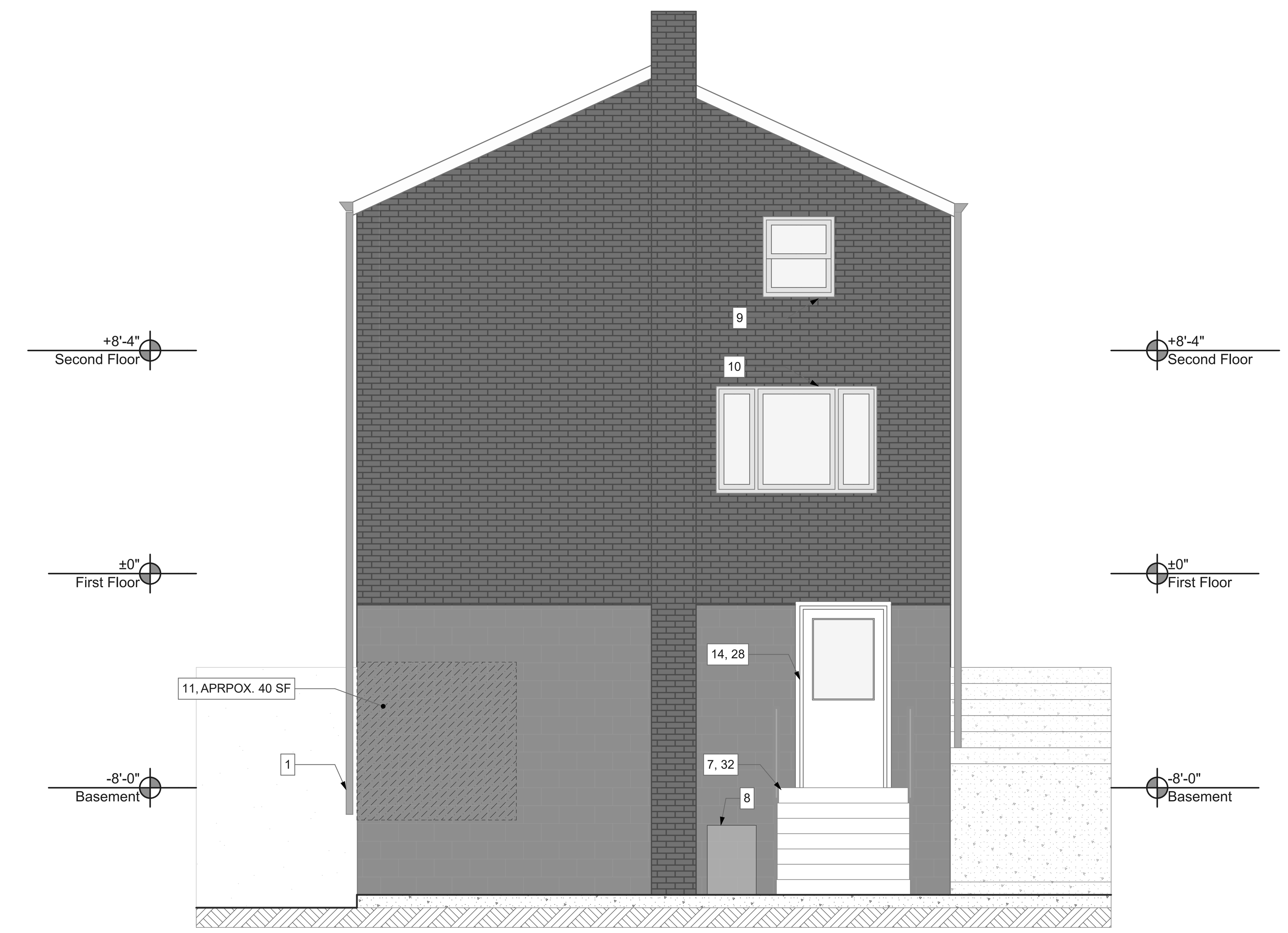
drawing title

Basement, Second Floor, First Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

scale	Sheet No.
As Noted	A3
date: August 20th, 2024	
no. 3 of. 9	Project #2326



1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes - 2337 Wolford St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages.
3. SMOKE/CO DETECTORS: In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. EXTERIOR TIMBER RETAINING WALL (GC): At this location existing Pressure Treated Timber retaining wall is failing. Completely remove the existing wall and replace with new segmented concrete block retaining wall installed per Specifications (approx. 24 linear ft x 2 ft high).
7. EXTERIOR REAR STEPS (GC): Clean and paint exterior wood stairs. See Specifications.
8. EXTERIOR CONDENSER (M): Remove existing DX line insulation. Provide new insulation on both lines with aluminum jacketing to protect from solar degradation. See Specifications.
9. BRICK WINDOW SILLS (GC): Repoint window all sills. See Specifications.
10. BRICK WALL LINTELS (GC): Scrape and paint lintels over garage door and all windows.
11. BRICK WALL (GC): Clean and repoint brick in area and in quantity indicated. See Specifications.
12. ENTRANCE RAILING (GC): At this location, remove existing metal railing. Provide new entrance railing and securely fasten, similar to existing. See Specifications.
13. GARAGE TO DRIVEWAY SLAB JOINT (GC): Scrape to remove organic growth from existing joint down 1". Provide new backer rod and caulk to seal. See Specifications.
14. REAR EXTERIOR DOOR (GC): Remove caulking around back door and install new caulk.
15. FRONT FENCE (GC): Remove portion of chain-link fence (approx. 30 linear ft x 3 ft high) along sidewalk and replace with new including gate.
16. BACKYARD STEPS (GC): Replace existing landscape steps using new concrete dry laid steps. Rebuilding dry stack wall using new dry stack masonry units. See Specifications.
17. BACKYARD SHED (GC): Remove existing garden shed and wood platform (approx. 6 ft x 10 ft). Restore grading and reseed. See Specifications.

Garage

18. CLEAN OUT (P): Clean out miscellaneous shelves and properly dispose of. See Specifications.
19. SOIL STACK (P): Remove and replace cast iron soil stack at this location with new cast iron with all connections to existing sanitary sewer system and clean-out at base. See Specifications.
20. FLOOR DRAIN (P): Remove and replace garage floor drain grate with new automotive rated grate. Snake drain to clear.
21. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
22. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
23. GARAGE ENVELOPE (GC): At this location, where interior stair or beam penetrates garage wall, provide new spray foam insulation (neatly trimmed) to seal air infiltration between garage and residence. Provide finished 5/8" type "X" GWB finish to fully enclose opening with all edge and corner beads. Spackle, sand and paint new GWB to finish. See Specifications.
24. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. See Specifications.

Basement

25. WATER HEATER (P): Water Heater appears to be manufactured dated April of 2019 and does not show signs of failure. Service.
26. BASEMENT WALL FINISH (GC): At exterior basement walls, remove interior existing finish paneling and wall covering (approx. 500 sf). Provide new 2"x pressure treated kiln dried furring at 16" OC with 1 ½" closed cell rigid insulation between furring strips from floor to ceiling. Over furring, provide new 5/8" MR GWB finish, taped, spackled, sanded and painted with 4" rubber or vinyl cove base. See Specifications.
27. BASEMENT INTERIOR WALL (GC): Rebuild wall by furnace (approx. 20 sf).
28. BASEMENT TO OUTSIDE DOOR (GC): Remove existing basement to exterior door, frame and threshold, provide new 1 3/4" insulated metal door, door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
29. BASEMENT FINISHED CEILING (GC): Remove and replace existing suspended ceiling tiles (approx. 320 sf). Provide new moisture resistant tiles in existing suspended grid. Clean, prep and paint exposed ductwork and suspended grid to match tile color.
30. BASEMENT LIGHTING (E): Provide new replacement ceiling lighting and new Smoke/CO sensors. See Specifications.
31. BASEMENT FLOOR (GC): Completely remove existing finish flooring carpet and tile. Clean, prep and paint concrete floor. See Specifications.
32. BASEMENT EXTERIOR STAIR (GC): Sand and paint existing exterior wood stair, treads, risers, stringers and railing. See Specifications.
33. BASEMENT ACCESS STAIR (GC): At stair to Basement, re-attach existing handrail to secure. Remove existing carpeted tread covers. Provide new vinyl non-slip tread covers covering full width and depth of tread surface and nosing. Sand and repaint risers and handrail.
34. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
35. FURNACE (M): Furnace manufacture date appears to be October of 1993, making the furnace 31 years old. Replace furnace. See Specifications.
36. MISC. WIRING (E): Trace and remove remnant low voltage and line voltage electrical wires back to nearest junction box, source or panel.

First Floor

37. WALL FINISH (GC): Remove existing wall covering, curtain rods, mirror, or other finish on this wall down to the wall board. Sand, prepare and paint wall surface. See Finish Schedule.
38. DINING ROOM CEILING (E): Remove and replace lighting fixture with new.
39. DINING ROOM (GC): Remove and replace countertop on half wall with new. Remove phone box on wall and patch wall.
40. DINING ROOM WINDOW (GC): Replace missing window screen with new.
41. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Provide new door/drawer knobs. See Specifications.
42. GFI OUTLET (E): Provide new GFI Outlet above stove. See Specifications.
43. KITCHEN CEILING (GC/E): Remove existing kitchen finish ceiling and lighting. Repair leaking plumbing line above. Provide new finished and painted GWB ceiling (approx. 20 sf) and new lighting per Specifications.
44. KITCHEN FLOORING (GC): Remove, prep subfloor and replace existing Kitchen flooring (approx. 145 sf) and wall base with new waterproof LVT flooring and 4" rubber base. See Specifications.
45. REMOVE RESIDENT INSTALLED WALL COVERING (GC): Remove wall finishes on this wall. Prep and paint wall to finish with new wall base. See Specifications.
46. MAIN STAIRWAY (GC): Remove and replace main stair carpet at treads and risers.
47. FLOOR FINISH (GC): Remove existing carpet finish in Living Room (approx. 235 sf) and Dining Room (approx. 120 sf), tack strips and thresholds. Provide new LVT floors over existing hardwood floors. See Specification.
48. THROUGH WALL KITCHEN EXHAUST FAN (M): Remove existing through wall kitchen exhaust fan and non-venting hood. Provide new kitchen vent type hood vented to exterior with damper. Seal old exhaust fan penetration in exterior wall using similar materials and details to match surrounding wall finish. See specifications.
49. KITCHEN STOVE BACKSPASH (GC): Provide new tile behind stove. See specifications.
50. FRONT DOOR (GC): Replace deadbolt with new and install new screen door.
51. LIVING ROOM THERMOSTAT (M): Provide new programable thermostat.

Second Floor / Attic

52. REMOVE SHELVES (GC): In this location, remove existing shelving standards and shelves. Patch, sand and paint wall finish to match. See Specifications.
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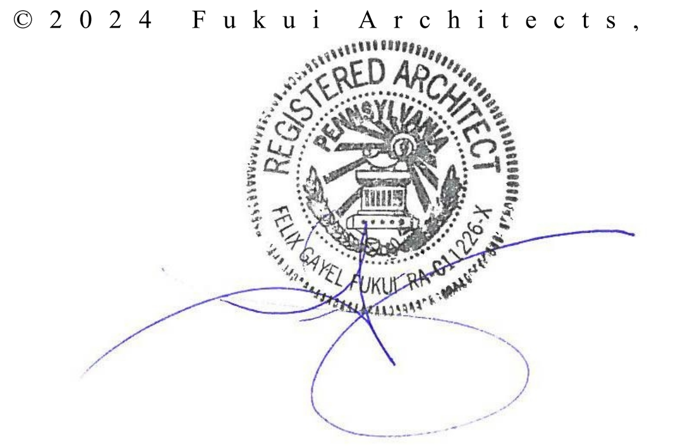

seal

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drawing title

South Elevation, East Elevation, Keynotes

scale	Sheet No.
As Noted	A4
date August 20th, 2024	Project #2326
no. 4 of. 9	

1 North Elevation
SCALE: 1/4" = 1'-0"

2 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes - 2337 Wolford St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

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Fukui Architects Pc
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seal

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revisions

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project title

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Pittsburgh,Pennsylvania,15219

Project Location:
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Pittsburgh, Pennsylvania 15216

drawing title

West Elevation, North Elevation, Keynotes

scale: As Noted	**Sheet No.**
date: August 20th, 2024	**A5**
no. 5 of. 9	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT
WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT
WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT
WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT
WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no. 6 of. 9

Sheet No.
A6
Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:

1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.

1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:

1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    A. SOLID COLORS, MATTE FINISH.
    B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    C. WOOD GRAINS, MATTE FINISH.
    D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB

FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET

PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES

VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED

GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
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ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	A7
no. 7 **of.** 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAUST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:
- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale
As Noted
date
August 20th, 2024
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Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS
1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS
1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS
1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS
1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES
MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS
CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES
1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS
FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM
USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS
1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE
METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION
USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL
ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION
PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS
1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

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FELIX GAYEL FUKUI RA-011226-X

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CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2337 Wolford Street
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale
As Noted
date
August 20th, 2024
no. 9
of. 9

Sheet No.
A9
Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Neeld Avenue
Single Family Residence, Minor Alteration
2534 Neeld Avenue,
Pittsburgh, Pennsylvania 15216

Drawing Index

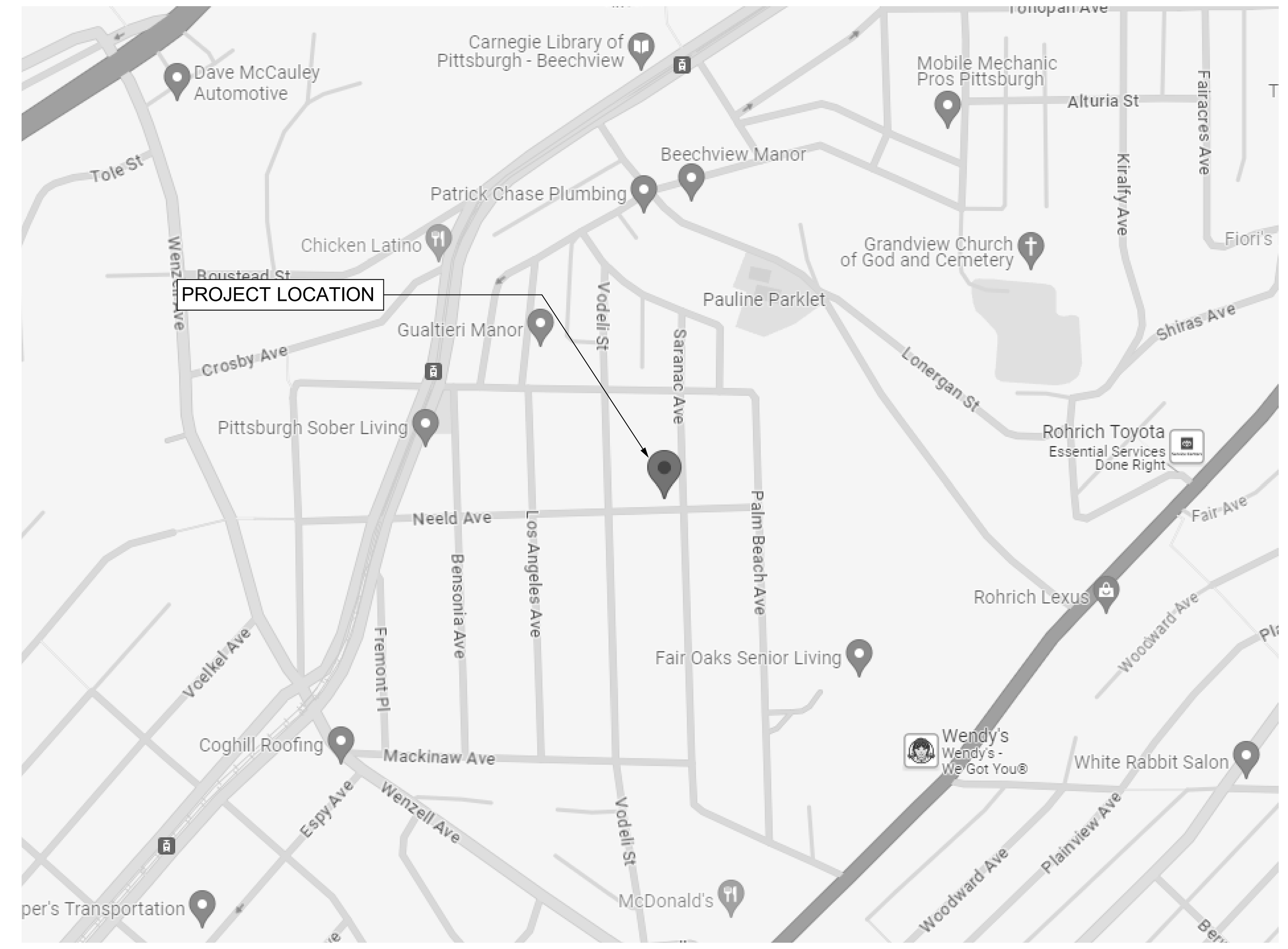
Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 481 sqft + Garage 320 sqft
	1st Floor 1,040 sqft
	2nd Floor 636 sqft



1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
CL	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 / A1 — ELEVATION MARKER

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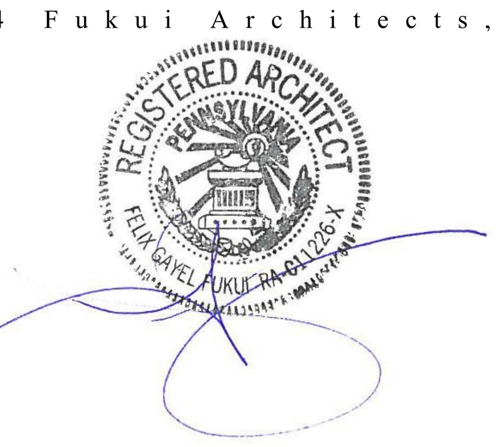

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revisions

△1 Bidding Addendum 04.01.2025

project title

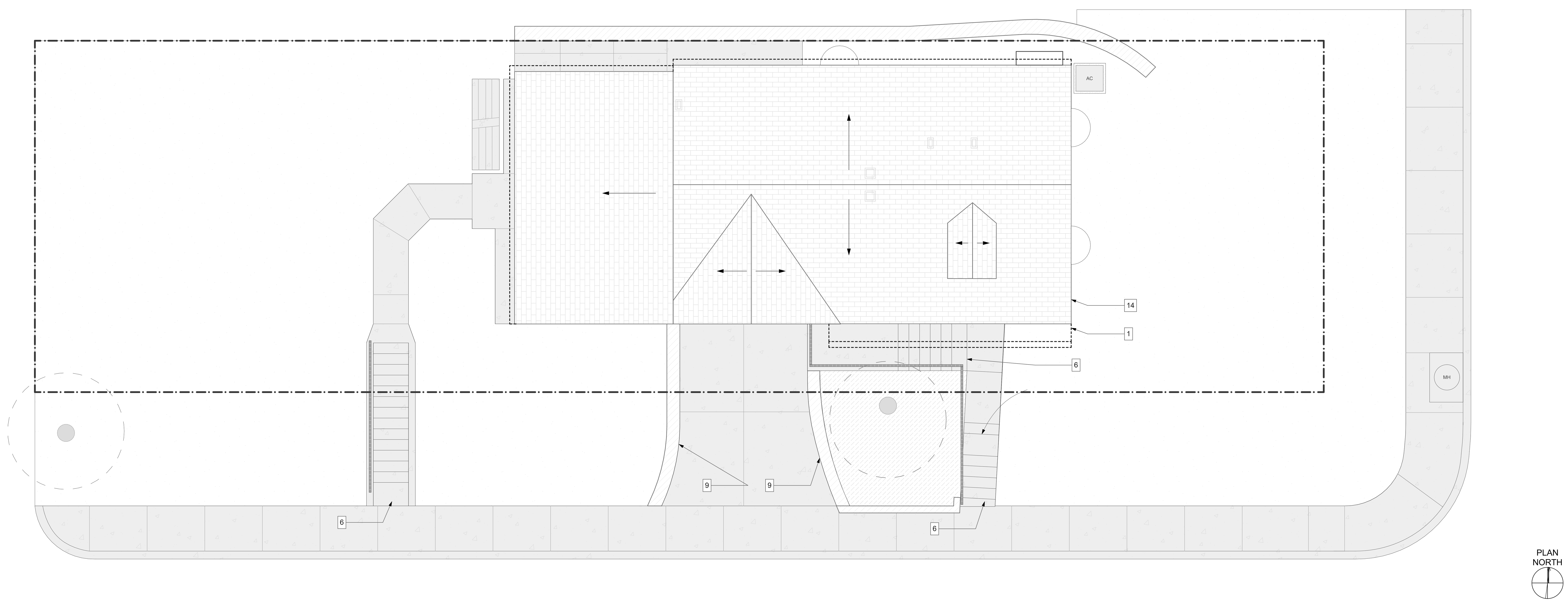
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Drawing Index, Code Conformance Information, Site Location, Abbreviations and Materials

scale	Sheet No.
As Noted	A1
date: August 20th, 2024	
no. 1 of. 9	Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 2534 Neeld Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
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Exterior

6. CONCRETE ENTRY STEPS (GC): Remove existing failing concrete steps from sidewalk to upper landing (approx. 7 risers/landings and 2 separate bottom risers/landings), taking care to set aside step lighting for reinstallation. Recompact soil and 4" of compacted gravel. Form and pour new exposed aggregate steps and landing, with even risers and sloped slightly to drain. Reset hardwired step lighting. Re-establish anchorage of metal railing. See Specifications.
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12. LINTELS (GC): Scrape, paint, and recaulk lintels over garage door and all windows.
13. ATTIC VENT (GC): Replace damaged attic vent in this location. See Specifications.
14. ROOF (GC): Remove existing shingles (approx. 1,200 sf), flashing, roof vent caps, roof pipe boots flashing, etc. Re-roof using new materials per Specifications.

Interior Garage

15. ELECTRICAL PANEL (E): Replace circuit breakers with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
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Interior Basement

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25. LAUNDRY SINK (P): Provide new laundry sink. See Specifications.
26. APPLIANCES (GC): To be removed by others.

Interior First Floor

27. KITCHEN RANGE HOOD (GC/E/M): Replace existing Kitchen Range hood with new. Vent to exterior. At existing ceiling mounted exhaust fan, remove fan, ductwork and damper if not re-usable. Patch ceiling and exterior wall to match. See Specifications.
28. KITCHEN CEILING / LIGHTING (GC/E): Provide new LED Energy star rated light fixtures at Kitchen ceiling. Remove existing recessed fluorescent lighting at Kitchen bulkhead. Laminate new 5/8" GWB over bulkhead to cover openings (approx. 130 sf). Tape spackle and paint bulkhead and provide new surface mounted LED lights. See Specifications.
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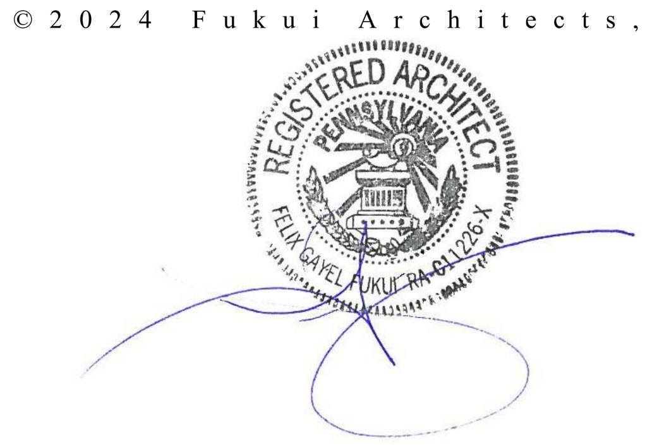
33. BEDROOM CEILING (GC/E/P): Relace light fixture with new. Remove section of water damaged ceiling (approx. 50 sf). Remove leaking plumbing drain line from bathroom above. Repair ceiling and refinish entire ceiling to match existing (approx. 100 sf).

Second Floor

34. BATHROOM (M/E): Install new exhaust fan, ducted to outside. See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002



seal

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drawing title

Site Plan, Site Plan Legend, Keynotes

scale: As Noted
date: August 20th, 2024
no. 2 of. 9

Sheet No.
A2
Project #2326

FLOOR COVERING PLAN LEGEND

Symbol	Flooring
	VCT FLOORING
	CONCRETE FLOORING
	CARPET FLOORING
	LVT FLOORING
	WOOD FLOORING

10 Scattered Sites Keynotes – 2534 Neeld Ave

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Second Floor

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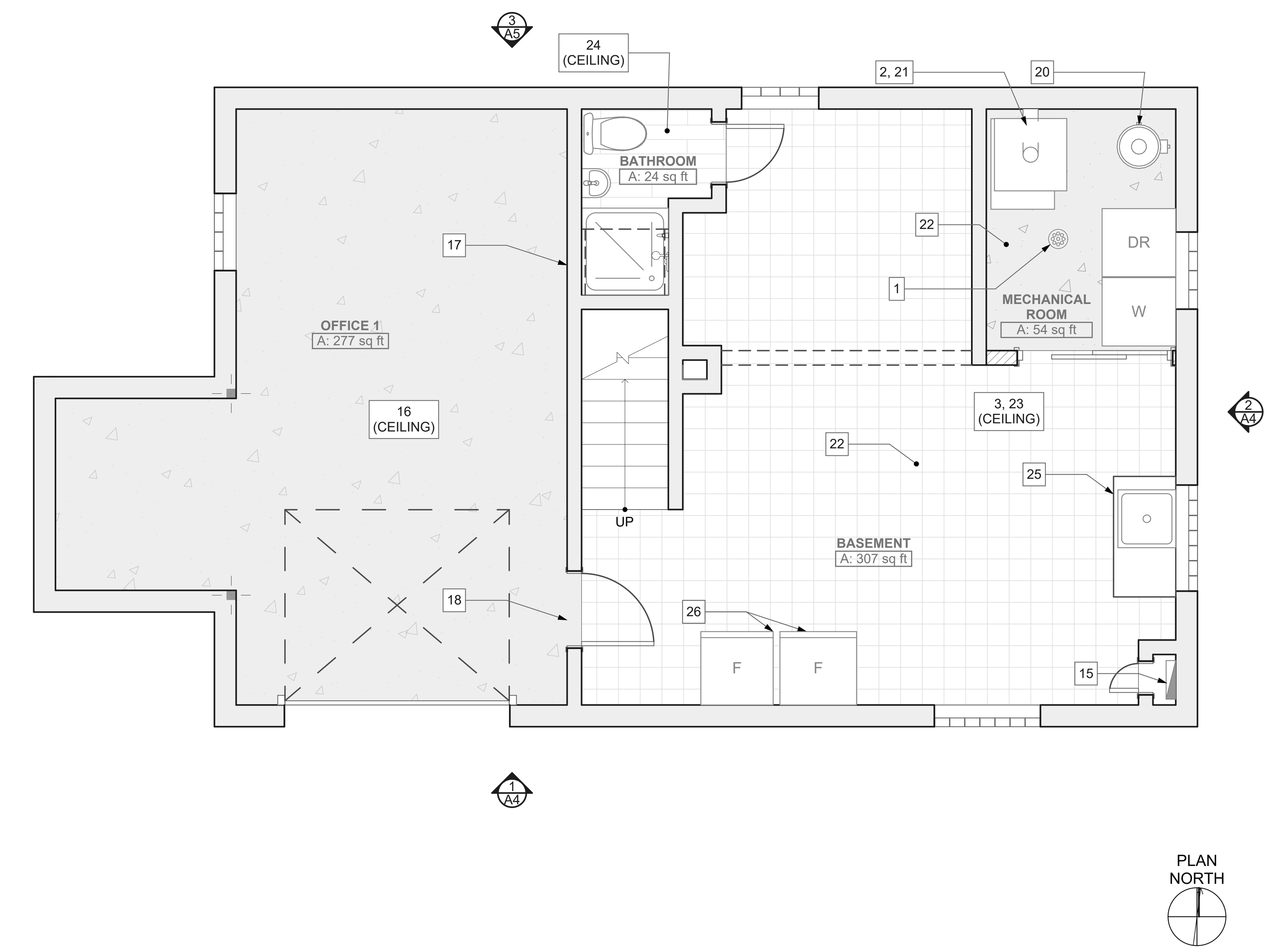
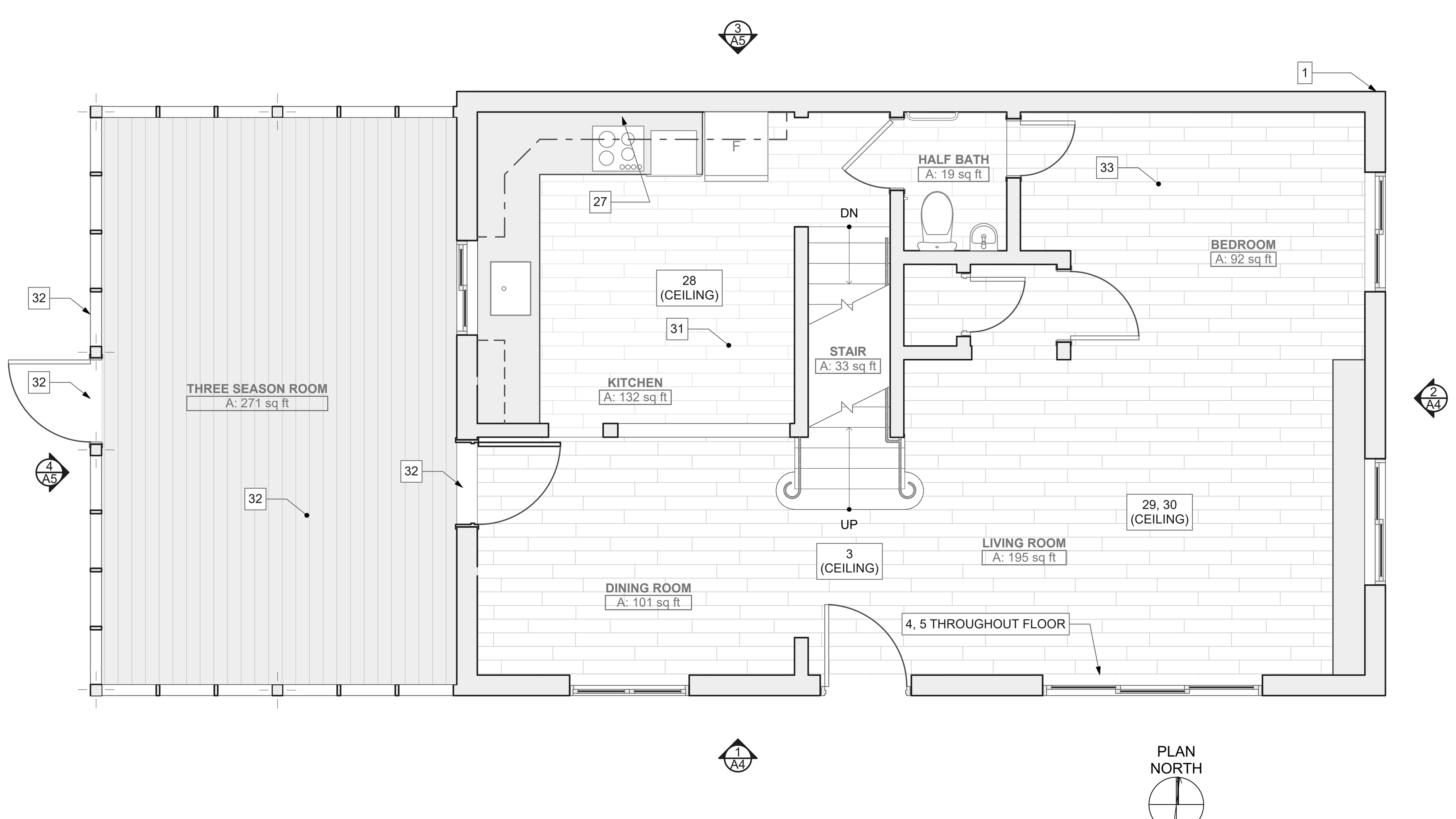
GENERAL FLOOR PLAN NOTES

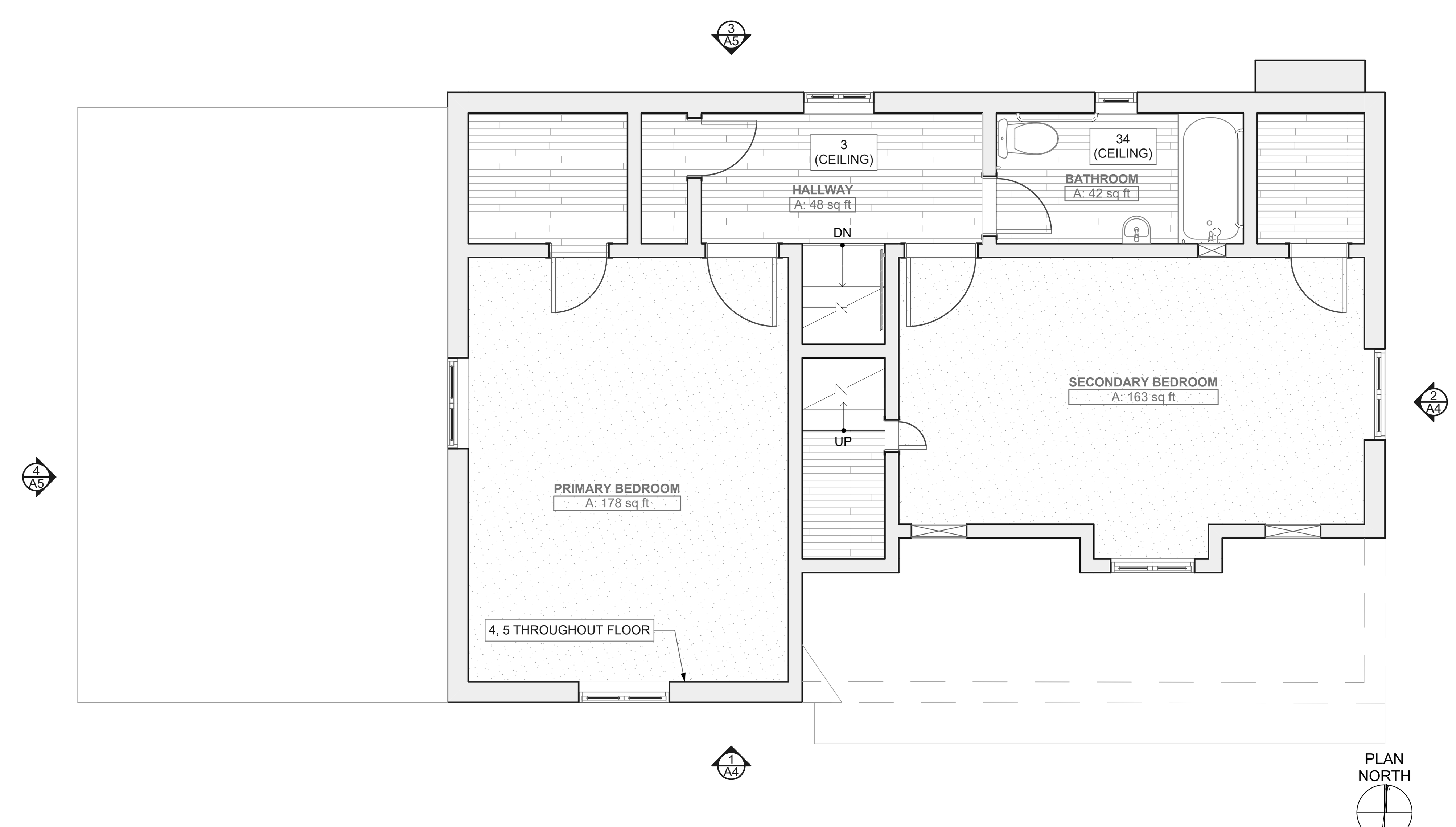
1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 1st Floor
SCALE: 1/4" = 1'-0"



3 2nd Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT

seal

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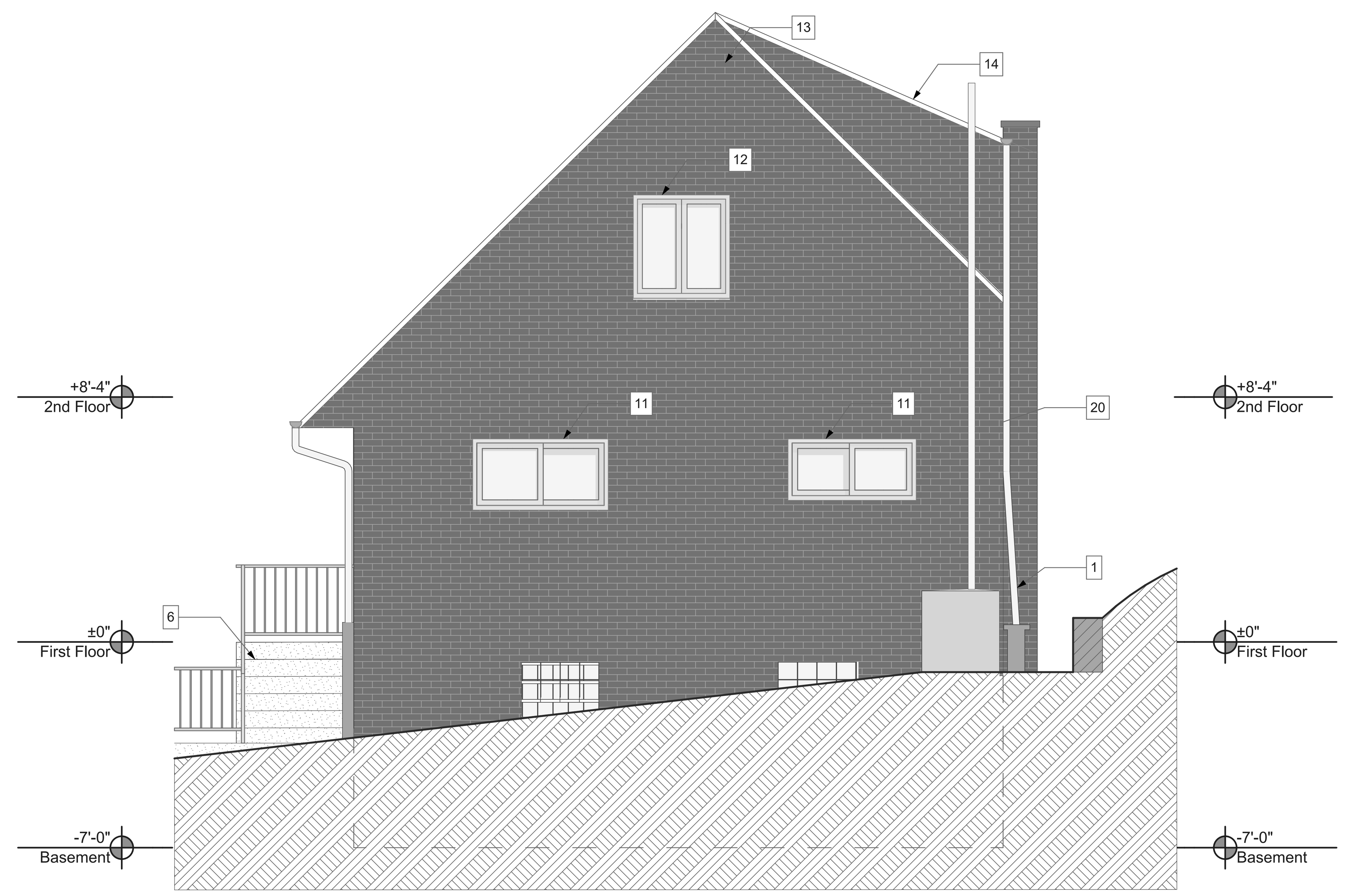
drawing title

Basement, 1st Floor, 2nd Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

scale	Sheet No.
As Noted	A3
date: August 20th, 2024	
no. 3 of. 9	Project #2326

1 South Elevation
SCALE: 1/4" = 1'-0"



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Interior First Floor

27. KITCHEN RANGE HOOD (GC/E/M): Replace existing Kitchen Range hood with new. Vent to exterior. At existing ceiling mounted exhaust fan, remove fan, ductwork and damper if not re-usable. Patch ceiling and exterior wall to match. See Specifications.
28. KITCHEN CEILING / LIGHTING (GC/E): Provide new LED Energy star rated light fixtures at Kitchen ceiling. Remove existing recessed fluorescent lighting at Kitchen bulkhead. Laminate new 5/8" GWB over bulkhead to cover openings (approx. 130 sf). Tape spackle and paint bulkhead and provide new surface mounted LED lights. See Specifications.
29. LIVING ROOM LIGHTING (E): Provide new LED Energy star rated light fixture at Living Room Ceiling. See Specifications.
30. LIVING ROOM CEILNG REPLACEMENT (GC/P): Remove completely the existing water damaged ceiling in this room. Trace and repair any damaged or leaking plumbing above. Provide new 5/8" painted GWB ceiling (approx. 200 sf). See Specifications.
31. KITCHEN FLOORING (GC): Remove existing Kitchen flooring down to subfloor. Repair subfloor as necessary to receive new LVT flooring (approx. 130 sf). Install new waterproof LVT flooring and thresholds. See Specification.
32. THREE SEASON ROOM ADDITION (GC): Provide new pressure treated sleepers at 16" o.c. over existing concrete flooring to level flooring (approx. 270 sf). Provide new synthetic wood decking over sleepers as finish flooring. At low corner of concrete subfloor, provide new floor drain and drain pipe to exterior. Drain to daylight with insect/rodent proof screen. Replace existing insect screening and wood stops with new screening and synthetic stops. Scrape and paint existing wood wall and roof framing. Replace rotten members with new pressure treated wood. Replace both doors in this room. See Specifications.
33. BEDROOM CEILING (GC/E/P): Relace light fixture with new. Remove section of water damaged ceiling (approx. 50 sf). Remove leaking plumbing drain line from bathroom above. Repair ceiling and refinish entire ceiling to match existing (approx. 100 sf).

Second Floor

34. BATHROOM (M/E): Install new exhaust fan, ducted to outside. See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

East Elevation, South Elevation, Keynotes

scale: As Noted
date: August 20th, 2024
no. 4 of. 9

Sheet No.
A4
Project #2326

Fukui Architects Pc
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Pittsburgh, Pennsylvania 15219
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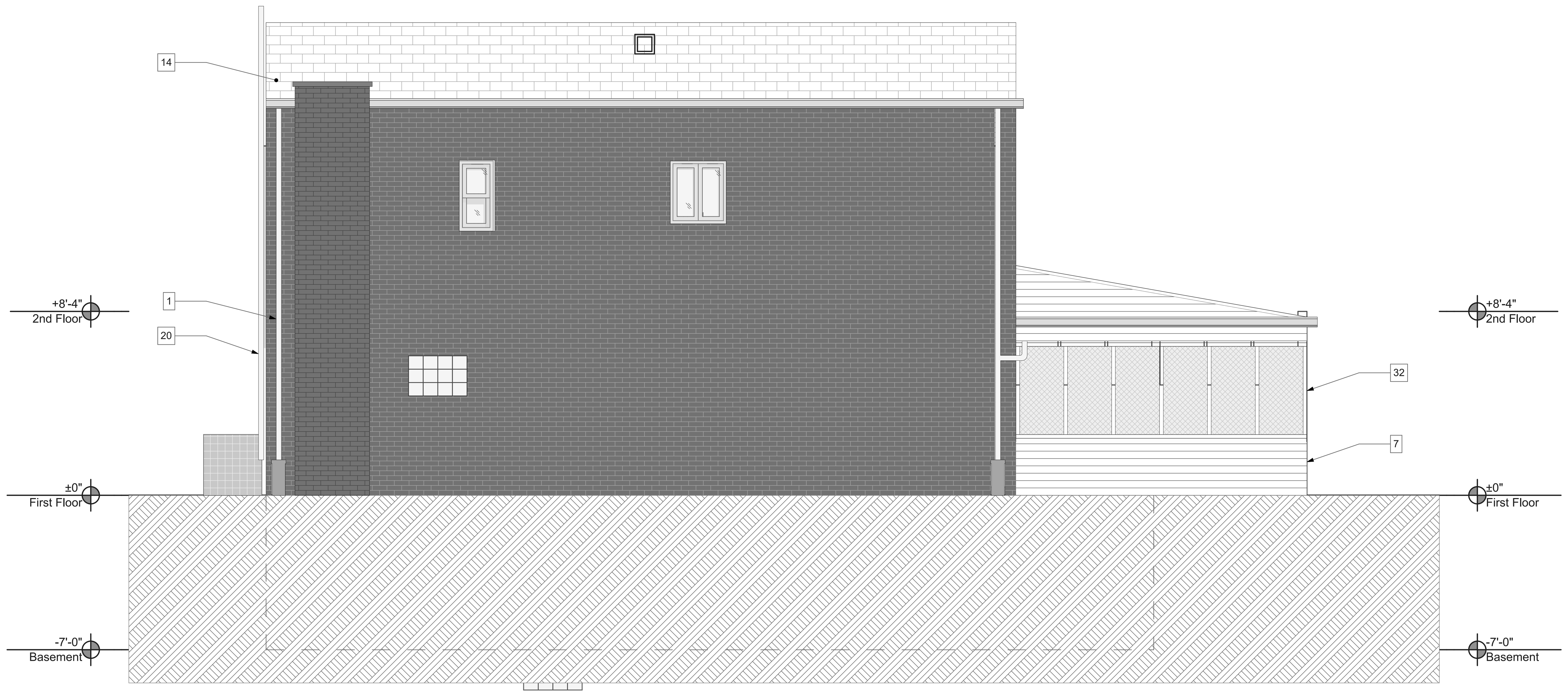
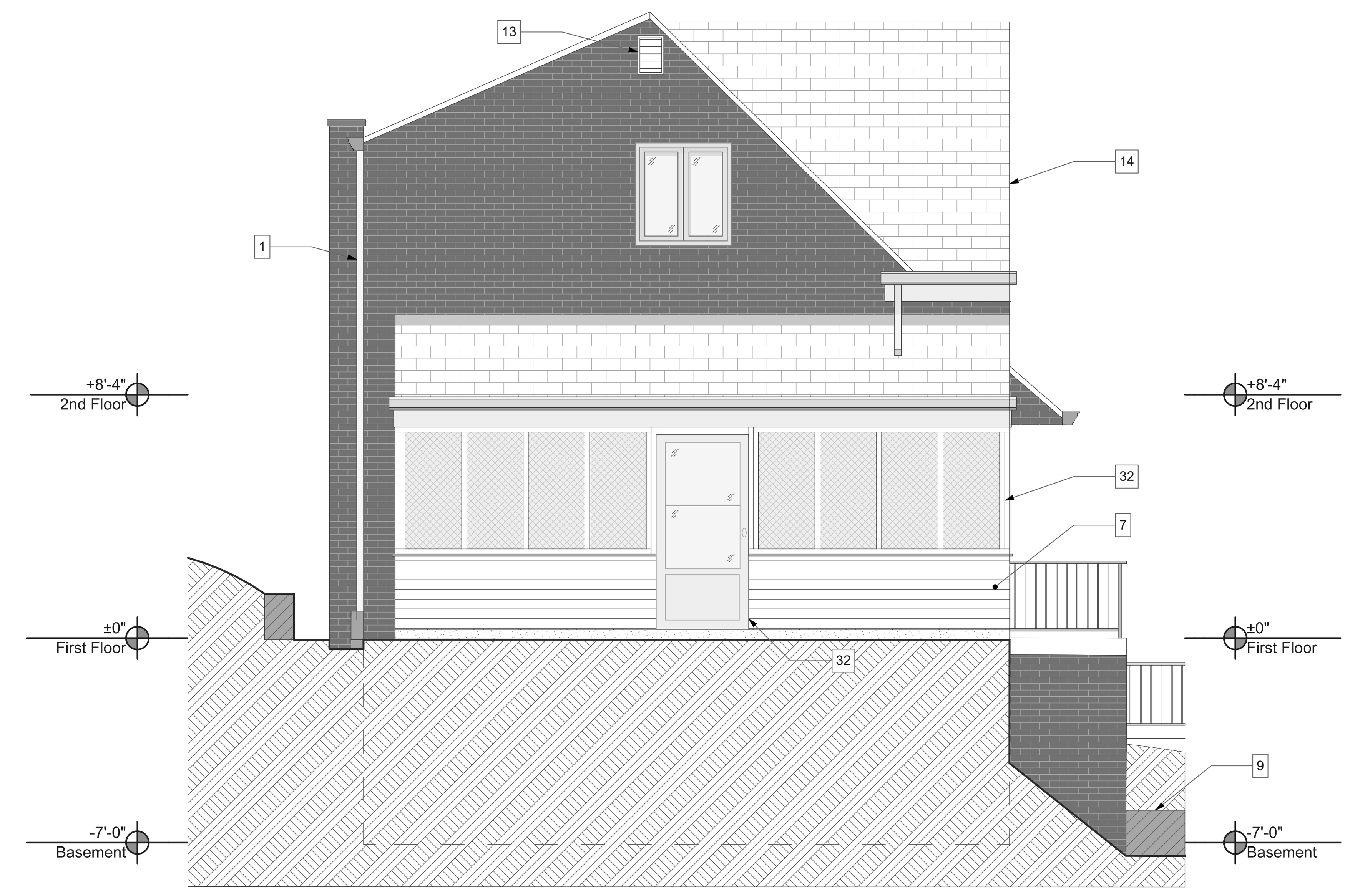


3 North Elevation
SCALE: 1/4" = 1'-0"



4 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 2534 Neeld Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. CONCRETE ENTRY STEPS (GC): Remove existing failing concrete steps from sidewalk to upper landing (approx. 7 risers/landings and 2 separate bottom risers/landings), taking care to set aside step lighting for reinstallation. Recompact soil and 4" of compacted gravel. Form and pour new exposed aggregate steps and landing, with even risers and sloped slightly to drain. Reset hardwired step lighting. Re-establish anchorage of metal railing. See Specifications.
7. VINYL SIDING (GC): On 3 sides of Three Season Room provide new vinyl siding on lower approx. 3 ft high portion of wall (approx. 150 sf).
8. ENTRANCE CANOPY / RAILING (GC): At this location, remove existing (8'x16' nom) aluminum entrance canopy AND RAILING. provide new canopy, decorative support posts and railing matching existing. See Specifications.
9. CONCRETE BLOCK RETAINING WALLS (GC): Provide and install new capstones to replace missing or damaged pieces, approx. 40 stones total on two walls. See Specifications.
10. EXISTING BRICK VENEER (GC): At brick area noted, strike and repoint areas of loose or missing mortar. Approximately 20 sf. See Specifications.
11. LINTEL REPLACEMENT BRICK REPAIR/REPOINTING (GC): At the following locations noted on elevations, temporarily support brick and remove corroded steel lintel. Repair masonry displaced or all open joints affected by damaged lintel. Replace lintel and replace and repoint brick per Specifications. Caulk to seal.
12. LINTELS (GC): Scrape, paint, and recaulk lintels over garage door and all windows.
13. ATTIC VENT (GC): Replace damaged attic vent in this location. See Specifications.
14. ROOF (GC): Remove existing shingles (approx. 1,200 sf), flashing, roof vent caps, roof pipe boots flashing, etc. Re-roof using new materials per Specifications.

Interior Garage

15. ELECTRICAL PANEL (E): Replace circuit breakers with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
16. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. See Specifications.
17. WALL PENETRATIONS BETWEEN GARAGE AND RESIDENCE (GC): At wall indicated, provide new brick/block infill mortared in place to completely seal garage from residence.
18. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
19. GARAGE DOOR (E): Provide new surface mounted electrical duplex outlet proximal to garage door to supply power to garage door.

Interior Basement

20. WATER HEATER (P): Water Heater American Standard 40 Gal. manufacture dated 10/2017. The Water Heater appears to be in good condition and does not show signs of failure. Service. Raise flue outside to run new exhaust flue up wall to eliminate interference with gas meter outside (approx. 20 ft in height). See Specifications.
21. FURNACE (M): Furnace is 2 years old. It appears to be properly functioning. Provide Inspection of unit by a qualified HVAC Technician. Seam seal all exposed duct seams within basement. Seam seal and insulate all ductwork running in unconditioned space, e.g. Garage. See Specifications.
22. BASEMENT AND MECHANICAL ROOM FINISH FLOOR (GC): Properly remove and dispose of existing damaged asbestos tile flooring. Paint concrete floor (approx. 360 sf). See Specifications.
23. BASEMENT AND MECHANICAL ROOM CEILING (GC): Remove existing damaged suspended ceiling tiles (approx. 360 sf). Provide new moisture resistant ceiling tile in existing suspended grid.
24. BASEMENT BATHROOM (GC/E/M/P): Remove existing damaged plaster ceiling (approx. 25 sf). Provide new moisture resistant GWB ceiling, lighting and exhaust fan. See Specifications. Clean shower basin. Provide new shower rod and tub/shower faucet and drain per specifications.
25. LAUNDRY SINK (P): Provide new laundry sink. See Specifications.
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seal

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West Elevation, North Elevation, Keynotes

scale	Sheet No.
As Noted	A5
date: August 20th, 2024	
no. 5 of. 9	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT

WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT

WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT

WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT

WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.

(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.

(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.

(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.

(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.

(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.

(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.

(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.

(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.

(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".

(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.

(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.

(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.

(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.

(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."

(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.

(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.

(B)APPROVAL OF EQUIPMENT AND MATERIALS.

(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,

EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.

(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S

EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.

(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.

(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.

(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS

DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.

(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.

(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER. WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.

(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.

(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.

(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.

(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.

(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.

(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.

(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.

(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.

(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.

(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.

(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.

(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.

(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.

(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.

(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.

(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.

(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.

(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.

(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.

(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.

(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.

(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.

(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.

(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPURTENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.

(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.

(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.

(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.

(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:

(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.

(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.

(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.

(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.

(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.

(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.

(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.

(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE

AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.

(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.

(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.

(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.

(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.

(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.

(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A6**
no. 6 of. 9	Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL
WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES
WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK
SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES
SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS
PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING
EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING
SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS
PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS
FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS
ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS
QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
   A. SOLID COLORS, MATTE FINISH.
   B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
   C. WOOD GRAINS, MATTE FINISH.
   D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS
BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM
GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION
GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS
INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING
VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE
BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE
INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS
SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS
REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING
ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS
BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS
PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP
GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING
BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX
NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT
RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted		Sheet No.
date August 20th, 2024		A7
no. 7	of. 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED

STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2” DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED

GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED

FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK

FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB

FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES

SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS

PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS

ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS

ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS

UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS

ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4” AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING

SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING

POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING

DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES

VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION

ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2” THICK ARMAFLEX.

PIPE IDENTIFICATION

ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING

ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS

FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT

THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.

- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.

- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:

- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:

- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:

- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:

- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:

- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS

DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.

- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:

- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:

- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL

DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2” PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS

FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS

DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS

SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES

GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS

THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION

ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2” THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4” WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2” FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS

THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP’S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR’S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE

THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS

SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT’S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS

THE HACP’S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK

FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:

1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS

THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS

DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE

SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP

ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY

PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE

FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE

VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER

PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION

BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB’S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR’S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING

PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS

DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS

SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES

IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION

CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP

PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS

UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP.
RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING

PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL

FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL

MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted		**Sheet No.**
date August 20th, 2024		**A8**
no. 8	of. 9	Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE

ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL

ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM

ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

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FELIX GAYEL FUKUI RA-011226-X

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general notes

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3. All work shall be installed in accordance with applicable codes and regulations.
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5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
2534 Neeld Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no.: 9
of.: 9

Sheet No.
A9
Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - McPherson Blvd
Single Family Residence, Minor Alteration
7152 McPherson Blvd,
Pittsburgh, Pennsylvania 15208

Drawing Index

Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	1 Stories
Building Gross Area:	Basement 994 sqft
	1st Floor 994 sqft + Garage 317 sq ft

PROJECT LOCATION

N

1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
℄	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

T.O. FINISH FLOOR / ELEV: 0'-0"	ELEVATION HEIGHT
PLAN NORTH	NORTH ARROW
1 / A1	ELEVATION MARKER

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CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

Drawing Index, Code Conformance Information, Abbreviations and Materials, Site Location

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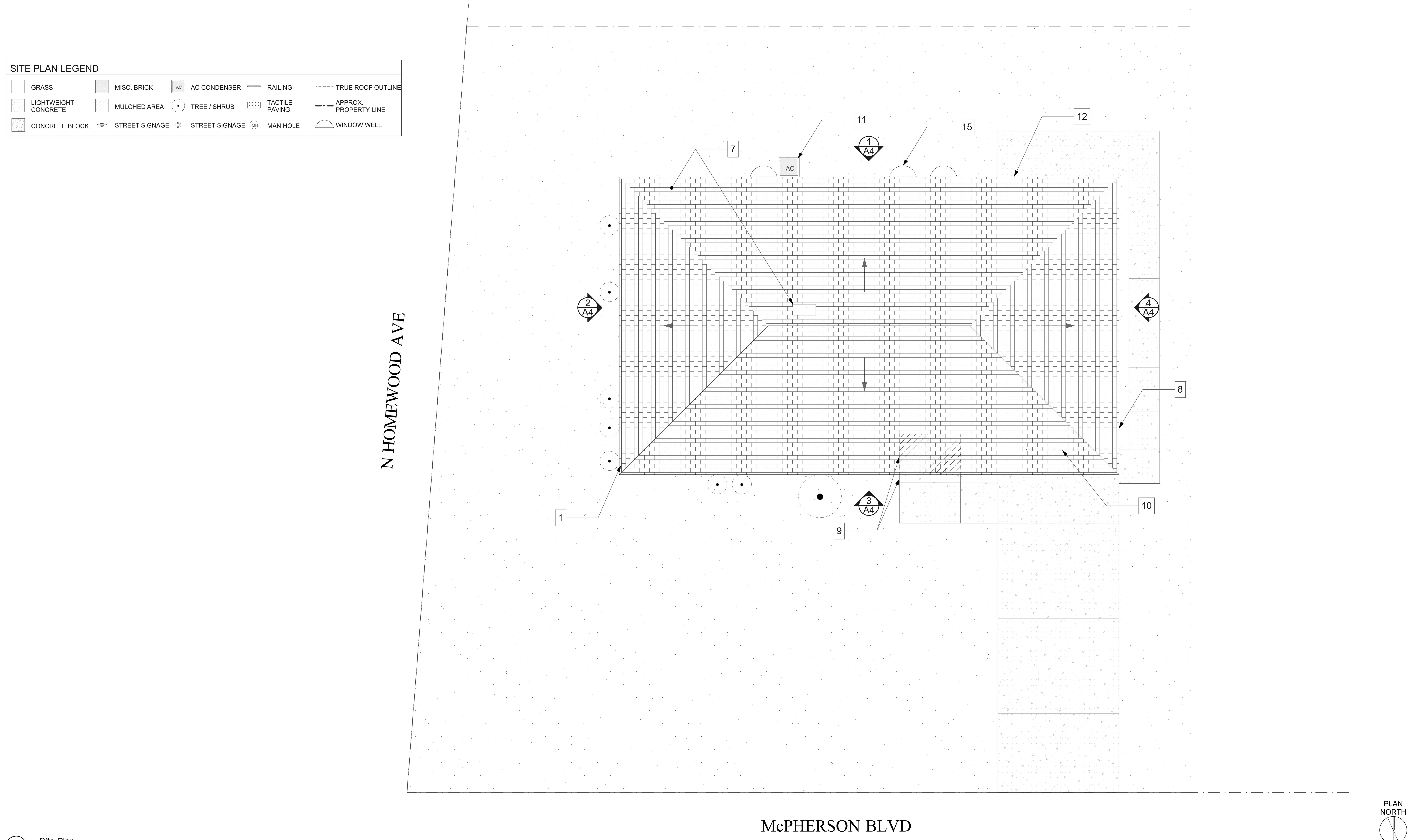
no. 1 / of. 8	Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

<u>10 Scattered Sites Keynotes – 7153 McPherson Blvd</u>

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS, AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.
6. ABANDONED ATTIC MTD HVAC UNIT AND DUCTWORK (M, GC): Remove existing abandoned unit all utility connections, ductwork, grilles, and diffusers. Patch and paint to match all finished surfaces where existing grilles/diffusers and utility penetrations were removed.

Exterior

7. ROOF (GC): Remove existing shingles (approx. 1,600 sf), flashing, roof vent caps, roof pipe boots flashing, gutters, downspouts, etc. Relocate existing Dish to a wall mounted location so as to <u>not</u> penetrate the roof. Re-roof using new materials per Specifications. Replace sloped mortar chimney cap with new.
8. ELECTRICAL SERVICE ENTRANCE (E): Replace existing electrical service entrance. See Specifications.
9. CONCRETE ENTRY STEPS (GC): Remove existing displaced concrete steps (2) and stoop (approx. 25 sf). Provide new poured concrete steps and stoop pinned to front concrete porch. See Specifications.
10. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
11. EXISTING AC CONDENSER (M): Provide new seal tie replacement from conduit to Condenser. Remove abandoned condensate drain line from old HVAC in attic and seal any through wall penetrations with silicone seal, see Note 6 for coordination. See Specifications.
12. REAR LIGHT FIXTURE (E): Replace photocell in existing exterior light fixture and assure proper functioning. Alternatively, replace fixture with new photocell operated fixture with switch override.
13. GARAGE DOOR (GC): Scrape clean and repaint garage door and wood trim.
14. FRONT COLUMNS (GC): Scrape clean and repaint (3) columns by front porch.

15. WINDOW WELLS (GC): Provide liquid applied waterproofing membrane to exposed foundation block within all window wells. See specifications.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing archaic electric fuse panel and electrical panel with new consolidated 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE CEILING (GC): At corner of garage ceiling. Remove portion of ceiling (approx. 10 sf) damaged by water intrusion. Replace with new GWB with textured/painted finish to match. Note: repair ceiling after roof is replaced and Dish is permanently relocated. See Specifications.
18. REAR DOOR TO EXTERIOR (GC): Replace rear doorknob on door to exterior with new. Scrape to remove old caulk and re-caulk door frame to seal.

Interior Basement

19. FURNACE/ DUCTWORK (M): Furnace is 3 years old. Provide inspection by a qualified HVAC technician. Seam seal all exposed duct seams within basement. See Specifications.
20. BASEMENT ACCESS STAIR (GC): Clean and paint basement stair handrail. Provide new riser closures consisting of painted 2"-by wood, taking care to preserve 1" nosing dimension at treads. Provide new vinyl non-slip tread covers at each tread. See Specifications
21. WATER HEATER (P): Water heater is 15 years old, replace. Provide all necessary connections (electrical, water and waste) with the installation. See Specifications.

Interior First Floor

22. FLOOR FINISH (GC): Remove existing carpet (approx. 604 sf) and VCT (approx. 155 sf) floor finish throughout first floor. Prep subfloor and provide new LVT floor finish and wall base in kitchen and bathrooms (approx. 155 sf). Provide new LVT floors over existing hardwood floors (approx. 604 sf). See Specification.
23. DISHWASHER (GC): Replace existing non-operating dishwasher per Specifications. Provide all necessary connections (electrical, water and waste) with the installation.
24. BATHROOM (P/GC): In first floor bathroom: Remove and replace entirely existing tub tile surround, vanity base and sink, medicine cabinet, tub/shower faucet and drain, sink faucet and drain, and toilet. Provide new sliding glass shower door. Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. Provide new towel bar(s). Robe Hook, Grab bar and toilet roll holder. Provide repair of wall behind tub surround after demolition. See Specifications.

Attic

25. MISC. ATTIC INSULATION (GC): Provide new min R-38 fiberglass batt insulation at location where HVAC unit was removed (approx. 10 sf). See Specifications.

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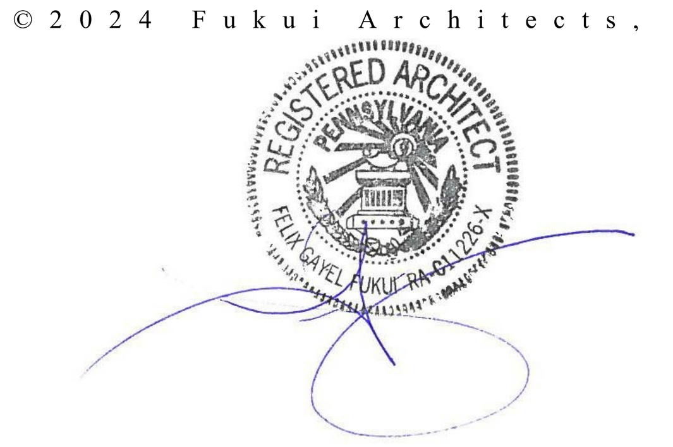

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drawing title

Site Plan, Site Plan Legend, Keynotes

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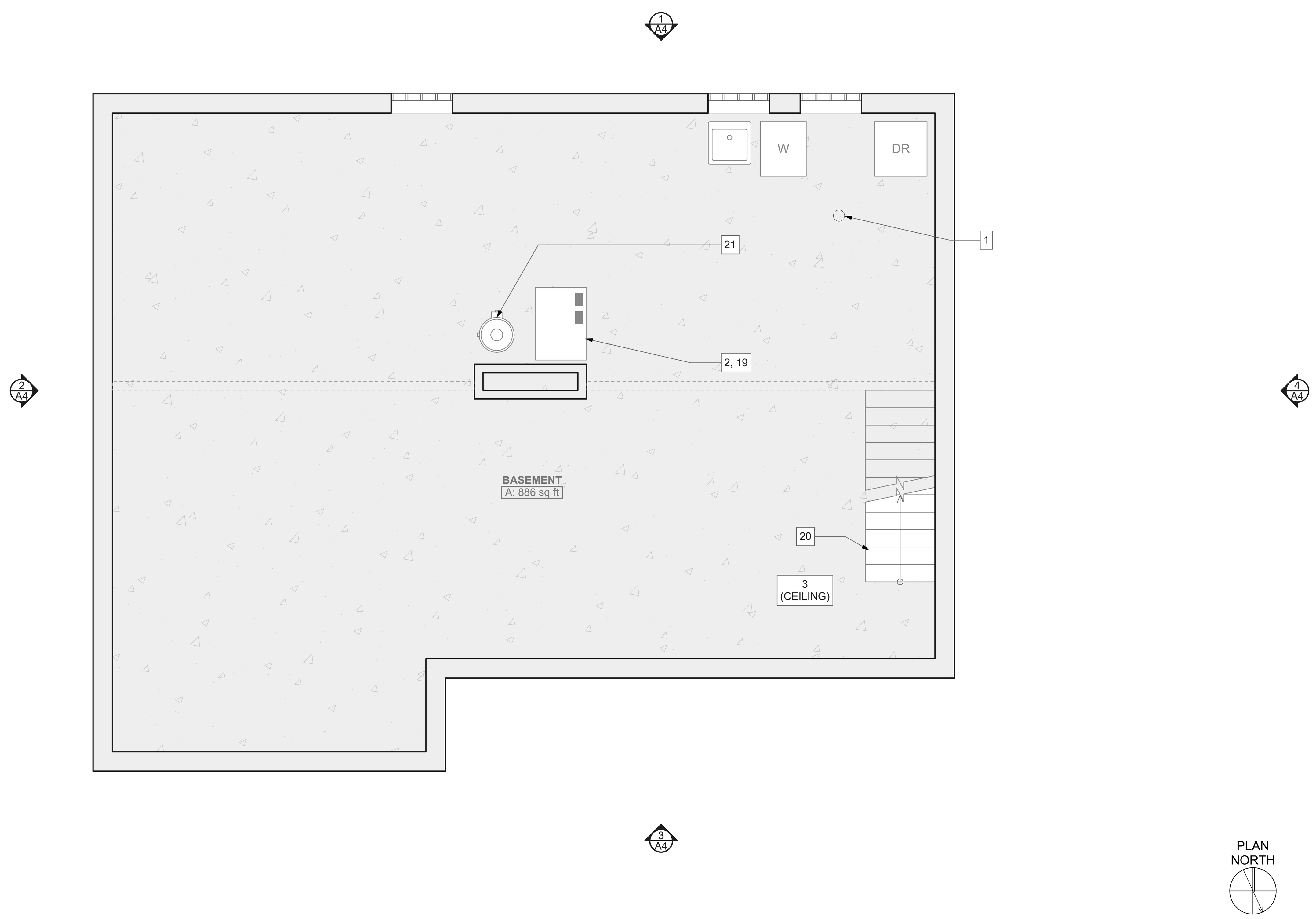
FLOOR COVERING PLAN LEGEND

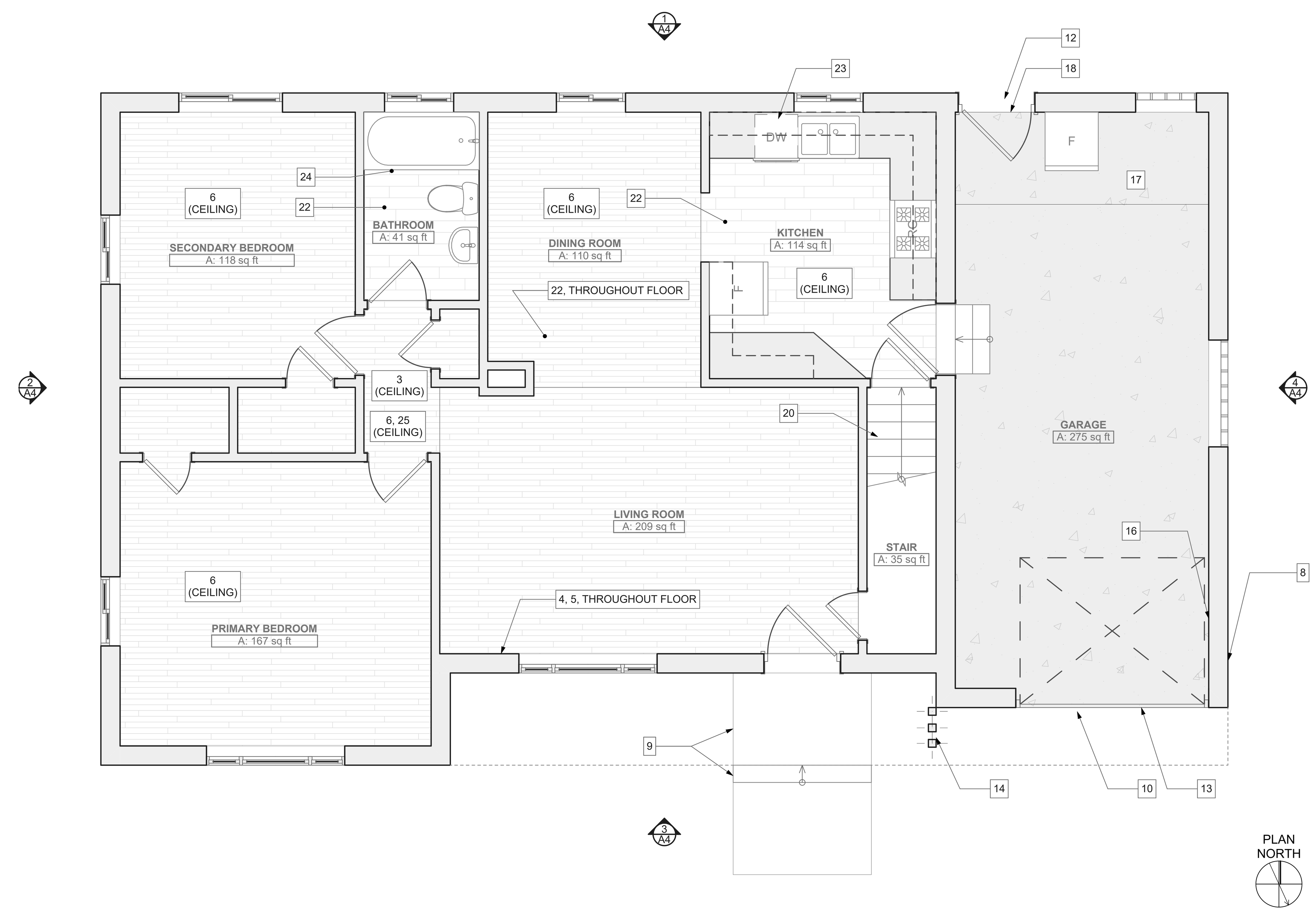
- VCT FLOORING
- CONCRETE FLOORING
- CARPET FLOORING
- LVT FLOORING
- WOOD FLOORING

GENERAL FLOOR PLAN NOTES

1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 7153 McPherson Blvd

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS, AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.
6. ABANDONED ATTIC MTD HVAC UNIT AND DUCTWORK (M, GC): Remove existing abandoned unit all utility connections, ductwork, grilles, and diffusers. Patch and paint to match all finished surfaces where existing grilles/diffusers and utility penetrations were removed.

Exterior

7. ROOF (GC): Remove existing shingles (approx. 1,600 sf), flashing, roof vent caps, roof pipe boots flashing, gutters, downspouts, etc. Relocate existing Dish to a wall mounted location so as to not penetrate the roof. Re-roof using new materials per Specifications. Replace sloped mortar chimney cap with new.
8. ELECTRICAL SERVICE ENTRANCE (E): Replace existing electrical service entrance. See Specifications.
9. CONCRETE ENTRY STEPS (GC): Remove existing displaced concrete steps (2) and stoop (approx. 25 sf). Provide new poured concrete steps and stoop pinned to front concrete porch. See Specifications.
10. CONCRETE EDGE SEAL (GC): At floor joint between garage slab and driveway, clean out joint, provide new backer rod and caulk to seal full width. See Specifications.
11. EXISTING AC CONDENSER (M): Provide new seal tie replacement from conduit to Condenser. Remove abandoned condensate drain line from old HVAC in attic and seal any through wall penetrations with silicone seal, see Note 6 for coordination. See Specifications.
12. REAR LIGHT FIXTURE (E): Replace photocell in existing exterior light fixture and assure proper functioning. Alternatively, replace fixture with new photocell operated fixture with switch override.
13. GARAGE DOOR (GC): Scrape clean and repaint garage door and wood trim.
14. FRONT COLUMNS (GC): Scrape clean and repaint (3) columns by front porch.
15. WINDOW WELLS (GC): Provide liquid applied waterproofing membrane to exposed foundation block within all window wells. See specifications.

Interior Garage

16. ELECTRICAL PANEL (E): Replace existing archaic electric fuse panel and electrical panel with new consolidated 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
17. GARAGE CEILING (GC): At corner of garage ceiling. Remove portion of ceiling (approx. 10 sf) damaged by water intrusion. Replace with new GWB with textured/painted finish to match. Note: repair ceiling after roof is replaced and Dish is permanently relocated. See Specifications.
18. REAR DOOR TO EXTERIOR (GC): Replace rear doorknob on door to exterior with new. Scrape to remove old caulk and re-caulk door frame to seal.

Interior Basement

19. FURNACE/ DUCTWORK (M): Furnace is 3 years old. Provide inspection by a qualified HVAC technician. Seam seal all exposed duct seams within basement. See Specifications.
20. BASEMENT ACCESS STAIR (GC): Clean and paint basement stair handrail. Provide new riser closures consisting of painted 2"-by wood, taking care to preserve 1" nosing dimension at treads. Provide new vinyl non-slip tread covers at each tread. See Specifications
21. WATER HEATER (P): Water heater is 15 years old, replace. Provide all necessary connections (electrical, water and waste) with the installation. See Specifications.

Interior First Floor

22. FLOOR FINISH (GC): Remove existing carpet (approx. 604 sf) and VCT (approx. 155 sf) floor finish throughout first floor. Prep subfloor and provide new LVT floor finish and wall base in kitchen and bathrooms (approx. 155 sf). Provide new LVT floors over existing hardwood floors (approx. 604 sf). See Specification.
23. DISHWASHER (GC): Replace existing non-operating dishwasher per Specifications. Provide all necessary connections (electrical, water and waste) with the installation.
24. BATHROOM (P/GC): In first floor bathroom: Remove and replace entirely existing tub tile surround, vanity base and sink, medicine cabinet, tub/shower faucet and drain, sink faucet and drain, and toilet. Provide new sliding glass shower door. Provide new bathroom exhaust fan wired to light circuit and ventilated to the exterior. Provide new towel bar(s). Robe Hook, Grab bar and toilet roll holder. Provide repair of wall behind tub surround after demolition. See Specifications.

Attic

25. MISC. ATTIC INSULATION (GC): Provide new min R-38 fiberglass batt insulation at location where HVAC unit was removed (approx. 10 sf). See Specifications.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

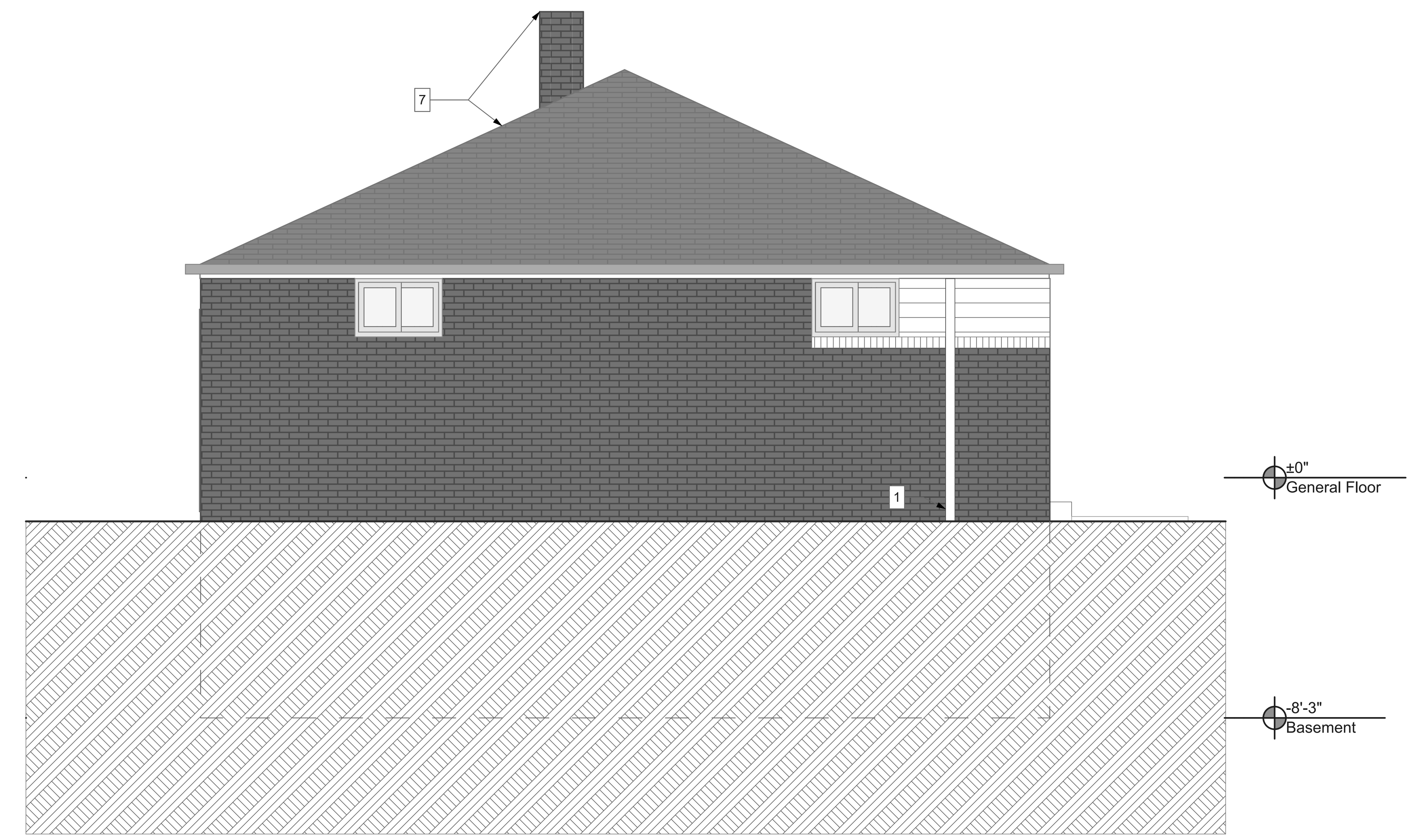
Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

Basement, Renovation Plan Legend, First Floor, Floor Plan Legend, Keynotes

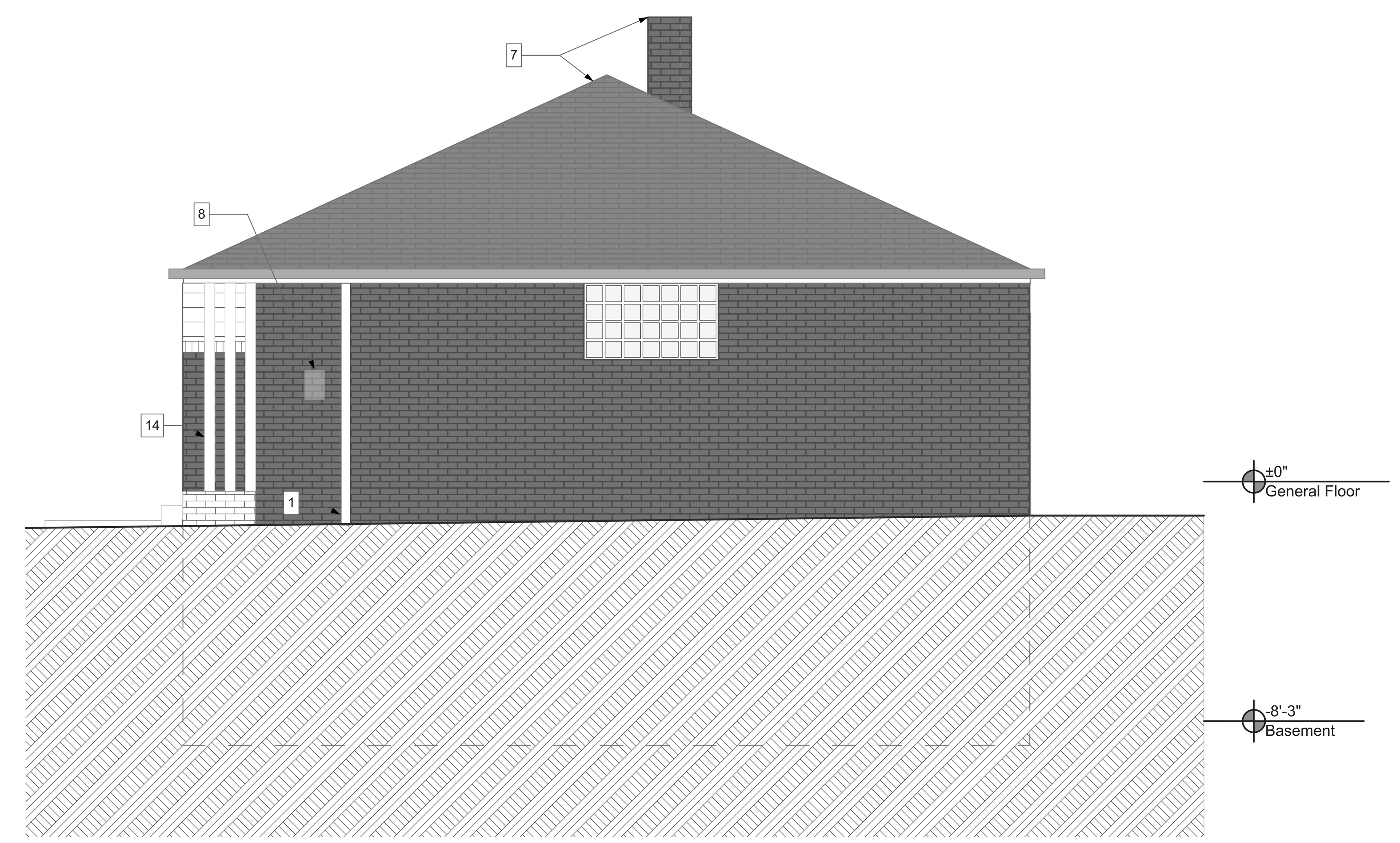
scale		Sheet No.
As Noted		A3
date: August 20th, 2024		
no. 3	of. 8	Project #2326

1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

3 North Elevation
SCALE: 1/4" = 1'-0"



4 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 7153 McPherson Blvd

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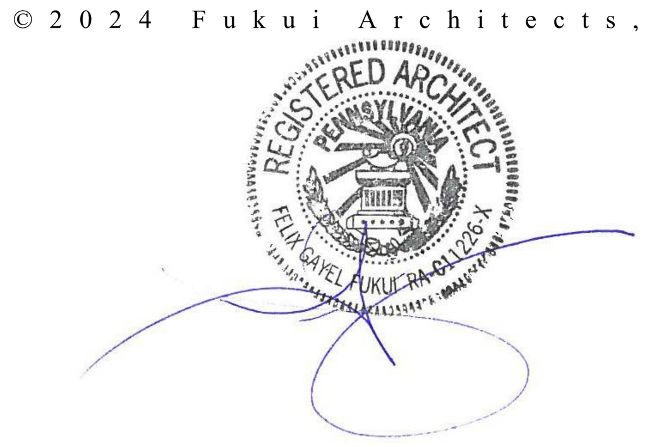

seal

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revisions

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Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

South Elevation, East Elevation, West Elevation, North Elevation, Keynotes

scale: As Noted		**Sheet No.**
date: August 20th, 2024		**A4**
no. 4	of. 8	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT
WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT
WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT
WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT
WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".
(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,
EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S
EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS
DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.
WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE
AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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Fukui Architects Pc
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ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

2024-08-19 Specifications

scale As Noted
date August 20th, 2024
no. 5 of. 8

Sheet No.
A5
Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:

A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:

1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.

1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:

1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
   A. SOLID COLORS, MATTE FINISH.
   B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
   C. WOOD GRAINS, MATTE FINISH.
   D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.** **A6** Project #2326
date August 20th, 2024	
no. 6 **of.** 8	

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:
- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS.
INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP.
RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

2024-08-19 Specifications

scale: As Noted
date: August 20th, 2024
no.: 7
of.: 8

Sheet No.
A7
Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS

1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS

1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS

1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS

1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES

MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS

CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES

1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS

FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM

USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS

1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE

METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION

USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL

ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION

PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS

BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS

1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE

ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL

ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM

ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
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FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
7152 McPherson Blvd
Pittsburgh, Pennsylvania 15208

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A8**
no. 8 / **of.** 8	Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Vidette St
Single Family Residence, Minor Alteration
8331 Vidette Street,
Pittsburgh, Pennsylvania 15221

Drawing Index

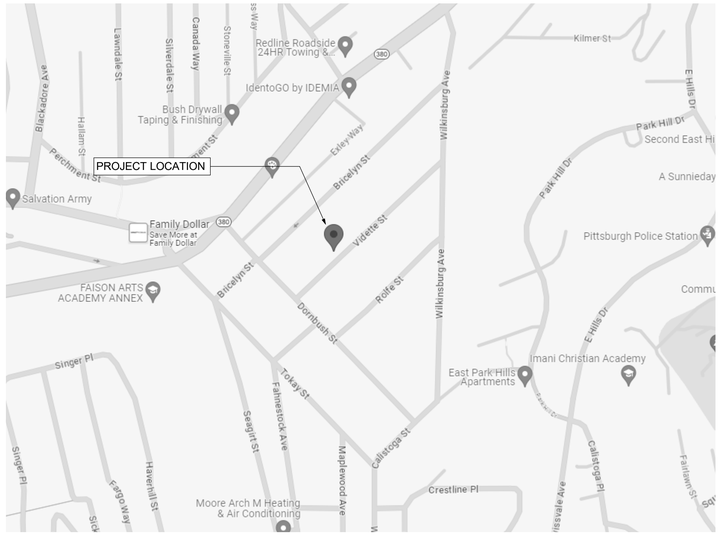
Code Conformance Information

Applicable Codes

General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information

Stories:	2 Stories
Building Gross Area:	Basement 351 sqft + Garage 266 sqft
	1st Floor 617 sqft
	2nd Floor 617 sqft



1 Site Location
SCALE: 1" = 30'

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
℄	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

- T.O. FINISH FLOOR ELEV: 0'-0" — ELEVATION HEIGHT
- PLAN NORTH — NORTH ARROW
- 1 / A1 — ELEVATION MARKER

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REGISTERED ARCHITECT PENNSYLVANIA

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

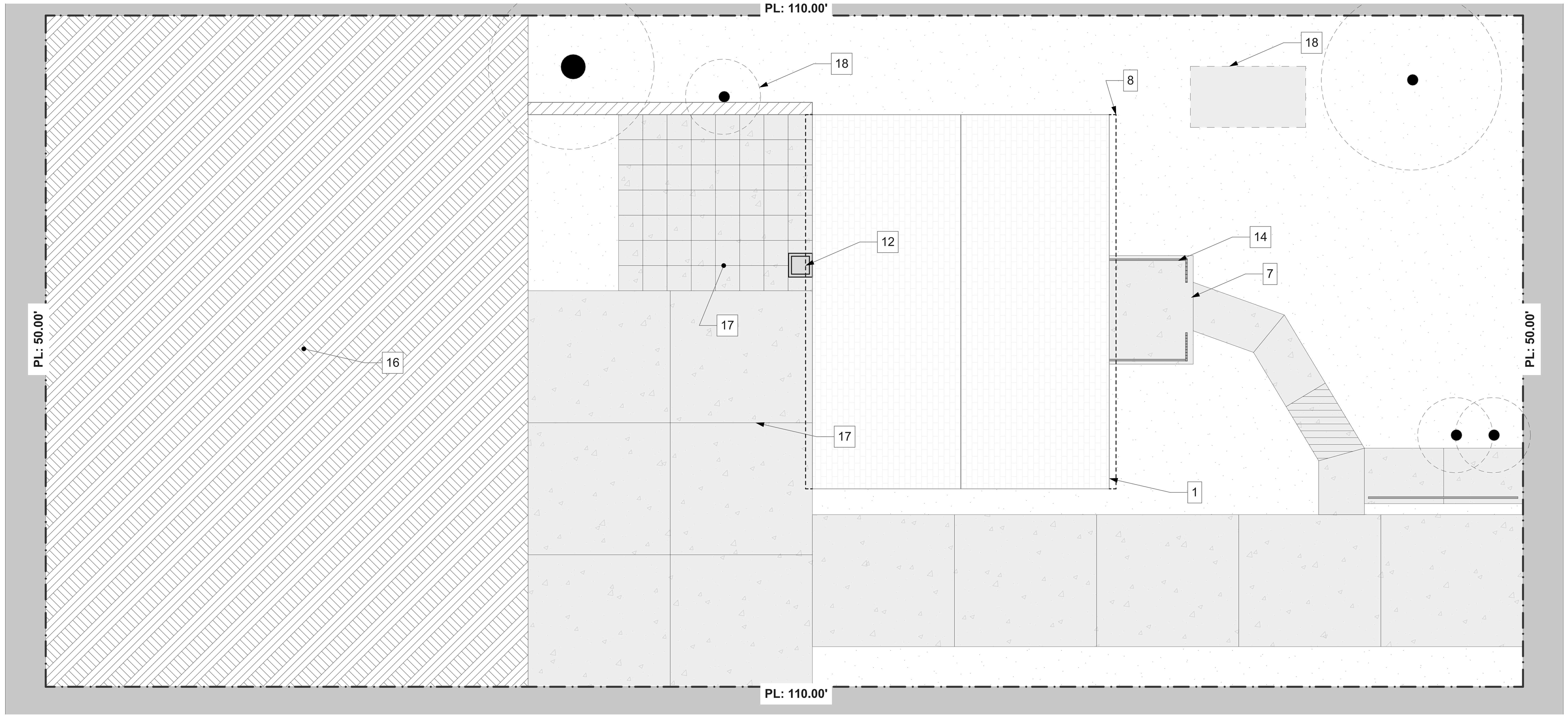
Drawing Index, Code Conformance Information, Site Location, Abbreviations and Materials

scale	As Noted
date	August 20th, 2024
no.	1
of.	9

Sheet No.

A1

Project #2326



1 Site Plan
SCALE: 3/16" = 1'-0"

PLAN NORTH

SITE PLAN LEGEND

GRASS · MISC. BRICK · AC CONDENSER · RAILING · TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE · MULCHED AREA · TREE / SHRUB · TACTILE PAVING · APPROX. PROPERTY LINE
CONCRETE BLOCK · STREET SIGNAGE · STREET SIGNAGE · MAN HOLE · WINDOW WELL

10 Scattered Sites Keynotes - 8331 Vidette St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. FRONT DOOR (GC): Remove existing front exterior door, frame and threshold, provide new 1 3/4" insulated wood look fiberglass door (with 3 lites sim. to existing), door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
7. ENTRANCE CANOPY (GC): At this location, provide new 52" wide x 36" deep, concave style aluminum entrance canopy properly fastened, flashed and sealed to exterior wall face. See Specifications.
8. ROOF GUTTERS AND FASCIA (GC): Remove gutters and replace existing fascia board with new synthetic white fascia board. Clear gutters downspouts and underground piping of debris. Clean and reinstall gutters and reconnect to downspout ensuring that all joints are properly sealed. Provide new gutter guard protection along the full length of the gutters. See Specification.
9. EXISTING LINTELS (GC): Protect surrounding finishes and windows, sandblast to clean rust and old paint off of existing steel lintels. Prime bare steel using zinc rich primer. Paint lintels to finish and caulk to seal within brick joints. Match caulk to mortar. Replace these (2) lintels with new. See Specifications
10. EXISTING BRICK SILLS (GC): At exterior of building, repoint all brick sills at each opening location (14 total).
11. EXISTING BRICK VENEER (GC): At entire façade strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the entire chimney stack.
12. CHIMNEY (GC): in addition to repointing chimney, remove existing crumbling mortar cap and provide new aluminum cap at top. See Specifications.
13. EXISTING WINDOW CAULK (GC): Scrape clean and recaulk head, jamb and sill of all windows. See Specifications.
14. ENTRY RAILING (GC): Scrape and paint patio railing. (See Specifications)
15. REAR GLASS SLIDING DOOR (GC): Remove and replace existing rear sliding door, frame and associated synthetic trim. Provide new replacement sliding door x full height and width of opening. See Specifications.
16. REAR YARD (GC): In this area clear out undergrowth, fallen and dead branches (approx. 1,800 sf).
17. REAR PATIO (GC): Remove and replace concrete pavers (approx. 200 sf). Provide new concrete slab sloped to drain away from building. See Specifications. At existing concrete slab and driveway clean control joints down to ½" to 1" and provide new backer rod and caulk to seal (approx. 200 sf). Pressure wash entire slab.
18. TREE STUMPS (GC): Remove existing tree stump and surrounding invasive flora entirely. Provide new compacted soil and grass overseed to establish lawn in area of removal.

Interior Garage

19. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
20. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, and paint new GWB to finish. See Specifications.
21. GARAGE TO HOUSE DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
22. GARAGE WALLS (GC): Scrape and paint interior surface floor to ceiling (approx. 550 sf). See Specifications.
23. GARAGE FLOOR (GC): Pressure wash to clean garage floor (approx. 240 sf).

Interior Basement

24. WATER HEATER (P): Water Heater appears to be manufacture dated May of 2019 and does not show signs of failure. Service.
25. FURNACE (M): Furnace is 32 years old. Replace the Furnace. See Specifications.
26. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 200 sf). See Specification.
27. WATER METER (E): Add grounding site to jump water meter. Reattach cover.
28. MECHANICAL ROOM (GC): Clean and paint walls (approx. 300 sf). Provide new painted moisture resistant GWB finish at partition wall and below stair.

Interior First Floor

29. KITCHEN APPLIANCES (GC/E/M): Replace all appliances including stove/oven, refrigerator, kitchen exhaust hood.
30. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Provide new door/drawer knobs. Adjust doors and drawers to level and ensure smooth operation. See Specifications.
31. KITCHEN SINK AND FAUCETS (P): Provide new Kitchen sink faucet and drain.
32. KITCHEN FLOORING (GC): Kitchen flooring: Remove and replace kitchen flooring (approx. 100 sf) and wall base. Prep subfloor, smooth and level. Provide new LVT finish flooring and 4" rubber cove base.
33. KITCHEN BACKSPLASH (GC): Kitchen stove backsplash: Provide new thinset ceramic tile backsplash from 12" below top of cooking surface to base of upper cabinets x width of cabinets. Grouted and sealed.
34. KITCHEN CEILING (GC/E): Kitchen Ceiling and ceiling lighting: remove remaining damaged portions of kitchen ceiling. Replace/Repair existing leaking plumbing lines above. Provide new GWB ceiling patch to blend with existing ceiling. Tape, spackle, texture and paint entire ceiling (approx. 100 sf). Provide new energy star kitchen lighting fixtures (typ. 2). See Specifications.
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39. HALF-BATH (P): Replace toilet with new. See Specifications.

Interior Second Floor

40. MAIN STAIRWAY (GC): At main stairway, replace 5 damaged painted oak stair treads. Match existing tread nosing, trim, depth and width. Glue and screw to secure. Repaint entire stairway treads, risers and stringers to match existing. Sand and re-paint handrail, or replace handrail, and paint.
41. BATHROOM (GC/P/E/M): Completely renovate bathroom with new tub/shower, tub/shower surround, shower rod and curtain; sink base cabinet and counter with integral sink; sink faucet, drain assembly and shut-offs; toilet and spring loaded paper holder; new medicine cabinet and lighting. Provide new GFCI outlet located on left side of sink approx. 42" AFF. Remove completely the existing flooring down to the floor joists. If necessary, sister two joists to strengthen and level. Otherwise level floor and provide new glue down ¾" T&G exterior grade subfloor glued and screwed to fasten. Provide new waterproof LVT finish flooring (approx. 40 sf) and 4" rubber cove base. See Specifications.
42. FLOOR FINISH (GC): Remove existing carpet and VCT floor finish throughout second floor. Provide new LVT floors over existing hardwood floors (approx. 460 sf). See Specification.
43. WINDOWS (GC): Clean tape residue. Clean out all window tracks (14 total).
44. PRIMARY BEDROOM CLOSET (GC): Add closet rod (3 ft).

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

Site Plan, Site Plan Legend, Keynotes

scale	Sheet No.
As Noted	A2
date: August 20th, 2024	
no. 2 of. 9	Project #2326

FLOOR COVERING PLAN LEGEND

- VCT FLOORING
- CONCRETE FLOORING
- CARPET FLOORING
- LVT FLOORING
- WOOD FLOORING

10 Scattered Sites Keynotes - 8331 Vidette St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
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3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
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Exterior

6. FRONT DOOR (GC): Remove existing front exterior door, frame and threshold, provide new 1 3/4” insulated wood look fiberglass door (with 3 lites sim. to existing), door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
7. ENTRANCE CANOPY (GC): At this location, provide new 52” wide x 36” deep, concave style aluminum entrance canopy properly fastened, flashed and sealed to exterior wall face. See Specifications.
8. ROOF GUTTERS AND FASCIA (GC): Remove gutters and replace existing fascia board with new synthetic white fascia board. Clear gutters downspouts and underground piping of debris. Clean and reinstall gutters and reconnect to downspout ensuring that all joints are properly sealed. Provide new gutter guard protection along the full length of the gutters. See Specification.
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19. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
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Interior Basement

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25. FURNACE (M): Furnace is 32 years old. Replace the Furnace. See Specifications.
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27. WATER METER (E): Add grounding site to jump water meter. Reattach cover.
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Interior First Floor

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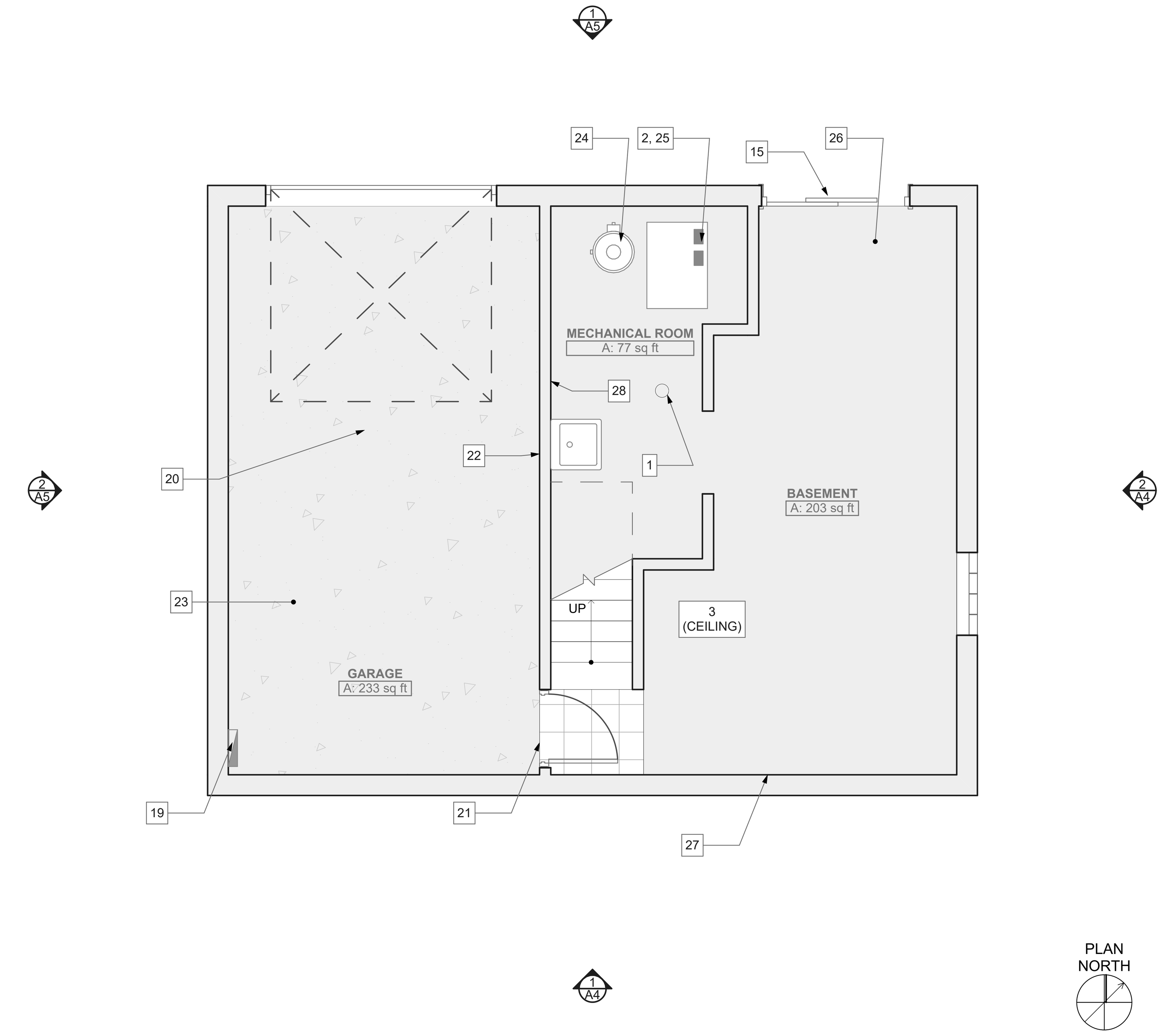
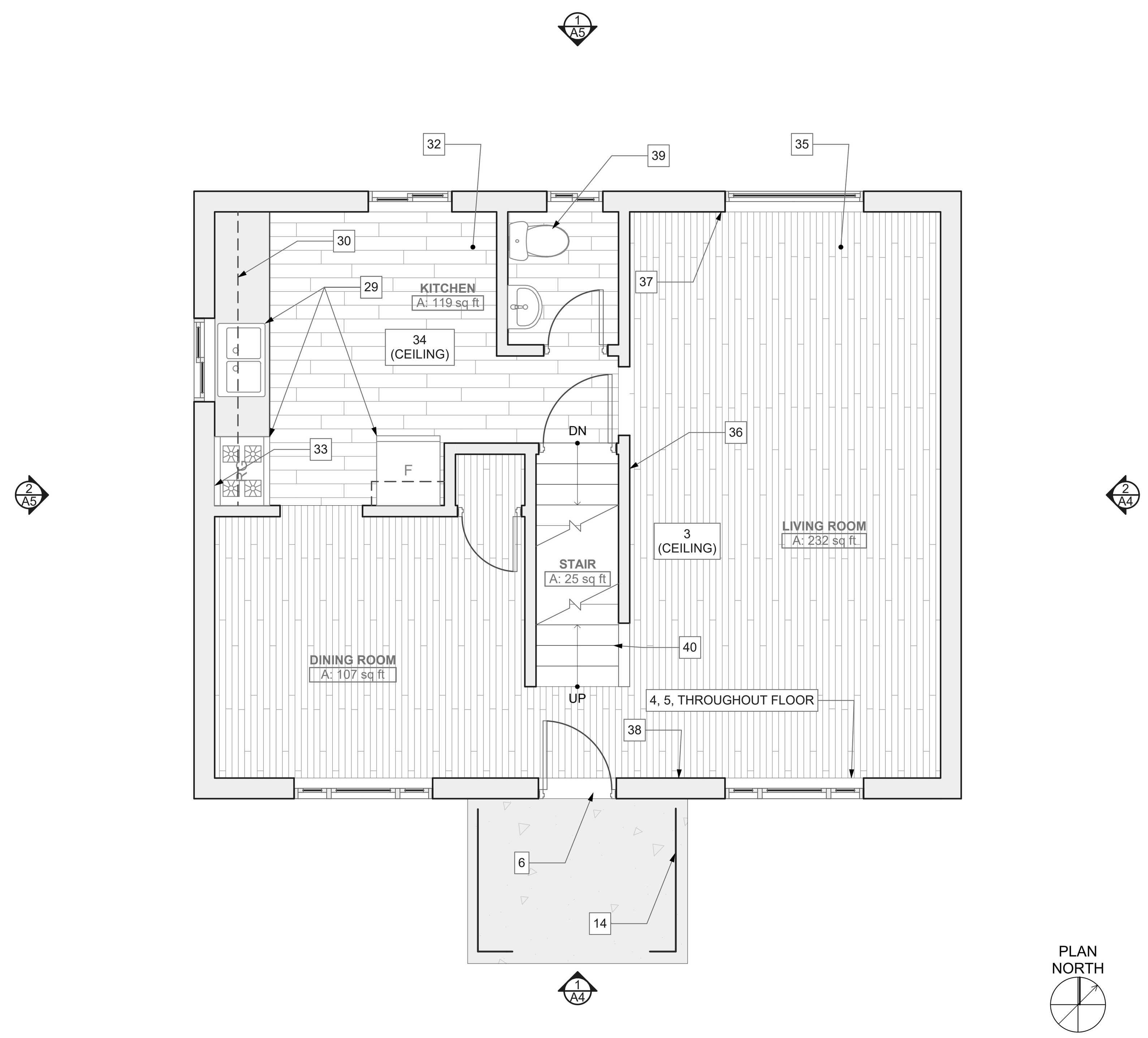
44. PRIMARY BEDROOM CLOSET (GC): Add closet rod (3 ft).

GENERAL FLOOR PLAN NOTES

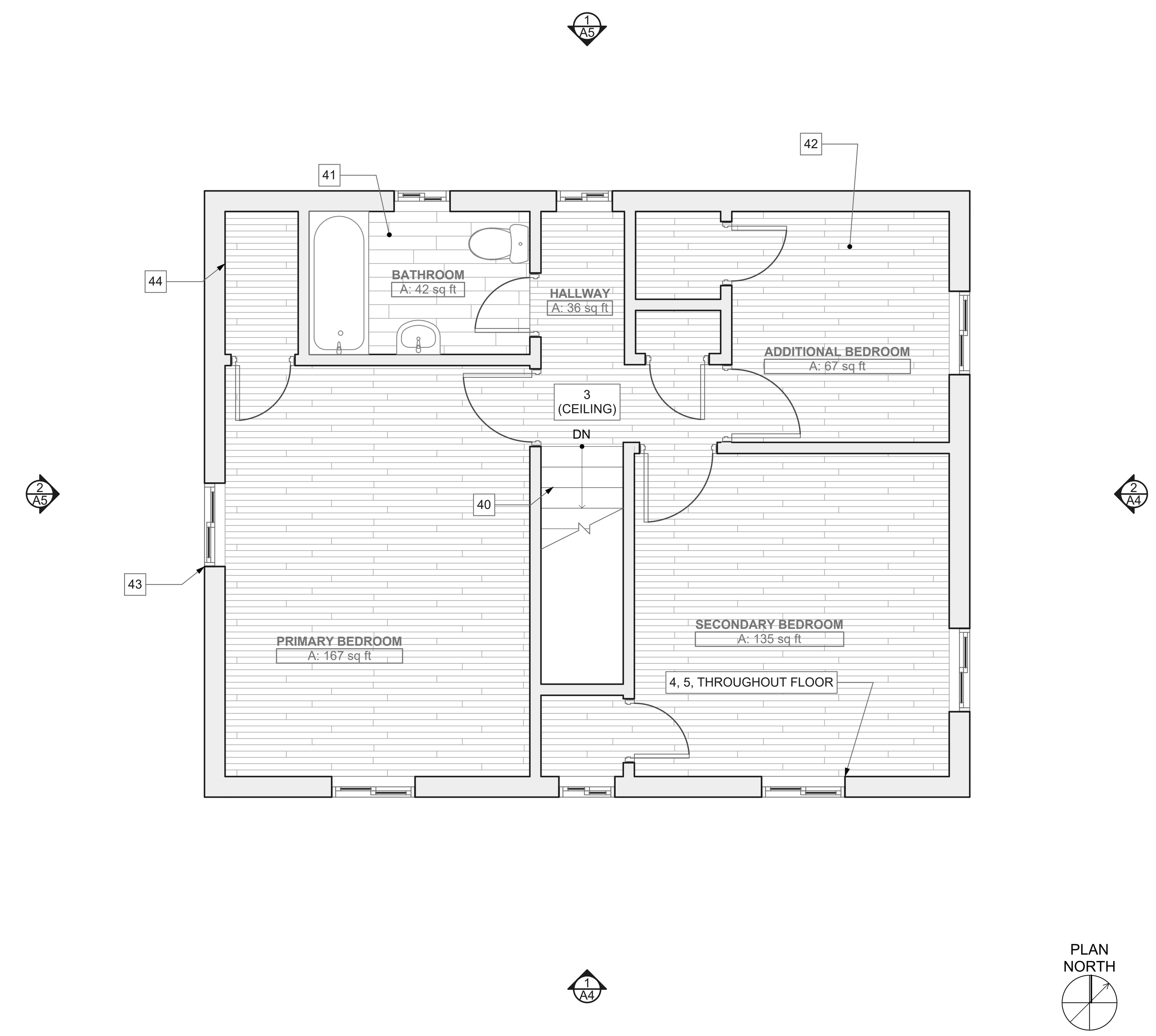
1. PROPERTY HAS BEEN TESTED FOR HAZARDOUS MATERIALS. REPORT WILL BE AVAILABLE AND PROVIDED BY HACP. GC TO ABATED MATERIALS FOLLOWING THE RECOMMENDATIONS FROM THE REPORT.
2. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
4. ALIGN NEW WALL & CEILING CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
5. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
6. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
7. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
8. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
9. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.



1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc

205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

Basement, First Floor, Second Floor, Renovation Plan Legend, Keynotes, Floor Plan Legend

scale	Sheet No.
As Noted	A3
date: August 20th, 2024	
no. 3 of. 9	Project #2326

Fukui Architects Pc
205 Ross Street
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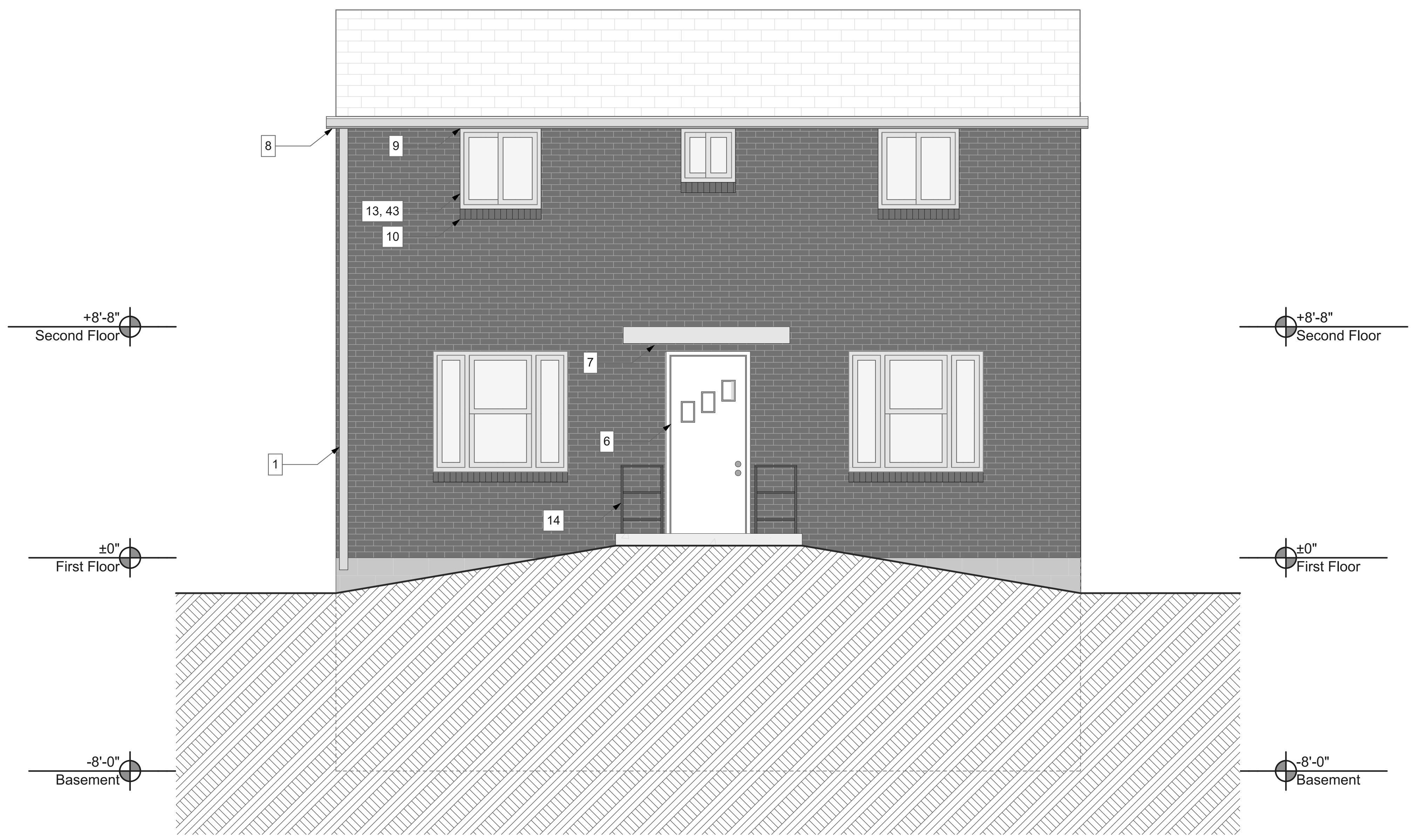
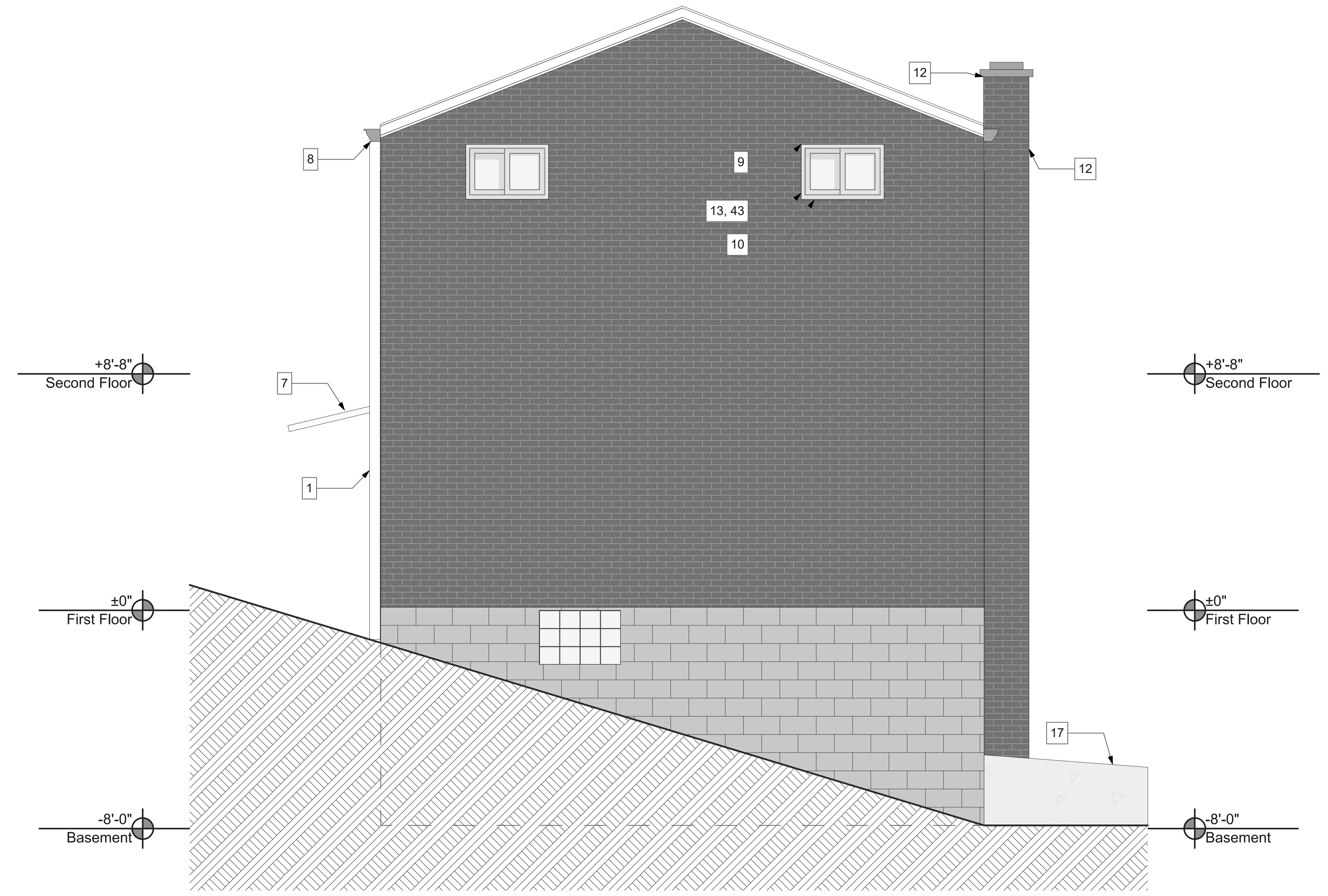


1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

seal

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project title

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Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
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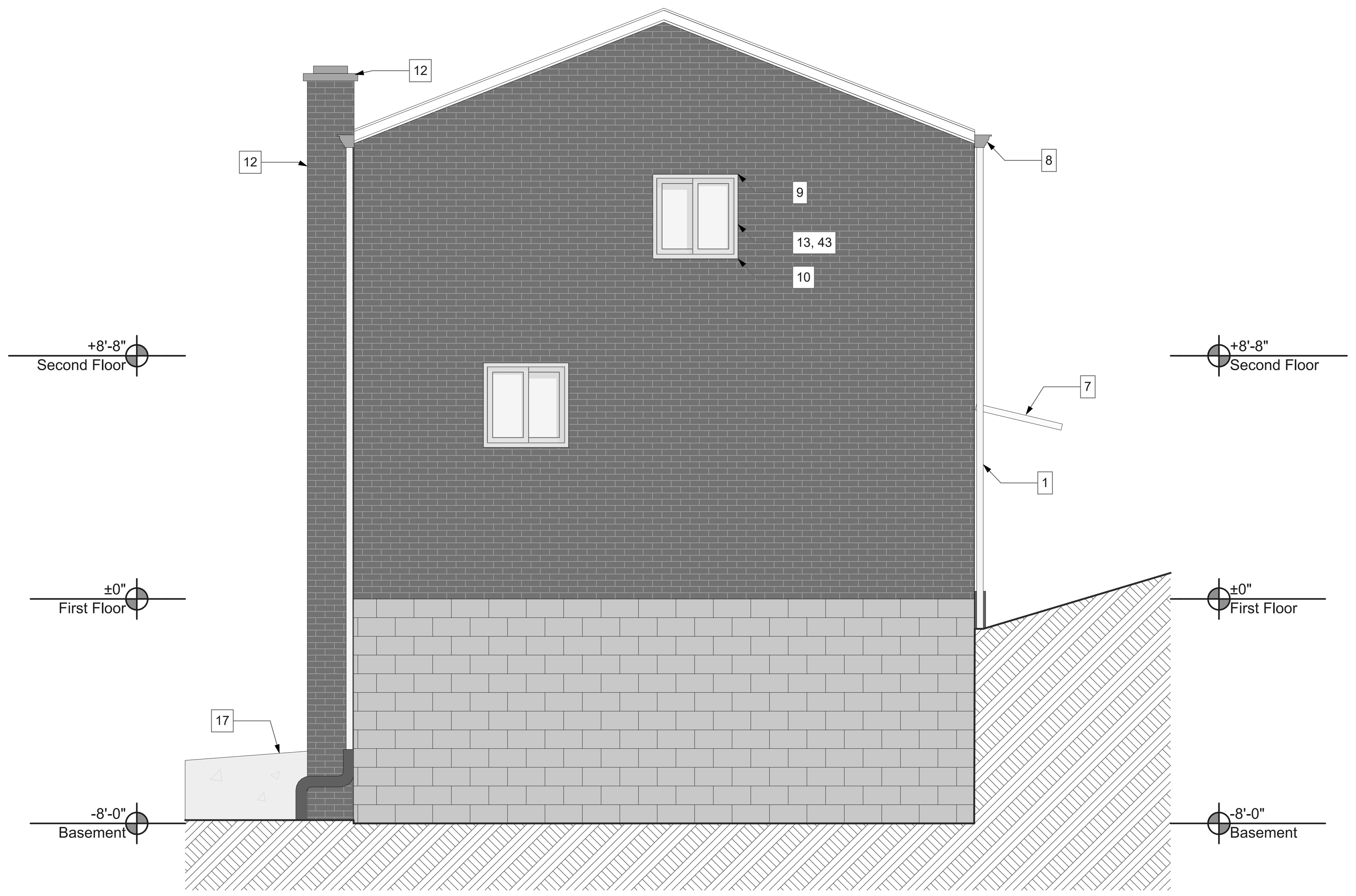
drawing title

South Elevation, East Elevation, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	A4
no. 4 / of. 9	Project #2326

1 North Elevation
SCALE: 1/4" = 1'-0"



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10 Scattered Sites Keynotes - 8331 Vidette St

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
5. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.

Exterior

6. FRONT DOOR (GC): Remove existing front exterior door, frame and threshold, provide new 1 3/4" insulated wood look fiberglass door (with 3 lites sim. to existing), door threshold and all door hardware. Paint frame to finish and trim with new synthetic wood trim, caulked to seal. See Specifications.
7. ENTRANCE CANOPY (GC): At this location, provide new 52" wide x 36" deep, concave style aluminum entrance canopy properly fastened, flashed and sealed to exterior wall face. See Specifications.
8. ROOF GUTTERS AND FASCIA (GC): Remove gutters and replace existing fascia board with new synthetic white fascia board. Clear gutters downspouts and underground piping of debris. Clean and reinstall gutters and reconnect to downspout ensuring that all joints are properly sealed. Provide new gutter guard protection along the full length of the gutters. See Specification.
9. EXISTING LINTELS (GC): Protect surrounding finishes and windows, sandblast to clean rust and old paint off of existing steel lintels. Prime bare steel using zinc rich primer. Paint lintels to finish and caulk to seal within brick joints. Match caulk to mortar. Replace these (2) lintels with new. See Specifications
10. EXISTING BRICK SILLS (GC): At exterior of building, repoint all brick sills at each opening location (14 total).
11. EXISTING BRICK VENEER (GC): At entire façade strike and repoint areas of loose or missing mortar. This includes areas left, right and above all window lintels as well as the entire chimney stack.
12. CHIMNEY (GC): in addition to repointing chimney, remove existing crumbling mortar cap and provide new aluminum cap at top. See Specifications.
13. EXISTING WINDOW CAULK (GC): Scrape clean and recaulk head, jamb and sill of all windows. See Specifications.
14. ENTRY RAILING (GC): Scrape and paint patio railing. (See Specifications)
15. REAR GLASS SLIDING DOOR (GC): Remove and replace existing rear sliding door, frame and associated synthetic trim. Provide new replacement sliding door x full height and width of opening. See Specifications.
16. REAR YARD (GC): In this area clear out undergrowth, fallen and dead branches (approx. 1,800 sf).
17. REAR PATIO (GC): Remove and replace concrete pavers (approx. 200 sf). Provide new concrete slab sloped to drain away from building. See Specifications. At existing concrete slab and driveway clean control joints down to ½" to 1" and provide new backer rod and caulk to seal (approx. 200 sf). Pressure wash entire slab.
18. TREE STUMPS (GC): Remove existing tree stump and surrounding invasive flora entirely. Provide new compacted soil and grass overseed to establish lawn in area of removal.

Interior Garage

19. ELECTRICAL PANEL (E): Replace existing archaic electric panel with new 100 AMP panel with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally provide proper electrical grounding and bonding of the electrical system. See Specifications.
20. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, and paint new GWB to finish. See Specifications.
21. GARAGE TO HOUSE DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.
22. GARAGE WALLS (GC): Scrape and paint interior surface floor to ceiling (approx. 550 sf). See Specifications.
23. GARAGE FLOOR (GC): Pressure wash to clean garage floor (approx. 240 sf).

Interior Basement

24. WATER HEATER (P): Water Heater appears to be manufacture dated May of 2019 and does not show signs of failure. Service.
25. FURNACE (M): Furnace is 32 years old. Replace the Furnace. See Specifications.
26. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 200 sf). See Specification.
27. WATER METER (E): Add grounding site to jump water meter. Reattach cover.
28. MECHANICAL ROOM (GC): Clean and paint walls (approx. 300 sf). Provide new painted moisture resistant GWB finish at partition wall and below stair.

Interior First Floor

29. KITCHEN APPLIANCES (GC/E/M): Replace all appliances including stove/oven, refrigerator, kitchen exhaust hood.
30. KITCHEN CABINETS (GC): Carefully clean existing kitchen cabinet faces and interior to remove soiling and oils. Provide new door/drawer knobs. Adjust doors and drawers to level and ensure smooth operation. See Specifications.
31. KITCHEN SINK AND FAUCETS (P): Provide new Kitchen sink faucet and drain.
32. KITCHEN FLOORING (GC): Kitchen flooring: Remove and replace kitchen flooring (approx. 100 sf) and wall base. Prep subfloor, smooth and level. Provide new LVT finish flooring and 4" rubber cove base.
33. KITCHEN BACKSPLASH (GC): Kitchen stove backsplash: Provide new thinset ceramic tile backsplash from 12" below top of cooking surface to base of upper cabinets x width of cabinets. Grouted and sealed.
34. KITCHEN CEILING (GC/E): Kitchen Ceiling and ceiling lighting: remove remaining damaged portions of kitchen ceiling. Replace/Repair existing leaking plumbing lines above. Provide new GWB ceiling patch to blend with existing ceiling. Tape, spackle, texture and paint entire ceiling (approx. 100 sf). Provide new energy star kitchen lighting fixtures (typ. 2). See Specifications.
35. FLOOR FINISH (GC): Remove existing carpet and VCT floor finish throughout first floor dining room and living room. Provide new LVT floors over existing hardwood floors (approx. 360 sf). See Specification.
36. EXISTING STONE VENEER WALL (GC): At existing interior stone veneer wall (approx. 120 sf), clean and prep stone. Provide new semi-gloss white paint finish. See Specifications.
37. EXISTING INTERIOR WALL REPAIR (GC): Scrape, spackle, sand and paint area of wall adjacent to rear Living Room Window to match existing (Approx. 12 Sq In.)
38. NEW LIVING ROOM CEILING LIGHT FIXTURE AND SWITCH (E): Centered in Living Room ceiling, provide new energy star rated LED type surface mounted light fixture, wiring and new switch control. Gang new switch with existing 3 gang switch location adjacent to front door. See Specifications.
39. HALF-BATH (P): Replace toilet with new. See Specifications.

Interior Second Floor

40. MAIN STAIRWAY (GC): At main stairway, replace 5 damaged painted oak stair treads. Match existing tread nosing, trim, depth and width. Glue and screw to secure. Repaint entire stairway treads, risers and stringers to match existing. Sand and re-paint handrail, or replace handrail, and paint.
41. BATHROOM (GC/P/E/M): Completely renovate bathroom with new tub/shower, tub/shower surround, shower rod and curtain; sink base cabinet and counter with integral sink; sink faucet, drain assembly and shut-offs; toilet and spring loaded paper holder; new medicine cabinet and lighting. Provide new GFCI outlet located on left side of sink approx. 42" AFF. Remove completely the existing flooring down to the floor joists. If necessary, sister two joists to strengthen and level. Otherwise level floor and provide new glue down ¾" T&G exterior grade subfloor glued and screwed to fasten. Provide new waterproof LVT finish flooring (approx. 40 sf) and 4" rubber cove base. See Specifications.
42. FLOOR FINISH (GC): Remove existing carpet and VCT floor finish throughout second floor. Provide new LVT floors over existing hardwood floors (approx. 460 sf). See Specification.
43. WINDOWS (GC): Clean tape residue. Clean out all window tracks (14 total).
44. PRIMARY BEDROOM CLOSET (GC): Add closet rod (3 ft).

Fukui Architects Pc
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Pittsburgh, Pennsylvania 15219
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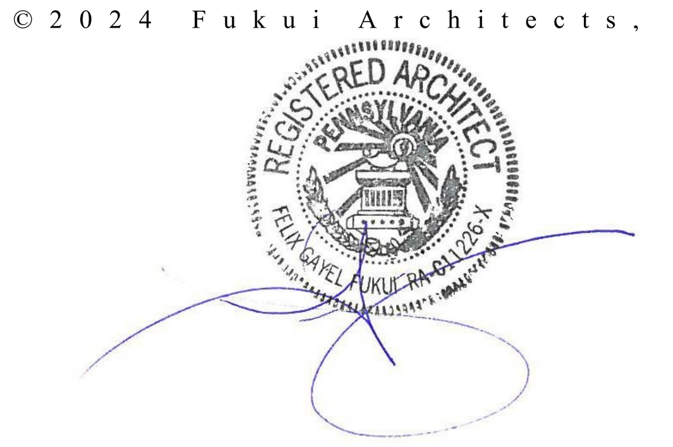

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

North Elevation, West Elevation, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	
no. 5	of. 9	A5
	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT

WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT

WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT

WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT

WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.
(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.
(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.
(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR’S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.
(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.
(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR’S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR’S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.
(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.
(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.
(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS “DIRECTED”, “REQUIRED”, “ORDERED”, “DESIGNATED”,“PRESCRIBED”, OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE“DIRECTION”, “REQUIREMENT”, “ORDER”,“DESIGNATION”, OR “PRESCRIPTION”, OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS “APPROVED”, “ACCEPTABLE”,“SATISFACTORY”, OR WORDS OF LIKE IMPORT SHALL MEAN “APPROVED BY”, OR “ACCEPTABLE TO”, OR “SATISFACTORY TO” THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.
(C)WHERE “AS SHOWN” “AS INDICATED”, “AS DETAILED”, OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD “PROVIDED” AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN “PROVIDE COMPLETE IN PLACE” THAT IS “FURNISHED AND INSTALLED”.
(D)“SHOP DRAWINGS” MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.
(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR’S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA’S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR’S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.
(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.
(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.
(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)“AS-BUILTDRAWINGS,” AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. “AS-BUILT DRAWINGS” SHALL BE SYNONYMOUS WITH “RECORD DRAWINGS.”
(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.
(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.
(B)APPROVAL OF EQUIPMENT AND MATERIALS.
(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER’S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER’S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY, EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.
(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR’S EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR’S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.
(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.
(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.
(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.
(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.
(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER. WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.
(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.
(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.
(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR’S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.
(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS’ COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.
(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.
(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.
(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.
(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.
(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.
(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.
(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.
(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.
(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.
(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.
(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) “ACCEPTANCE” MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) “INSPECTION” MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) “TESTING” MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.
(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.
(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.
(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER’S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.
(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.
(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.
(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.
(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR’S RIGHT TO PROCEED.
(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.
(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA’S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA’S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.
(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA’S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.
(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR’S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR’S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR’S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.
(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR’S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.
(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.
(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR’S EXPENSE.
(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:
(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.
(G) IN THE EVENT THE CONTRACTOR’S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR’S,MANUFACTURER’S OR SUPPLIER’S WARRANTY.
(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.
(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR’S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.
(J)THIS WARRANTY SHALL NOT LIMIT THE PHA’S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA’S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.
(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.
(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.
(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR’S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.
(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.
(F) THE CONTRACTOR’S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER’S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.
(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.
(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.
(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.
(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED…. **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

2024-08-19 Specifications

scale As Noted
date August 20th, 2024
no. 6 of. 9

Sheet No.
A6
Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL
WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES
WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK
SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES
SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS
PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING
EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
A. REMOVE DETERIORATED COATINGS AND CORROSION.
B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING
SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS
PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS
FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS
ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS
QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
   A. SOLID COLORS, MATTE FINISH.
   B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
   C. WOOD GRAINS, MATTE FINISH.
   D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS
BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM
GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION
GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS
INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING
VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE
BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE
INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS
SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS
REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING
ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS
BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS
PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP
GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING
BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR
BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX
NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS
BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT
RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.
TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:
ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB
FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET
PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES
VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A7**
no. 7 / of. 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAUST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
  - CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
  - LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
  - FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
  - AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
  - FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
  - SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
  - SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
  - GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
  - IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
  - ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
  - FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
  - LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
  - TYPE: NATURAL.
  - VENTING TYPE: WITH COMBUSTION-AIR INTAKE
  - MINIMUM EFFICIENCY AFUE: 80 PERCENT.
  - INPUT: SEE SCHEDULE ON DRAWINGS.
  - HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
  - GAS CONNECTION SIZE: 1/2" NPS.
  - VENT SIZE: 4 INCHES.

FAN:
  - MOTOR: SIZE: 1/3 HP.
  - SPEED: SEE SCHEDULE ON DRAWINGS.
  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
  - VOLTS: 120.
  - PHASE: SINGLE.
  - HERTZ: 60.
  - MINIMUM CIRCUIT AMPACITY: 15.
  - MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
  - TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
  - ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
  - FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
  - VOLTS: 208 V.
  - PHASE: 1.
  - HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS.
INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP.
RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

2024-08-19 Specifications

scale
As Noted
date
August 20th, 2024
no. 8 of. 9

Sheet No.
A8
Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS
1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS
1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS
1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS
1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES
MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS
CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE “DOOR IN A DOOR” HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES
1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS
FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM
USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS
1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE
METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE “MC” CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION
USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL
ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION
PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR’S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS
1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12”) BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE “HUMPS” OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4” [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4” [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16” [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

FELIX GAYEL FUKUI RA-011226-X

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

⚠1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
8331 Vidette Street
Pittsburgh, Pennsylvania 15221

drawing title

2024-08-19 Specifications

scale
As Noted
date
August 20th, 2024
no.
9
of.
9

Sheet No.
A9
Project #2326

Renovation of 10 Scattered Sites

10 Scattered Sites - Orangewood Avenue
Single Family Residence, Minor Alteration
1318 Orangewood Avenue,
Pittsburgh, Pennsylvania 15216

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

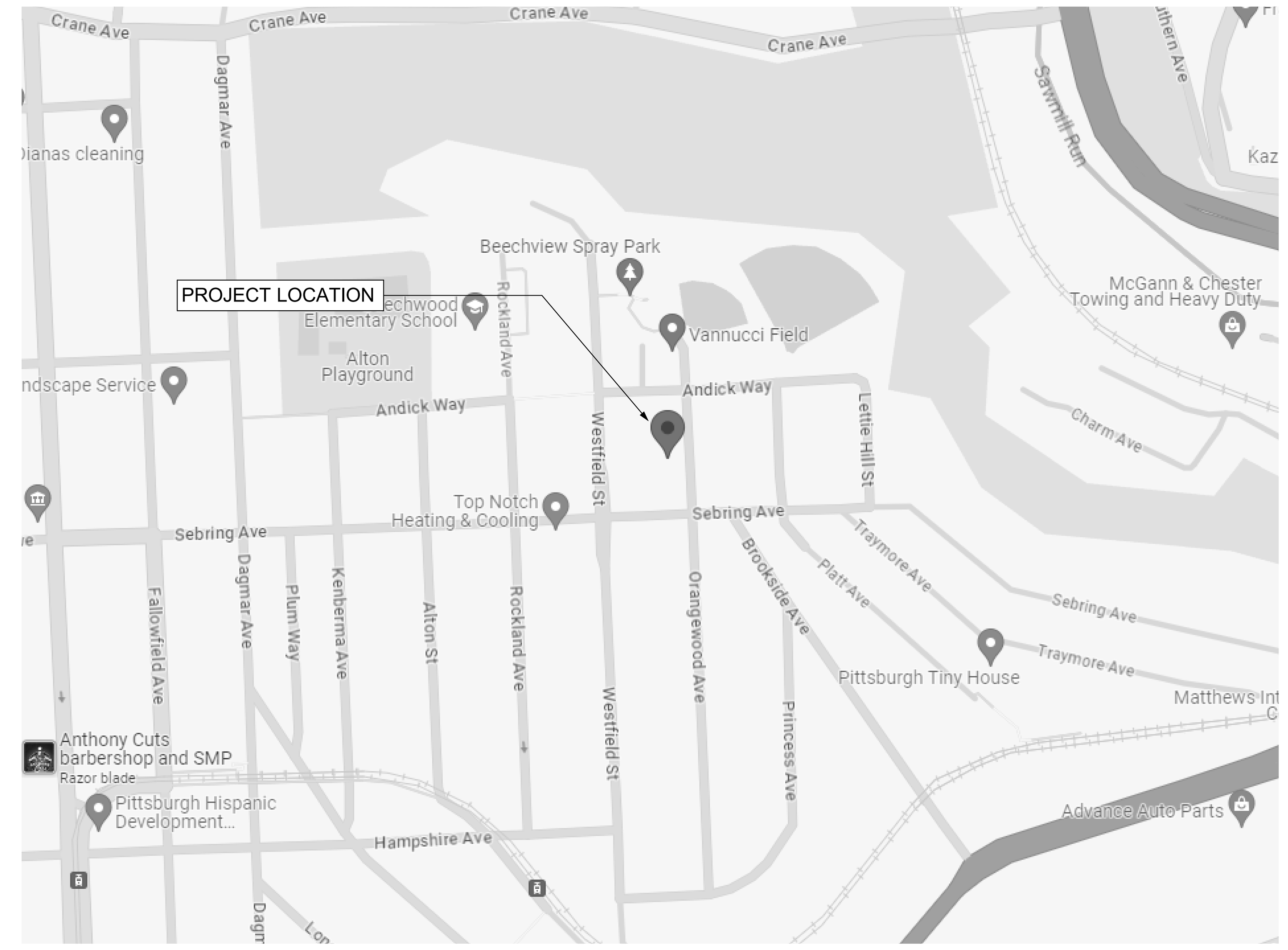
CONSTRUCTION DOCUMENTATION

Drawing Index

Code Conformance Information

Applicable Codes	
General:	2018 International Residential Code 2018
Energy:	2018 International Energy Conservation Code
Electrical:	2017 NEC (NFPA 70)
Fire:	2018 International Fire Code
Fuel Gas:	2018 International Fuel Gas Code
Mechanical:	2018 International Mechanical Code
Plumbing:	2017 Allegheny County Health Department Plumbing Code

General Building / Project Information	
Stories:	2 Stories
Building Gross Area:	Basement 341sq ft + Garage 267 sqft
	1st Floor 608 sqft
	2nd Floor 608 sqft



1 Site Location
SCALE: 1" = 30'

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revisions

1 Bidding Addendum 04.01.2025

Materials Legend

NOT ALL MATERIALS USED

- EARTH
- COMPACTED STONE FILL
- CONCRETE
- STEEL
- RIGID INSULATION
- BLOCKING
- BATT INSULATION
- GYPSUM WALL BOARD
- WOOD
- PLYWOOD SHEATHING
- SPRAY FOAM INSULATION

Abbreviations

A.F.F.	Above Finish Floor
A.P.	Access Panel
ACOUST.	Acoustical
A.C.T.	Acoustical Ceiling Tile
ADH.	Adhesive
ADJUST.	Adjustable
A/C	Air Conditioning
ALT.	Alteration
ALTN.	Alternate
ALUM.	Aluminum
A.O.R.	Area of Refuge
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
BLK.	Block
BD.	Board
BOT	Bottom
BLDG	Building
C.I.P.	Cast In Place
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
CG	Corner Guard
C.M.T.	Ceramic Mosaic Tile
C.W.T.	Ceramic Wall Tile
C.O.	Cleanout
C̲L	Center Line
CLO.	Closet
C.W.	Cold Water
CLG.	Ceiling
COL.	Column
CONC.	Concrete
C.M.U.	Concrete Masonry Unit
CONT.	Continuous
CORR.	Corridor
C.M.P.	Corrigated Metal Pipe
CRS.	Courses
DIA.	Diameter
DET	Detail
DGL	Dens Glass Gold
DR.	Door
DN.	Down
D.S.	Downspout
DWG.	Drawing
D.F.	Drinking Fountain
D.I.P.	Ductile Iron Pipe
EA.	Each
E.W.	Each Way
ELEC.	Electrical
E.C.	Electrical Contractor
EL.	Elevation
ELEV.	Elevation
EQUIP.	Equipment
E.F.	Exhaust Fan
EXIST.	Existing
EXP.	Expansion
E.J.	Expansion Joint
ESH	Exterior Sheathing
EXIST.	Existing
EXP.	Exposed
EXT.	Exterior
E.I.F.S.	Exterior Insulation & Finish System
F.R.P.	Fiberglass Reinforced Polyester
F.F.	Finish Floor
FIN.FLR.	Finish Floor
F.A.C.P.	Fire Alarm Control Panel
F.E.	Fire Extinguisher
FLR.	Floor
F.D.	Floor Drain
FTG.	Footing
GA.	Gauge
G.C.	General Contractor
G.F.I.	Ground Fault Interrupter
GYP.	Gypsum
G.W.B.	Gypsum Wall Board
GSH	Gypsum Sheathing
H/C	Handicap
H.V.A.C.	Heating, Ventilation &
HT	Height
HC	Hollow Core
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
IN.	Inch
I.M.	Insulated Metal
INSUL.	Insulation or Insulated
INT.	Interior
INV.	Invert
ISO.	Isolation
JAN.	Janitor's Closet
J.T.	Joint
LAM.	Laminate
LAV.	Lavatory
LG.	Long
M.D.F.	Medium Density Fiberboard
M.D.H.	Magnetic Door Holder
M.H.	Manhole
MFGR.	Manufacturer
MAX.	Maximum
MECH.	Mechanical
MET.	Metal
MIN.	Minimum
MISC.	Miscellaneous
N.I.C.	Not In Contract
N.T.S.	Not To Scale
O.C.	On Center
OPP.	Opposite
O.H.	Overhead
PR.	Pair
PLAS.	Plaster
PLAS.LAM.	Plastic Laminate
P.C.	Plumbing Contractor
PLYWD.	Plywood
POLY.	Polyethylene
P.V.C.	Polyvinyl Chloride
PRE-FAB.	Prefabricated
RE.	Refer To
REF.	Refrigerator
R.C.P.	Reinforced Concrete Pipe
REINF.	Reinforcement
RD.	Roof Drain
RM.	Room
S.A.T.	Suspended Acoustical Tile
SCHED.	Schedule
SHT.	Sheet
SIM.	Similar
S.C.	Solid Core
SPECS.	Specifications
SQ.	Square
S.F.	Square Foot
S.S.	Stainless Steel
STL.	Steel
STOR.	Storage
STRUCT.	Structural
TEL.	Telephone
THK.	Thick
T.B.D.	To Be Determined
T&G	Tongue & Groove
T.O.	Top Of
T.G.	Top Of Grade
T.O.S.	Top Of Steel
TYP.	Typical
UNFIN.	Unfinished
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
VERT.	Vertical
VEST.	Vestibule
V.C.T.	Vinyl Composition Tile
W.H.	Water Heater
W.W.F.	Welded Wire Fabric
WIN.	Window
W/	With
W/O	Without
WD.	Wood

Symbols

NOT ALL SYMBOLS USED

T.O. FINISH FLOOR ELEV: 0'-0"	ELEVATION HEIGHT
PLAN NORTH	NORTH ARROW
1 A1	ELEVATION MARKER

project title

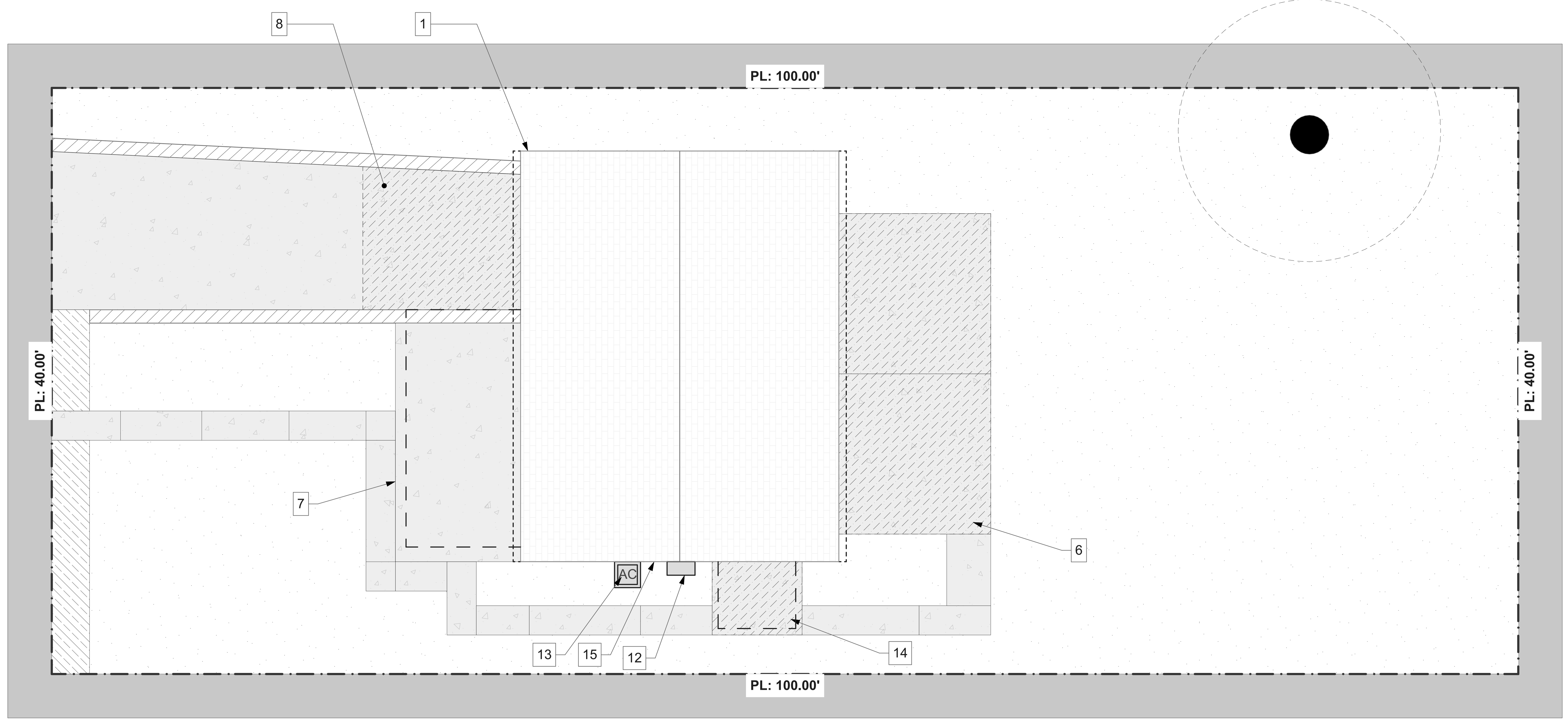
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Drawing Index, Code Conformance Information, Site Location, Abbreviations and Materials

scale: As Noted	Sheet No.
date: August 20th, 2024	A1
no. 1 of. 9	Project #2326



PLAN NORTH

1 Site Plan
SCALE: 3/16" = 1'-0"

SITE PLAN LEGEND

GRASS	MISC. BRICK	AC CONDENSER	RAILING	TRUE ROOF OUTLINE
LIGHTWEIGHT CONCRETE	MULCHED AREA	TREE / SHRUB	TACTILE PAVING	APPROX. PROPERTY LINE
CONCRETE BLOCK	STREET SIGNAGE	STREET SIGNAGE	MAN HOLE	WINDOW WELL

10 Scattered Sites Keynotes – 1318 Orangewood Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
1. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.
5.

Exterior

6. BACKYARD PATIO SLAB (GC): Remove existing concrete slab at rear yard (approx. 300 sf). Recompact soil and 4" of compacted gravel. Pour new (10'x 30') 4" slab to replace existing, taking care to assure new slab slopes positively away from house by 1/8" per ft.
7. ENTRANCE CANOPY / RAILING (GC): At this location, remove existing (8'x16') aluminum entrance canopy and railing. provide new canopy, decorative support posts and railing matching existing. See Specifications.
8. DRIVEWAY (GC): Replace bottom driveway concrete (approx. 120 sf) and slope to drain. Camera and clear existing drain line. Provide new trench drain. See Specifications.
9. STEEL LINTELS (GC): Scrape and paint lintels over garage door and all windows.
10. CONCRETE BLOCK RETAINING WALLS (GC0: Provide and install new capstones to replace missing or damaged pieces assume 40 stones total on two walls. See Specifications.
11. EXISTING BRICK VENEER (GC): At brick area noted, strike and repoint areas of loose or missing mortar. Approximately 20 sf. See Specifications.
12. CHIMNEY (GC): Strike and repoint mortar joints at top 8' of chimney. Remove existing crumbling mortar cap and top section of terra cotta flue. Provide new flue section and sloped mortar cap at top. See Specifications.
13. NEW AC CONDENSER (M): Provide new Condenser, seal any through wall penetrations with silicone seal. See Specifications.
14. SIDE PATIO SLAB (GC): Remove existing concrete slab at sideyard (approx. 10 sf). Recompact soil and 4" compacted gravel. Pour new 4" slab to replace existing. Height shall be equidistant between walkway and side door threshold height (approx. 8").
15. HOSE BIBB (P): Provide new freeze proof hose bibb. See Specifications.
16. DAMPER (GC): Remove abandoned damper and patch brick. See Specifications

Interior Garage

17. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. Provide new surface mounted electrical duplex outlet proximal to garage door to supply power to door. See Specifications.
18. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.

Interior Basement

19. ELECTRICAL PANEL (E): Replace circuit breakers with new arc fault type circuit breakers. Balance loads, mark all circuits and provide new panel legend typed or neatly and legibly handwritten. Additionally, provide proper electrical grounding and bonding of the electrical system. See Specifications.
20. WATER HEATER (P): Water Heater American Standard 40 Gal. manufacture dated 11/2021. The Water Heater appears to be in good condition and does not show signs of failure. Provide Inspection of unit by qualified plumber for pressure relief valve leak.
21. FURNACE (M): Furnace is a Bryant Plus 90. It appears to be properly functioning. Provide Inspection of unit by a qualified HVAC Technician. Seam seal all exposed duct seams within basement. Seam seal and insulate all ductwork running in unconditioned space, e.g. Garage. See Specifications.
22. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 300 sf). See Specification.
23. BASEMENT INSULATION (GC): Replace displaced fiberglass batt insulation at basement rim board. Provide missing sections to create a complete seal. Provide new wire mesh staple set to prevent insulation movement.
24. BASEMENT WATER PIPES AND INSULATION (P): Locate and repair existing leaking copper water line. Remove existing damaged pipe insulation and provide new. See Specifications.
25. BASEMENT ACCESS STAIR (GC): Provide new 1"x painted wood riser closure at each riser of stairway. Provide additionally new non-slip rubber tread covers x full width, depth and nosing of tread. See Specifications.
26. VENT SCREEN (GC): Replace screen at wall vent by electrical panel.

Interior First Floor

27. KITCHEN RANGE HOOD (E/M): Replace existing Kitchen Range hood with new. See Specifications.
28. KITCHEN CEILING (M): Remove exhaust fan and patch ceiling. See Specifications.
29. FRONT DOOR THRESHOLD (GC): Replace front door with new. Remove section of cracked non-shrink grout at sill. Prep surface, caulk crack at concrete slab to seal. Provide new non-shrink grout sloped cap. Clean and seal concrete stoop crack using concrete crack sealant. See Specification.
30. LIVING ROOM (M): Replace thermostat with programable thermostat.

Second Floor

31. MAIN STAIRWAY (GC): At main stairway, remove existing handrail, sand, stain and refinish handrail. Patch and paint existing and old mounting holes. Re-fasten handrail to studs to assure solid mounting. Remove existing carpet stair runner. Sand, stain and finish existing painted wood treads, risers and stringers. See Specifications
32. BATHROOM (GC/P/M/E): Provide new tub/shower, tub/shower surround, shower rod and curtain; tub/shower faucet showerhead, drain assembly and shut-offs. Install new exhaust fan ducted to outside. See Specifications.

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seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

Site Plan, Site Plan Legend, Keynotes

scale	Sheet No.
As Noted	
date	A2
August 20th, 2024	
no. 2 of. 9	Project #2326

FLOOR COVERING PLAN LEGEND

VCT FLOORING | CONCRETE FLOORING | CARPET FLOORING

LVT FLOORING | WOOD FLOORING

GENERAL FLOOR PLAN NOTES

1. CONTRACTOR TO FIELD VERIFY ANY AND ALL CONDITIONS & DIMENSIONS OF WORK AREAS BEFORE BEGINNING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
2. THE FINISH FLOOR OF THIS PROJECT IS IDENTIFIED AT 0'-0" IN THIS SET OF DRAWINGS.
3. ALIGN NEW WALL CONSTRUCTION WITH EXISTING WALL CONSTRUCTION. FINISH NEW PARTITION SMOOTH TO FORM A SEAMLESS JOINT BETWEEN NEW & EXISTING PARTITIONS.
4. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS. NOTIFY ARCHITECT IN WRITING OF ANY INCONSISTENT OR MISSING DIMENSIONS.
5. DIMENSIONS SHOWN INDICATE FINISHED FACE TO FINISHED FACE, UNLESS NOTED OTHERWISE.
6. ALL NEW OR RELOCATED DOOR FRAMES TO BE LOCATED 4" FROM PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.
7. SAND WALLS SMOOTH, REMOVE ALL ADHESIVE RESIDUE, AND/OR SKIM WITH JOINT COMPOUND AS NECESSARY TO PREP WALLS FOR NEW FINISHES. THE FLOOR SHOULD BE SCRAPED CLEAN OF ANY ADHESIVE RESIDUE, PATCHED AND LEVELED OUT AS NECESSARY TO RECEIVE NEW FLOORING.
8. AT WALLS EXISTING TO REMAIN, PATCH AND PAINT ANY HOLES OR DAMAGE TO APPEAR NEW.

10 Scattered Sites Keynotes – 1318 Orangewood Ave

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22. BASEMENT FINISH FLOOR (GC): Clean, prep and paint existing basement floor (approx. 300 sf). See Specification.
23. BASEMENT INSULATION (GC): Replace displaced fiberglass batt insulation at basement rim board. Provide missing sections to create a complete seal. Provide new wire mesh staple set to prevent insulation movement.
24. BASEMENT WATER PIPES AND INSULATION (P): Locate and repair existing leaking copper water line. Remove existing damaged pipe insulation and provide new. See Specifications.
25. BASEMENT ACCESS STAIR (GC): Provide new 1"x painted wood riser closure at each riser of stairway. Provide additionally new non-slip rubber tread covers x full width, depth and nosing of tread. See Specifications.
26. VENT SCREEN (GC): Replace screen at wall vent by electrical panel.

Interior First Floor

27. KITCHEN RANGE HOOD (E/M): Replace existing Kitchen Range hood with new. See Specifications.
28. KITCHEN CEILING (M): Remove exhaust fan and patch ceiling. See Specifications.
29. FRONT DOOR THRESHOLD (GC): Replace front door with new. Remove section of cracked non-shrink grout at sill. Prep surface, caulk crack at concrete slab to seal. Provide new non-shrink grout sloped cap. Clean and seal concrete stoop crack using concrete crack sealant. See Specification.
30. LIVING ROOM (M): Replace thermostat with programable thermostat.

Second Floor

31. MAIN STAIRWAY (GC): At main stairway, remove existing handrail, sand, stain and refinish handrail. Patch and paint existing and old mounting holes. Re-fasten handrail to studs to assure solid mounting. Remove existing carpet stair runner. Sand, stain and finish existing painted wood treads, risers and stringers. See Specifications
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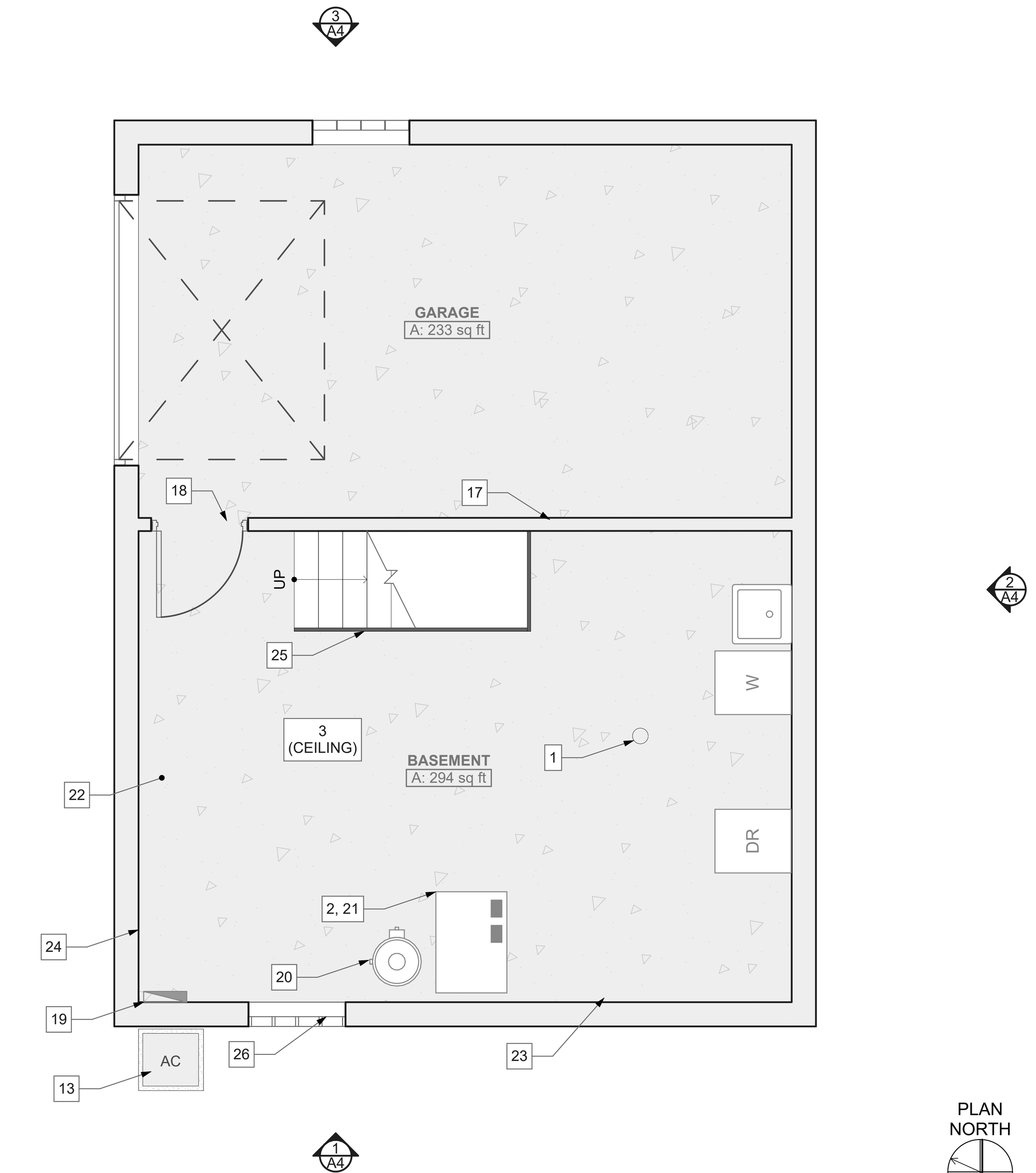
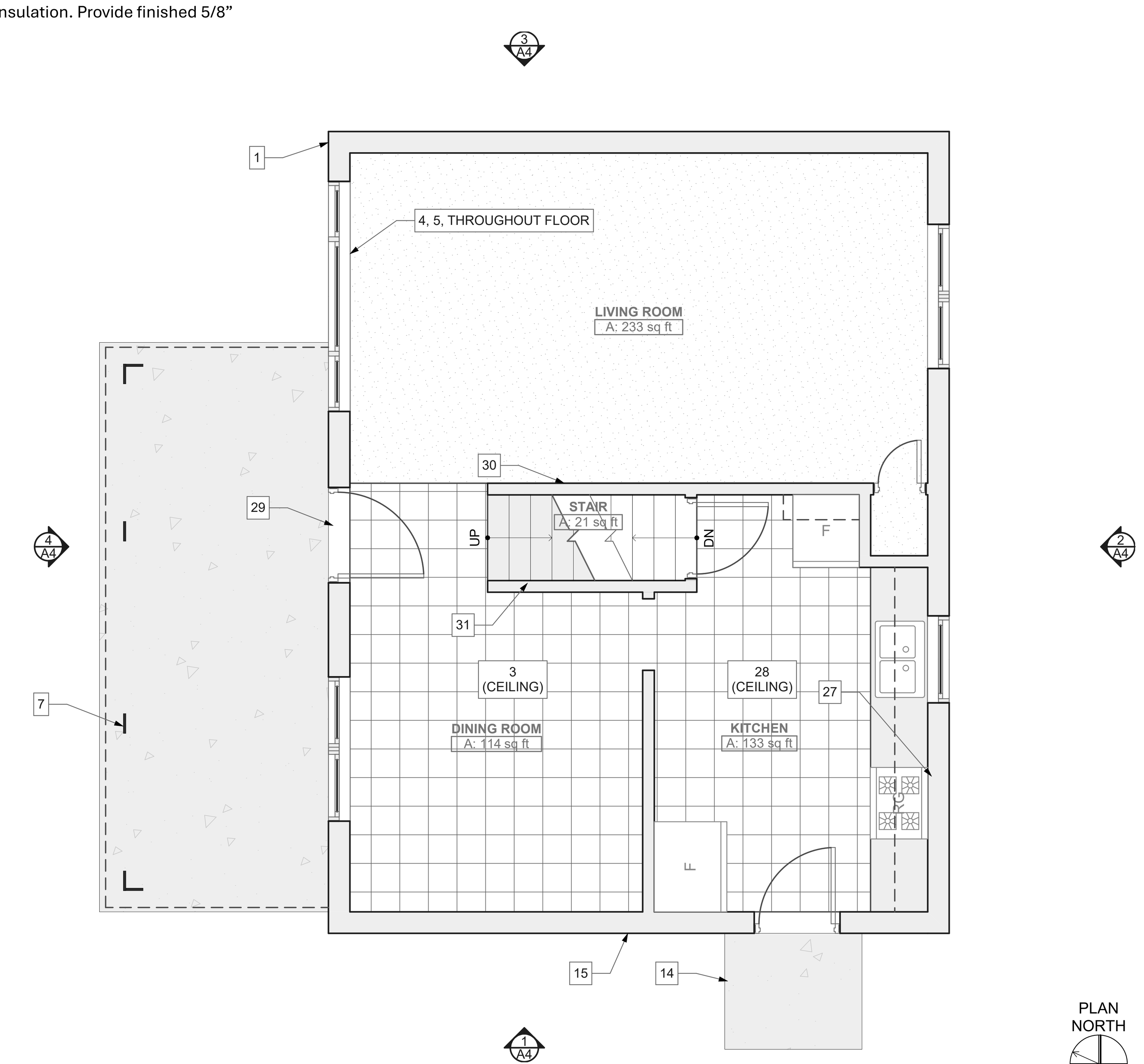
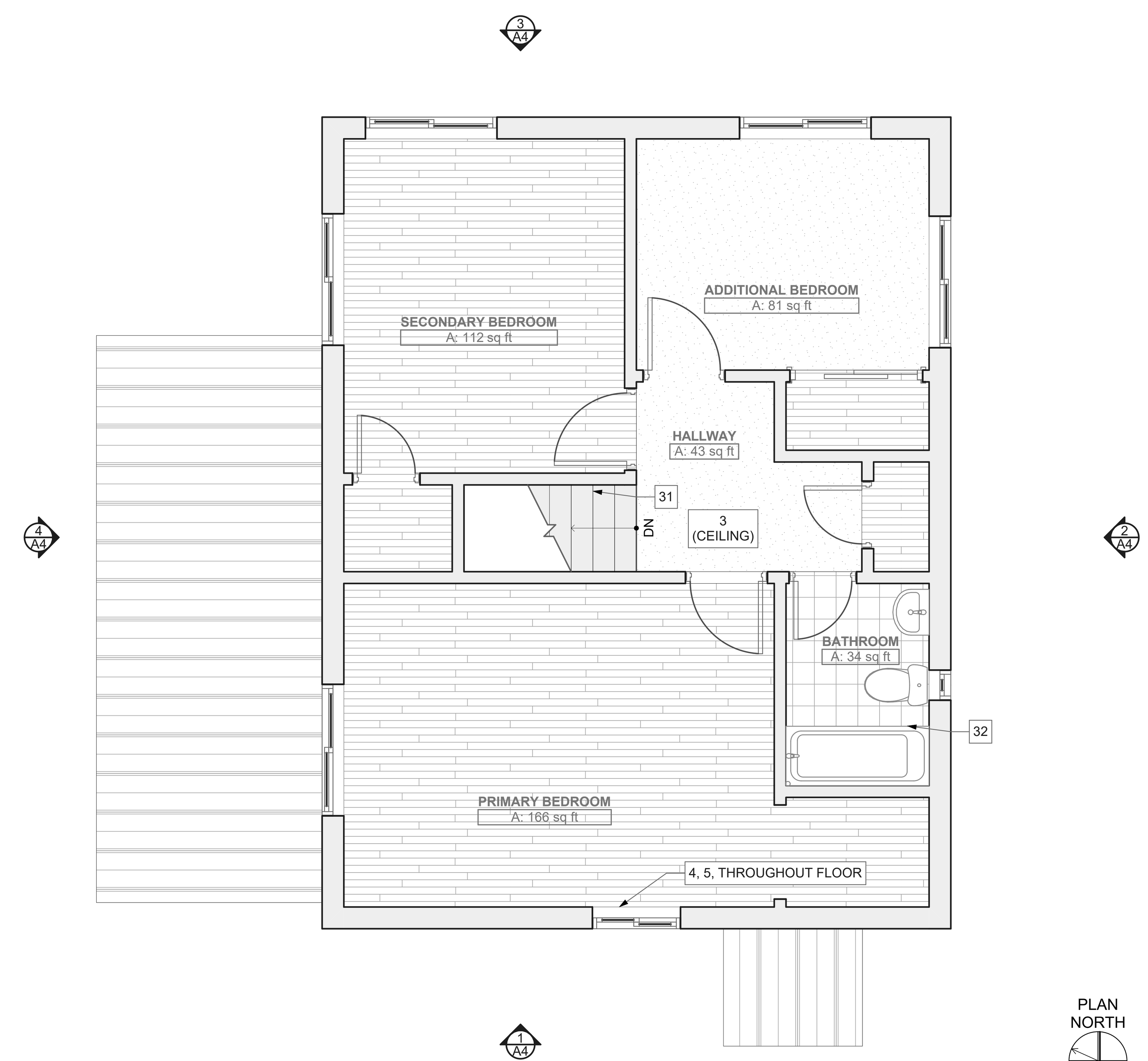


1 Basement
SCALE: 1/4" = 1'-0"



2 First Floor
SCALE: 1/4" = 1'-0"



3 Second Floor
SCALE: 1/4" = 1'-0"

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT

seal

CONSTRUCTION DOCUMENTATION

general notes

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revisions

1 Bidding Addendum 04.01.2025

project title

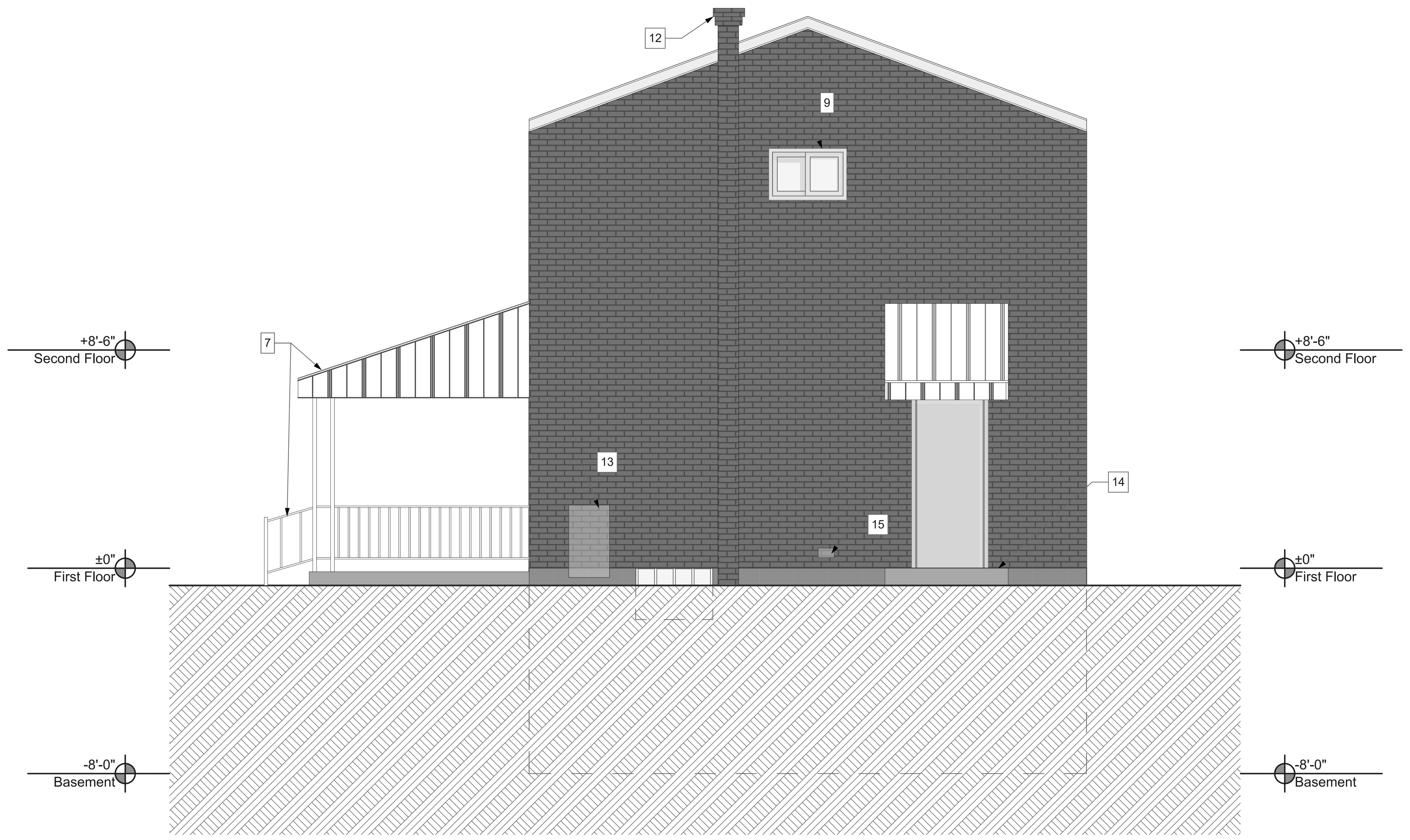
Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

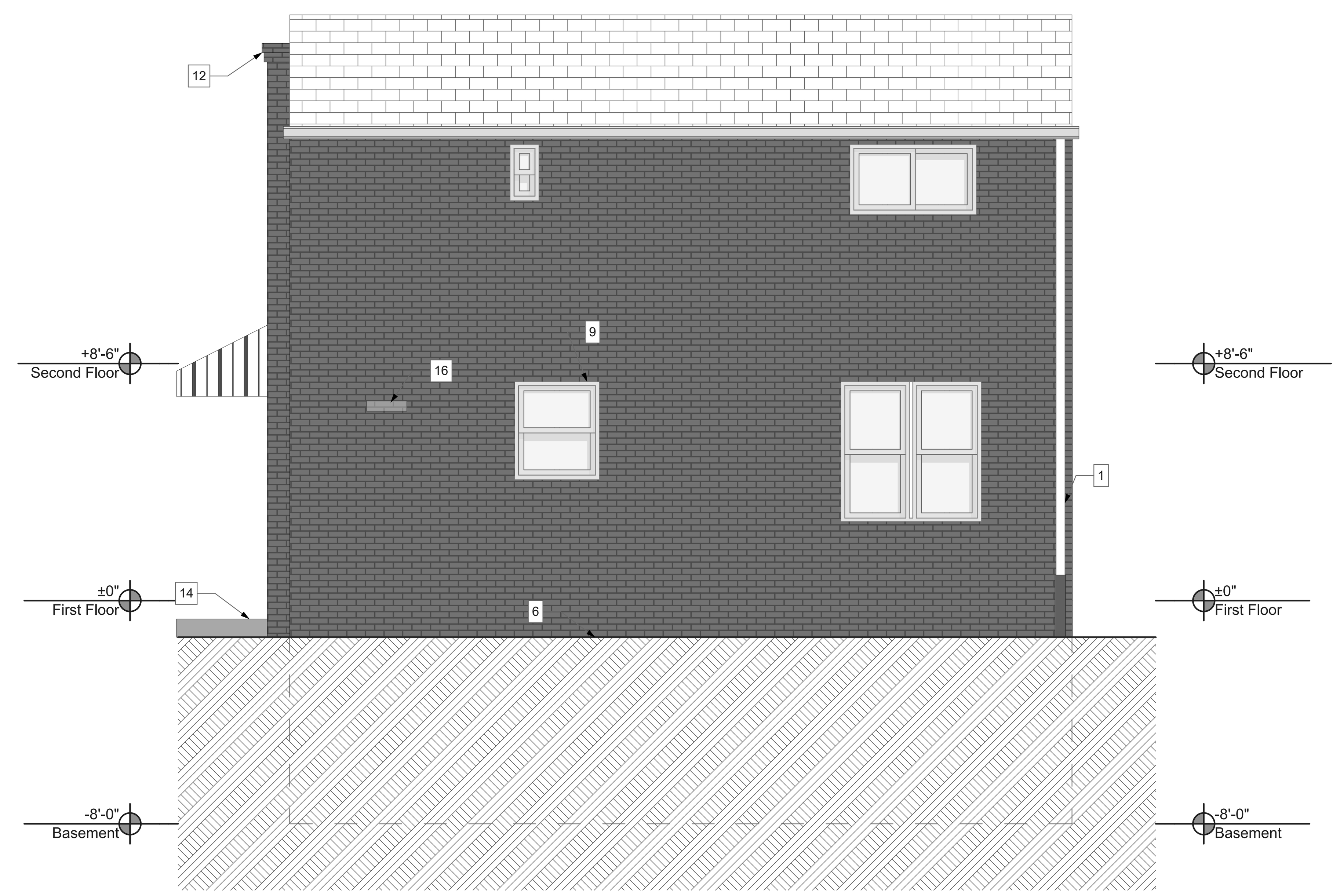
drawing title

Basement, First Floor, Second Floor, Renovation Plan Legend, Floor Plan Legend, Keynotes

scale	Sheet No.
As Noted	A3
date: August 20th, 2024	
no. 3 of. 9	Project #2326



1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 1318 Orangewood Ave

GC: General Contract; E: Electrical Contract; P: Plumbing Contract; M: Mechanical Contract

Portions of the work must be coordinated with the Hazardous materials report provided by PSI. GC to follow recommendations for abatement specified in the report if not already performed.

General

1. UNDERGROUND SEWER LINES (P): Camera and clear sanitary sewer line from lowest level to main, including all roof drains to tie in or daylight.
2. DUCTWORK (M): Engage professional ductwork cleaning company to clean whole house ductwork, including grilles and diffusers. Replace any rusted grilles or diffusers (Allowance of 6 grilles and 6 diffusers per address should be added, total number to be adjusted based on the total used at all 10 sites). Additionally, seam seal all exposed duct joints to limit air leakage. Insulate and seal ductwork in unconditioned spaces, e.g., garages (see additional ductwork note at garage)
3. SMOKE/CO DETECTORS (E): In entire house, provide new Smoke/CO Detectors. See Specifications for type and locations.
4. MISCELLANEOUS WALL (GC): Remove all existing drapery rods. See Specifications.
1. AT INTERIOR WALLS, CEILINGS, DOORS AND TRIM (GC): Repair holes and gouges ready for paint. Prep and paint all walls, ceilings, wall base, painted doors, and painted trim/casing. Painted doors, trim, casing, and wall base to be painted with a semi-gloss finish. All existing Walls and ceilings to be painted with an eggshell finish. See Specifications.
5.

Exterior

6. BACKYARD PATIO SLAB (GC): Remove existing concrete slab at rear yard (approx. 300 sf). Recompact soil and 4" of compacted gravel. Pour new (10'x 30') 4" slab to replace existing, taking care to assure new slab slopes positively away from house by 1/8" per ft.
7. ENTRANCE CANOPY / RAILING (GC): At this location, remove existing (8'x16') aluminum entrance canopy and railing. provide new canopy, decorative support posts and railing matching existing. See Specifications.
8. DRIVEWAY (GC): Replace bottom driveway concrete (approx. 120 sf) and slope to drain. Camera and clear existing drain line. Provide new trench drain. See Specifications.
9. STEEL LINTELS (GC): Scrape and paint lintels over garage door and all windows.
10. CONCRETE BLOCK RETAINING WALLS (GC0: Provide and install new capstones to replace missing or damaged pieces assume 40 stones total on two walls. See Specifications.
11. EXISTING BRICK VENEER (GC): At brick area noted, strike and repoint areas of loose or missing mortar. Approximately 20 sf. See Specifications.
12. CHIMNEY (GC): Strike and repoint mortar joints at top 8' of chimney. Remove existing crumbling mortar cap and top section of terra cotta flue. Provide new flue section and sloped mortar cap at top. See Specifications.
13. NEW AC CONDENSER (M): Provide new Condenser, seal any through wall penetrations with silicone seal. See Specifications.
14. SIDE PATIO SLAB (GC): Remove existing concrete slab at sideyard (approx. 10 sf). Recompact soil and 4" compacted gravel. Pour new 4" slab to replace existing. Height shall be equidistant between walkway and side door threshold height (approx. 8").
15. HOSE BIBB (P): Provide new freeze proof hose bibb. See Specifications.
16. DAMPER (GC): Remove abandoned damper and patch brick. See Specifications

Interior Garage

17. GARAGE ENVELOPE (GC): At this location, where ductwork penetrates garage envelope, expose ductwork, seam seal joints and wrap duct in 1" rigid insulation. Provide finished 5/8" type "X" GWB finish to fully enclose duct tight to ceiling and wall with all edge and corner beads. Tape, spackle, sand and paint new GWB to finish. Provide new surface mounted electrical duplex outlet proximal to garage door to supply power to door. See Specifications.
18. GARAGE TO INTERIOR DOOR (GC): Remove existing door and frame between garage and residence. Provide new min. 1 3/8" thick, 20 minute rated insulated metal door. Paint to finish with new threshold and all door hardware. See specifications.

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seal

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project title

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Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

South Elevation, East Elevation, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	A4
no. 4 / of. 9	Project #2326

3 North Elevation
SCALE: 1/4" = 1'-0"

4 West Elevation
SCALE: 1/4" = 1'-0"

10 Scattered Sites Keynotes – 1318 Orangewood Ave

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seal

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drawing title

West Elevation, North Elevation, Keynotes

scale	Sheet No.
As Noted	
date	
August 20th, 2024	A5
no. 5 of. 9	Project #2326

GENERAL NOTES

USE OF THE DOCUMENTS

THE USE OF THESE DOCUMENTS IS RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. RE-USE OR REPRODUCTION OF THE DOCUMENTS (IN WHOLE OR IN PART), FOR ANY OTHER PURPOSE IS PROHIBITED. TITLE TO THESE REMAINS WITH FUKUI ARCHITECTS P.C. (FAR). VISUAL CONTACT WITH THE DOCUMENTS IS PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

DIVISION 1 - GENERAL CONDITIONS

APPLICABILITY OF HUD-5370 GENERAL CONDITIONS FOR CONSTRUCTION CONTRACTS- PUBLIC HOUSING PROGRAMS

THE HUD-5370, GENERAL CONDITIONS, CURRENT EDITION, SHALL APPLY TO THE PROJECT. A COPY OF THE HUD GENERAL CONDITIONS ARE INCLUDED IN THE FRONT END DOCUMENTS AS PART OF HUD FORMS. HARD COPIES ARE AVAILABLE AT HACP OFFICE.

MULTIPLE CONTRACT

1. COORDINATION

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT, ELECTRICAL CONTRACT, AND ADDITIONAL CONTRACTS APPLICABLE IN THE CONSTRUCTION DOCUMENTS.

2. GENERAL REQUIREMENTS OF CONTRACTS

UNLESS THE AGREEMENT CONTAINS A MORE SPECIFIC DESCRIPTION OF THE WORK OF EACH CONTRACT, REQUIREMENTS INDICATED ON DRAWINGS AND IN SPECIFICATION SECTIONS DETERMINE WHICH CONTRACT INCLUDES A SPECIFIC ELEMENT OF PROJECT.

3. SCOPE OF WORK RESPONSIBILITY

A. GENERAL CONSTRUCTION CONTRACT

WORK OF THE GENERAL CONSTRUCTION CONTRACT INCLUDES, BUT IS NOT LIMITED TO, THE REMAINING WORK NOT IDENTIFIED AS WORK UNDER OTHER CONTRACTS.

B. PLUMBING CONTRACT

WORK OF THE PLUMBING CONTRACT INCLUDES, BUT IS NOT LIMITED TO, PLUMBING FIXURES AND APPLIANCES (INCLUDING BUT NOT LIMITED TO: SINKS, TUBS, SHOWER ENCLOSURES, SINK BASES, FAUCETS AND DRAIN ASSEMBLIES, ETC), PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT. PLUMBING CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE PLUMBING CONTRACT AND MECHANICAL CONTRACT.

C. MECHANICAL CONTRACT

WORK OF THE MECHANICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ALL MECHANICAL EQUIPMENT AND CONNECTIONS TO EQUIPMENT FURNISHED BY MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. MECHANICAL EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: FURNACES AND CONDENSERS, KITCHEN AND BATH EXHAUST FANS, THERMOSTATS AND CONTROLS, ETC.

D. ELECTRICAL CONTRACT

WORK OF THE ELECTRICAL CONTRACT INCLUDES, BUT IS NOT LIMITED TO, SUPPLYING AND INSTALLING ELECTRICAL EQUIPMENT AND FIXTURES INCLUDING BUT NOT LIMITED TO: (INTERIOR AND EXTERIOR LIGHT FIXTURES, SMOKE AND CO DETECTORS, COMPLETE CIRCUIT BREAKER PANELS INCLUDING ALL BREAKERS AND LABELING, ELECTRICAL SERVICE ENTRANCE), WIRING, AND ELECTRICAL AND LOW VOLTAGE CONNECTIONS TO EQUIPMENT FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT. ELECTRICAL CONNECTIONS TO EXISTING SYSTEMS AND TEMPORARY FACILITIES AND CONTROLS FURNISHED BY THE GENERAL CONSTRUCTION CONTRACT, PLUMBING CONTRACT, MECHANICAL CONTRACT AND ELECTRICAL CONTRACT

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

(A)WITHIN TEN CALENDAR DAYS OF CONTRACT EXECUTION, AND PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PHA, ITS ARCHITECT, AND OTHER INTERESTED PARTIES CONVENED BY THE PHA. THE CONFERENCE WILL SERVE TO ACQUAINT THE PARTICIPANTS WITH THE GENERAL PLAN OF THE CONSTRUCTION OPERATION AND ALL OTHER REQUIREMENTS OF THE CONTRACT. THE PHA WILL PROVIDE THE CONTRACTOR WITH THEDATE, TIME, AND PLACE OF THE CONFERENCE.

(B)THE CONTRACTOR SHALL BEGIN WORK UPON RECEIPT OF A WRITTEN NOTICE TO PROCEED FROM THE CONTRACTING OFFICER OR DESIGNEE. THE CONTRACTOR SHALL NOT BEGIN WORK PRIOR TO RECEIVING SUCH NOTICE.

CONSTRUCTION PROGRESS

(A) THE CONTRACTOR SHALL, WITHIN FIVE DAYS AFTER THE WORK COMMENCES ON THE CONTRACT OR ANOTHER PERIOD OF TIME DETERMINED BY THE CONTRACTING OFFICER, PREPARE AND SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL THREE COPIES OF A PRACTICABLE SCHEDULE SHOWING THE ORDER IN WHICH THE CONTRACTOR PROPOSES TO PERFORM THE WORK, AND THE DATES ON WHICH THE CONTRACTOR CONTEMPLATES STARTING AND COMPLETING THE SEVERAL SALIENT FEATURES OF THE WORK(INCLUDING ACQUIRING LABOR, MATERIALS, AND EQUIPMENT). THE SCHEDULE SHALL BE IN THE FORM OF A PROGRESS CHART OF SUITABLE SCALE TO INDICATE APPROPRIATELY THE PERCENTAGE OF WORK SCHEDULED FOR COMPLETION BY ANY GIVEN DATE DURING THE PERIOD. IF THE CONTRACTOR FAILS TO SUBMIT A SCHEDULE WITHIN THE TIME PRESCRIBED, THE CONTRACTING OFFICER MAY WITHHOLD APPROVAL OF PROGRESS PAYMENTS OR TAKE OTHER REMEDIES UNDER THE CONTRACT UNTIL THE CONTRACTOR SUBMITS THE REQUIRED SCHEDULE.

(B) THE CONTRACTOR SHALL ENTER THE ACTUAL PROGRESS ON THE CHART AS REQUIRED BY THE CONTRACTING OFFICER, AND IMMEDIATELY DELIVER THREE COPIES OF THE ANNOTATED SCHEDULE TO THE CONTRACTING OFFICER. IF THE CONTRACTING OFFICER DETERMINES, UPON THE BASIS OF INSPECTION CONDUCTED PURSUANT TO THE CLAUSE ENTITLED INSPECTION AND ACCEPTANCE OF CONSTRUCTION, HEREIN THAT THE CONTRACTOR IS NOT MEETING THE APPROVED SCHEDULE, THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO IMPROVE ITS PROGRESS, INCLUDING THOSE THAT MAY BE REQUIRED BY THE CONTRACTING OFFICER, WITHOUT ADDITIONAL COST TO THE PHA. IN THIS CIRCUMSTANCE,THE CONTRACTING OFFICER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS, OVERTIME OPERATIONS, DAYS OF WORK, AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AND TO SUBMIT FOR APPROVAL ANY SUPPLEMENTARY SCHEDULE OR SCHEDULES IN CHART FORM AS THE CONTRACTING OFFICER DEEMS NECESSARY TO DEMONSTRATE HOW THE APPROVED RATE OF PROGRESS WILL BE REGAINED.

(C) FAILURE OF THE CONTRACTOR TO COMPLY WITH THE REQUIREMENTSOF THE CONTRACTING OFFICER UNDER THIS CLAUSE SHALL BE GROUNDS FOR A DETERMINATION BY THE CONTRACTING OFFICER THAT THE CONTRACTOR IS NOT PROSECUTING THE WORK WITH SUFFICIENT DILIGENCE TO ENSURE COMPLETION WITHIN THE TIME SPECIFIED IN THE CONTRACT. UPON MAKING THIS DETERMINATION, THE CONTRACTING OFFICER MAY TERMINATE THE CONTRACTOR'S RIGHT TO PROCEED WITH THE WORK, OR ANY SEPARABLE PART OF IT, IN ACCORDANCE WITH THE DEFAULT CLAUSE OF THIS CONTRACT.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

(A) THE CONTRACTOR ACKNOWLEDGES THAT IT HAS TAKEN STEPS REASONABLY NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THAT IT HAS INVESTIGATED AND SATISFIED ITSELF AS TO THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR ITS COST, INCLUDING BUT NOT LIMITED TO, (1) CONDITIONS BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; (2) THE AVAILABILITY OF LABOR, WATER,ELECTRIC POWER, AND ROADS;(3) UNCERTAINTIES OF WEATHER, RIVER STAGES, TIDES, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE; (4) THE CONFORMATION AND CONDITIONS OF THE GROUND; AND (5) THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING WORK PERFORMANCE. THE CONTRACTOR ALSO ACKNOWLEDGES THAT IT HAS SATISFIED ITSELF AS TO THE CHARACTER, QUALITY, AND QUANTITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED IN SO FAR AS THIS INFORMATION IS REASONABLY ASCERTAINABLE FROM AN INSPECTION OF THE SITE, INCLUDING ALL EXPLORATORY WORK DONE BY THE PHA, AS WELL AS FROM THE DRAWINGS AND SPECIFICATIONS MADE A PART OFTHIS CONTRACT. ANY FAILURE OF THE CONTRACTOR TO TAKE THE ACTIONS DESCRIBED AND ACKNOWLEDGED IN THIS PARAGRAPH WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK, OR FOR PROCEEDING TO SUCCESSFULLY PERFORM THE WORK WITHOUT ADDITIONAL EXPENSE TO THE PHA.

(B) THE PHA ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS OR INTERPRETATIONS MADE BY THE CONTRACTOR BASED ON THE INFORMATION MADE AVAILABLE BY THE PHA. NOR DOES THEPHA ASSUME RESPONSIBILITY FOR ANY UNDERSTANDING REACHED OR REPRESENTATION MADE CONCERNING CONDITIONS WHICH CAN AFFECT THE WORK BY ANY OF ITS OFFICERS OR AGENTS BEFORE THE EXECUTION OF THIS CONTRACT, UNLESS THAT UNDERSTANDING OR REPRESENTATION IS EXPRESSLY STATED IN THIS CONTRACT.

DIFFERING SITE CONDITIONS

(A)THE CONTRACTOR SHALL PROMPTLY, AND BEFORE THE CONDITIONS ARE DISTURBED, GIVE A WRITTEN NOTICE TO THE CONTRACTING OFFICER OF (1) SUBSURFACE OR LATENT PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THIS CONTRACT, OR (2)UNKNOWN PHYSICAL CONDITIONS AT THE SITE(S), OF AN UNUSUAL NATURE, WHICH DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERING IN WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT.

(B)THE CONTRACTING OFFICER SHALL INVESTIGATE THE SITE CONDITIONS PROMPTLY AFTER RECEIVING THE NOTICE. WORK SHALL NOT PROCEED AT THE AFFECTED SITE, EXCEPT AT THE CONTRACTOR'S RISK, UNTIL THE CONTRACTING OFFICER HAS PROVIDED WRITTEN INSTRUCTIONS TO THE CONTRACTOR. IF THE CONDITIONS DO MATERIALLY SO DIFFER AND CAUSE AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR, PERFORMING ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED AS A RESULT OF THE CONDITIONS, THE CONTRACTOR SHALL FILE A CLAIM IN WRITING TO THE PHA WITHIN TEN DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS AND, IN ANY EVENT, BEFORE PROCEEDING WITH THE WORK. ANEQUITABLE ADJUSTMENT IN THE CONTRACT PRICE, THE DELIVERY SCHEDULE, OR BOTH SHALL BE MADE UNDER THIS CLAUSE ANDTHE CONTRACT MODIFIED IN WRITING ACCORDINGLY.

(C)NO REQUEST BY THECONTRACTOR FOR AN EQUITABLE ADJUSTMENT TO THE CONTRACT UNDER THIS CLAUSE SHALL BE ALLOWED, UNLESS THE CONTRACTOR HAS GIVEN THE WRITTEN NOTICE REQUIRED; PROVIDED, THAT THE TIME PRESCRIBED IN (A) ABOVE FORGIVING WRITTEN NOTICE MAY BE EXTENDED BY THE CONTRACTING OFFICER.

(D)NO REQUEST BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENTTO THE CONTRACT FOR DIFFERING SITE CONDITIONS SHALL BE ALLOWED IF MADE AFTER FINAL PAYMENT UNDER THIS CONTRACT.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

(A) THE CONTRACTOR SHALL KEEP ON THE WORK SITE A COPY OF THE DRAWINGS AND SPECIFICATIONS AND SHALL AT ALL TIMES GIVE THE CONTRACTING OFFICER ACCESS THERETO. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCE BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IN CASE OF DISCREPANCY IN THE FIGURES, IN THE DRAWINGS, OR IN THE SPECIFICATIONS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE CONTRACTING OFFICER, WHO SHALL PROMPTLY MAKE A DETERMINATION IN WRITING. ANY ADJUSTMENTBY THE CONTRACTOR WITHOUT SUCH A DETERMINATION SHALL BE ATITS OWN RISK AND EXPENSE. THE CONTRACTING OFFICER SHALLFURNISH FROM TIME TO TIME SUCH DETAILED DRAWINGS AND OTHER INFORMATION AS CONSIDERED NECESSARY, UNLESS OTHERWISE PROVIDED.

(B)WHEREVER IN THE SPECIFICATIONS OR UPON THE DRAWINGS THE WORDS "DIRECTED", "REQUIRED", "ORDERED", "DESIGNATED","PRESCRIBED", OR WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE"DIRECTION", "REQUIREMENT", "ORDER","DESIGNATION", OR "PRESCRIPTION", OF THE CONTRACTING OFFICER IS INTENDED AND SIMILARLY THE WORDS "APPROVED", "ACCEPTABLE","SATISFACTORY", OR WORDS OF LIKE IMPORT SHALL MEAN "APPROVED BY", OR "ACCEPTABLE TO", OR "SATISFACTORY TO" THE CONTRACTING OFFICER, UNLESS OTHERWISE EXPRESSLY STATED.

(C)WHERE "AS SHOWN" "AS INDICATED", "AS DETAILED", OR WORDS OF SIMILAR IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THIS CONTRACT UNLESS STATED OTHERWISE. THE WORD "PROVIDED" AS USED HEREIN SHALL BE UNDERSTOOD TO MEAN "PROVIDE COMPLETE IN PLACE" THAT IS "FURNISHED AND INSTALLED".

(D)"SHOP DRAWINGS" MEANS DRAWINGS, SUBMITTED TO THE PHA BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY LOWER TIER SUBCONTRACTOR, SHOWING IN DETAIL (1) THE PROPOSED FABRICATION AND ASSEMBLY OF STRUCTURAL ELEMENTS AND (2) THE INSTALLATION(I.E., FORM, FIT, AND ATTACHMENT DETAILS) OF MATERIALS OF EQUIPMENT. IT INCLUDES DRAWINGS, DIAGRAMS, LAYOUTS,SCHEMATICS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, SCHEDULES,PERFORMANCE AND TEST DATA, AND SIMILAR MATERIALS FURNISHED BY THE CONTRACTOR TO EXPLAIN IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. THE PHA MAY DUPLICATE, USE, AND DISCLOSE IN ANY MANNER AND FOR ANY PURPOSE SHOP DRAWINGS DELIVERED UNDER THIS CONTRACT.

(E)IF THIS CONTRACT REQUIRES SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE ALL SUCH DRAWINGS, AND REVIEW THEM FOR ACCURACY, COMPLETENESS, AND COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS AND SHALL INDICATE ITS APPROVAL THEREON AS EVIDENCE OF SUCH COORDINATION AND REVIEW. SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER WITHOUT EVIDENCE OF THE CONTRACTOR'S APPROVAL MAY BE RETURNED FOR RESUBMISSION.THE CONTRACTING OFFICER WILL INDICATE AN APPROVAL OR DISAPPROVAL OF THE SHOP DRAWINGS AND IF NOT APPROVED AS SUBMITTED SHALL INDICATE THE PHA'S REASONS THEREFORE. ANYWORK DONE BEFORE SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. APPROVAL BY THE CONTRACTING OFFICER SHALL NOT RELIEVE THECONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN SUCH DRAWINGS, NOR FROM RESPONSIBILITY FOR COMPLYING WITH THE REQUIREMENTS OF THIS CONTRACT, EXCEPT WITH RESPECT TO VARIATIONS DESCRIBED AND APPROVED IN ACCORDANCE WITH (F)BELOW.

(F)IF SHOP DRAWINGS SHOW VARIATIONS FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL DESCRIBE SUCH VARIATIONS IN WRITING, SEPARATE FROM THE DRAWINGS, AT THE TIME OF SUBMISSION. IF THE ARCHITECT APPROVES ANY SUCH VARIATION AND THE CONTRACTING OFFICER CONCURS, THE CONTRACTING OFFICER SHALL ISSUE AN APPROPRIATE MODIFICATION TO THE CONTRACT, EXCEPT THAT,IF THE VARIATION IS MINOR OR DOES NOT INVOLVE A CHANGE IN PRICE OR IN TIME OF PERFORMANCE, A MODIFICATION NEED NOT BE ISSUED.(G)IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE TIMELY REQUESTS OF THE PHA FOR SUCH LARGE SCALE AND FULL SIZE DRAWINGS, COLOR SCHEMES, AND OTHER ADDITIONAL INFORMATION,NOT ALREADY IN HIS POSSESSION, WHICH SHALL BE REQUIRED IN THE PLANNING AND PRODUCTION OF THE WORK. SUCH REQUESTS MAY BE SUBMITTED AS THE NEED ARISES, BUT EACH SUCH REQUEST SHALL BE FILED IN AMPLE TIME TO PERMIT APPROPRIATE ACTION TO BE TAKEN BY ALL PARTIES INVOLVED SO AS TO AVOID DELAY.

(H)THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOR APPROVAL FOUR COPIES (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS AS CALLED FOR UNDER THE VARIOUS HEADINGS OF THESE SPECIFICATIONS. THREE SETS (UNLESS OTHERWISE INDICATED) OF ALL SHOP DRAWINGS, WILL BE RETAINED BY THE PHA AND ONE SET WILL BE RETURNED TO THE CONTRACTOR. AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR, UPONCOMPLETING THE WORK UNDER THIS CONTRACT, SHALL FURNISH A COMPLETE SET OF ALL SHOP DRAWINGS AS FINALLY APPROVED.THESE DRAWINGS SHALL SHOW ALL CHANGES AND REVISION SMADE UP TO THE TIME THE WORK IS COMPLETED AND ACCEPTED.

(I)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SHOP DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS

(A)"AS-BUILTDRAWINGS," AS USED IN THIS CLAUSE, MEANS DRAWINGS SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR AT ANY TIER TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "AS-BUILT DRAWINGS" SHALL BE SYNONYMOUS WITH "RECORD DRAWINGS."

(B)AS REQUIRED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER ACCURATE INFORMATIONTO BE USED IN THE PREPARATION OF PERMANENT AS-BUILTDRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES FROM THE INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONSOF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS, OR EDGES OF WALKS.

(C)THIS CLAUSE SHALL BE INCLUDED IN ALL SUBCONTRACTS AT ANY TIER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT DRAWINGS PREPARED BY SUBCONTRACTORS ARE SUBMITTED TO THE CONTRACTING OFFICER.

MATERIAL AND WORKMANSHIP

(A)ALL EQUIPMENT, MATERIAL, AND ARTICLES FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND OF THE MOST SUITABLE GRADE FORTHE PURPOSE INTENDED, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT. REFERENCES IN THE CONTRACT TO EQUIPMENT, MATERIAL, ARTICLES, OR PATENTED PROCESSES BY TRADE NAME, MAKE, OR CATALOG NUMBER, SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. THE CONTRACTOR MAY, AT ITS OPTION, USE ANY EQUIPMENT, MATERIAL, ARTICLE, ORPROCESS THAT, IN THE JUDGMENT OF, AND AS APPROVED BY THE CONTRACTING OFFICER, IS EQUAL TO THAT NAMED IN THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS CONTRACT.

(B)APPROVAL OF EQUIPMENT AND MATERIALS.

(1) THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT TO BE INCORPORATED INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL FURNISH TO THE CONTRACTING OFFICER THE NAME OF THE MANUFACTURER, THE MODEL NUMBER, AND OTHER INFORMATION CONCERNING THE PERFORMANCE, CAPACITY, NATURE, AND RATING OF THE MACHINERY AND MECHANICAL AND OTHER EQUIPMENT.WHEN REQUIRED BY THIS CONTRACT OR BY THE CONTRACTINGOFFICER, THE CONTRACTOR SHALL ALSO OBTAIN THE CONTRACTING OFFICER'S APPROVAL OF THE MATERIAL ORARTICLES WHICH THE CONTRACTOR CONTEMPLATES INCORPORATING INTO THE WORK. WHEN REQUESTING APPROVAL, THE CONTRACTOR SHALL PROVIDE FULL INFORMATION CONCERNING THE MATERIAL OR ARTICLES. MACHINERY,

EQUIPMENT, MATERIAL, AND ARTICLES THAT DO NOT HAVE THE REQUIRED APPROVAL SHALL BE INSTALLED OR USED AT THE RISK OF SUBSEQUENT REJECTION.

(2) WHEN REQUIRED BY THE SPECIFICATIONS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL SUBMIT APPROPRIATELY MARKED SAMPLES (AND CERTIFICATES RELATED TO THEM) FOR APPROVAL AT THE CONTRACTOR'S

EXPENSE, WITH ALL SHIPPING CHARGES PREPAID. THE CONTRACTOR SHALL LABEL, OR OTHERWISE PROPERLY MARK ONTHE CONTAINER, THE MATERIAL OR PRODUCT REPRESENTED, ITS PLACE OF ORIGIN, THE NAME OF THE PRODUCER, THE CONTRACTOR'S NAME, AND THE IDENTIFICATION OF THE CONSTRUCTION PROJECT FOR WHICH THE MATERIAL OR PRODUCTIS INTENDED TO BE USED.

(3) CERTIFICATES SHALL BE SUBMITTED IN TRIPLICATE, DESCRIBING EACH SAMPLE SUBMITTED FOR APPROVAL AND CERTIFYING THAT THE MATERIAL, EQUIPMENT OR ACCESSORY COMPLIES WITH CONTRACT REQUIREMENTS. THE CERTIFICATES SHALL INCLUDE THE NAME AND BRAND OF THE PRODUCT, NAME OFMANUFACTURER, AND THE LOCATION WHERE PRODUCED.

(4) APPROVAL OF A SAMPLE SHALL NOT CONSTITUTE A WAIVER OFTHE PHA RIGHT TO DEMAND FULL COMPLIANCE WITH CONTRACT REQUIREMENTS. MATERIALS, EQUIPMENT AND ACCESSORIES MAY BE REJECTED FOR CAUSE EVEN THOUGH SAMPLES HAVE BEEN APPROVED.

(5) WHEREVER MATERIALS ARE REQUIRED TO COMPLY WITH RECOGNIZED STANDARDS OR SPECIFICATIONS, SUCH SPECIFICATIONS SHALL BE ACCEPTED AS ESTABLISHING THE TECHNICAL QUALITIES AND TESTING METHODS, BUT SHALL NOT GOVERN THE NUMBER OF TESTS REQUIRED TO BE MADE NOR MODIFY OTHER CONTRACT REQUIREMENTS. THE CONTRACTING OFFICER MAY REQUIRE LABORATORY TEST REPORTS ON ITEMS SUBMITTED FOR APPROVAL OR MAY APPROVE MATERIALS ON THE BASIS OF DATA SUBMITTED IN CERTIFICATES WITH SAMPLES. CHECK TESTS WILL BE MADE ON MATERIALS

DELIVERED FOR USE ONLY AS FREQUENTLY AS THE CONTRACTING OFFICER DETERMINES NECESSARY TO INSURE COMPLIANCE OF MATERIALS WITH THE SPECIFICATIONS. THE CONTRACTOR WILL ASSUME ALL COSTS OF RETESTING MATERIALS WHICH FAIL TO MEET CONTRACT REQUIREMENTS AND/OR TESTING MATERIAL SOFFERED IN SUBSTITUTION FOR THOSE FOUND DEFICIENT.

(6) AFTER APPROVAL, SAMPLES WILL BE KEPT IN THE PROJECT OFFICE UNTIL COMPLETION OF WORK. THEY MAY BE BUILT INTO THE WORK AFTER A SUBSTANTIAL QUANTITY OF THE MATERIALSTHEY REPRESENT HAS BEEN BUILT IN AND ACCEPTED.

(C) REQUIREMENTS CONCERNING LEAD-BASED PAINT. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS CONCERNING LEAD-BASED PAINT CONTAINED IN THE LEAD-BASED PAINT POISONING PREVENTION ACT (42 U.S.C. 4821-4846) AS IMPLEMENTED BY 24 CFR PART 35.

PERMITS AND CODES

(A)THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALLAPPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS. NOTWITHSTANDING THE REQUIREMENT OF THE CONTRACTOR TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS IN THE CONTRACT, ALL WORK INSTALLED SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. BEFORE INSTALLING THE WORK, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND THE SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS BEARING ON THE WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCY IT MAY DISCOVER TO THE CONTRACTING OFFICER.

WHERE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS FAIL TO COMPLY WITH THE APPLICABLE CODE OR REGULATION, THE CONTRACTING OFFICER SHALL MODIFY THE CONTRACT BY CHANGE ORDER PURSUANT TO THE CLAUSE ENTITLED CHANGES HEREIN TO CONFORM TO THE CODE OR REGULATION.

(B) THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES,AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. WHERE THE PHA CAN ARRANGE FORTHE ISSUANCE OF ALL OR PART OF THESE PERMITS, FEES AND LICENSES, WITHOUT COST TO THE CONTRACTOR, THE CONTRACT AMOUNT SHALL BE REDUCED ACCORDINGLY.

HEALTH, SAFETY AND ACCIDENT PREVENTION

(A) IN PERFORMING THIS CONTRACT, THE CONTRACTOR SHALL: (1)ENSURE THAT NO LABORER OR MECHANIC SHALL BE REQUIRED TO WORK IN SURROUNDINGS OR UNDER WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO HIS/HER HEALTH AND/OR SAFETY AS DETERMINED UNDER CONSTRUCTION SAFETY AND HEALTHSTANDARDS PROMULGATED BY THE SECRETARY OF LABOR BY REGULATION; (2)PROTECT THE LIVES, HEALTH, AND SAFETY OF OTHER PERSONS; (3)PREVENT DAMAGE TO PROPERTY, MATERIALS, SUPPLIES, AND EQUIPMENT; AND, (4)AVOID WORK INTERRUPTIONS.

(B) FOR THESE PURPOSES, THE CONTRACTOR SHALL: (1)COMPLY WITH REGULATIONS AND STANDARDS ISSUED BY THE SECRETARY OF LABOR AT 29 CFR PART 1926. FAILURE TO COMPLY MAY RESULT IN IMPOSITION OF SANCTIONS PURSUANT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT(PUBLIC LAW 91-54, 83 STAT. 96), 40 U.S.C. 3701 ETSEQ.; AND (2)INCLUDE THE TERMS OF THIS CLAUSE IN EVERY SUBCONTRACT SO THAT SUCH TERMS WILL BE BINDING ON EACH SUBCONTRACTOR.

(C) THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF EXPOSURE DATA ON ALL ACCIDENTS INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT RESULTING IN DEATH, TRAUMATIC INJURY,OCCUPATIONAL DISEASE, OR DAMAGE TO PROPERTY, MATERIALS,SUPPLIES, OR EQUIPMENT, AND SHALL REPORT THIS DATA IN THE MANNER PRESCRIBED BY 29 CFR PART1904.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THESE REQUIREMENTS AND OF THE CORRECTIVE ACTION REQUIRED. THIS NOTICE, WHEN DELIVERED TOTHE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE AT THE SITE OF THE WORK, SHALL BE DEEMED SUFFICIENT NOTICE OF THE NON COMPLIANCE AND CORRECTIVE ACTION REQUIRED. AFTER RECEIVING THE NOTICE, THE CONTRACTOR SHALL IMMEDIATELY TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS OR REFUSES TO TAKE CORRECTIVE ACTION PROMPTLY, THE CONTRACTING OFFICER MAY ISSUE ANORDER STOPPING ALL OR PART OF THE WORK UNTIL SATISFACTORY CORRECTIVE ACTION HAS BEEN TAKEN. THE CONTRACTOR SHALL NOT BASE ANY CLAIM OR REQUEST FOR EQUITABLE ADJUSTMENT FOR ADDITIONAL TIME OR MONEY ON ANY STOP ORDER ISSUED UNDER THESE CIRCUMSTANCES.

(E) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS SUBCONTRACTORS' COMPLIANCE WITH THE PROVISIONS OF THIS CLAUSE. THE CONTRACTOR SHALL TAKE SUCH ACTION WITH RESPECT TO ANY SUBCONTRACT AS THE PHA, THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, OR THE SECRETARY OF LABOR SHALL DIRECT AS A MEANS OF ENFORCING SUCH PROVISIONS.

TEMPORARY HEATING

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY HEATING, COVERING, AND ENCLOSURES NECESSARY TO PROPERLY PROTECT ALL WORK AND MATERIALS AGAINST DAMAGE BY DAMPNESS AND COLD, TO DRY OUT THE WORK, AND TO FACILITATE THE COMPLETION OF THE WORK. ANY PERMANENT HEATING EQUIPMENT USED SHALL BE TURNED OVER TO THE PHA IN THE CONDITION AND AT THE TIME REQUIRED BY THE SPECIFICATIONS.

AVAILABILTIY AND USE OF UTILITY SERVICES

(A) THE PHA SHALL MAKE ALL REASONABLY REQUIRED AMOUNTS OF UTILITIES AVAILABLE TO THE CONTRACTOR FROM EXISTING OUTLETS AND SUPPLIES, AS SPECIFIED IN THE CONTRACT. UNLESS OTHERWISE PROVIDED IN THE CONTRACT, THE AMOUNT OF EACH UTILITY SERVICE CONSUMED SHALL BE CHARGED TO OR PAID FOR BY THE CONTRACTOR AT PREVAILING RATES CHARGED TO THE PHA OR,WHERE THE UTILITY IS PRODUCED BY THE PHA, AT REASONABLE RATES DETERMINED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL CAREFULLY CONSERVE ANY UTILITIES FURNISHED WITHOUT CHARGE.

(B) THE CONTRACTOR, AT ITS EXPENSE AND IN A MANNER SATISFACTORY TO THE CONTRACTING OFFICER, SHALL INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY CONNECTIONS AND DISTRIBUTION LINES, AND ALL METERS REQUIRED TO MEASURE THE AMOUNT OF EACH UTILITY USED FOR THE PURPOSE OF DETERMINING CHARGES. BEFORE FINAL ACCEPTANCE OF THE WORK BY THE PHA, THE CONTRACTOR SHALL REMOVE ALL THE TEMPORARY CONNECTIONS, DISTRIBUTION LINES, METERS, AND ASSOCIATED PARAPHERNALIA.

PROTECTION OF EXISTING VEGETATION, STRUCTURES,EQUIPMENT, UTILITIES, AND IMPROVEMENTS

(A) THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL STRUCTURES,EQUIPMENT, AND VEGETATION (SUCH AS TREES, SHRUBS, ANDGRASS) ON OR ADJACENT TO THE WORKSITE, WHICH ARE NOT TO BE REMOVED UNDER THIS CONTRACT, AND WHICH DO NOT UNREASONABLY INTERFERE WITH THE WORK REQUIRED UNDER THIS CONTRACT.

(B) THE CONTRACTOR SHALL ONLY REMOVE TREES WHEN SPECIFICALLY AUTHORIZED TO DO SO, AND SHALL AVOID DAMAGING VEGETATION THAT WILL REMAIN IN PLACE. IF ANY LIMBS OR BRANCHES OF TREES ARE BROKEN DURING PERFORMANCE OF THIS CONTRACT, OR BY THE CARELESS OPERATION OF EQUIPMENT, OR BY WORKMEN, THE CONTRACTOR SHALL TRIM THOSE LIMBS OR BRANCHES WITH A CLEANCUT AND PAINT THE CUT WITH A TREE-PRUNING COMPOUND AS DIRECTED BY THE CONTRACTING OFFICER.

(C) THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS AND UTILITIES (1) AT OR NEAR THE WORK SITE AND (2) ON ADJACENT PROPERTY OF A THIRD PARTY, THE LOCATIONS OF WHICH ARE MADE KNOWN TO OR SHOULD BE KNOWN BY THE CONTRACTOR. PRIOR TO DISTURBING THE GROUND AT THE CONSTRUCTION SITE, THE CONTRACTOR SHALL ENSURE THAT ALL UNDERGROUND UTILITY LINES ARE CLEARLY MARKED.

(D) THE CONTRACTOR SHALL SHORE UP, BRACE, UNDERPIN, SECURE,AND PROTECT AS NECESSARY ALL FOUNDATIONS AND OTHER PARTS OF EXISTING STRUCTURES ADJACENT TO, ADJOINING, AND IN THE VICINITY OF THE SITE, WHICH MAY BE AFFECTED BY THE EXCAVATIONS OR OTHER OPERATIONS CONNECTED WITH THE CONSTRUCTION OF THE PROJECT.

(E) ANY EQUIPMENT TEMPORARILY REMOVED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE PROTECTED, CLEANED, AND REPLACEDIN THE SAME CONDITION AS AT THE TIME OF AWARD OFTHIS CONTRACT.

(F)NEW WORK WHICH CONNECTS TO EXISTING WORK SHALL CORRESPOND IN ALL RESPECTS WITH THAT TO WHICH IT CONNECTS AND/OR BE SIMILAR TO EXISTING WORK UNLESS OTHERWISE REQUIRED BY THE SPECIFICATIONS.

(G)NO STRUCTURAL MEMBERS SHALL BE ALTERED OR IN ANY WAY WEAKENED WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER, UNLESS SUCH WORK IS CLEARLY SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(H)IF THE REMOVAL OF THE EXISTING WORK EXPOSES DISCOLORED OR UNFINISHED SURFACES, OR WORK OUT OF ALIGNMENT, SUCH SURFACES SHALL BE REFINISHED, OR THE MATERIAL REPLACED AS NECESSARY TO MAKE THE CONTINUOUS WORK UNIFORM AND HARMONIOUS. THIS, HOWEVER, SHALL NOT BE CONSTRUED TO REQUIRE THE REFINISHING OR RECONSTRUCTION OF DISSIMILAR FINISHES PREVIOUSLY EXPOSED, OR FINISHED SURFACES IN GOOD CONDITION, BUT IN DIFFERENT PLANES OR ON DIFFERENT LEVELS WHEN BROUGHT TOGETHER BY THE REMOVAL OF INTERVENING WORK, UNLESS SUCH REFINISHING OR RECONSTRUCTION IS SPECIFIED IN THE PLANS OR SPECIFICATIONS.

(I)THE CONTRACTOR SHALL GIVE ALL REQUIRED NOTICES TO ANY ADJOINING OR ADJACENT PROPERTY OWNER OR OTHER PARTY BEFORE THE COMMENCEMENT OF ANY WORK.

(J)THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE PHA FROM ANY DAMAGES ON ACCOUNT OF SETTLEMENT OR THE LOSS OF LATERAL SUPPORT OF ADJOINING PROPERTY, ANY DAMAGES FROM CHANGES IN TOPOGRAPHY AFFECTING DRAINAGE, AND FROM ALL LOSS OR EXPENSE AND ALL DAMAGES FOR WHICH THE PHA MAY BECOME LIABLE IN CONSEQUENCE OF SUCH INJURY OR DAMAGE TO ADJOINING AND ADJACENT STRUCTURES AND THEIR PREMISES.

(K)THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, OR IMPROVEMENTS,INCLUDING THOSE THAT ARE THE PROPERTY OF A THIRD PARTY,RESULTING FROM FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS CONTRACT OR FAILURE TO EXERCISE REASONABLE CARE IN PERFORMING THE WORK. IF THE CONTRACTOR FAILS OR REFUSES TO REPAIR THE DAMAGE PROMPTLY, THE CONTRACTING OFFICER MAY HAVE THE NECESSARY WORK PERFORMED AND CHARGE THE COST TO THE CONTRACTOR.

TEMPORARY BUILDINGS AND TRANSPORTATION OF MATERIALS

(A)TEMPORARY BUILDINGS (E.G., STORAGE SHEDS, SHOPS, OFFICES, SANITARY FACILITIES) AND UTILITIES MAY BE ERECTED BY THE CONTRACTOR ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER AND SHALL BE BUILT WITH LABOR AND MATERIALS FURNISHED BY THE CONTRACTOR WITHOUT EXPENSE TO THE PHA. THE TEMPORARY BUILDINGS AND UTILITIES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR AT ITS EXPENSE UPON COMPLETION OF THE WORK. WITH THE WRITTEN CONSENT OF THE CONTRACTING OFFICER, THE BUILDINGS AND UTILITIES MAY BE ABANDONED AND NEED NOT BE REMOVED.

(B)THE CONTRACTOR SHALL, AS DIRECTED BY THE CONTRACTING OFFICER, USE ONLY ESTABLISHED ROADWAYS, OR USE TEMPORARY ROADWAYS CONSTRUCTED BY THE CONTRACTOR WHEN AND ASAUTHORIZED BY THE CONTRACTING OFFICER. WHEN MATERIALS ARE TRANSPORTED IN PROSECUTING THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHEN IT IS NECESSARY TO CROSS CURBS OR SIDEWALKS, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR PAY FOR THE REPAIR OF ANY DAMAGED CURBS, SIDEWALKS, OR ROADS.

CLEAN AIR AND WATER

THE CONTACTOR SHALL COMPLY WITH THE CLEAN AIR ACT, ASAMENDED, 42 USC 7401 ET SEQ., THE FEDERAL WATER POLLUTION CONTROL WATER ACT, AS AMENDED, 33 U.S.C. 1251ET SEQ., AND STANDARDS ISSUED PURSUANT THERE TO IN THE FACILITIES IN WHICH THIS CONTRACT IS TO BE PERFORMED.

ENERGY EFFICIENCY

THE CONTRACTOR SHALL COMPLY WITH MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (PUB.L. 94-163) FOR THE STATE IN WHICH THE WORK UNDER THE CONTRACT IS PERFORMED.

INSPECTION AND ACCEPTANCE OF CONSTRUCTION

(A)DEFINITIONS. AS USED IN THIS CLAUSE- (1) "ACCEPTANCE" MEANS THE ACT OF AN AUTHORIZED REPRESENTATIVE OF THE PHA BY WHICH THE PHA APPROVES AND ASSUMES OWNERSHIP OF THE WORK PERFORMED UNDER THIS CONTRACT. ACCEPTANCE MAY BE PARTIAL OR COMPLETE. (2) "INSPECTION" MEANS EXAMINING AND TESTING THE WORK PERFORMED UNDER THE CONTRACT (INCLUDING, WHEN APPROPRIATE, RAW MATERIALS, EQUIPMENT, COMPONENTS, AND INTERMEDIATE ASSEMBLIES) TO DETERMINE WHETHER IT CONFORMS TO CONTRACT REQUIREMENTS. (3) "TESTING" MEANS THAT ELEMENT OF INSPECTION THAT DETERMINES THE PROPERTIES OR ELEMENTS, INCLUDING FUNCTIONAL OPERATION OF MATERIALS, EQUIPMENT, OR THEIR COMPONENTS, BY THE APPLICATION OF ESTABLISHED SCIENTIFIC PRINCIPLES AND PROCEDURES.

(B) THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE INSPECTION SYSTEM AND PERFORM SUCH INSPECTIONS AS WILL ENSURE THAT THE WORK PERFORMED UNDER THE CONTRACT CONFORMS TO CONTRACT REQUIREMENTS. ALL WORK IS SUBJECT TO PHA INSPECTION AND TEST AT ALL PLACES AND AT ALL REASONABLE TIMES BEFORE ACCEPTANCE TO ENSURE STRICT COMPLIANCE WITH THE TERMS OF THE CONTRACT.

(C) PHA INSPECTIONS AND TESTS ARE FOR THE SOLE BENEFIT OF THE PHA AND DO NOT: (1) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROVIDING ADEQUATE QUALITY CONTROL MEASURES; (2) RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR LOSS OR DAMAGE OF THE MATERIAL BEFORE ACCEPTANCE; (3) CONSTITUTE OR IMPLY ACCEPTANCE; OR, (4) AFFECT THE CONTINUING RIGHTS OF THE PHA AFTER ACCEPTANCE OF THE COMPLETED WORK UNDER PARAGRAPH (J) BELOW.

(D) THE PRESENCE OR ABSENCE OF THE PHA INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM ANY CONTRACT REQUIREMENT, NOR IS THE INSPECTOR AUTHORIZED TO CHANGE ANY TERM OR CONDITION OF THE SPECIFICATIONS WITHOUT THE CONTRACTING OFFICER'S WRITTEN AUTHORIZATION. ALL INSTRUCTIONS AND APPROVALS WITH RESPECT TO THE WORK SHALL BE GIVEN TO THECONTRACTOR BY THE CONTRACTING OFFICER.

(E) THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT ADDITIONAL CHARGE, ALL FACILITIES, LABOR, AND MATERIAL REASONABLY NEEDED FOR PERFORMING SUCH SAFE AND CONVENIENT INSPECTIONS AND TESTS AS MAY BE REQUIRED BY THE CONTRACTING OFFICER. THE PHA MAY CHARGE TO THECONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN WORK IS NOT READY AT THE TIME SPECIFIED BY THE CONTRACTOR FOR INSPECTION OR TEST, OR WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY. THE PHA SHALL PERFORM ALL INSPECTIONS AND TESTS IN A MANNER THAT WILL NOT UNNECESSARILY DELAY THE WORK. SPECIAL, FULL SIZE, AND PERFORMANCE TESTS SHALL BE PERFORMED AS DESCRIBED IN THE CONTRACT.

(F)THE PHA MAY CONDUCT ROUTINE INSPECTIONS OF THE CONSTRUCTION SITE ON A DAILY BASIS.

(G)THE CONTRACTOR SHALL, WITHOUT CHARGE, REPLACE OR CORRECT WORK FOUND BY THE PHA NOT TO CONFORM TO CONTRACT REQUIREMENTS, UNLESS THE PHA DECIDES THAT IT IS IN ITS INTEREST TO ACCEPT THE WORK WITH AN APPROPRIATE ADJUSTMENT IN CONTRACT PRICE. THE CONTRACTOR SHALL PROMPTLY SEGREGATE AND REMOVE REJECTED MATERIAL FROM THE PREMISES.

(H)IF THE CONTRACTOR DOES NOT PROMPTLY REPLACE OR CORRECT REJECTED WORK, THE PHA MAY (1) BY CONTRACT OR OTHERWISE, REPLACE OR CORRECT THE WORK AND CHARGE THE COST TO THE CONTRACTOR, OR (2) TERMINATE FOR DEFAULT THE CONTRACTOR'S RIGHT TO PROCEED.

(I)IF ANY WORK REQUIRING INSPECTION IS COVERED UP WITHOUT APPROVAL OF THE PHA, IT MUST, IF REQUESTED BY THE CONTRACTING OFFICER, BE UNCOVERED AT THE EXPENSE OF THE CONTRACTOR. IFAT ANY TIME BEFORE FINAL ACCEPTANCE OF THE ENTIRE WORK, THE PHA CONSIDERS IT NECESSARY OR ADVISABLE, TO EXAMINE WORK ALREADY COMPLETED BY REMOVING OR TEARING IT OUT, THE CONTRACTOR, SHALL ON REQUEST, PROMPTLY FURNISH ALL NECESSARY FACILITIES, LABOR, AND MATERIAL. IF SUCH WORK IS FOUND TO BE DEFECTIVE OR NONCONFORMING IN ANY MATERIALRESPECT DUE TO THE FAULT OF THE CONTRACTOR OR ITSSUBCONTRACTORS, THE CONTRACTOR SHALL DEFRAY ALL THE EXPENSES OF THE EXAMINATION AND OF SATISFACTORY RECONSTRUCTION. IF, HOWEVER, SUCH WORK IS FOUND TO MEET THE REQUIREMENTS OF THE CONTRACT, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENT TO COVER THE COST OF THE EXAMINATION AND RECONSTRUCTION, INCLUDING, IF COMPLETION OF THE WORK WAS THERE BY DELAYED, AN EXTENSION OF TIME.

(J)THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER, IN WRITING, AS TO THE DATE WHEN IN ITS OPINION ALL OR A DESIGNATED PORTION OF THE WORK WILL BE SUBSTANTIALLY COMPLETED AND READY FOR INSPECTION. IF THE ARCHITECT DETERMINES THAT THE STATE OF PREPAREDNESS IS AS REPRESENTED, THE PHA WILL PROMPTLY ARRANGE FOR THE INSPECTION. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, THE PHA SHALL ACCEPT, AS SOON AS PRACTICABLE AFTER COMPLETION AND INSPECTION, ALL WORK REQUIRED BY THE CONTRACT OR THAT PORTION OF THE WORK THE CONTRACTING OFFICER DETERMINES AND DESIGNATES CAN BE ACCEPTED SEPARATELY. ACCEPTANCE SHAL LBE FINAL AND CONCLUSIVE EXCEPT FOR LATENT DEFECTS, FRAUD,GROSS MISTAKES AMOUNTING TO FRAUD, OR THE PHA'S RIGHT UNDER ANY WARRANTY OR GUARANTEE.

USE AND POSSESSION PRIOR TO COMPLETION

(A)THE PHA SHALL HAVE THE RIGHT TO TAKE POSSESSION OF OR USE ANY COMPLETED OR PARTIALLY COMPLETED PART OF THE WORK. BEFORE TAKING POSSESSION OF OR USING ANY WORK, THE CONTRACTING OFFICER SHALL FURNISH THE CONTRACTOR A LIST OF ITEMS OF WORK REMAINING TO BE PERFORMED OR CORRECTED ON THOSE PORTIONS OF THE WORK THAT THE PHA INTENDS TO TAKE POSSESSION OF OR USE. HOWEVER, FAILURE OF THE CONTRACTING OFFICER TO LIST ANY ITEM OF WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE TERMS OF THE CONTRACT. THE PHA'S POSSESSION OR USE SHALL NOT BE DEEMED AN ACCEPTANCE OF ANY WORK UNDER THE CONTRACT.

(B)WHILE THE PHA HAS SUCH POSSESSION OR USE, THE CONTRACTOR SHALL BE RELIEVED OF THE RESPONSIBILITY FOR (1) THE LOSS OF OR DAMAGE TO THE WORK RESULTING FROM THE PHA'S POSSESSION OR USE, NOTWITHSTANDING THE TERMS OF THE CLAUSE ENTITLED PERMITS AND CODES HEREIN; (2) ALL MAINTENANCE COSTS ON THE AREAS OCCUPIED; AND, (3)FURNISHING HEAT, LIGHT, POWER, AND WATER USED IN THE AREAS OCCUPIED WITHOUT PROPER REMUNERATION THEREFORE. IF PRIOR POSSESSION OR USE BY THE PHA DELAYS THE PROGRESS OF THE WORK OR CAUSES ADDITIONAL EXPENSE TO THE CONTRACTOR, AN EQUITABLE ADJUSTMENT SHALL BE MADE IN THE CONTRACT PRICE OR THE TIME OF COMPLETION, AND THE CONTRACT SHALL BE MODIFIED IN WRITING ACCORDINGLY.

WARRANTY OF TITLE

THE CONTRACTOR WARRANTS GOOD TITLE TO ALL MATERIALS,SUPPLIES, AND EQUIPMENT INCORPORATED IN THE WORK AND AGREES TO DELIVER THE PREMISES TOGETHER WITH ALL IMPROVEMENTS THERE ON FREE FROM ANY CLAIMS, LIENS OR CHARGES, AND AGREES FURTHER THAT NEITHER IT NOR ANY OTHER PERSON, FIRM OR CORPORATION SHALL HAVE ANY RIGHT TO A LIEN UPON THE PREMISES OR ANYTHING APPUR TENANT THERETO.

WARRANTY OF CONSTRUCTION

(A) IN ADDITION TO ANY OTHER WARRANTIES IN THIS CONTRACT, THE CONTRACTOR WARRANTS, EXCEPT ASPROVIDED IN PARAGRAPH (J)OF THIS CLAUSE, THAT WORK PERFORMED UNDER THIS CONTRACT CONFORMS TO THE CONTRACT REQUIREMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL, OR WORKMANSHIP PERFORMED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER AT ANY TIER. THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF_ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE OF FINAL ACCEPTANCE OFTHE WORK. IF THE PHA TAKES POSSESSION OF ANY PART OF THE WORK BEFORE FINAL ACCEPTANCE, THIS WARRANTY SHALL CONTINUE FOR A PERIOD OF ONE YEAR UNLESS OTHERWISE INDICATED FROM THE DATE THAT THE PHA TAKES POSSESSION.

(B) THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY FAILURE TO CONFORM, OR ANY DEFECT. IN ADDITION, THE CONTRACTOR SHALL REMEDY, AT THE CONTRACTOR'S EXPENSE, ANY DAMAGE TO PHA-OWNED OR CONTROLLED REAL ORPERSONAL PROPERTY WHEN THE DAMAGE IS THE RESULT OF— (1) THE CONTRACTOR'S FAILURE TO CONFORM TO CONTRACT REQUIRE-MERITS; OR (2) ANY DEFECTS OF EQUIPMENT, MATERIAL, WORKMANSHIP OR DESIGN FURNISHED BY THE CONTRACTOR.

(C) THE CONTRACTOR SHALL RESTORE ANY WORK DAMAGED IN FULFILLING THE TERMS AND CONDITIONS OF THIS CLAUSE. THE CONTRACTOR'S WARRANTY WITH RESPECT TO WORK REPAIRED OR REPLACED WILL RUN FOR (ONE YEAR UNLESS OTHERWISEINDICATED)FROM THE DATE OF REPAIR OR REPLACEMENT.

(D) THE CONTRACTING OFFICER SHALL NOTIFY THE CONTRACTOR, IN WRITING, WITHIN A REASONABLE TIME AFTER THE DISCOVERY OFANY FAILURE, DEFECT OR DAMAGE.

(E) IF THE CONTRACTOR FAILS TO REMEDY ANY FAILURE, DEFECT, OR DAMAGE WITHIN A REASONABLE TIME AFTER RECEIPT OF NOTICE, THE PHA SHALL HAVE THE RIGHT TO REPLACE, REPAIR OR OTHERWISE REMEDY THE FAILURE, DEFECT, OR DAMAGE AT THE CONTRACTOR'S EXPENSE.

(F) WITH RESPECT TO ALL WARRANTIES, EXPRESS OR IMPLIED, FROM SUBCONTRACTORS, MANUFACTURERS, OR SUPPLIERS FOR WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT,THE CONTRACTOR SHALL:

(1) OBTAIN ALL WARRANTIES THAT WOULD BE GIVEN IN NORMALCOMMERCIAL PRACTICE; (2) REQUIRE ALL WARRANTIES TO BE EXECUTED IN WRITING, FOR THEBENEFIT OF THE PHA; AND, (3) ENFORCE ALL WARRANTIES FOR THE BENEFIT OF THE PHA.

(G) IN THE EVENT THE CONTRACTOR'S WARRANTY UNDER PARAGRAPH (A) OF THIS CLAUSE HAS EXPIRED, THE PHA MAY BRING SUIT ATITS OWN EXPENSE TO ENFORCE A SUBCONTRACTOR'S,MANUFACTURER'S OR SUPPLIER'S WARRANTY.

(H)UNLESS A DEFECT IS CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR OR SUBCONTRACTOR OR SUPPLIER AT ANY TIER, THECONTRACTOR SHALL NOT BE LIABLE FOR THE REPAIR OF ANY DEFECT OF MATERIAL OR DESIGN FURNISHED BY THE PHA NOR FOR THE REPAIR OF ANY DAMAGE THAT RESULTS FROM ANY DEFECT IN PHA FURNISHED MATERIAL OR DESIGN.

(I)NOTWITHSTANDING ANY PROVISIONS HEREIN TO THE CONTRARY, THE ESTABLISHMENT OF THE TIME PERIODS IN PARAGRAPHS (A) AND(C) ABOVE RELATE ONLY TO THE SPECIFIC OBLIGATION OF THE CONTRACTOR TO CORRECT THE WORK, AND HAVE NO RELATIONSHIPTO THE TIME WITHIN WHICH ITS OBLIGATION TO COMPLY WITH THE CONTRACT MAY BE SOUGHT TO BE ENFORCED, NOR TO THE TIME WITHIN WHICH PROCEEDINGS MAY BE COMMENCED TO ESTABLISH THE CONTRACTOR'S LIABILITY WITH RESPECT TO ITS OBLIGATION OTHER THAN SPECIFICALLY TO CORRECT THE WORK.

(J)THIS WARRANTY SHALL NOT LIMIT THE PHA'S RIGHTS UNDER THE INSPECTION AND ACCEPTANCE OF CONSTRUCTION CLAUSE OF THIS CONTRACT WITH RESPECT TO LATENT DEFECTS, GROSS MISTAKES OR FRAUD.

PROHIBITION AGAINST LIENS

THE CONTRACTOR IS PROHIBITED FROM PLACING A LIEN ON THE PHA'S PROPERTY. THIS PROHIBITION SHALL APPLY TO ALL SUBCONTRACTORS AT ANY TIER AND ALL MATERIALS SUPPLIERS.

CHANGES

(A) THE CONTRACTING OFFICER MAY, AT ANY TIME, WITHOUT NOTICE TO THE SURETIES, BY WRITTEN ORDER DESIGNATED OR INDICATED TO BE A CHANGE ORDER, MAKE CHANGES IN THE WORK WITHIN THE GENERAL SCOPE OF THE CONTRACT INCLUDING CHANGES: (1) IN THE SPECIFICATIONS (INCLUDING DRAWINGS AND DESIGNS); (2) IN THE METHOD OR MANNER OF PERFORMANCE OF THE WORK; (3) PHA-FURNISHED FACILITIES, EQUIPMENT, MATERIALS,SERVICES, OR SITE; OR, (4) DIRECTING THE ACCELERATION IN THE PERFORMANCE OF THEWORK.

(B) ANY OTHER WRITTEN ORDER OR ORAL ORDER (WHICH, AS USED IN THIS PARAGRAPH (B), INCLUDES DIRECTION, INSTRUCTION,INTERPRETATION, OR DETERMINATION) FROM THE CONTRACTING OFFICER THAT CAUSES A CHANGE SHALL BE TREATED AS ACHANGE ORDER UNDER THIS CLAUSE; PROVIDED, THAT THE CONTRACTOR GIVES THE CONTRACTING OFFICER WRITTEN NOTICE STATING (1) THE DATE, CIRCUMSTANCES AND SOURCE OF THEORDER AND (2) THAT THE CONTRACTOR REGARDS THE ORDER AS ACHANGE ORDER.

(C) EXCEPT AS PROVIDED IN THIS CLAUSE, NO ORDER, STATEMENT OR CONDUCT OF THE CONTRACTING OFFICER SHALL BE TREATED AS A CHANGE UNDER THIS CLAUSE OR ENTITLE THE CONTRACTOR TO AN EQUITABLE ADJUSTMENT.

(D) IF ANY CHANGE UNDER THIS CLAUSE CAUSES AN INCREASE OR DECREASE IN THE CONTRACTOR'S COST OF, OR THE TIME REQUIRED FOR THE PERFORMANCE OF ANY PART OF THE WORK UNDER THIS CONTRACT, WHETHER OR NOT CHANGED BY ANY SUCH ORDER, THE CONTRACTING OFFICER SHALL MAKE AN EQUITABLE ADJUSTMENTAND MODIFY THE CONTRACT IN WRITING. HOWEVER, EXCEPT FOR A ADJUSTMENT BASED ON DEFECTIVE SPECIFICATIONS, NO PROPOSAL FOR ANY CHANGE UNDER PARAGRAPH (B) ABOVE SHALL BE ALLOWED FORANY COSTS INCURRED MORE THAN 20 DAYS (5 DAYS FOR ORAL ORDERS) BEFORE THE CONTRACTOR GIVES WRITTEN NOTICE

AS REQUIRED. IN THE CASE OF DEFECTIVE SPECIFICATIONS FOR WHICH THE PHA IS RESPONSIBLE, THE EQUITABLE ADJUSTMENTSHALL INCLUDE ANY INCREASED COST REASONABLY INCURRED BY THE CONTRACTOR IN ATTEMPTING TO COMPLY WITH THE DEFECTIVE SPECIFICATIONS.

(E) THE CONTRACTOR MUST ASSERT ITS RIGHT TO AN ADJUSTMENTUNDER THIS CLAUSE WITHIN 30 DAYS AFTER (1) RECEIPT OF A WRITTEN CHANGE ORDER UNDER PARAGRAPH (A) OF THIS CLAUSE,OR (2) THE FURNISHING OF A WRITTEN NOTICE UNDER PARAGRAPH(B) OF THIS CLAUSE, BY SUBMITTING A WRITTEN STATEMENT DESCRIBING THE GENERAL NATURE AND THE AMOUNT OF THE PROPOSAL. IF THE FACTS JUSTIFY IT, THE CONTRACTING OFFICER MAY EXTEND THE PERIOD FOR SUBMISSION. THE PROPOSAL MAY BE INCLUDED IN THE NOTICE REQUIRED UNDER PARAGRAPH (B) ABOVE. NO PROPOSAL BY THE CONTRACTOR FOR AN EQUITABLE ADJUSTMENT SHALL BE ALLOWED IF ASSERTED AFTER FINAL PAYMENT UNDER THIS CONTRACT.

(F) THE CONTRACTOR'S WRITTEN PROPOSAL FOR EQUITABLE ADJUSTMENT SHALL BE SUBMITTED IN THE FORM OF A LUMP SUMPROPOSAL SUPPORTED WITH AN ITEMIZED BREAKDOWN OF ALL INCREASES AND DECREASES IN THE CONTRACT IN AT LEAST THE FOLLOWING DETAILS: (1)DIRECT COSTS. MATERIALS (LIST INDIVIDUAL ITEMS, THE QUANTITY AND UNIT COST OF EACH, AND THE AGGREGATE COST); TRANSPORTATION AND DELIVERY COSTS ASSOCIATED WITH MATERIALS; LABOR BREAKDOWNS BY HOURS OR UNIT COSTS (IDENTIFIED WITH SPECIFIC WORK TO BE PERFORMED);CONSTRUCTION EQUIPMENT EXCLUSIVELY NECESSARY FOR THE CHANGE; COSTS OF PREPARATION AND/ OR REVISION TO SHOP DRAWINGS RESULTING FROM THE CHANGE; WORKER'S COMPENSATION AND PUBLIC LIABILITY INSURANCE;EMPLOYMENT TAXES UNDER FICA AND FUTA; AND, BOND COSTS WHEN SIZE OF CHANGE WARRANTS REVISION. (2)INDIRECT COSTS. INDIRECT COSTS MAY INCLUDE OVERHEAD,GENERAL AND ADMINISTRATIVE EXPENSES, AND FRINGE BENEFITS NOT NORMALLY TREATED AS DIRECT COSTS. (3)PROFIT. THE AMOUNT OF PROFIT SHALL BE NEGOTIATED AND MAY VARY ACCORDING TO THE NATURE, EXTENT, AND COMPLEXITY OF THE WORK REQUIRED BY THE CHANGE. THE ALLOWABILITY OF THE DIRECT AND INDIRECT COSTS SHALL BE DETERMINED IN ACCORDANCE WITH THE CONTRACT COST PRINCIPLES AND PROCEDURES FOR COMMERCIAL FIRMS IN PART 31 OF THE FEDERAL ACQUISITION REGULATION (48 CFR 1-31),AS IMPLEMENTED BY HUD HANDBOOK 2210.18, IN EFFECT ONTHE DATE OF THIS CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED A PROFIT ON THE PROFIT RECEIVED BY ANY SUBCONTRACTOR. EQUITABLE ADJUSTMENTS FOR DELETED WORK SHALL INCLUDE A CREDIT FOR PROFIT AND MAY INCLUDE A CREDIT FOR INDIRECT COSTS. ON PROPOSALS COVERING BOTH INCREASES AND DECREASES IN THE AMOUNT OF THE CONTRACT, THE APPLICATION OF INDIRECT COSTS AND PROFIT SHALL BE ON THE NET-CHANGE INDIRECT COSTS FOR THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.

(G)THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL ITS REQUESTFOR TIME EXTENSION (IF ANY), AND SHALL INCLUDE SUFFICIENT INFORMATION AND DATES TO DEMONSTRATE WHETHER AND TO WHAT EXTENT THE CHANGE WILL DELAY THE COMPLETION OF THE CONTRACT IN ITS ENTIRETY.

(H)THE CONTRACTING OFFICER SHALL ACT ON PROPOSALS WITHIN 30DAYS AFTER THEIR RECEIPT, OR NOTIFY THE CONTRACTOR OF THE DATE WHEN SUCH ACTION WILL BE TAKEN.

(I)FAILURE TO REACH AN AGREEMENT ON ANY PROPOSAL SHALL BE ADISPUTE UNDER THE CLAUSE ENTITLED DISPUTES HEREIN.NOTHING IN THIS CLAUSE, HOWEVER, SHALL EXCUSE THE CONTRACTOR FROM PROCEEDING WITH THE CONTRACT AS CHANGED.

(J)EXCEPT IN AN EMERGENCY ENDANGERING LIFE OR PROPERTY, NOCHANGE SHALL BE MADE BY THE CONTRACTOR WITHOUT A PRIOR ORDER FROM THE CONTRACTING OFFICER.

DEMOLITION/ALTERATION NOTES

HAZARDOUS MATERIALS REMOVAL

IF NOT ALREADY IDENTIFIED OR REMOVED, ANY MATERIALS DISCOVERED IN THE COURSE OF CONSTRUCTION THAT ARE DEEMED AS HAZARDOUS, SUCH AS BUT NOT LIMITED TO, ASBESTOS OR LEAD PAINTS, SHALL BE REMOVED, ENCAPSULATED OR LEFT IN ITS PRESENT CONDITION AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL UTILIZE THE APPROPRIATE TECHNIQUES, PROCEDURES AND DISPOSAL METHODS AS PER STANDARD PRACTICE, FEDERAL, STATE AND LOCAL CODES. REMOVAL OF HAZARDOUS MATERIALS NOT PREVIOUSLY IDENTIFIED SHALL BE AT AN EXTRA COST TO THE CONTRACT, EXCEPT THAT HACP SHALL HAVE THE OPPORTUNITY TO HAVE THE MATERIALS REMEDIATED AT ITS OWN EXPENSE.

HAZARDOUS MATERIALS REPORTS ARE AVAILABLE FOR REVIEW BY GC. WHERE RECOMMENDED BY THE HACP HAZARDOUS MATERIAL CONSULTANT AS STATED ON THE REPORT, REMOVAL OR ENCAPSULATION SHOULD BE INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. ABATEMENT SHOULD FOLLOW THE SPECIFICATIONS AND RECOMMENDATIONS STATED IN THE REPORT FOR EACH PROPERTY.

IF GC SUSPECTS OR ENCOUNTER ANY HAZARDOUS MATERIALS NOT INCLUDED IN THE REPORT, GC SHOULD SUBMIT A RFI TO HACP TO TEST THE SUSPECTED MATERIAL OR AREAS BEFORE REMOVAL.

ABANDONED OR REMOVED EQUIPMENT

ALL PLUMBING, DUCT WORK, ROOF TOP UNITS, SEWER & WATER LINES TO BE REMOVED MUST BE CAPPED AND REMOVED TO THE POINT OF CONNECTION TO BUILDING MAIN UTILITY LOCATION - NO EXCEPTIONS. GENERAL CONTRACTOR TO VERIFY WITH HACP REPRESENTATIVE AND ARCHITECT PRIOR TO ANY SUCH WORK, INCLUDING ROOF PENETRATIONS. EACH PRIME CONTRACTOR SHALL REMOVE ALL THEIR RESPECTIVE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PLUMBING FIXTURES, PIPING SYSTEMS, WIRING, ETC., NOT BEING REUSED.... **DO NOT ABANDON IN PLACE.**

EACH PRIME CONTRACTOR IS RESPONSIBLE TO VERIFY VISUALLY ALL CONDITIONS RELATIVE TO SERVICE REQUIREMENTS AND CODE CONFORMANCE FOR THIS SPACE, AND TO COORDINATE ALL WITH HACPS REPRESENTATIVE, REPORT ANY DEVIATION FROM INFORMATION ON DRAWINGS TO ARCHITECT PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL RESULT IN CONTRACTOR BEING HELD RESPONSIBLE FOR ANY COSTS FOR SUBSEQUENT CHARGES.

SELECTIVE DEMOLITION

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED ON THE DRAWINGS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.

CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE. EACH INDIVDUAL PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIING ANY DAMAGE CAUSED BY THEIR OWN ACTIVITIES OR REQUIRED DEMOLITION.

CLEANLINESS OF JOB SITE, PROTECTION OF PREMISES, AFTER HOURS WORK

THE ENTIRE AREA OF WORK IS TO BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES AND POLICED AT THE END OF EACH WORK DAY TO PREVENT ACCUMULATION OF TRASH AND DERBRIS. ALL MATERIALS SHALL BE DISPOSED FOLLOWING LOCAL REGULATIONS AND LEGALLY. ALL MATERIALS SHALL BE STACKED NEATLY IN CENTRAL LOCATIONS APPROVED BY THE HACP AND/OR THE GENERAL CONTRACTOR. IF CONTRACTORS DO NOT MAINTAIN PROPER ORDER OR REQUIRE CONTINUED NOTICE TO COMPLY, HEREWITH, HACP MAY AFTER 24 HOURS WRITTEN NOTICE TO THE INDIVIDUAL OFFENDING CONTRACTOR, HIRE THE NECESSARY LABOR TO ADEQUATELY CLEAN. CHARGES FOR SUCH WORK SHALL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. CONTRACTOR AND HIS/HER SUBCONTRACTORS MUST LEAVE THEIR WORK IN A NEAT AND CLEAN CONDITION READY FOR WORK TO BE PERFORMED BY OTHERS. THE GENERAL CONTRACTOR SHALL PROVIDE DUMPSTERS AS REQUIRED. THE GENERAL CONTRACROT SHALL PROVIDE PROTECTION OF MATERIAL AND EQUIPMENT, SECURITY MEASURES, OF THE WORK AREA FOR THE DURATION OF THE CONTRACT.

CONTRACT CLOSEOUT:

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HACP'S REPRESENTATIVE TO PERFORM A PRELIMINARY FINAL INSPECTION. A PUNCH LIST OUTLINING WORK TO BE CORRECTED, FINISHED,

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seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale	Sheet No.
As Noted	A6
date	
August 20th, 2024	
no. 6 of. 9	Project #2326

PERFORMED OR COMPLETED SHALL BE SUBMITTED BY EACH PRIME CONTRACTOR. ALL WORK OUTLINED ON THE INITIAL PUNCH LIST SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE FINAL INSPECTION AND BEFORE THE PROJECT WILL BE ACCEPTED FOR FINAL COMPLETION. AFTER ALL REQUIREMENTS PREPARATORY TO THE FINAL INSPECTION HAVE BEEN COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO PERFORM A FINAL INSPECTION. IF ALL THE WORK HAS BEEN COMPLETED, INCLUDING PUNCH LIST ITEMS FROM EARLIER INSPECTIONS, AND NO FURTHER CORRECTIONS ARE REQUIRED, THE ARCHITECT SHALL RECOMMEND FINAL ACCEPTANCE OF THE PROJECT WHEN ALL THE CLOSEOUT DOCUMENTS ARE RECEIVED, INCLUDING BUT NOT LIMITED TO:WARRANTIES, O&M MANUALS, FINAL TESTING, CERTIFICATES, PERMITS, PUNCH LIST, SUBMITTALS, RFIS, AS BUILD DRAWINGS AND ANY ADDITIONAL DOCUMENTATION REQUIRED BY HACP FOR CLOSEOUT.

ALL PUNCH LIST ITEMS TO BE COMPLETED WITHIN THIRTY (30) WORKING DAYS OF RECEIPT, OR FINAL 10% DRAW WILL BE FORFEITED. ALL WORK NOT COMPLETED WITHIN THE ALLOTTED TIME WILL BE COMPLETED BY HACP AT PRIME CONTRACTOR'S EXPENSE. FINAL COMPLETION OCCURS WHEN ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND OCCUPANCY PERMIT HAS BEEN ISSUED.

PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL EQUIPMENT FURNISHED, INSTALLED OR SERVICED UNDER THIS AND THEIR CONTRACT/S. EACH PRIME CONTRACTOR SHALL VERIFY THAT IT'S EQUIPMENT, ELECTRICAL SYSTEMS AND APPLIANCES ARE FUNCTIONAL AND OPERATIONAL AND THAT ALL PLUMBING AND MECHANICAL EQUIPMENT IS OPERATING QUIETLY AND FREE FROM VIBRATION. CONTRACTOR SHALL PROVIDE A BINDER FOR HACP AND TENANT CONTAINING MAINTENANCE MANUALS, INCLUDING OPERATION INSTRUCTIONS, SPARE PARTS, WARRANTIES, INSPECTION PROCEDURES, AND DATA FOR EACH SYSTEM OR EQUIPMENT ITEM.

ALL ELECTRICAL PANELS AND BREAKERS TO BE PROPERLY MARKED AND A TYPED SCHEDULE TO BE FURNISHED.

FINAL CLEANING: AT THE TIME OF THE PROJECT CLOSE OUT, THE GENERAL CONTRACTOR SHALL PROVIDE AND THOROUGHLY CLEAN AND READY THE SPACE FOR OCCUPANCY. THIS SHALL, AT MINIMUM, INCLUDE HARDWARE, SECURITY EQUIPMENT, LIGHT FIXTURES, REPLACEMENT OF BURNED OUT LAMPS, REMOVAL OF NON PERMANENT PROTECTION AND LABELS, TOUCH UP OF ANY MINOR FINISH DAMAGE, AND CLEANING OR REPLACEMENT OF MECHANICAL SYSTEM FILTERS. DAMAGE TO ANY FINISH, SURFACE, EQUIPMENT OR OBJECT CAUSED DURING CLEANING SHALL BE REPAIRED OR REPLACED BY THE GENERAL CONTRACTOR AT HIS/HER OWN COST.

UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR SHALL OBTAIN A CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT AND PROVIDE A COPY OF THE ORIGINAL TO HACP AND ARCHITECT IF REQUIRED.

AT EACH PAYMENT REQUEST AND BEFORE PAYMENT IS MADE, EACH CONTRACTOR SHALL DELIVER TO THE HACP A COMPLETE RELEASE OF ALL SUB CONTRACTOR'S AND SUPPLIER'S LIENS ARISING OUT OF THIS CONTRACT, OR RECEIPTS IN FULL COVERING ALL LABOR AND MATERIALS FOR WHICH A LIEN COULD BE FILED OR A BOND SATISFACTORY TO THE HACP INDEMNIFYING HACP AGAINST ANY LIENS.

DIVISION 2 – SITE WORK – NOT APPLICABLE

DIVISION 3 – CONCRETE

PLAIN AND REINFORCE CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 19 OF THE IBC 2018 AND ACI 318 AS AMMENDED IN SECTION 1905 OF THE IBC 2018.

CONCRETE TO BE INSTALLED AND CURED PER ACI 318 AND BE NORMAL WEIGHT (144PCF) WITH COMPRESSIVE STRENGTH IN 28 DAYS OF 4000 PSI, AIR ENTRAINED. CEMENT SHALL BE PORTLAND, TYPE 1(FLY ASH & GROUND GRANULATED BLAST FURNACE SLAG NOT PERMITTED). COARSE AGGREGATE SHALL BE ¾" MAXIMUM. AIR ENTRAINED SHALL BE 7 PERCENT. SLUMP SHALL BE 4" MAXIMUM

REINFORCING BARS SHALL COMPLY WITH A.S.T.M. A615–GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH A.S.T.M. A185.

4" MINIMUM COMPACTED GRAVEL BED TO PLACE CONCRETE TO BE #57 HAND OR MACHINE COMPACTED BEFORE CONCRETE PLACEMENT.

PROVIDE COLD-APPLIED JOINT SEALANTS, SINGLE COMPONENT, SILICONE, SELF LEVELING TYPE, BY SIKA OR EQUAL.

ROUND BACKER RODS FOR COLD-APPLIED JOINT SEALANTS: ASTM D5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL JOINT-SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT. BY SIKA OR EQUAL.

DIVISION 4 – MASONRY

BRICK MASONRY REPOINTING

BRICK MASONRY REPOINTING SPECIALIST QUALIFICATIONS: ENGAGE AN EXPERIENCED BRICK MASONRY REPOINTING FIRM TO PERFORM WORK OF THIS SECTION. FIRM SHALL HAVE COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE. EXPERIENCE IN ONLY INSTALLING MASONRY IS INSUFFICIENT EXPERIENCE FOR MASONRY REPOINTING WORK.

REPOINTING OF AREAS INDICATED IN THE DRAWINGS AND LOCATIONS WITH THE FOLLOWING DEFECTS:
A. HOLES AND MISSING MORTAR.
B. CRACKS THAT CAN BE PENETRATED 1/4 INCH OR MORE BY A KNIFE BLADE 0.027 INCH THICK.
C.CRACKS 1/8 INCH OR MORE IN WIDTH AND OF ANY DEPTH.
D.HOLLOW-SOUNDING JOINTS WHEN TAPPED BY METAL OBJECT.
E. ERODED SURFACES 1/4 INCH OR MORE DEEP.
F. DETERIORATION TO POINT THAT MORTAR CAN BE EASILY REMOVED BY HAND, WITHOUT TOOLS.
G. JOINTS FILLED WITH SUBSTANCES OTHER THAN MORTAR.

MATERIALS
PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR TYPE II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION; GRAY, WHERE REQUIRED FOR COLOR MATCHING OF MORTAR.

MASONRY CEMENT: ASTM C 91/C 91M. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- CEMEX S.A.B. DE C.V.
- . HOLCIM (US) INC.
- QUIKRETE; THE QUIKRETE COMPANIES, LLC.

REMOVE GUTTERS, DOWNSPOUTS AND ASSOCIATED HARDWARE ADJACENT TO MASONRY REPOINTING. REINSTALL WHEN REPOINTING IS CLOMPLETED.PROVIDE TEMPORARY RAIN DRAINAGE DURING WORK TO DIRECT WATER AWAY FROM THE BUILDING.

SEE LINTEL REPLACEMENT BELOW AND COORDINATE MASONRY REPOINTING AND REPLACEMENT WITH REMEDIAL LINTEL REPAIR OR REPLACEMENT.

RETAINING WALL

WHERE NOTED ON THE DRAWINGS, NEW DRYSTACK RETAINING WALL, BELGARD OR EQUAL, TO MATCH EXISTING COLOR AND TYPE OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. REMOVE SUFFICIENT SOIL TO ALLOW ACCESS TO INSTALL A NEW WALL. SET NEW WALL IN COMPACTED GRAVEL BED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTALLATION SPECIFICATIONS. INSTALL NEW WALL WITH ALL NECESSARY PINS, GEOGRID AND CAP PIECES ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

RETAINING WALL ACCESSORIES

WALL CAPS, PINS AND GEOGRID FABRIC.
REPLACEMENT WALL CAPS TO MATCH EXISTING, MATERIAL CONCRETE BY BELGARD OR EQUAL, COLOR AND TYPE TO MATCH EXISTING OR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLASS BLOCK

SOLID GLASS BLOCK COLORLESS, TRANSPARENT, SMOOTH FACES AND MANUFACTURER'S STANDARD EDGE COATING WHITE, BY SEVES, OWINGS CORNING GLASS BLOCK OR EQUAL. SILICONE SEALANT BY SIKA OR EQUAL. PRODUCT INFORMATION AND SAMPLE TO BE PROVIDED TO ARCHITECT AND HACP FOR APPROVAL. SIZE OF GLASS BLOCK TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD SIZES. GLASS BLOCK SHALL BE INSTALLED PER IBC AND IRC BUILDING CODE AND TMS 402/ACI 530/ASCE 5 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

DIVISION 5 – METALS

STEEL BEAMS, ANGLES AND PLATES

SHOP PRIMED WITH RUST PREVENTATIVE PAINT. DIMENSIONS AND GRADE TO MATCH EXISTING, SHOP DRAWINGS TO BE PROVIDED BY GC.

ALL EXTERIOR LINTELS MUST BE HOT-DIP GALVANIZED PER ASTM A123.

LINTEL REPLACEMENT/ INSTALLATION ON BRICK VENEER EXTERIOR WALLS

PROTECT EXISTING OPENING WITH PLYWOOD.TEMPORARILY SHORE AND REMOVE EXISTING BRICK ABOVE THE OPENING AT LEAST 6 INCHES ON EACH SIDE MINIMUM AND VERTICALLY AS NEEDED TO REMOVE EXISTING METAL ANGLE.REPLACED EXISTING LINTEL WITH NEW GALVANIZED STEEL ANGLE TO MATCH EXISTING LENGTH AND GAUGE. PROVIDE NEW FLASHING OVER NEW LINTEL AND CAULK AGAINST HOUSE WRAP. REINSTALL EXISTING BRICK.

FOR LINTEL CLEANING USE METAL CLEANING ON NEXT SECTION.

METAL CLEANING

EXECUTION OF THE WORK: IN CLEANING ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
- A. REMOVE DETERIORATED COATINGS AND CORROSION.
- B. SEQUENCE WORK TO MINIMIZE TIME BEFORE PROTECTIVE COATINGS ARE REAPPLIED.
- C. CLEAN ITEMS IN PLACE UNLESS OTHERWISE INDICATED.

MECHANICAL COATING REMOVAL: USE GENTLE METHODS, SUCH AS SCRAPING AND WIRE BRUSHING, THAT WILL NOT ABRADE METAL SUBSTRATE.

REPAINT: WHERE INDICATED, PREPARE PAINTED DECORATIVE METAL BY CLEANING SURFACE, REMOVING LESS THAN FIRMLY ADHERED EXISTING PAINT, SANDING EDGES SMOOTH, REMOVING EXISTING PAINT AND PRIMING FOR PAINTING AS SPECIFIED.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS, PERIMETER FASCIA, BRACING AND SUPPORTS TO BE EXTRUDED ALUMINUM, DECKING ALUMINUM INTERLOCKING PANELS, PROFILE AND THICKNESS AS DETERMINED BY MANUFACTURER. FACTORY APPLIED BACKED ENAMEL OR KYNAR PAINT FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. INSTALLATION OF AWNINGS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS FOR AWNINGS SHALL BE TYPE 316 SS. FOR LOCATIONS WHERE AWNINGS ARE ATTACHED TO SIDEWALL, AWNING FASTENERS SHALL FASTEN INTO STUDS WITH COMPRESSION STAND-OFF IF THROUGH VENEER BRICK. INSTALLATION SHALL INCLUDE PREFINISHED ALUMINUM REGLETED WALL FLASHING AT HEAD, PROPERLY INSTALLLED AND CAULKED. SEE ALSO DIVISION 10.

ALUMINUM METAL RAILINGS

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS, INCORPORATED. OR COMPARABLE PRODUCT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
PROVIDE ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH STRENGTH AND DURABILITY PROPERTIES FOR EACH ALUMINUM FORM REQUIRED NOT LESS THAN THAT OF ALLOY AND TEMPER DESIGNATED BELOW.
GC TO PROVIDE PRODUCT INFORMATION AND SHOP DRAWINGS OF NEW RAILINGS TO MATCH EXISTING DIMENSIONS. PROVIDE ACCESSORIES AS REQUIED FOR INSTALLATION ON CONCRETE, SYNTHETIC DECKING, WALLS AND CHANGE IN DIRECTION FITTINGS AS REQUIRED.

DIVISION 6 – WOOD AND PLASTICS

WOOD FRAMING AND BLOCKING

SELECT STRUCTURAL GRADE DOUGLAS FIR SOUTH, SIZES AS INDICATED ON DRAWINGS. COMPLY WITH THE "RECOMMENDED NAILING SCHEDULE" OF THE "MANUAL FOR HOUSING FRAMING."

FLOOR SHEATHING (IF REQUIRED) - PROVIDE 3/4" T&G PLYWOOD FLOOR SHEATHING OR OSB STRUCTURAL FIBERBOARD. ALIGN PANELS ACROSS A MINIMUM OF TWO SUPPORTS WITH STRENGTH AXIS PERPENDICULAR TO AXIS OF JOISTS, STAGGER JOINTS. GLUE TO JOISTS AND EDGES WITH ELASTOMERIC SOLVENT-BASED GLUE CONFORMING TO APA SPECIFICATION AFG-101. FASTEN WITH 8D COMMON OR 6D ANNULAR OR SPIRAL NAILS AT 6" O.C. ALONG EDGES AND 10" ALONG INTERMEDIATE SUPPORTS. FOLLOW PANEL MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR SUB-FLOOR PREP, PRIOR TO INSTALLATION OF FINISH FLOORING.

EXTERIOR WOOD FRAMING EXPOSED TO WEATHERING AND INSECTS SHALL BE MINIMUM 2" X PRESSURE TREATED LUMBER. KILN DRIED TO 19% MOISTURE CONTENT BEFORE INSTALLATION.

WOOD TRIM AND MOLDINGS

PROVIDE FURNITURE GRADE SOLID HARDWOOD TRIM AND MOLDINGS. STAIN ALL SIDES AND ENDS. WOOD TRIM AND MOLDINGS TO MATCH EXISTING UNLESS OTHERWISE NOTED ON DRAWINGS.

INSTALL WOOD TRIM AND MOLDINGS WITH MITER AT CORNERS, MITERED LAP SPLICES, AND SET WITH COUNTER SUNK GALVANIZED FINISH NAILS CAPPED WITH WOOD PUTTY SANDED SMOOTH. COMPLY WITH AWI 300 FOR ALL STANDING AND RUNNING TRIM.

FABRICATOR QUALIFICATIONS

FIRM EXPERIENCED IN PRODUCING ARCHITECTURAL WOODWORK SIMILAR TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT DELAYING THE WORK.

INTERIOR ARCHITECTURAL WOODWORK

INSTALLER QUALIFICATIONS

ARRANGE FOR INTERIOR ARCHITECTURAL WOODWORK INSTALLATION BY A FIRM THAT CAN DEMONSTRATE SUCCESSFUL EXPERIENCE IN INSTALLING ARCHITECTURAL WOODWORK ITEMS SIMILAR IN TYPE AND QUALITY TO THOSE REQUIRED FOR THIS PROJECT.

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS."

ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETE, AND MECHANICAL SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE AND RELATIVE HUMIDITY AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD. REFER TO AWI'S OR WI'S MEMBER LIST FOR NAMES OF WOODWORKING FIRMS THAT COULD POTENTIALLY BE INCLUDED.

MATERIALS

WOOD SPECIES AND CUT FOR TRANSPARENT FINISH: AS INDICATED ON DRAWINGS.

WOOD SPECIES FOR OPAQUE FINISH: ANY CLOSED-GRAIN HARDWOOD.

GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT THE SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.

- INTERIOR WOODWORK GRADE: AWI CUSTOM.
- SHOP CUT OPENINGS TO MAXIMUM EXTENT POSSIBLE. SAND EDGES OF CUTOUTS TO REMOVE SPLINTERS AND BURRS. SEAL EDGES OF OPENINGS IN COUNTERTOPS WITH A COAT OF VARNISH.
- FOR TRANSPARENT-FINISHED TRIM ITEMS WIDER THAN AVAILABLE LUMBER, USE VENEERED CONSTRUCTION. DO NOT GLUE FOR WIDTH.
- BACK OUT OR GROOVE BACKS OF FLAT TRIM MEMBERS AND KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.
- ASSEMBLE CASINGS IN PLANT EXCEPT WHERE LIMITATIONS OF ACCESS TO PLACE OF INSTALLATION.

PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS

QUALITY STANDARD: UNLESS OTHERWISE INDICATED, COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS FOR GRADES OF CABINETS INDICATED FOR CONSTRUCTION, FINISHES, INSTALLATION, AND OTHER REQUIREMENTS.

ARCHITECTURAL WOODWORK STANDARDS GRADE: AWI PREMIUM.

TYPE OF CONSTRUCTION: FRAMELESS.

DOOR AND DRAWER-FRONT STYLE: FLUSH OVERLAY.

HIGH-PRESSURE DECORATIVE LAMINATE: ISO 4586-3, GRADES AS INDICATED OR IF NOT INDICATED, AS REQUIRED BY QUALITY STANDARD.

EXPOSED SURFACES:
1. PLASTIC-LAMINATE GRADE: AWI PREMIUM.
2. EDGES: GRADE AWI PREMIUM.
3. PATTERN DIRECTION: AS INDICATED.

CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, ISO 4586-3, GRADE TO MATCH EXPOSED SURFACE.

DRAWER CONSTRUCTION: FABRICATE WITH EXPOSED FRONTS FASTENED TO SUBFRONT WITH MOUNTING SCREWS FROM INTERIOR OF BODY.
1. JOIN SUBFRONTS, BACKS, AND SIDES WITH GLUED RABBETED JOINTS SUPPLEMENTED BY MECHANICAL FASTENERS OR GLUED DOVETAIL JOINTS.

COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM LAMINATE MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
    - A. SOLID COLORS, MATTE FINISH.
    - B. SOLID COLORS WITH CORE SAME COLOR AS SURFACE, MATTE FINISH.
    - C. WOOD GRAINS, MATTE FINISH.
    - D. PATTERNS, MATTE FINISH.

SYNTHETIC DECKING

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE AZEK BUILDING PRODUCTS; TIMBERTECH, AZEK OR COMPARABLE PRODUCT.
DECKING SIZE AND LENGTH TO MATCH EXISTING INSTALLATION. FINISH TEXTURE BRUSHED; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. FASCIA BOARDS TO MATCH DECKING COLOR.
DECKING FASTENING SYSTEM AS RECOMMENDED BY MANUFACTURER INSTALLATION MANUAL. FOLLOW MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR CUTTING, TRIMMING AND INSTALLING DECKING.

RUBBER STAIR TREADS COVERS

BASIS OF DESIGN, BY ROPPE OR EQUAL, RIBBED PATTERN, BLACK FINISH. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR INSTALLATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING, SHEET METAL FLASHING AND TRIM

GENERAL CONTRACTOR TO EVALUATE STATUS OF ROOFING MATERIAL, COMMUNICATE THE HACP AND ARCHITECT OF FINDINGS AND IF PATCHING OR REPLACEMENT IS NEEDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INSTALL ASPHALT SHINGLES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN ARMA'S "ASPHALT ROOFING RESIDENTIAL MANUAL - DESIGN AND APPLICATION METHODS" AND NRCA'S "NRCA GUIDELINES FOR ASPHALT SHINGLE ROOF SYSTEMS."

ASPHALT SHINGLES: ASTM D3462/D3462M, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION; GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING, BY GAF OR EQUAL, STRAIGHT CUT. FINISH COLOR TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. HACP TO APPROVE FINAL COLOR SELECTION. RIDGE VENT, IF REQUIRED TO MATCH ROOFING MATERIAL MANUFACTURER.

GC TO INSPECT FLASHING OF ROOF PENETRATIONS, PATCH AND REPLACE IF NEEDED TO COMPLY WITH CODE AND REGULATIONS.

SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCA'S "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS

THERMAL INSULATION

GC TO PROVIDE THERMAL INSULATION ON WALLS, CEILINGS AND FLOORS AS NOTED ON THE DRAWINGS.

INSULATION TO COMPLY WITH THE ENERGY CODE IN MINIMUM R VALUES OR AS SPECIFIED ON DRAWINGS.

GC TO BE RESPONSIBLE TO INSPECTING, ADJUSTING AND ADDING INSULATION TO THE ENTIRE ATTIC SPACE TO INSURE CONTINUOUS INSULATION COVERAGE WITH NO GAPS. GC TO INFORM HACP AND ARCHITECT PRIOR TO ADD ADDITIONAL INSULATION.

ATTIC DOORS TO RECEIVED RIGID FOAM INSULATION GLUED TO BACK OF THE DOOR AND SEALED RUBBER JOINTS. INSULATION TO MATCH R VALUE OF CEILING ASSEMBLY.

ASSEMBLIES, SEPARATIONS & FIRESTOPPING:

ANY NEW DEMISING OR INTERIOR PARTITIONS SHALL BE RATED AS REQUIRED BY CODE. ANY PENETRATION THROUGH AN EXISTING DEMISING OR OTHER REQUIRED UL RATED ASSEMBLY WALL MUST RETAIN THE UL ASSEMBLY FIRE-RATING.

ALL NEW WORK SHALL MATCH OR EQUAL THE UL FIRE RATINGS, IF ANY, OF THE SURROUNDING WORK, AS APPROPRIATE. THE CONTRACTOR SHALL CONTACT HACP AND ARCHITECT IF ANY AREAS ARE UNCOVERED OR DISCOVERED THAT MAY REQUIRE ADDITIONAL ANALYSIS OR CLARIFICATION.

THROUGH PENETRATIONS OF FIRE RESISTANCE WALLS SHALL BE INSTALLED IN AN APPROVED FIRE-RESISTANCE-RATED ASSEMBLY PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED BY AN INDEPENDENT TESTING AGENCY SUCH AS UNDERWRITERS LABORATORIES. IF THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES OR STEEL CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-WALL SHALL BE PERMITTED TO BE PROTECTED AS FOLLOWS:

IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH NOMINAL DIAMETER AND THE OPENING IS A MAXIMUM 144 SQUARE INCHES, CONCRETE, GROUT, OR MORTAR SHALL BE PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.

THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTME 119 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY.

MEMBRANE PENETRATIONS, WHERE WALL AND PARTITIONS ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

EXCEPTIONS:
FOR STEEL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES; A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILL WITH CELLULOSE LOOSE FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; SOLID FIREBLOCKING (CONSISTING OF 2-INCH NOMINAL LUMBER OR TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS OR ONE THICKNESS OF 0.179-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANEL OR ONE THICKNESS OF 0.75-INCH PARTICLEBOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLEBOARD. GYPSUM BOARD, CEMENT FIBER BOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIREBLOCK. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONRIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROW OF STUDS OR STAGGERED STUDS. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES. THE INTEGRITY OF FIREBLOCKS SHALL BE MAINTAINED); PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

MEMBRANE PENETRATIONS FOR LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL ARE PERMITTED PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24-INCHES; SOLID FIREBLOCKING; PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS OR OTHER LISTED MATERIALS AND METHODS.

EXCEPTIONS:
MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, ELECTRICAL BOXES, PIPES, TUBES, VENTS, CONCRETE, MASONRY-PENETRATING ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. SUCH PENETRATIONS SHALL NOT EXCEED AN AGGREGATE AREA OF 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF CEILING AREA IN ASSEMBLIES TESTED WITHOUT PENETRATIONS.

MEMBRANE PENETRATIONS BY LISTED ELECTRICAL OUTLET BOXES OF ANY MATERIAL THAT HAS BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED PER INSTRUCTIONS INCLUDED IN LISTING.

JOINT SEALERS

INTERIOR JOINT SEALER IS TO BE MILDEW-RESISTANT SILICONE SEALANT. APPLY SEALANT AT ALL MATERIAL JOINTS SUBJECT TO WATER PENETRATION. COLOR TO BE SELECTED BY THE ARCHITECT FROM MFR'S STANDARD LINE.

VINYL SIDING

VINYL SIDING: INTEGRALLY COLORED PRODUCT COMPLYING WITH ASTM D3679.
BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ALSIDE EXTERIOR BUILDING PRODUCTS, KAYCAN LTD., ROYAL BUILDING PRODUCTS, A WESTLAKE COMPANY. OR EQUAL.

HORIZONTAL PATTERN: 6-1/2- OR 7-INCH EXPOSURE IN BEADED-EDGE, SINGLE-BOARD STYLE. SMOOTH TEXTURE. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OR TO MATCH EXISTING WHEN REQUIRED.

WATERPROOFING MEMBRANE

BASIS OF DESIGN, BY SIKA OR EQUAL, 60 MIL. REFER TO MANUFACTURERS INSTRUCTION FOR PREPARATION OF SUBSTRATES AND INSTALLATION OF MEMBRANE.

DIVISION 8 - DOORS, WINDOWS AND HARDWARE

ALL DOORS AND WINDOWS SHALL BE INSTALLED PLUMB, LEVEL, SQUARE, AND PER ALL MANUFACTURERS RECOMMENDATION.

EXTERIOR DOORS TO BE 1 3/4"THICK, FIBERGLASS INSULATED WITH 3 SETS OF STEEL HINGES, RUBER WEATHER STRIPPING. LOCKING AS SPECIFIED ON HARDWARE. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. MANUFACTURER MASONITE OR EQUAL

INTERIOR DOORS SOLID CORE FIVE PLY VENEER FACED, 1 3/8" THICK, 1 PAIR OF HINGES, HARDWARE TO MATCH EXISTING, VENEER FINISH TO MATCH EXISTING OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.MANUFACTURER MASONITE OR EQUAL.

INTERIOR GLAZING SHALL BE AS SPECIFIED ON THE DRAWINGS.

TEMPERED OR SAFETY GLAZING IS TO BE PROVIDED AS FOLLOWS: 1) IN DOORS, 2) WITHIN 12" OF A DOOR AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE, 3) IN FIXED PANELS WITH THE LOWEST EDGE LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" OF SUCH GLAZING.

DOOR HARDWARE

INTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN NON- ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, ROUND KNOB TRADITIONAL ROUND, MODEL PS.ROU.TRR.150. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

BASIS OF DESIGN ACCESIBLE UNITS
MANUFACTURER BALDWIN OR EQUAL, TOBIN LEVER WITH ROUND ROSE, MODEL 352TBL-RDB-15. FINISH TO MATCH EXISTING OR SATIN NICKEL IF ALL INTERIOR DOOR HARDWARE IS REPLACED. OPERATION TYPE: DUMMY, PRIVACY AND PASSAGE.

OPERATION LOCATION:
DUMMY: CLOSET DOORS THAT ARE NOT SWINGING DOORS
PRIVACY: BATHROOMS
PASSAGE: BEDROOMS, CLOSETS WITH SWINGING DOOR

EXTERIOR DOOR HARDWARE

ALL DOOR HARDWARE TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

DEADBOLT AND LEVERS
D100 GRADE 1 DEADBOLT BY FALCON, SATIN CHROME FINISH.
ALL EXTERIOR, STORAGE AND MAINTENANCE DOOR TO HAVE 6 PIN FALCON CORE LOCKS.

ENTRANCE LEVER TO BE FALCON W SERIES GRADE 2 CYLINDRICAL LOCK, LEVER TO BE AVALON AND KNOB TO BE COINTURN STYLE. SATIN CHORME FINISH.

UNLESS NOTED OTHERWISE, THE FINISH OF THE NEW HARDWARE SHOULD MATCH THE EXISTING.

ADJUSTMENT: ADJUST AND CHECK EACH OPAERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

DOOR AND WINDOW SEALANTS

SEALANTS FOR DOORS AND WINDOWS TO BE SILICONE BY SIKA, TREMCO OR EQUAL.

WINDOWS

REPLACEMENT WINDOWS TO MATCH EXISTING STYLE AND FINISH. ALL WINDOWS TO BE APPROVED BY HACP FACILITY REPRESENTATIVE.

BASIS OF DESIGN, ANDERSEN WINDOWS OR EQUAL, VINYL WINDOW REPLACEMENT, FINISH TO MATCH EXISTING OR WHITE. LOW E GLAZING WITH ARGON TO MATCH THERMAL PERFORMANCE FENESTRATION OF U 0.3 MAX. PROVIDE SCREENS ON OPERABLE WINDOWS, SCREEN FRAME FINSIH TO MATCH WINDOW. OPERATION TO MATCH EXISTING WINDOW TO BE REPLACED.

THERMAL PERFORMANCE OF FENESTRATION:

MAX FENESTRATION: U 0.3MAX
SOLAR HEAT GAIN COEFFICIENT FOR ALL VERTICAL GLAZING: NR
SKYLIGHTS: U 0.55 MAX

DIVISION 9 - FINISHES

ALL FINISH TRIM TO BE PAINT GRADE POPLAR OR OTHER TIGHT-GRAINED HARDWOOD, SMOOTH SANDED FINISHED WITH SCARFED JOINTS, GLUED AND NAILED. NO BUTT JOINTS.

GYPSUM BOARD TO BE FINISHED AS SPECIFIED ACCORDING TO THE FOLLOWING:

STANDARD FINISH (LEVEL 4 PER GA 216-96): ALL JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT OF JOINT COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH THREE SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE FROM TOOL MARKS AND RIDGES. BEFORE FINAL DECORATION PREPARE SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF FINAL FINISHES.

TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

ALL INTERIOR GYPSUM BOARD WALLS AND CEILINGS TO BE 1/2" THICK BY USG OR EQUAL UNLESS NOTED OTHERWISE. SUPPLY AND INSTALL 1/2" "AQUATOUGH" BY USG OR EQUAL AT ALL LOCATIONS UNLESS THE WET LOCATIONS. ON GARAGE CEILINGS UNDER LIVING SPACES SUPPLY AND INSTALL 5/8" TYPE X TO COVER CEILING AND DUCTWORK BY USG OR EQUAL UNLESS NOTED OTHERWISE.

ALL PARTITIONS ARE TO BE SET IN CAULK.

ALL WORK TO BE COMPLETED IN A FIRST CLASS MANNER WITH NO EXPOSED, UNFINISHED EDGES, NAILS, SCREWS, ETC.

PAINTING

ALL EXTERIOR SURFACES IDENTIFIED TO BE PAINTED SHALL RECEIVE 3-COAT SYSTEM, INCLUDING ONE PRIME COAT (WHERE NOT PROVIDED BY FACTORY) AND TWO FINISH COATS EXTERIOR ENAMEL AS APPROPRIATE FOR SUBSTRATE.

ALL INTERIOR DRYWALL AND PLASTER SURFACES SHALL RECEIVE A 3-COAT SYSTEM, INCLUDING ONE COAT PRIMER SEALER OR AS RECOMMENDED BY PAINT MANUFACTURER (COLORED TO MATCH FINISH TOPCOAT), AND TWO FINISH COATS. PAINT SHALL BE INTERIOR GRADE LATEX PAINT BY SHERWIN WILLIAMS, PITTSBURGH PAINTS, OR APPROVED EQUIVALENT. ALL COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS FULL LINE OF COLORS.

CEILINGS TO RECEIVE FLAT FINISH PAINT- UNLESS NOTED OTHERWISE.
WALLS TO RECEIVE EGG-SHELL FINISH – UNLESS NOTED OTHERWISE.
TRIM AND DOORS SHALL RECEIVE SEMI-GLOSS FINISH.

CONCRETE AND MASONRY COATINGS

BASIS-OF-DESIGN INTERIOR PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE NEOGARD, A PART OF HEMPEL; NEOFLEX NEOCRYLIC HB WALL-GARD HD, SERIES 1 WALL-GARD HD, SERIES 2 WITH REINFORCED FABRIC LAYER BASECOAT AND TOPCOAT SYSTEM OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING: PPG PAINTS, SHERWIN-WILLIAMS COMPANY OR EQUAL.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF COATINGS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

CONCRETE SUBSTRATES: REMOVE RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, AND CHALK.

DO NOT COAT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE COATED EXCEEDS THAT PERMITTED IN COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

TILE & FLOORS

PROPERLY PREPARE SUB FLOOR TO RECEIVE SPECIFIED FINISH FLOORING.

ON VERTICAL SURFACES, TILE MAY BE SET OVER 1/2" MOISTURE RESISTANT DRYWALL ABOVE 6 FEET. FASTEN BACKER USING CORROSION RESISTANT STEEL DRILL SCREWS AS RECOMMENDED BY MANUFACTURER. TAPE ALL JOINTS AS RECOMMENDED BY MANUFACTURER USING POLYMER-COATED, OPEN GLASS-FIBER MESH. TILE SETTING MATERIAL SHALL BE A LATEX-PORTLAND CEMENT MORTAR WITH A DRY POLYMER ADDITIVE. TILE GROUT SHALL BE EPOXY GROUT. VERIFY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PROVIDE EXPANSION JOINTS AT ALL INTERIOR CORNERS BOTH HORIZONTALLY AND VERTICALLY SEAL WITH ONE PART MILDEW RESISTANT SILICONE SEALANT. FOLLOW "TILE COUNCIL OF AMERICA 2003 EDITION HANDBOOK FOR THE CERAMIC TILE INSTALLATION".

FLOORING PREP

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOORS PREPPED AND LEVEL READY TO RECEIVE SCHEDULED FLOOR FINISH. CONCRETE SLAB SURFACES SHALL BE CLEANED AND MADE SMOOTH WITH LEVELING COMPOUND AND SUBSTRATE PRIMER PRIOR TO THE INSTALLATION OF ANY TILE OR CARPET. ALL PREPARATORY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FLOORING MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

LVT FLOORING

BASIS OF DESIGN: PROVIDE LUXE PLANK AND TILE WITH FASTAK INSTALLATION LUXURY VINYL TILE BY ARMSTRONG COMMERCIAL FLOORINGS OR EQUAL. APPROVAL BY ARCHITECT AND HACP REQUIRED.

THICKNESS: 12 MIL WEAR LAYER X 4 MM OVERALL THICKNESS, NO WAX. .

SIZE: 7 INCHES BY 48 INCHES AND 18 INCHES BY 18 INCHES .

COLORS AND PATTERNS: ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND SIZES AND TO BE APPROVED BY HACP.

FLOOR SURFACE IS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS, OR BUMPS. ALL EDGE CONDITIONS TO BE FLOATED UP FOR SMOOTH EVEN FLUSH TRANSITION.

DIVISION 10 - SPECIALTIES

TOILET PAPER DISPENSER

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

CURTAIN ROD

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY BRADLEY CORPORATION OR EQUAL. 1" OD, STRAIGHT ROD, MOUNTING FLANGES, STAINLESS STEEL SATIN FINISH.

ROBE HOOK

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. LOCATION TO BE PROVIDED BY ARCHITECT.

TOWEL BAR

BASIS OF DESIGN SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE OR COMPARABLE PRODUCTS BY MOEN OR EQUAL. FINISH POLISHED CHROME-PLATED BRASS. 3/4" ROUND TUBE WITH CIRCULAR BRACKETS. 18 INCHES OR 24 INCHES TO FIT AVAILABLE SPACE. LOCATION TO BE PROVIDED BY ARCHITECT.

MAILBOX

NEW POST MOUNTED MAILBOX, HEAVY DUTY USPS APPROVED. 1/8 INCH DIE CAST AND EXTRUDED ALUMINUM CONSTRUCTION, FRONT LOADED, POWDER COATED FINISH, MAGNETIC CATCH. BLACK FINISH.

METAL AWNINGS

BASIS OF DESIGN, MATCH EXISTING AWNINGS DIMENSIONS TO BE REPLACED, ALUMINUM CLAMSHELL TYPE, 0.025 GAUGE ROOF AND 0.040 GAUGE UNDERSTRUCTURE. FACTORY APPLIED BACKED ENAMEL FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD COLOR CHART. STRUCTURE ABLE TO SUPPORT 30 PSF OF SNOW LOAD AND BASIC DESIGN WIND SPEED OF 3 SECOND GUST WINDS OF 110 MPH. SEE ALSO DIVISION 5.

DIVISION 11 - EQUIPMENT

MANUFACTURER TO PROVIDE WARRANTY TO REPAIR AND REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKSMANSHIP PER HUD GENERAL CONDITIONS.

COOKING APPLIANCES- BASIS OF DEISGN

- GAS RANGE

FREESTANDING SLIDE IN RANGE WITH ONE OVEN, 4 GAS BURNERS, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- KITCHEN EXHAUST VENTILATION

OVERHEAD EXHAUST HOOD, WALL MOUNTED, THREE SPEED FAN BUILT INTO HOOD WITH STANDARD 500CFM, VENTED TO OUTSIDE THROUGH ROOF OR WALL, FINISH STANDARD WHITE, BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.
BAROMETRIC BACKDRAFT VENT DAMPER BY FAMCO OR EQUAL. DAMPER CONSTRUCTION: HIGH-TEMPERATURE-ENAMEL-PAINTED STEEL DAMPER AND HOUSING WITH GALVANIZED-STEEL BREECHING CONNECTION. ADJUSTABLE COUNTERWEIGHT WITH LOCK. INCLUDE KNIFE-EDGE BEARINGS THAT DO NOT REQUIRE LUBRICATION. VENT SIZE TO MATCH HOOD EXHAUST DIAMETER.

- REFRIGERATOR/FREEZER

FREESTANDING TWO DOOR, SIDE BY SIDE REFRIGERATOR/FREEZER, WITH FREEZER ON TOP, 15.6 CU.FT. REFRIGERATOR STORAGE VOLUME AND 5.13 CU.FT. FREEZER STORAGE VOLUME, AUTOMATIC ICE MAKER AND STORAGE BIN, FRONT PANEL STANDARD WHITE. BY GE, DACOR, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

CLEANING APPLIANCES- BASIS OF DEISGN

- CLOTHES WASHER

FREESTANDING TOP LOADING UNIT, 3.2 CU. FT MAX. CPACITY, CENTER SPINDLE, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

- CLOTHES DRYER

FREESTANDING FRONT LOADING UNIT, 5.7 CU. FT MAX. CPACITY, GAS ELECTRIC, VENT KIT BY MANUFACTURER, FINISH STANDARD WHITE, BY GE, MAYTAG, BOSCH OR EQUAL.TO FIT EXISTING SPACE. GC TO PROVIDE UNIT DIMENSIONS AND VERIFY THAT FITS IN THE EXISTING SPACE. ANTI TIP DEVICE TO BE MANUFACTURER STANDARD.

ALL APPLIANCES TO QUALIFY FOR THE EPA/DOE ENERGY STAR PRODUCT LABELING PROGRAM.

DIVISION 12 – FURNISHINGS

HORIZONTAL LOUVER BLINDS, POLYMER SLATS
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- HUNTER DOUGLAS ARCHITECTURAL WINDOW COVERINGS.
- LEVOLOR CONTRACT.
- SPRINGS WINDOW FASHIONS; SWFCONTRACT.

MANUAL CORDED OPERATION WITH CHILD SAFETY CORDS.

PLUMBING REQUIREMENTS

GENERAL CONDITIONS OF THE PLUMBING CONTRACT

PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL PLUMBING WORK TO COMPLY WITH LOCAL ALLEGHENY COUNTY HEALTH DEPARTMENT CODE AND REGULATIONS.

EQUIPMENT

RESIDENTIAL, DIRECT-VENT, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:

MANUFACTURER SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- SMITH CORPORATION.
- BRADFORD WHITE CORPORATION.
- LOCHINVAR, LLC.

STANDARD: ANSI Z21.10.1/CSA 4.1.
ENERGY STAR RATING MINIMUM: 0.86 UEF.

STORAGE-TANK CONSTRUCTION: STEEL.

TAPPINGS: ASME B1.20.1 PIPE THREAD.
PRESSURE RATING: 150 PSIG.
INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING LINING MATERIAL INTO TAPPINGS.

FACTORY-INSTALLED, STORAGE-TANK APPURTENANCES:

ANODE ROD: REPLACEABLE MAGNESIUM.
DIP TUBE: REQUIRED UNLESS COLD-WATER INLET IS NEAR BOTTOM OF TANK.
DRAIN VALVE: CORROSION-RESISTANT METAL WITH HOSE-END CONNECTION.
INSULATION: COMPLY WITH ASHRAE/IES 90.1 ASHRAE 90.2.
JACKET: STEEL WITH ENAMELED FINISH.
HEAT-TRAP FITTINGS: INLET TYPE IN COLD-WATER INLET AND OUTLET TYPE IN HOT-WATER OUTLET.
BURNER: FOR USE WITH DIRECT-VENT, GAS-FIRED, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
IGNITION: STANDING PILOT OR ANSI Z21.20/CSA C22.2 NO. 60730-2-5, ELECTRIC, AUTOMATIC, GAS-IGNITION SYSTEM.
TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT.
COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVE: ANSI Z21.22/CSA 4.4. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVE WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

DIRECT-VENT SYSTEM: THROUGH- WALL ROOF, COAXIAL- OR DOUBLE-CHANNEL VENT ASSEMBLY WITH DOMESTIC-WATER HEATER MANUFACTURERS OUTSIDE INTAKE/EXHAUST SCREEN.

PLUMBING FIXTURES (UNLESS NOTED ON DRAWINGS)

BATHTUB

FRP BATHTUB, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER.
- STERLING

SLIP RESISTANCE, 60 BY 30 INCHES, WHITE FINISH, DRAIN NPS 1 1/2" CHROME PLATED BRASS, POP UP WASTE AND OVERFLOW. PLUMBING CONTTRACTOR SHALL VERIFY THE EXACT SIZE OF ALL REPLACEMENT TUBS AND SHOWERS TO MAKE CERTAIN THAT NEW TUB/SHOWERS FIT IN EXISTING FRAMING, PRIOR TO ORDERING.

BATHTUB / SHOWER FAUCET

PRESSURE BALANCED FAUCET, SINGLE HANDLE, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN INCORPORATED.
- STERLING.

FINISH POLISHED CHROME, 2.5 GMP FLOW RATE, CONCEALED MOUNTING, SINGLE HANDLE, ANTISCALD DEVICE INTEGRATED WITHIN MIXING VALVE.

SHOWER HEAD, BALL JOINT WITH ARM AND FLANGE, CHROME PLATE FINISH, FIXED SPRAY PATTERN

BATHTUB FILLER SPOUT FINISH CHROME PLATE FINISH.

LAVATORIES

VITREOUS-CHINA LAVATORIES. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- DURAVIT USA, INC.
- KOHLER CO.

TYPE: FLAT RIM WITH LEDGE, RECTANGULAR NOMINAL SIZE: 19 BY 16 INCHES FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. COLOR: WHITE.

LAVATORIES FAUCETS – WATER SENSE CERTIFIED

GENERAL DUTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- MOEN
- HANSGROHE USA

Fukui Architects Pc
205 Ross Street
Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A7**
no. 7 **of.** 9	Project #2326

POLISH CHROME PLATE FINISH, 2.2 GPM FLOW RATE, LEVER HANDLE, RIGID SPOUT, DRAIN POP UP.

KITCHEN SINKS – WATER SENSE CERTIFIED
STAINLESS STEEL, COUNTER MOUNTED, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- AFFINITY SURFACES

0.038 INCH THICKNESS, 3 1/2" DRAIN GRID CENTERED IN BOWL.

SINKS FAUCETS – WATER SENSE CERTIFIED
GENERAL DUTTY, SOLID BRASS, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- ELKAY
- HANSGROHE

POLISHED CHROME PLATE FINISH. SINGLE HANDLE ON KITCHEN TWO HANDLE ON UTILITY SINKS.

WATER CLOSET – WATER SENSE CERTIFIED
FLOOR MOUNTED, FLOOR OUTLET, CLOSE COUPLED (GRAVITY TANK), VITREOUS CHINE, 1.6 GAL/FLUSH, MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- AMERICAN STANDARD.
- KOHLER
- TOTO USA

STANDARD HEIGHT, ELONGATED RIM, WATER SAVING, COLOR WHITE.
TOILET SEAT PLASTIC FOR RESIDENTIAL USE, ELONGATED RIM, SEAT COVER, SELF SUSTAINING HINGE, COLOR WHITE.

UTILITY SINK
FRESTANDING UTILITY SINK, MANUFACTURERS: PROFLO OR EQUAL
STANDARD HEIGHT, COLOR WHITE. 20 INCH BY 20 INCH SIZE.

EXTERIOR HOSE BIBB
FREEZELESS WALL FAUCET, WOODFORD OR EQUAL, MODEL 30,3/4 INCH CONNECTION, BRASS FINISH, ASSE 1053 APPROVED, MAX PRESSURE 125 PSI.

SLEEVES
SLEEVES SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH WALLS, CEILINGS, OR FLOORS. SLEEVES SHALL BE CUT FROM SCHEDULE 40 BLACK IRON PIPE. THE INTERNAL DIAMETER OF THE SLEEVE SHALL EXCEED THE EXTERNAL DIAMETER OF THE PIPE (INCLUDING INSULATION) BY NOT LESS THAN ONE INCH. SLEEVES SHALL BE CUT FLUSH WITH WALLS AND UNDERSIDES OF FLOORS AND SHALL EXTEND ONE INCH ABOVE FLOORS ABOVE GRADE.

PIPE PORTALS
PIPING THROUGH THE ROOF SHALL BE INSTALLED THROUGH A PREFABRICATED PIPING PORTAL. PORTALS SHALL HAVE GALVANIZED STEEL INSULATED CURBS, ABS PLASTIC CURB CAP, NEOPRENE RUBBER NIPPLES, AND STAINLESS-STEEL CLAMPS. CURB HEIGHT AS INDICATED ON DRAWINGS. PORTALS SHALL BE MODEL RC AND N28 AS MADE BY ROOF PRODUCTS AND SYSTEMS CORP. PORTALS SHALL HAVE EXTRA HOLES FOR POWER AND CONTROL CONDUITS.

FIRESTOPS
ALL OPENINGS THROUGH FLOORS AND FIRE-RATED PARTITIONS SHALL BE SEALED. VOID SPACES AROUND DUCTS OR PIPES SHALL BE PACKED WITH A FIREPROOF CERAMIC FIBER AND SEALED WITH FIRE RETARDANT CAULKING. FIBER SHALL BE KAOWOOL BY BABCOCK AND WILCOX, FIBERFRAX BY CARBORUNDUM, OR CERAFIBER BY MANVILLE CO. CAULKING SHALL BE SE/411 F BY UNISEAL, STANDARD DUXSEAL BY MANVILLE, OR MOLDABLE PUTTY BY 3M.

ESCUTCHEONS
ESCUTCHEONS SHALL BE INSTALLED WHEREVER PIPING PASSES THROUGH FLOORS, CEILINGS, OR WALLS OF FINISHED SPACES. ESCUTCHEONS SHALL BE CHROMIUM PLATED STEEL, SNAP ON TYPE WITH SPRING RETAINERS. ESCUTCHEONS SHALL BE THE NO. 40 MADE BY BEATON/CORBIN COMPANY OR APPROVED EQUAL, SIZED TO FIT PIPE PLUS INSULATION. WHERE RISER CLAMPS ARE IN FINISHED SPACES, PROVIDE HIGH-SKIRT ESCUTCHEONS TO COVER CLAMP.

UNIONS
UNIONS SHALL BE INSTALLED AT ALL POINTS INDICATED ON THE DRAWINGS AND AT ALL OTHER POINTS NECESSARY FOR THE INSTALLATION AND REMOVAL OF EQUIPMENT, CONTROL DEVICES, ETC. UNIONS IN GAS LINES WILL BE PERMITTED ONLY AT THE FINAL CONNECTIONS TO EQUIPMENT.

HANGERS
ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH PIPEHANGERS TO PREVENT SAGGING AND AVOID CONCENTRATION OF HANGING LOAD. HANGER SPACING SHALL NOT EXCEED 10 FT. FOR STEEL PIPE OR 8 FT. FOR COPPER TUBING. COPPER TUBING 1-1/4" AND SMALLER SHALL BE SUPPORTED AT NO GREATER THAN 6 FT. SPACING.

REPAIR ALL FIREPROOFING WHICH IS DAMAGED BY HANGER INSTALLATION.

SOIL WASTE AND VENT PIPING
SOIL, WASTE AND VENT STACKS AND BRANCHES, AND ROOF CONDUCTORS SHALL BE ABS OR PVC PIPING AND FITTINGS SCHEDULE 40. WASTE LINES SHALL BE MINIMUM 2 INCH.

HOT AND COLD-WATER PIPING
POTABLE-WATER PIPING AND COMPONENTS ARE TO COMPLY WITH NSF 14, NSF 61, AND NSF 372. INCLUDE MARKING "NSF-PW" ON PIPING.

HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE TYPE L, SEAMLESS, HARD TEMPER, COPPER TUBING WHICH CONFORMS TO ASTM SPECIFICATION B-88 WITH WROUGHT COPPER, SOLDER TYPE FITTINGS, OR PEX TUBING PLASTIC IN ACCORDANCE WITH ASTM F876 AND ASTM F877 WITH FITTINGS ASTM F1807, METAL INSERT AND COPPER CRIMP RINGS ASTM F1960, COLD EXPANSION FITTINGS AND REINFORCING RINGS.

INSTALLATION OF PIPING
DRAINAGE PIPING SHALL BE INSTALLED TO ACCURATE LINE AND UNIFORM GRADE, AND AT THE ELEVATIONS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE INDICATED, ALL DRAINAGE LINES SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT.
DRAINAGE LINES SHALL BE PROVIDED WITH SUFFICIENT CLEANOUTS TO MAKE ALL PARTS OF THE DRAINAGE SYSTEM ACCESSIBLE. CLEANOUTS SHALL BE PROVIDED ALONG INTERIOR HORIZONTAL RUNS AT NOT MORE THAN 50 FT. ON CENTER. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH ROOF CONDUCTOR AND AT ALL OTHER POINTS INDICATED ON THE DRAWING OR REQUIRED BY LOCAL PLUMBING CODE.

ALL PIPES SHALL BE CUT WITH SQUARE ENDS AND SHALL BE PROPERLY REAMED. THREADS SHALL BE CUT WITH CLEAN, SHARP DIES TO FULL DEPTH. ALL BURRS SHALL BE REMOVED FROM PIPE. JOINT COMPOUND SHALL BE APPLIED TO PIPE THREAD ONLY. USE OF EXCESSIVE JOINT COMPOUND IS PROHIBITED.

SOLDER JOINTS IN ALL WATER LINES SHALL BE MADE WITH 95-5 TIN-ANTIMONY SOLDER. OTHER JOINTS MADE WITH EASYBRITE LEAD FREE SOLDER.

WATER LINES WITHIN THE BUILDING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO PROPERLY DRAIN LINES TO DRAIN VALVES. IN ADDITION TO DRAIN VALVES INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL DRAIN VALVES NECESSARY TO PROPERLY DRAIN THE SYSTEM.

GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND NFPA-54. ALL GAS PIPING AND CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH AGA RECOMMENDATIONS AND ALL APPLICABLE LOCAL GAS COMPANY REGULATIONS.

CONTRACTOR SHALL VENTILATE THE WORK AREA TO PROVIDE A SAFE ENVIRONMENT. VENTILATION SHALL NOT DIRECT FUMES TO ADJACENT SPACES OR NEIGHBORING STRUCTURES.

CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION DURING WELDING, CUTTING AND SOLDERING.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

VALVES
VALVES IN WATER LINES SHALL BE 125 PSI CLASS, BRONZE BODY, BALL VALVES WITH TEFLON SEATS AND PACKING. NIBCO 580 OR APOLLO.DRAIN VALVES SHALL BE BRONZE BODY SOLDERED ENDS, BALL VALVES WITH 3/4 INCH AMERICAN STANDARD HOSE THREAD OUTLET. NIBCO OR APOLLO.

WALL HYDRANT SHALL BE ALL BRASS, FULLY RECESSED, NON-FREEZE, KEY OPERATED, WITH ADJUSTABLE LOCKNUT, REMOVABLE NYLON SEAT, 3/4 INCH HOSE CONNECTION. FURNISH WITH INTEGRAL VACUUM BREAKER. ZURN Z-1300 OR APPROVED EQUAL.

VALVES IN GAS LINES SHALL BE 125 PSI CLASS, THREADED END, IRON BODY, GAS COCKS WITH BRASS PLUG AND WASHER AND SQUARE HEAD. CRANE NO. 324.

INSULATION
ALL COLD AND HOT WATER PIPING, AND HORIZONTAL PORTIONS OF ROOF CONDUCTORS SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.

PIPE IDENTIFICATION
ALL PIPING SHALL BE LABELED WITH THE NAME OF THE FLUID IN THE PIPE AND WITH ARROWS INDICATING THE DIRECTION OF THE FLOW.

TESTING

DRAINAGE SYSTEM - THE ENTIRE DRAINAGE SYSTEM SHALL BE TESTED HYDROSTATICALLY FOR LEAKS. THE ENTIRE SYSTEM SHALL BE FILLED TO THE TOP OF THE STACKS WITH WATER AND CHECKED FOR LEAKS.

WATER PIPING - ALL WATER PIPING SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL FOREIGN MATERIAL. ALL TESTING SHALL BE COMPLETED BEFORE INSULATION IS APPLIED.
DURING THE TESTS ALL VALVES SHALL BE CAREFULLY CHECKED FOR LEAKAGE AROUND THE STEM.

WATER HEATERS - HEATERS SHALL BE TESTED AND CHECKED TO DETERMINE THAT THEY OPERATE IN COMPLIANCE WITH THE SPECIFICATIONS. ALL CONTROLS SHALL BE PROPERLY ADJUSTED.

DISINFECTION OF POTABLE WATER SYSTEM - GENERAL: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY.

MECHANICAL REQUIREMENTS

GENERAL CONDITIONS OF THE MECHANICAL CONTRACT
PLUMBING CONTRACTO TO FOLLOW HUD GENERAL CONDITIONS AS SPECIFIED EARLIER IN DIVISION 1.

ALL MECHANICAL WORK TO COMPLY WITH LOCAL CODE AND REGULATIONS.

CUTTING AND PATCHING
ALL CHASES, RECESSES, HOLES, AND OPENINGS FOR EQUIPMENT AND DUCTWORK WILL BE PROVIDED BY THE GENERAL CONTRACTOR.

SHOULD THE MECHANICAL CONTRACTOR FAIL TO SET SLEEVES OR LOCATE OPENINGS BEFORE THE WORK OF THE GENERAL CONTRACTOR HAS BEEN COMPLETED IN THAT PARTICULAR AREA, THE MECHANICAL CONTRACTOR SHALL CUT WHATEVER HOLES ARE NECESSARY FOR THE INSTALLATION OF EQUIPMENT. ALL PATCHING NECESSITATED BY THE CUTTING OF SUCH HOLES SHALL BE DONE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.

REPAIR ALL FIREPROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

EXHAUST FANS
FANS SHALL VENT DIRECTLY TO THE EXTERIOR. EXHAUST DUCTS MAY BE TIED TOGETHER OR TIED INTO AN EXISTING SYSTEM PROVIDED THAT BACK FLOW PREVENTORS ARE INSTALLED AT EACH FAN INCLUDING ALL FANS TIED INTO THE EXISTING SYSTEM.

FURNISH NEMA I SURFACE MOUNTING STARTER WITH OVERLOAD AND UNDER VOLTAGE PROTECTION.

FURNISH WITH BIRD SCREEN AND BACKDRAFT DAMPER.

FAN SHALL BE ACE MADE BY COOK. GREENHECK, OR APPROVED EQUAL. 100CFM CAPACITY, RECESSED MOUNTED. FINISH WHITE.

THE HEATING CONTRACTOR SHALL FURNISH THERMALLY AND ACOUSTICALLY INSULATED CURB.

MECHANICAL EQUIPMENT
THE EQUIPMENT DESCRIBED IN THIS SECTION IS BASIS OF DESIGN, MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT TO MATCH EXISTING SYSTEM CAPACITY AT A MINIMUM.

MECHANICAL CONTRACTOR TO PROVIDE HACP AND ARCHITECT WITH SPECIFICATION SHEETS OF EQUIPMENT.

GAS-FIRED FURNACES, NONCONDENSING
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- BRYANT; CARRIER GLOBAL CORPORATION.
- CARRIER GLOBAL CORPORATION.
- BUILDING SOLUTIONS NORTH AMERICA.

ENERGY START RATING OF 95% AFUE OR GREATER
CABINET: GALVANIZED STEEL.
- CABINET INTERIOR AROUND HEAT EXCHANGER SHALL BE FACTORY-INSTALLED INSULATION.
- LIFT-OUT PANELS SHALL EXPOSE BURNERS AND ALL OTHER ITEMS REQUIRING ACCESS FOR MAINTENANCE.
- FACTORY PAINT EXTERNAL CABINETS IN MANUFACTURER'S STANDARD COLOR.
- AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.

FAN: CENTRIFUGAL, FACTORY BALANCED, RESILIENT MOUNTED, DIRECT OR BELT DRIVE.
- FAN MOTORS: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT."
- SPECIAL MOTOR FEATURES, SINGLE SPEED: SINGLE SPEED, PREMIUM EFFICIENCY, AS DEFINED IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT," AND WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, MULTISPEED: MULTITAPPED, MULTISPEED WITH INTERNAL THERMAL PROTECTION AND PERMANENT LUBRICATION.
- SPECIAL MOTOR FEATURES, ECM: ELECTRONICALLY CONTROLLED MOTOR (ECM) CONTROLLED BY INTEGRATED FURNACE/BLOWER CONTROL.

TYPE OF GAS: NATURAL.
HEAT EXCHANGER: ALUMINIZED STEEL.
BURNER:
- GAS VALVE: 100 PERCENT SAFETY TWO-STAGE MAIN GAS VALVE, MAIN SHUTOFF VALVE, PRESSURE REGULATOR, SAFETY PILOT WITH ELECTRONIC FLAME SENSOR, LIMIT CONTROL, TRANSFORMER, AND COMBINATION IGNITION/FAN TIMER CONTROL BOARD.
- IGNITION: ELECTRIC PILOT IGNITION, WITH HOT-SURFACE IGNITER OR ELECTRIC SPARK IGNITION.

GAS-BURNER SAFETY CONTROLS:
- ELECTRONIC FLAME SENSOR: PREVENTS GAS VALVE FROM OPENING UNTIL PILOT FLAME IS PROVEN; STOPS GAS FLOW ON IGNITION FAILURE.
- FLAME ROLLOUT SWITCH: INSTALLED ON BURNER BOX; PREVENTS BURNER OPERATION.
- LIMIT CONTROL: FIXED STOP AT MAXIMUM PERMISSIBLE SETTING; DE-ENERGIZES BURNER ON EXCESSIVE BONNET TEMPERATURE; AUTOMATIC RESET.

COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.
FURNACE CONTROLS: SOLID-STATE BOARD INTEGRATES IGNITION, HEAT, COOLING, AND FAN SPEEDS; AND ADJUSTABLE FAN-ON AND FAN-OFF TIMING; TERMINALS FOR CONNECTION TO ACCESSORIES.
VENT MATERIALS: COMPLY WITH REQUIREMENTS IN SECTION 235123 "GAS VENTS" FOR TYPE B METAL VENTS.

CAPACITIES AND CHARACTERISTICS:
AIRFLOW CONFIGURATION: UPFLOW.
GAS:
- TYPE: NATURAL.
- VENTING TYPE: WITH COMBUSTION-AIR INTAKE
- MINIMUM EFFICIENCY AFUE: 80 PERCENT.
- INPUT: SEE SCHEDULE ON DRAWINGS.
- HEAT OUTPUT: SEE SCHEDULE ON DRAWINGS.
- GAS CONNECTION SIZE: 1/2" NPS.
- VENT SIZE: 4 INCHES.

FAN:
- MOTOR: SIZE: 1/3 HP.
- SPEED: SEE SCHEDULE ON DRAWINGS.
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

FURNACE ELECTRICAL CONNECTION:
- VOLTS: 120.
- PHASE: SINGLE.
- HERTZ: 60.
- MINIMUM CIRCUIT AMPACITY: 15.
- MAXIMUM OVERCURRENT PROTECTION: 25.

COMPRESSOR AND CONDENSER UNITS, AIR COOLED, 1 TO 5 TONS
DESCRIPTION: FACTORY ASSEMBLED AND TESTED; CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTORS, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS.
ENERGY STAR RATING EQUAL OR OVER 15.2 SEER2.
COMPRESSOR TYPE: SCROLL, HERMETICALLY SEALED, WITH RUBBER VIBRATION ISOLATORS.
- TWO-SPEED COMPRESSOR: INCLUDE MANUAL-RESET, HIGH-PRESSURE SWITCH AND AUTOMATIC-RESET, LOW-PRESSURE SWITCH.
- ACCUMULATOR: SUCTION TUBE.

REFRIGERANT: R-410A
CONDENSER COIL: SEAMLESS COPPER-TUBE, -FIN COIL; WITH REMOVABLE DRAIN PAN AND BRASS SERVICE VALVES WITH SERVICE PORTS.
CONDENSER FAN: DIRECT-DRIVE, METAL PROPELLER FAN; WITH PERMANENTLY LUBRICATED, TOTALLY ENCLOSED FAN MOTOR WITH THERMAL-OVERLOAD PROTECTION AND BALL BEARINGS
UNIT CASING: GALVANIZED STEEL, FINISHED WITH; WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. MOUNT SERVICE VALVES, FITTINGS, AND GAUGE PORTS ON EXTERIOR OF CASING.
CAPACITIES AND CHARACTERISTICS:
COMPRESSOR AND CONDENSER UNIT:
- FULL-LOAD COOLING CAPACITY: TO BE CALCULATED BY MECHANICAL CONTRACTOR

ELECTRICAL CHARACTERISTICS:
- VOLTS: 208 V.
- PHASE: 1.
- HERTZ: 60 HZ.

SHEET METAL
DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS.

ALL DUCTS SHALL BE COMPLETE WITH FOUR SIDES AND SHALL BE OF AIRTIGHT CONSTRUCTION. ALL DUCTS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED OF 24 GAGE GALVANIZED SHEET STEEL AT 2" PRESSURE CLASS.

JOINTS, SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. SEALANT MATERIAL SHALL BE CAULKING COMPOUND SPECIFICALLY MANUFACTURED FOR DUCT APPLICATION FOR INDOOR USE.

JOINTS BETWEEN SHEET METAL SECTIONS MAY BE MADE WITH PREFABRICATED JOINING SYSTEM SUCH AS THE DUCTMATE INDUSTRIES SYSTEM.
STIFFENERS SHALL BE PLACED AT NOT MORE THAN 8-FOOT INTERVALS.

ALL DUCTS SHALL BE ADEQUATELY SUPPORTED FROM CONSTRUCTION ABOVE BY MEANS OF GALVANIZED STEEL STRAP HANGERS SPACED AT NOT MORE THAN 8-FOOT INTERVALS. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS.

DUCTWORK CONNECTIONS TO AIR HANDLING AND AIR CONDITIONING UNITS SHALL HAVE FLEXIBLE CONNECTIONS. WHEN CONNECTION IS OUTDOORS, CONNECTION LENGTH SHALL BE INSULATED AND WEATHERPROOFED.

TUNING VANES SHALL BE INSTALLED IN ALL ELBOWS HAVING SQUARE THROATS OR A THROAT RADIUS LESS THAN HALF THE DUCT WIDTH. TURNING VANES MAY BE PREFABRICATED. IF JOB FABRICATED, DESIGN AND CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. VANES SHALL BE AIRFOIL TYPE.

MANUAL VOLUME CONTROL DAMPERS IN DUCTS SHALL BE CONSTRUCTED OF NOT LIGHTER THAN US GAGE NO. 16 GALVANIZED SHEET STEEL. DAMPER BLADES SHALL BE SUPPORTED ON AN END BEARING ON ONE SIDE AND A COMBINATION BEARING AND DAMPER REGULATOR ON THE OTHER SIDE. REGULATOR SHALL BE EQUIPPED WITH A LOCKING DEVICE. MANUAL DAMPERS SHALL BE OPPOSED BLADE TYPE.

FURNISH AND INSTALL FIRE DAMPERS WHERE INDICATED OR WHERE REQUIRED. DAMPERS SHALL COMPLY WITH LATEST EDITION OF NFPA 90A, AND SHALL BE UL LABELED. BLADE STACK SHALL BE OUT OF AIRSTREAM. FUSIBLE FIRE LINKS SHALL HAVE A MELTING POINT OF 165F. DAMPERS SHALL BE MODEL IBD AS MADE BY RUSKIN, OR APPROVED EQUAL BY SAFE-AIR. FURNISH ACCESS DOORS TO ALL DAMPERS.

ACCESS DOORS IN DUCTS SHALL BE RIGIDLY CONSTRUCTED AND TIGHTLY FITTED. DOORS SHALL BE SUPPORTED ON TWO STEEL BUTT HINGES AND SHALL BE SECURED WITH A SASH LOCK. DOORS SHALL BE GASKETED AND INSULATED.

REPAIR ALL FIRE PROOFING DAMAGED BY THE WORK UNDER THIS CONTRACT.

FLEXIBLE DUCTS
FLEXIBLE DUCTS SHALL BE SOUND ATTENUATING, THERMAL INSULATED, WIRE WOUND, REINFORCED TYPE WITH A MOISTURE TIGHT FLAME PROOF VINYL BARRIER. FLEXIBLE DUCTS TO BE USED ONLY TO CONNECT INDIVIDUAL DIFFUSERS WITH MAIN OR BRANCH DUCTS. AVAC CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PORTION OF THE EXISTING SYSTEM WHICH DOES NOT MEET THESE REQUIREMENTS WITH PROPERLY SIZED AND INSULATED SHEET METAL DUCTS. THIS WORK TO BE INCLUDED IN BASE BID.

DIFFUSERS
DIFFUSERS SHALL BE SQUARE OR RECTANGULAR FACED, RECESSED TYPE, WITH REMOVABLE CORES. DIFFUSER CAPACITIES, SIZES AND DIRECTIONAL BLOWS ARE INDICATED ON THE DRAWINGS. FURNISH EACH DIFFUSER WITH DEFLECTING VANES AND KEY OPERATED, OPPOSED BLADE, VOLUME DAMPERS. DIFFUSERS SHALL BE FURNISHED WITH BAKED, WHITE FINISH.

SUPPLY REGISTERS
SUPPLY REGISTERS SHALL HAVE INDIVIDUALLY ADJUSTABLE FINS WITH VERTICAL FRONT BARS AND HORIZONTAL REAR BARS. FINS SHALL BE STREAMLINED AND OF STURDY CONSTRUCTION. FLANGES SHALL BE 5/8 INCH CHANNEL BORDER. FURNISH RUBBER GASKET AROUND PERIMETER OF FLANGE, AND KEY OPERATED, OPPOSED BLADE VOLUME CONTROL DAMPERS. RUBBER GASKET SHALL BE NON-CHLORINATED RUBBER AND NON-POROUS. FURNISH WITH PRIME COAT OF PAINT.

GRILLES
GRILLES AND REGISTERS FOR MECHANICAL TO MATCH EXISTING. GRILLES AND REGISTERS SHALL BE OUT OF STEEL, WITH DAMPER, PRIMED PAINTED WHITE. SIZE OF GRILLE TO MATCH EXISTING OPENING ON TOE KICK, WALL OR CEILING.

CONTROLS
THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES NECESSARY TO ACHIEVE THE CONTROL SEQUENCE DESCRIBED HEREIN.

CONTROL SYSTEMS SHALL BE GUARANTEED FOR 2 YEARS FROM DATE OF ACCEPTANCE BY HACP.

CONTROL WIRING SHALL BE CONCEALED AND INSTALLED IN ACCORDANCE WITH SECTION 16.

MOTOR STARTERS - MOTOR STARTERS FOR ALL MECHANICAL ITEMS SHALL BE FURNISHED BY THE HEATING CONTRACTOR. STARTERS SHALL HAVE HAND–OFF–AUTO SWITCHES AND CONTROL TRANSFORMERS.

DAMPERS - DAMPERS SHALL BE OPPOSED MULTI-BLADE. BLADES SHALL BE CONSTRUCTED OF 16 GAGE STEEL WITH NEOPRENE GASKETED EDGES, AND SHALL BE MOUNTED IN CORROSION RESISTANT BUSHINGS. DAMPERS SHALL HAVE STOPS ON ALL FOUR SIDES. MOTORS SHALL BE MODULATING WITH OIL-IMMERSED GEAR TRAINS. DAMPERS SHALL BE 2% LOW LEAKAGE TYPE.

FREEZE PROTECTION THERMOSTAT - FREEZE PROTECTION THERMOSTAT SHALL BE MERCURY TUBE, MANUAL RESET TYPE SET AT 45F. INSTALL AN ADJUSTABLE TIME DELAY RELAY TO PERMIT AIR TO ESTABLISH SATISFACTORY TEMPERATURE TO AVOID FALSE TRIPS.

INSULATION
ALL SUPPLY AIR DUCTS SHALL BE INSULATED WITH 2" THICK, 1.00 DENSITY, OWENS-CORNING OR APPROVED EQUAL FLEXIBLE DUCT INSULATION WITH FLAME RETARDANT REINFORCED FRK 25 FOIL COVERING. SEAL ALL JOINTS, BOLTS AND ALL EXPOSED EDGES WITH 4" WIDE STRIPS OF SEALING TAPE USING A SUITABLE ADHESIVE. INSULATION SHALL HAVE A 2" FLAP AT ALL JOINTS AND SEAMS WHICH SHALL BE STAPLED AND SECURED WITH ADHESIVE. APPLY ADHESIVE TO DUCTS IN SIX-INCH-WIDE STRIPS AT ONE FOOT INTERVALS. DUCTOWRK EXPOSED WITHIN THE SPACE MAY BE LEFT UN-INSULATED.

OPERATING INSTRUCTIONS
THE CONTRACTOR SHALL FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS. THIS SHALL INCLUDE FINAL CONTROL DIAGRAMS, CATALOG DATA INCLUDING CONSTRUCTION AND MAINTENANCE INFORMATION ON ALL EQUIPMENT, AND MAINTENANCE INFORMATION ON THE COMPLETE SYSTEM.

ONE COMPLETE CONTROL DIAGRAM SHALL BE INCLUDED IN EACH O&M MANUAL.

THE CONTRACTOR SHALL FORMALLY INSTRUCT THE HACP'S STAFF ON THE OPERATION OF THE SYSTEM. THE INSTRUCTION SHALL CONSIST OF NOT LESS THAN 2 PERIODS, EACH PERIOD OF 4 HOURS DURATION. THE CONTRACTOR SHALL ARRANGE FOR THIS INSTRUCTION WITH THE HACP.

FUNCTIONS AND ALL ACTUATORS OPERATE IN ACCORDANCE WITH THE SPECIFICATIONS.
TESTS AND INSPECTION

THE FOLLOWING OPERATIONS SHALL BE PERFORMED IN PREPARATION FOR FINAL INSPECTION BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE TO THE ARCHITECT THAT THE SYSTEM IS OPERATING IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL TESTS AND INSPECTIONS SHALL BE COMPLETED BEFORE FINAL PAYMENT IS MADE TO THE HEATING (MECHANICAL) CONTRACTOR.

CONTROLS - ALL CONTROLS SHALL BE TESTED AND ADJUSTED TO ACHIEVE THE INTENT OF THESE SPECIFICATIONS. CONTROLS SHALL BE ADJUSTED WHILE THE SYSTEM IS OPERATING UNDER FULL-LOAD CONDITIONS, BOTH HEATING AND COOLING. CONTROL SUB-CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION THAT ALL ON/OFF AND ALARM.

AIR DISTRIBUTION SYSTEM - AIR BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE SUBCONTRACTOR. THE COST OF THE SUB-CONTRACTOR SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE INDEPENDENT AIR BALANCER SHALL NOT BE AN EMPLOYEE NOR A SUBSIDIARY OF THE CONTRACTOR.

GUARANTEE
THE MECHANICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE JOB THAT ALL EQUIPMENT, MATERIAL AND LABOR FURNISHED BY HIM ARE FREE FROM DEFECTS. ANY DEFECTS IN MATERIAL AND WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT FURTHER EXPENSE TO THE HACP. ALL ITEMS SPECIFIED TO HAVE A LONGER WARRANTEE SHALL BE GUARANTEED FOR THAT LONGER PERIOD. CONTROLS SHALL HAVE A 2-YEAR GUARANTEE ON PARTS AND LABOR.

CONTROLS
SOLID-STATE THERMOSTAT: WALL-MOUNTED, PROGRAMMABLE, MICROPROCESSOR-BASED UNIT WITH MANUAL SWITCHING FROM HEATING TO COOLING, PREFERENTIAL RATE CONTROL, SEVEN-DAY PROGRAMMABILITY WITH MINIMUM OF FOUR TEMPERATURE PRESETS PER DAY, VACATION MODE, AND BATTERY BACKUP PROTECTION AGAINST POWER FAILURE FOR PROGRAM SETTINGS.

DIVISION 26 - ELECTRICAL WORK

NOTE: ELECTRICAL WORK ON THIS PROJECT IS TO BE DESIGN BUILD. THE E.C. IS RESPONSIBLE FOR VERIFYING LOCATIONS AND REQUIREMENTS FOR THE ELECTRICAL SYSTEM WITH THE HACP.

CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE SPECIFIC BUILDING HACP REQUIREMENTS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION.

DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.

BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES. RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.

PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES. OBSERVE ALL UNIFORM CONSTRUCTION CODE REQUIREMENTS.

OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ARCHITECT'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT.

THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ARCHITECT AND SHALL BE ACCEPTED AS FINAL.

IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.

AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED WILL NOT BE RECOGNIZED.

OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.

ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.

OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK. DELIVER COPIES TO THE HACP.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL. STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED TIME AND MATERIAL BREAKDOWN FOR EACH ITEM.

THE E.C. SHALL BE RESPONSIBLE FOR CALCULATION AND BALANCING OF THE ELECTRICAL LOADS, CIRCUITING AND CONFIRMING THE ADEQUACY OF EXISTING SERVICE WITH HACP.

SEE GENERAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. GENERAL PROVISIONS
THE HACP'S GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF EACH SECTION IN DIVISION 26 AND SHALL APPLY TO ALL THE FOLLOWING WORK.
ELECTRICAL WORK WILL BE LET BY THE HACP, SUBJECT TO THE INSTRUCTIONS TO BIDDERS AND TO ALL ADDENDA AND BULLETINS HEREAFTER MADE PART OF THESE SPECIFICATIONS. REFER THERETO FOR INSTRUCTIONS REGARDING SPECIFIC JOB CONDITIONS.
OBSERVE ALL SPECIAL INSTRUCTIONS IN REGARD TO WORKING CONDITIONS AND MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER AND HACP.

B. SCOPE OF WORK
FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TOOLS, SUPERVISION AND SERVICES NECESSARY FOR THE INSTALLATION AND PROPER COMPLETION OF ALL ELECTRICAL WORK AS HEREIN SPECIFIED AND/OR AS SHOWN ON THE DRAWINGS.

INSTALL ALL SYSTEMS COMPLETE, UNLESS OTHERWISE NOTED, AND LEAVE IN FIRST CLASS OPERATING CONDITION, SATISFACTORY TO THE ENGINEER AND HACP.
ELECTRICAL WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.ALL ELECTRICAL DEMOLITION, AS REQUIRED.
2.PROVISION OF TEMPORARY LIGHT AND POWER AS SPECIFIED HEREINAFTER.
4. FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS.
5. ALL POWER WIRING, 120 VOLTS OR HIGHER, FOR ANY NEW MECHANICAL OR PLUMBING EQUIPMENT.
6. PROVISION AND INSTALLATION OF LIGHTING SWITCHES AND DEVICES, AS SHOWN.
7. NEW PANELBOARDS, SUBFEEDERS, BRANCH CIRCUIT WIRING, AS SHOWN.
8. PROVISION AND INSTALLATION OF NEW CANOPY GOOSENECK LIGHTS.
9. PROVISION AND INSTALLATION OF ALL MISCELLANEOUS ITEMS, AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREINAFTER.
10. SEE THE ARCHITECTURAL DIVISION FOR INSTRUCTIONS AND PRECAUTIONS REGARDING EXISTING ASBESTOS/LEAD PAINT IN THE BUILDING.

C. SPECIFICATIONS
THESE SPECIFICATIONS COMPLEMENT THE ELECTRICAL DRAWINGS. EXECUTE ANY ITEM DRAWN AND NOT SPECIFIED OR SPECIFIED AND NOT DRAWN AS FULLY AS IF BOTH DRAWN AND SPECIFIED IN ORDER TO INSURE A COMPLETE INSTALLATION. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL BE APPLICABLE. INSTALL ANY ITEM SPECIFIED AND NOT DRAWN, OR VICE VERSA, AS COMPLETELY AS IF BOTH SHOWN AND SPECIFIED.

D. CONTRACT DRAWINGS
DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL CONDUITS, CONDUCTORS, CONNECTORS, FITTINGS, BOXES, SWITCHES AND OTHER MISCELLANEOUS PARTS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE THE NEW WORK ACCORDINGLY, FURNISHING SUCH PARTS AND EQUIPMENT AS MAY BE NECESSARY FOR THIS INSTALLATION.

THE ELECTRICAL DRAWINGS INDICATE THE REQUIRED CONDUIT SIZES AND POINTS OF TERMINATION AND THE NUMBER AND SIZE OF THE WIRES THEREIN BUT DO NOT SUGGEST THE PROPER ROUTING OF THESE RACEWAYS. THE PREPARATION OF FIELD DRAWINGS, IF REQUIRED, IS THE CONTRACTOR'S RESPONSIBILITY.

E. PERMITS, LICENSES AND INSPECTIONS
OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR THE EXECUTION OF THE WORK IN ADVANCE OF CONSTRUCTION.
ARRANGE FOR ALL TESTS AND INSPECTIONS OF THE WORK REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND PAY ALL COSTS.
OBTAIN ALL CERTIFICATES OF INSPECTIONS AND APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION AND DELIVER THEM TO THE HACP AS A PREREQUISITE FOR ACCEPTANCE OF THE WORK.

F. REGULATIONS AND CODES
CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND WITH LOCAL ORDINANCES HAVING JURISDICTION. DO NOT INTERPRET ANYTHING IN THE DRAWINGS OR SPECIFICATIONS AS AUTHORITY TO VIOLATE APPLICABLE CODES.
BE RESPONSIBLE FOR EXAMINING DRAWINGS AND SPECIFICATIONS FOR COMPLIANCE WITH APPLICABLE CODES.
RESOLVE ALL CONFLICTS BEFORE INSTALLATION AT NO EXTRA COST.
PREPARE ANY ADDITIONAL CLARIFYING DETAILS REQUIRED BY THE LOCAL INSPECTION AUTHORITIES AND SECURE APPROVAL OF SAME. PAY ANY CHARGES.
OBSERVE ALL REQUIREMENTS OF NEC-2008 EDITION.
OBSERVE ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
OBSERVE ALL APPLICABLE SAFETY REGULATIONS REQUIRED BY HACP AND/OR BY OSHA.

G. INTERPRETATIONS AND CONFLICTS
BRING ANY DISCREPANCIES BETWEEN DIFFERENT DRAWINGS, BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR ANY APPARENT OMISSIONS, TO THE ENGINEER'S ATTENTION BEFORE SUBMITTING THE BID. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE ENGINEER AND SHALL BE ACCEPTED AS FINAL.
IF MENTION HAS BEEN OMITTED PERTAINING TO DETAILS, ITEMS OR RELATED ACCESSORIES REQUIRED FOR THE COMPLETION OF ANY ELECTRICAL SYSTEM, INCLUDE SUCH ITEMS AND ACCESSORIES IN THE ELECTRICAL CONTRACT WITHOUT ADDITIONAL CHARGES.
AFTER THE JOB IS AWARDED, CLAIMS BASED ON INSUFFICIENT DATA OR INCORRECTLY ASSUMED CONDITIONS, OR CLAIMS BASED ON MISUNDERSTANDING THE NATURE OR CHARACTER OF THE WORK OR THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED, WILL NOT BE RECOGNIZED.

H. WORK SCHEDULE
SCHEDULE ALL ELECTRICAL WORK TO CONFORM TO THE HACP'S WORK SCHEDULE. INCLUDE ANY APPLICABLE PREMIUM TIME, AS DIRECTED.

I. CHANGES IN THE WORK
DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL.
STATE IN A WRITTEN REQUEST FOR EXTRA WORK THE NATURE OF THE WORK, BY WHOM REQUESTED, THE PRICE TO BE CHARGED AND AN ITEMIZED BREAKDOWN FOR EACH ITEM.

J. STANDARDS OF WORKMANSHIP
ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND GOOD WORKMANSHIP AS SET FORTH IN THE LATEST COPY OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION PUBLICATION ENTITLED "NECA STANDARDS OF INSTALLATION", EXCEPT AS OTHERWISE MODIFIED IN THESE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
THE ENGINEER/HACP RESERVES THE RIGHT TO DIRECT THE REMOVAL OF ANY ITEM WHICH DOES NOT COMPLY WITH THE CONTRACT DRAWINGS OR THESE SPECIFICATIONS, OR DOES NOT PRESENT A NEAT, ORDERLY AND WORKMANLIKE APPEARANCE.

K. JOB RESPONSIBILITY
PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.
BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF VIOLENCE AND THEFT, UP TO THE TIME OF FINAL ACCEPTANCE BY THE ENGINEER AND HACP.
BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.
ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

L. GUARANTEE
FULLY GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER THIS CONTRACT AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE HACP.

BASIC ELECTRICAL METHODS AND PROCEDURES

A. VISITING THE SITE
VISIT THE PRESENT INSTALLATION TO ASCERTAIN THE EXISTING SITE CONDITIONS, TO DETERMINE THE LOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AND TO NOTE THE ROUTING AND LENGTHS OF THE NEW CONDUIT INSTALLATION. MAKE ALL VISITS TO THE SITE DURING THE NORMAL WORKDAY AND WEEK. SCHEDULE VISITS IN ADVANCE WITH THE HACP'S REPRESENTATIVE.
SECURE AND VERIFY ALL DIMENSIONS AT THE SITE.

B. TEMPORARY LIGHT AND POWER
PROVIDE A TEMPORARY SERVICE FOR CONSTRUCTION USING THE EXISTING SERVICE AND PANELS. THE HACP WILL PAY ALL UTILITY CHARGES FOR MONTHLY ENERGY BILLS.
PROVIDE ALL NECESSARY EQUIPMENT PER N.E.C. AND O.S.H.A. REQUIREMENTS.
EXTEND WIRING FOR LIGHTING, AS REQUIRED FOR THE NEW WORK.
LIGHTING INSTALLATION SHALL MEET O.S.H.A. REGULATIONS FOR INTENSITY OF ILLUMINATION, SPACING OF LUMINAIRES AND SAFETY.
INSTALL 120 VOLT CORD SETS WITH GROUND FAULT PROTECTION AS PER THE N.E.C. LATEST REQUIREMENTS.
MAINTAIN THE ELECTRICAL EQUIPMENT AND LAMPS FOR THE TEMPORARY FACILITIES.
REPAIR OR REPLACE ANY DAMAGE TO THE BUILDING RESULTING FROM THE TEMPORARY INSTALLATION. REPAIRS SHALL BE SATISFACTORY TO THE HACP.
THE PRESENT SYSTEM MAY BE USED AS THE SOURCE FOR THE TEMPORARY SERVICE, PROVIDED A SATISFACTORY ARRANGEMENT FOR THIS USE IS MADE WITH THE HACP.

C. DEMOLITION
BE RESPONSIBLE FOR THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT NO LONGER REQUIRED, SUCH AS WIRE, OUTLETS, PANELS, TRANSFORMERS, BOXES, ETC. SHOULD AN INTERRUPTION OR SHUTDOWN BE REQUIRED, NOTIFY THE HACP SUFFICIENTLY IN ADVANCE OF THE REQUIRED SHUTDOWN SO THAT PROPER ARRANGEMENTS CAN BE MADE.
REWIRE AND RECONNECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN USE IF THE WIRING TO SAME IS DISCONNECTED, DISTURBED OR REMOVED BY THIS RENOVATION. LEAVE ALL EXISTING EQUIPMENT IN OPERATION AT THE JOB'S CONCLUSION.
REMOVE, CLEAN, AND STORE ANY EXISTING ITEMS INDICATED AS BEING REUSED OR RELOCATED UNTIL THE PROPER TIME TO REINSTALL THE SAME.
PROPERLY PROTECT ALL EXISTING ELECTRICAL ITEMS WHICH REMAIN IN PLACE. ANY ELECTRICAL REPLACEMENT NECESSARY SHALL BE DONE AT THIS ELECTRICAL CONTRACTOR'S DIRECT EXPENSE.
NOTE THAT THE REQUIRED ELECTRICAL DEMOLITION IS NOT SHOWN ON THE DRAWINGS.

VISIT THE SITE PRIOR TO BID TO VERIFY ALL REQUIREMENTS FOR THIS DIVISION.

D. PAINTING
PAINTING IS INCLUDED IN THE ELECTRICAL DIVISION AS PER THE FOLLOWING PARAGRAPHS.
TOUCH UP ANY PANELS, SWITCH BOXES OR APPARATUS SCRATCHED, DAMAGED OR RUSTED DURING CONSTRUCTION.
PAINT ANY BRACKETS OR EQUIPMENT WHICH ARE NOT FACTORY PAINTED OR CONSTRUCTED OF A MATERIAL WHICH REQUIRES PROTECTION. PAINT ALL PLYWOOD BACK BOARDS.

E. DETERMINATION OF LOCATIONS
DRAWINGS INDICATE THE APPROXIMATE LOCATIONS OF OUTLETS, APPARATUS, AND EQUIPMENT. THE RUNS OF FEEDERS AND BRANCHES AS SHOWN ARE SCHEMATIC. FINAL ROUTING SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND OTHER OBSTRUCTIONS. THIS SHALL NOT MEAN THAT THE DESIGN OF A SYSTEM MAY BE CHANGED; IT MERELY REFERS TO THE EXACT ROUTING OF A RACEWAY BETWEEN GIVEN POINTS. INSTALL RACEWAYS WITH ALL NECESSARY OFFSETS, JUNCTION AND PULL BOXES, IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, PRESERVE HEADROOM AND SATISFYING THE REQUIREMENTS OF THE GOVERNING CODES AND THE STANDARDS OF GOOD PRACTICE.
ALL SURFACE CONDUIT ROUTINGS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT, PRIOR TO ROUGH-IN OF SAME.

F. GROUNDING AND BONDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDING AND BONDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
MAKE GOOD CONTACT AT ALL PANELS, BOXES AND WHEREVER A CONDUIT RUN IS BROKEN.
GROUND AND BOND ALL CONDUIT, FIXTURES AND OTHER APPARATUS IN A PERMANENT MANNER.
GROUND ALL LIGHTING FIXTURES AND CONVENIENCE OUTLETS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

G. LIST OF MATERIALS
SUBMIT TO THE HACP FOR PRELIMINARY APPROVAL, SIX (6) COPIES OF A COMPLETE LIST OF ALL MATERIALS PROPOSED FOR USE IN THE ELECTRICAL SYSTEMS COVERED BY THESE SPECIFICATIONS WITHIN 15 DAYS AFTER THE AWARD OF CONTRACT.

H. SUBMITTAL OF SHOP DRAWINGS AND BROCHURES
IMMEDIATELY FOLLOWING THE AWARDING OF THE CONTRACT, SUBMIT SHOP DRAWINGS, BROCHURES AND/OR DESCRIPTIVE LITERATURE FOR REVIEW TO THE HACP IN ACCORDANCE WITH THE GENERAL CONTRACT.
ITEMIZE THE DRAWINGS SUBMITTED IN THE TRANSMITTAL LETTER.
STAMP THE DRAWINGS WITH THE CONTRACTOR'S SEAL AS EVIDENCE THAT THE DRAWINGS HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DRAWINGS.

I. MARKING AND IDENTIFICATION
CLEARLY MARK ALL PANELS, DISCONNECT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS FOR EASY IDENTIFICATION AND FOR SAFETY.
PROVIDE PLASTIC NAMEPLATES ON ALL PANELBOARDS AND DISCONNECT SWITCHES.
TYPE ALL CIRCUIT DIRECTORIES ON SUITABLE CARDS WHICH SHALL FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
PROVIDE NEW PLASTIC SLEEVES ATTACHED TO THE INSIDE OF THE PANEL DOORS FOR THE NEW DIRECTORIES.
CARDS SHALL INDICATE THE USE OF EACH CIRCUIT AND IN WHICH SPACE THE CIRCUIT IS UTILIZED.
TAG ALL CIRCUIT LINE CONDUCTORS IN LIGHTING AND POWER PANELS WITH GUMMED NUMBER LABELS TO INDICATE CIRCUIT NUMBERS.
PROVIDE ALL REQUIRED LABELS FOR CONDUCTOR COLOR CODING AND EQUIPMENT INTERRUPTING CAPACITIES, AS REQUIRED BY NEC.
PROVIDE ALL REQUIRED LABELS FOR SAFETY PRECAUTIONS WHEN WORKING ON ELECTRICAL EQUIPMENT.

J. CLEAN UP
PERFORM THE INSTALLATION IN A NEAT AND ORDERLY MANNER.
BE RESPONSIBLE FOR CLEANING UP ELECTRICAL WORK AND HAULING AWAY DEBRIS DAILY. EXERCISE DUE CARE IN THE HANDLING OF WASTE MATERIALS, SCRAP ITEMS AND PAPER. PERIODICALLY REMOVE ELECTRICAL WASTE MATERIALS, PAPER AND RUBBISH. MAINTAIN ORDER. ON COMPLETION OF THE JOB, REMOVE ALL TOOLS, EQUIPMENT, MATERIALS AND LOOSE PARTS.
FINGERPRINTS AND SMEARS ON CEILINGS AND PAINTED WALLS WILL NOT BE TOLERATED. RESTORE ALL AREAS TO THEIR ORIGINAL CLEAN CONDITION, SATISFACTORY TO THE HACP.
LEAVE ALL LIGHTING, PLASTIC PANELS AND GLASSWARE IN A CLEAN CONDITION. WASH WITH A DETERGENT AND AIR DRY. LEAVE THE PREMISES CLEAN, FREE FROM ALL DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
DO A FINAL CLEAN UP AT THE JOB'S CONCLUSION.

K. TESTS
UPON COMPLETION OF THE WORK, AND AS A CONDITION FOR ACCEPTANCE, TEST ALL SYSTEMS IN THE PRESENCE OF THE HACP. RETEST EQUIPMENT REQUIRING CORRECTION.
MAKE ALL TESTS IN ACCORDANCE WITH REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
TEST SECONDARY WIRING FOR CONTINUITY, SHORT CIRCUIT AND IMPROPER GROUNDS, AND SHOW AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND GROUND NOT LESS THAN THE REQUIREMENTS OF THE N.E.C.
OPERATE EACH LIGHTING CIRCUIT TO TEST EVERY FIXTURE.
CORRECT ALL FAILURES OR IMPROPER OPERATIONS. FURNISH ALL NECESSARY TESTING EQUIPMENT AND PAY ALL COSTS OF TESTING, REPLACING AND REPAIRING.
RETEST ITEMS UNTIL SATISFACTORY PERFORMANCE IS OBTAINED AT NO ADDITIONAL CHARGE.

L. LOAD BALANCE AND PHASING
PROPERLY BALANCE THE BUILDING ELECTRICAL LOADS ACROSS PHASES OF ALL LIGHTING AND POWER PANELS, TRANSFORMER TERMINALS, AND SERVICE ENTRANCE CONDUCTORS. WHEN ALL LOADS ARE TURNED ON, THE INITIAL UNBALANCE SHALL NOT EXCEED 10%.
PROVIDE FOR THE CORRECT DIRECTION OF ROTATION OF ALL MOTORIZED EQUIPMENT.

M. INSTRUCTIONS TO OPERATING PERSONNEL
FURNISH THE SERVICES OF A PERSON OR PERSONS WHO IS THOROUGHLY FAMILIAR WITH THE COMPLETED INSTALLATION, TO INSTRUCT THE HACP'S OPERATING PERSONNEL IN THE PROPER OPERATION, CARE AND MAINTENANCE OF ALL ELECTRICAL APPARATUS AND SYSTEMS.
FURNISH THESE SERVICES FOR AT LEAST ONE FOUR HOUR PERIOD. DURING THIS TIME DEMONSTRATE TO THE HACP, THE COMPLETE OPERATION OF THE VARIOUS ELECTRICAL SYSTEMS.

BASIC ELECTRICAL MATERIALS AND INSTALLATION

A. MATERIAL IN GENERAL
MATERIALS SHALL BE NEW, TESTED AND LISTED BY UNDERWRITERS LABORATORIES, AND SHALL BEAR THE UNDERWRITERS LABEL WHERE SUCH LABELING SERVICE IS FURNISHED. MATERIALS SHALL MEET WITH THE APPROVAL OF ALL STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.

Fukui Architects Pc

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Pittsburgh, Pennsylvania 15219
ph 412.281.6001 fx 412.281.6002

REGISTERED ARCHITECT

seal

CONSTRUCTION DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

△1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

scale As Noted	**Sheet No.**
date August 20th, 2024	**A8**
no. 8 **of.** 9	Project #2326

MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, ASTM AND IEEE.
ALL SIMILAR MATERIALS SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

B. RACEWAYS
1. MATERIALS
RIGID HEAVY WALL STEEL CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE STEEL, HOT DIPPED GALVANIZED AND ZINC COATED, INSIDE AND OUTSIDE. CONDUIT SHALL BEAR THE MANUFACTURER'S AND UNDERWRITERS' LABELS. THIN WALL CONDUIT IS DESIGNATED AS E.M.T.
STEEL CONDUIT SHALL BE MANUFACTURED BY WHEATLAND, ALLIED, TRIANGLE, OR EQUAL.
FLEXIBLE CONDUIT (GREENFIELD) SHALL BE U.L. LISTED, 3/4 INCH MINIMUM TRADE SIZE FOR BRANCH WIRING. GREENFIELD OF ½ INCH SIZE WILL BE PERMITTED FOR FINAL CONNECTIONS TO LIGHTING FIXTURES ONLY.

2. INSTALLATION
MINIMUM SIZE CONDUIT IS 3/4 INCHES.
INSTALL CONDUIT AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTING, MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY IS SECURED.
DO NOT ROUTE RACEWAYS THROUGH ANY DUCTWORK.

C. CONDUIT FITTINGS
1. MATERIALS
ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL, WHERE APPLICABLE.
CONDUIT FITTINGS SHALL CONFORM IN DESIGN AND QUALITY TO THE TYPE OF CONDUIT ON WHICH THEY ARE BEING INSTALLED.

2. INSTALLATION
USE THREADED CONNECTORS ON GRS CONDUIT.
USE SET-SCREW STYLE CONNECTORS ON E.M.T. WHERE SAME IS RUN EXPOSED OR CONCEALED ABOVE GRADE.
USE BUSHINGS, LOCKNUTS AND EXPANSION FITTINGS OF THE APPROPRIATE TYPE FOR THE RACEWAY SYSTEM BEING INSTALLED.

D. PULL BOXES, OUTLET BOXES AND COVERS
1. GENERAL
FOR EACH OUTLET BOX, USE THE PROPER CODE SIZE FOR THE ENTERING CONDUITS AND THE NUMBER OF WIRES TERMINATING THEREIN.
USE BOXES WITH PLASTER RING EXTENSIONS IN PLASTERED OR DRY WALL PARTITIONS.

2. MATERIALS
FOR LARGE PULL BOXES, USE BOXES OF CODE GAUGE SHEET STEEL WITH STEEL COVERS ATTACHED WITH BRASS SCREWS. BOXES SHALL BE HOT DIPPED, GALVANIZED AFTER FABRICATION - THE MINIMUM SIZE OF EACH BOX SHALL BE AS REQUIRED BY THE NATIONAL ELECTRIC CODE. MANUFACTURER'S ARE HOFFMAN, KEYSTONE OR EQUAL.
FOR CONCEALED WORK, USE PRESSED STEEL BOXES, KNOCKOUT TYPE, ZINC COATED, OF 1/16 INCH MINIMUM THICKNESS.
USE BOXES OF FORM AND DIMENSIONS BEST ADAPTED TO SPECIFIC LOCATION, KIND OF FIXTURE USED AND THE NUMBER, SIZE AND ARRANGEMENT OF RACEWAYS CONNECTING THERETO. USE STEEL CITY OR RACO.
USE WIREMOLD FINISHED STYLE BOXES IN FINISHED AREAS WHERE CONCEALED BOXES ARE NOT FEASIBLE.

E. CONDUCTORS IN RACEWAYS
1. MATERIALS
CONDUCTORS SHALL BE SOFT DRAWN COPPER, MINIMUM 97% CONDUCTIVITY, 600 VOLT, CONFORMING TO ASTM SPECIFICATIONS AND THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
INSULATION SHALL BE SUITABLE FOR THE CONDITIONS AND LOCATIONS IN WHICH CONDUCTORS ARE INSTALLED. THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED OR REQUIRED BY LOCATION OR INSTALLATION CONDITIONS:
A. FOR BUILDING WIRE IN INTERIOR ABOVE GRADE LOCATIONS, USE TYPE THWN/THHN COPPER RATED 75 DEGREES C. WET OR DRY.
WIRES SHALL BE CLEARLY AND REGULARLY MARKED WITH THE WIRE SIZE, VOLTAGE, INSULATION TYPE AND MANUFACTURER'S NAME.
CONDUCTORS SHALL BE NEW AND MANUFACTURED WITHIN EIGHT MONTHS PREVIOUS TO DELIVERY AT SITE, WITH DATE OF MANUFACTURE MARKED ON THE PACKAGES.
MINIMUM WIRE SIZE FOR BRANCH CIRCUITING SHALL BE #12 AWG.
ALL CIRCUIT RUNS EXCEEDING 75 FEET IN LENGTH EXTENDING FROM THE PANELBOARD TO THE FIRST OUTLET IN THE CIRCUIT SHALL BE #10 AWG MINIMUM.
WIRE #8 AWG AND SMALLER SHALL BE SOLID; WIRE #6 AWG AND LARGER SHALL BE STRANDED.
WIRE SHALL BE AS MANUFACTURED BY HI-TECH, PIRELLI, TRIANGLE OR EQUAL.

2. INSTALLATION
COLOR CODE ALL WIRES PER NEC REQUIREMENTS:
A. MATCH THE EXISTING SCHEME PRESENTLY INSTALLED; NEUTRAL SHALL BE WHITE; EQUIPMENT GROUND SHALL BE GREEN.
THE GROUPING OF OUTLETS ON INDIVIDUAL NEW CIRCUITS AS SHOWN ON THE DRAWINGS SHALL BE STRICTLY OBSERVED. GROUPING OF CONDUCTORS IN THE CONDUIT SHALL NOT BE PERMITTED. INCORPORATE A MAXIMUM OF FOUR (4) WIRES, I.E. A MAXIMUM OF ONE CIRCUIT CONDUCTOR ON EACH PHASE PLUS THE NEUTRAL WIRE PLUS THE GROUND WIRE IN ONE CONDUIT.
EMPLOY A U.L. LISTED COMMERCIAL PRODUCT SUCH AS WYRE-EZE OR YELLOW-77 FOR PULLING WIRES INTO A RACEWAY.
CLEAN AND DRY CONDUITS BEFORE PULLING IN WIRES.
THE USE OF B.X., ROMEX, OR U.F. CABLE IS NOT PERMITTED.
MC CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING.

F. SPLICES
MAKE ALL SPLICES, JOINTS AND TAPS WITH SOLDERLESS PRESSURE CONNECTORS LISTED AND APPROVED FOR THE INTENDED USE AND FOR THE SIZE AND NUMBER OF CONDUCTORS UTILIZED.
1. FOR WIRE #10 AWG AND SMALLER, USE TWIST-ON WIRE NUTS.
2. FOR WIRE #8 AWG AND LARGER, USE HEAVY DUTY SOLDERLESS SET SCREW CONNECTORS WITH A SEPARATE BARREL FOR EACH CONDUCTOR. USE INSULATING COVERS FROM THE MANUFACTURER, WHERE AVAILABLE. TAPE PROPERLY TO PROVIDE A SUFFICIENT INSULATION AROUND THE ENTIRE SPLICE UNIT, WHEN INTEGRAL INSULATING COVERS ARE NOT AVAILABLE FROM THE FITTING MANUFACTURER.

G. PANELBOARDS AND CABINETS
CABINETS SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL WITH WIRING GUTTERS OF SUFFICIENT WIDTH TO PROVIDE AMPLE SPACE FOR BRANCH CIRCUIT WIRES AND FEEDERS. GUTTERS SHALL NOT BE LESS THAN FOUR INCHES WIDE. GUTTERS SHALL CONFORM TO NEC STANDARDS AND SHALL BE OVER-SIZED WHERE NECESSARY TO ACCOMMODATE THE ENTRANCE OF SEVERAL LARGE CONDUITS AND/OR WHERE NECESSARY TO AVOID OVERCROWDING OF CONDUCTORS OR EQUIPMENT WITHIN. TRIMS SHALL BE SURFACE AS NOTED IN THE PANEL SCHEDULE AND SHALL CONTAIN CONCEALED HINGED DOORS, EACH EQUIPPED WITH FLUSH CHROME PLATED COMBINATION LOCKS AND CATCHES, ALL KEYED ALIKE. FINISH SHALL BE STANDARD BAKED ENAMEL OR LACQUER, MEDIUM GRAY, ANSI-61. PROVIDE TWO (2) KEYS WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE. USE "DOOR IN A DOOR" HINGED TRIMS.

PANELBOARD BASIS OF DESIGN:
- MANUFACTURER: GE, SIEMENS OR EQUAL.
- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY QUALIFIED ELECTRICAL TESTING AGENCY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- COMPLY WITH NEMA PB 1.
- COMPLY WITH NFPA 70.
- ENCLOSURES: SURFACE-MOUNTED, DEAD-FRONT CABINETS.
- INDOOR DRY AND CLEAN LOCATIONS: UL 50E, TYPE 1
- OTHER WET OR DAMP INDOOR LOCATIONS: UL 50E
- HEIGHT: 7 FT MAXIMUM.
- RETAIN ONE OF FIRST TWO SUBPARAGRAPHS BELOW. VERIFY WITH MANUFACTURER FOR AVAILABILITY OF "DOOR-IN-DOOR" CONSTRUCTION IN OTHER THAN NEMA 1 STYLE PANELBOARDS.
- HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS MUST COVER LIVE PARTS AND MAY HAVE NO EXPOSED HARDWARE.
- INCOMING MAIN ON TOP
- 20 SPACE- 40 CIRCUITS MINIMUM.

BUSING SHALL BE FULL CAPACITY, 98% CONDUCTIVITY COPPER OR 80% CONDUCTIVITY ALUMINUM, BRACED FOR THE SHORT CIRCUIT CURRENT AVAILABLE TO THE PANEL AND SIZED AS SHOWN IN THE PANEL DETAIL. CIRCUIT BREAKERS SHALL BE CONNECTED TO BUSES WITH BOLTED CONNECTIONS FOR SEQUENCE PHASING: I.E., CIRCUITS 1 AND 2 CONNECTED TO PHASE A; 3 AND 4 TO PHASE B AND SO ON. POLARITY OR BLOCK PHASING SHALL NOT BE ACCEPTABLE. PANEL SHALL INCLUDE A NEUTRAL BUS AND AN EQUIPMENT GROUNDING BUS. CIRCUIT BREAKERS SHALL BE MOLDED CASE TYPE, BOLT-ON, WITH THERMAL AND MAGNETIC TRIPS, TRIP-FREE ON OVERLOAD OR SHORT CIRCUIT, UL LISTED, HAVING INTERRUPTING CAPACITIES, AS INDICATED.

H. WIRING DEVICES AND PLATES
1. MATERIALS
ALL WIRING DEVICES SHALL BE MANUFACTURED BY ONE OF THE MANUFACTURERS LISTED. DO NOT MIX MANUFACTURER'S PRODUCTS.
DEVICES SHALL BE U.L. SPECIFICATION GRADE.

2. WALL SWITCHES
SWITCHES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE GENERAL USE, AC QUIET TYPE, 20 AMPERE, 120/277 VOLT, BACK AND SIDE WIRED. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

3. WALL SWITCH TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENTS FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP SINGLE POLE WALL SWITCH - HUBBELL #HBL-1221, P & S #20AC1, COOPER #1221, BRYANT #4901, OR LEVITON #1221-2.
20 AMP 3-WAY WALL SWITCH - HUBBELL #HBL-1223, P & S #20AC3, COOPER #1223, BRYANT #4903, OR LEVITON #1223-2. USE SIMILAR SERIES FOR 4-WAY SWITCHES.

4. WALL RECEPTACLES
ALL CONVENIENCE AND POWER RECEPTACLES SHALL CONFORM TO NEMA HEAVY DUTY STANDARDS AND SHALL BE THE GROUNDING TYPE.
CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, BACK AND SIDE WIRED, 3 WIRE GROUNDING, UL LISTED AS COMPLYING WITH THE REQUIREMENTS OF NEC ARTICLE 250-146, AND SHALL BE NEMA 5-20R CONFIGURATION. VERIFY COLOR OPTIONS WITH THE ARCHITECT.

5. RECEPTACLE TABLE
THE FOLLOWING ENTRIES ARE ACCEPTABLE EQUIVALENT FROM EACH OF THE LISTED MANUFACTURERS:

20 AMP, 125 VOLT DUPLEX CONVENIENCE OUTLET (NEMA 5-20R) - HUBBELL #HBL-5362, P & S #5362A, COOPER #5362, BRYANT #5362, OR LEVITON #5362.
20 AMP, 125 VOLT GROUND FAULT INTERRUPTER (NEMA 5-20R) - HUBBELL #GF-5362, P & S #2091, COOPER #XGF-20, BRYANT #GFR53FT, OR LEVITON #8899.

6. PLATES
USE STAINLESS STEEL PLATES.

I. FASTENINGS AND ATTACHMENTS
FOR FASTENINGS AND ATTACHMENTS, SUCH AS SCREWS, BOLTS AND NUTS, USE DEVICES MADE OF NON-FERROUS METALS OR OF GALVANIZED OR CADMIUM PLATED STEEL. WHEN SUCH DEVICES ARE NOT OBTAINABLE IN NON-FERROUS METALS, OR IN STEEL WITH A PROTECTIVE METALLIC COATING, PAINT SAME WITH A RUST PREVENTING PAINT SUCH AS RUSTOLEUM.
ALL FASTENINGS AND ATTACHMENTS SHALL BE MADE OF MATERIALS OR SO PROTECTED, THAT THEY WILL OFFER THE MAXIMUM PROTECTION AGAINST DETERIORATION FROM AGE, WEATHER OR DAMPNESS.
DO NOT PENETRATE THE ROOF DECK WITH ANY FASTENERS.

J. SURFACE METALLIC RACEWAY SYSTEM
USE A SURFACE METAL RACEWAY SYSTEM AND BOXES, WHERE CONCEALED WIRING IS NOT POSSIBLE OR WHERE SHOWN ON THE PLANS. USE RACEWAYS, SUCH AS WIREMOLD, FOR STRAIGHT RUNS, COMPLETE WITH BOXES AND FITTINGS, AS DIRECTED. VERIFY COLOR OPTIONS WITH THE ARCHITECT. PAINT SAME WHERE REQUIRED OR INDICATED.
OBTAIN APPROVAL FOR ALL SURFACE ROUTINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

K. FIRE STOPS
1. GENERAL
PROVIDE THROUGH PENETRATION FIRE STOP SYSTEMS TO PREVENT THE SPREAD OF FIRE THROUGH OPENINGS MADE IN FIRE-RATED WALLS OR FLOORS TO ACCOMMODATE THROUGH PENETRATING ITEMS SUCH AS CONDUIT AND CABLES.
FIRE-RESISTANCE-RATED ASSEMBLY SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY OR SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRE STOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM-E-814 OR U.L. 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER. THE SYSTEM SHALL HAVE AN F RATING AND A T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A MINIMUM 1-HOUR FIRE RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. FIRE STOP SHALL RESTORE FLOOR AND WALL TO ORIGINAL FIRE RATED INTEGRITY AND SHALL BE WATERPROOF.

PENETRATIONS OF MEMBRANES THAT ARE PART OF A FIRE-RATED WALL OR FLOOR MUST BE STOPPED AS OUTLINED FOR THROUGH PENETRATIONS WITH THE FOLLOWING EXCEPTIONS.
A. STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA PROVIDED THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
B. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS INDICATED.
1. BY HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.
2. BY HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE FILL ROCK WOOL OR SLAG MINERAL WOOL INSULATION.
3. BY SOLID FIRE BLOCKING.
4. BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS.
5. BY OTHER LISTED MATERIALS AND METHODS.

2. MATERIALS
PUTTY - USE FLAMESEAL PUTTY #AA423 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
FIBER - USE CERAMIC FIBER #AA401 (10 LB. BOX) OR #AA417 (2 LB. BAG) AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN WALLS - USE CERAMIC BOARD #AA402 (1" X 18" X 12") OR #AA403 (1" X 36" X 48") AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.
OVERSIZED OPENINGS IN FLOOR - USE SUPPORT WIRE #AA404 AS MANUFACTURED BY NELSON ELECTRIC, TULSA, OKLAHOMA.

3. INSTALLATION
USE TOTAL THICKNESS OF 1-1/2 INCHES OF FLAMESEAL PUTTY #AA423 ON ALL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. USE NELSON FIBER #AA401 OR #AA417 IN CONJUNCTION WITH THE PUTTY TO FILL THE REMAINING VOID OF PENETRATIONS.
PACK CERAMIC FIBER IN CENTER OF OPENING LEAVING 3/4 INCH ON EITHER SIDE OF WALL FOR THE PUTTY. INSTALL THE PUTTY IN THE REMAINING PART OF OPENING, WORKING IT INTO ALL VOIDS AND CAVITIES. FOR OPENINGS WITH GREATER THAN 4 INCHES OF UNSUPPORTED SPACE, USE NELSON CERAMIC BOARD #AA402 OR #AA403 DEPENDING ON SIZE OF OPENING. PACK CERAMIC FIBER IN BOTTOM OF OPENING PER FACTORY RECOMMENDATIONS, LEAVING 1-1/2 INCHES BELOW FLOOR LEVEL FOR THE INSTALLATION OF FLAMESEAL PUTTY. USE SUPPORT WIRE #AA404 ON ALL PENETRATIONS IN EXCESS OF 6 INCHES DIAMETER.

L. MC CABLE
METAL CLAD CABLE (MC) SHALL BE COPPER WIRE WITH 90 DEGREES C. THHN INSULATION, #12 AWG MINIMUM, WITH CONTINUOUS INSULATED GREEN GROUND CONDUCTOR AND STEEL ARMOR, MANUFACTURED BY A.F.C., ALFLEX, OR EQUAL. INSTALL NON-RIGID CABLE IN A NEAT, APPROVED MANNER, AS PER N.E.C. REQUIREMENTS. DO NOT GROUP CABLES INTO A COMMON CONDUIT AS OVERHEATING WILL RESULT. DO NOT TIE THE SEVERAL CABLES TOGETHER. USE APPROVED STYLE "MC" CONNECTORS AND FITTINGS IN ORDER TO MAINTAIN ADEQUATE CASE GROUNDING REQUIRED BY THE NATIONAL ELECTRICAL CODE. PROVIDE AN INDEPENDENT MEANS OF SUPPORT FOR ALL WIRING LOCATED ABOVE A DROPPED CEILING ASSEMBLY FROM THE STRUCTURAL CEILING SYSTEM. DO NOT SUPPORT WIRING FROM THE CEILING ASSEMBLY OR FROM ITS SUPPORT WIRES.

SERVICE AND DISTRIBUTION

A. GENERAL INSTALLATION
USE RIGID HEAVY WALL STEEL CONDUIT FOR EXPOSED EXTERIOR RACEWAYS.
USE EMT ELECTRICAL METALLIC THINWALL CONDUIT FOR CONCEALED INTERIOR FEEDERS, TELEPHONE RACEWAYS, ETC.
USE FLEXIBLE CONDUIT SUCH AS "GREENFIELD" FOR CONNECTIONS TO RECESSED LIGHTING FIXTURES IN 72" MAXIMUM LENGTHS AND FOR USE IN STUD WALLS WHERE THE USE OF RIGID CONDUIT IS NOT PRACTICAL.
USE WEATHERPROOF AND OILPROOF FLEXIBLE CONDUIT SUCH AS "SEAL-TITE" FOR ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN LENGTHS OF 18" MAXIMUM.
USE LIQUID-TIGHT FLEXIBLE CONDUIT AND APPROPRIATE LIQUID-TIGHT FITTINGS IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP. WHERE USED, CONFORM TO NEC #250-118.
USE WIREMOLD RACEWAYS FOR BRANCH CIRCUIT SURFACE ROUTINGS IN FINISHED AREAS ONLY WHERE CONCEALED WIRING IS NOT FEASIBLE, AND WHERE INDICATED.
USE M.C. CABLE FOR CONCEALED BRANCH CIRCUIT WIRING ONLY, IN ACCORDANCE WITH THE N.E.C. REQUIREMENTS.
THE USE OF B.X., ROMEX, AND U.F. IS NOT APPROVED.

LIGHTING FIXTURES AND ACCESSORIES

GENERAL
ALL LIGHTING FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

LIGHTING FIXTURES

BASIS OF DESIGN LIGHTING FIXTURES BY KICHLER OR EQUAL.
CEILING FIXTURE: KICHLER #8112WH, WHITE FINISH, SURFACE MOUNTED
EXTERIOR CEILING FIXTURE: KICHLER #11132AZTLED, OUTDOOR RATED.
WALL EXTERIOR: KICHLER #9654TZ, WALL MOUNTED, OUTDOOR RATED
BATHROOM VANITY: KICHLER JOELSON #45923
FLOOD LIGHT: LITHONIA LIGHTING OLF LED WITH MOTION OCCUPANCY SENSOR
RECESSED LIGHTING: HALO OR EQUAL.

B. INSTALLATION
PROVIDE ALL SUPPLEMENTARY STRUCTURAL MATERIALS REQUIRED TO PROPERLY MOUNT ALL LIGHTING FIXTURES.
SECURELY MOUNT LIGHTING FIXTURES TO STRUCTURAL ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS SUCH THAT SAID FIXTURES WILL BE SQUARE, PLUMB, AND RIGID, WILL NOT FALL OR SAG, AND WILL NOT CAUSE THE SUSPENDED CEILING SYSTEM TO SAG. PROVIDE ADDITIONAL CEILING SUPPORTS, WHERE REQUIRED TO SUPPORT RECESSED OR SURFACE FIXTURES.
INSTALL WIRING TO AND WITHIN FIXTURES TO COMPLY WITH NEC ARTICLE #410. TAKE SPECIAL CARE TO ASSURE THAT THE FIXTURE OUTLETS FOR RECESSED FIXTURES ABOVE SOLID SUSPENDED CEILINGS WILL ACTUALLY BE ACCESSIBLE AFTER THE PROJECT IS COMPLETED.
USE CLIPS TO FASTEN RECESSED TROFFERS TO DROP CEILING CHANNELS AS REQUIRED BY NEC SECTION #410-16. USE CADDY FASTENERS #515 OR APPROVED EQUAL.
TIME CLOCKS SHALL BE COMMERCIAL GRADE, 7 DAY, ASTRONOMICAL DIAL, WITH 24-HOUR SPRING RESERVE BACKUP, AS MANUFACTURED BY TORK OR PARAGON (IF REQUIRED).

SMOKE ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 20SAR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

COMBO SMOKE + CO ALARMS
BASIS OF DESIGN, KIDDE OR EQUAL, MODEL 30CUDR, PHOTOELECTRIC, HARDWIRE 120 V AC WITH 2 AA BATTERY BACKUP, FINISH WHITE.

SMOKE DETECTOR'S LOCATIONS:
1 COMBO SMOKE + CO ALARM PER FLOOR, NOT TO BE PLACED IN MECHANICAL ROOM OR KITCHEN.
1 SMOKE DETECTOR INSIDE EACH SLEEPING ROOM.
INTERCONNECT SMOKE DETECTORS INSIDE THE UNIT.

MOTOR WIRING

WIRING FOR MECHANICAL AND PLUMBING CONTRACTS
1. INSTALLATION
VERIFY ALL LOCATIONS WITH THE VARIOUS MECHANICAL CONTRACTORS BEFORE INSTALLING RACEWAYS.
PROVIDE ALL WIRING MATERIALS AND DEVICES REQUIRED TO CONNECT AND OPERATE THE ELECTRICAL PARTS OF EQUIPMENT FURNISHED AND INSTALLED UNDER THE MECHANICAL DIVISION.
INSTALL AND CONNECT ALL STARTERS, PUSHBUTTONS, SWITCHES, THERMOSTATS AND OTHER CONTROL DEVICES AS FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.
MAKE ALL FINAL CONNECTIONS TO MOTORIZED EQUIPMENT. VERIFY THE CORRECT DIRECTION OF ROTATION.
CONNECT MOTOR CIRCUITS TO THE RIGID CONDUIT SYSTEM BY MEANS OF WEATHERPROOF STYLE FLEXIBLE CONDUIT, PROPERLY GROUNDED AND BONDED. EMPLOY A GREEN GROUND WIRE FOR ALL SYSTEMS AND MOTOR FRAME GROUND CONNECTIONS.
BOLT THE WIRE TO THE MOTOR FRAME AT ONE END AND TO THE MOTOR STARTER AT THE OTHER END WITH APPROVED TERMINAL DEVICES.
DO ALL LINE VOLTAGE CONTROL WIRING (120 VOLT AND HIGHER).
ALL LOW VOLTAGE CONTROL WIRING (UNDER 120 VOLTS) IS THE RESPONSIBILITY OF THE MECHANICAL OR PLUMBING CONTRACTS.

SECTION 32- EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE
ALUMINUM WIRED FABRIC 2X2 INCHES WITH ROUNDED POST AND RAILS 2.5 INCHES IN DIAMETER, LIGHT INDUSTRIAL STRENGTH, ZINC COATED. WITH TOP AND BOTTOM TENSION WIRED ZINC COATED. MECHANICALLY DRIVEN INTO SOIL OR USING ANCHORING CONCRETE.

GATES TO MATCH FENCE MATERIAL AND FRAME. DOOR WITH LATCH TO PERMIT OPERATION FROM BOTH SIDES OF GATE. PADLOCK AND CHAIN TO BE PROVIDED BY HACP.

SEEDING

QUALITY, NON-STATE CERTIFIED: SEED OF GRASS SPECIES AS LISTED BELOW FOR SOLAR EXPOSURE, WITH NOT LESS THAN 85 PERCENT GERMINATION, NOT LESS THAN 95 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED

A.SOW SEED WITH SPREADER OR SEEDING MACHINE. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH.
1.EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
2.DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED.
3.DO NOT SEED AGAINST EXISTING TREES. LIMIT EXTENT OF SEED TO OUTSIDE EDGE OF PLANTING SAUCER.

B. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

C. PROTECT SEEDED AREAS FROM HOT, DRY WEATHER OR DRYING WINDS BY APPLYING COMPOST MULCH WITHIN 24 HOURS AFTER COMPLETING SEEDING OPERATIONS. SOAK AREAS, SCATTER MULCH UNIFORMLY TO A THICKNESS OF 3/16 INCH >, AND ROLL SURFACE SMOOTH.

TREE AND STUMP REMOVAL
ALL APPROPRIATE SAFETY EQUIPMENT MUST BE UTILIZED AT ALL TIMES DURING OPERATIONS; INCLUDING, BUT NOT LIMITED TO: HARD HATS, GLOVES, SAFETY GLASSES, FALL RESTRAINTS, TRAFFIC CONTROL DEVICES, HIGH VISIBILITY CLOTHING, ADEQUATE HEARING PROTECTION AND ANY OTHER SAFETY REQUIRED BY OSHA
ONCE A TREE IS CUT DOWN, THE STUMP MUST BE GROUND OUT WITHIN FIVE DAYS (5). STUMPS AND BUTTRESS ROOTS MUST BE REMOVED TO A MINIMUM OF TWELVE INCHES (12") BELOW GROUND LEVEL AND TWO (2) TIMES THE DIAMETER AT BREAST HEIGHT IN SURFACE AREA GROUND. THE REMAINING STUMP AND/OR CHIPS SHALL BE REMOVED FROM THE SITE WITHIN TWO DAYS (2) AFTER GRINDING. ALL SURFACE ROOTS AND ADJACENT SUBSURFACE ROOTS SHALL BE REMOVED AS MAY BE NECESSARY TO ELIMINATE "HUMPS" OR MOUNDS IN THE TREE EASEMENT AREA ADJACENT TO THE STUMP. ALL TREE EASEMENT AREAS ARE TO BE LEFT FLAT AND MEET ORIGINAL GRADE. THE AREA WILL THEN BE BACKFILLED WITH CLEAN, PULVERIZED TOPSOIL TO THE LEVEL OF THE ADJOINING GRADE AND SEEDED. SEE SEEDING FOR SEED REQUIRED.

THE PARTY AUTHORIZED TO REMOVE THE TREE, AT THEIR EXPENSE, SHALL RESTORE THE LAWN AND ANY EXISTING LANDSCAPING AND APPURTENANCES THAT EXIST BETWEEN THE SIDEWALK AND CURB OR IN OTHER AREAS THAT HAVE BEEN DISTURBED BY THE PARTY AUTHORIZED TO REMOVE THE TREE DURING THE PROSECUTION OF THE WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL PROTECT ALL CONCRETE SIDEWALK, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT FROM DAMAGE THROUGH THE USE OF PLYWOOD SHEETING OR MATS WHEN NECESSARY. THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL REPLACE OR RESTORE ALL CONCRETE SIDEWALKS, DRIVEWAY APPROACHES, DRIVEWAYS AND STREET PAVEMENT WHICH MAY HAVE BEEN DAMAGED DURING THE PROSECUTION OF THE WORK.

THE PARTY AUTHORIZED TO REMOVE THE TREE SHALL BE RESPONSIBLE AT ALL TIMES FOR KEEPING THE WORK SITE ADJOINING PREMISES, STREET, WALKS AND DRIVEWAYS CLEAN. ALL TREE BRANCHES, BARK, CHIPS AND OTHER DEBRIS MUST BE CLEARED UP AT THE END OF THE WORKDAY.

SECTION 33- UTILITIES

TRENCH DRAIN SYSTEM
ZURN Z880 2 1/2 [64] WIDE TRENCH DRAIN SYSTEM SHALL BE 48 [1220] LONG AND 2 1/2 [63.5] WIDE. DRAIN SHALL BE 3 [76] DEEP. DRAIN SHALL BE MADE OF (HDPE) HIGH DENSITY POLYETHYLENE AND IS UV-10 STABILIZED. DRAIN SHALL HAVE BEDDING FEET TO BE USED FOR POSITIONING AND ANCHORING PURPOSES. DRAINS SHALL HAVE TONGUE AND GROOVE SNAP FIT CONNECTION. DRAIN SHALL HAVE 24 [610] LONG HIGH-DENSITY POLYETHYLENE DECORATIVE GRATE (-POG) PROVIDED AS STANDARD.

INSTALLATION
TRENCH EXCAVATION MUST BE 4" [102MM] GREATER THAN THE TRENCH DEPTH AND A MINIMUM OF 4" [102MM] GREATER THAN THE EDGE OF THE TRENCH ON EACH SIDE. SOFT AND/OR SHIFTING SOIL SUBSTRATES MAY CAUSE CRACKING OF THE CONCRETE AND CONSEQUENT MOVEMENT OF THE TRENCH. IT IS CRITICAL THAT THE CONCRETE BE POURED ON AN ADEQUATE FOUNDATION

ASSEMBLING PER MANUFACTURER INSTRUCTION. A SILICONE CAULK, OR A CONSTRUCTION ADHESIVE, SUCH AS LIQUID NAILS, IS RECOMMENDED TO BE USED AT EACH JOINT AS A SEALER.

UPON COMPLETION OF THE TRENCH EXCAVATION, THE CHANNELS SHOULD BE PLACED IN ORDER ALONGSIDE THE EXCAVATION AND ACCORDING TO THE JOB LAYOUT.

AFTER ATTACHMENT OF ACESSORIES, ANCHOR AND LEVEL TRENCH IN THE EXCAVATION USING CONCRETE PATTIES AROUND THE FEET. MAKE FINISH POUR OF CONCRETE AND BE CERTAIN TO PROPERLY VIBRATE CONCRETE TO ELIMINATE ANY UNWANTED VOIDS. FINISH TROWELING SHOULD BE DONE TO SET THE TOP EDGE OF THE TRENCH DRAIN 1/16" [1.6MM] BELOW THE FLOOR GRADE. REMEMBER TO COMPENSATE FOR CONCRETE SHRINKAGE THAT MAY OCCUR DURNING CURE SO THAT THE EDGE OF THE TRENCH DRAIN DOES NOT PROTRUDE ABOVE THE FINISHED FLOOR GRADE.

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seal

CONSTRUCTION
DOCUMENTATION

general notes

1. Any conflicts in the drawings or between new and existing construction shall be referred to the Architect.
2. Contractor shall verify all dimensions and existing conditions in the field and shall advise **Fukui Architects, Pc** of any discrepancies between, additions to, deletions from, or alterations to any and all conditions prior to proceeding with any phase of work. **Do not scale drawings.**
3. All work shall be installed in accordance with applicable codes and regulations.
4. Contractor shall be responsible for the patching, repairing, and preparations of all existing floor, wall, and ceiling surfaces as required to receive scheduled finishes.
5. All items shown on drawings are finished construction assemblies. Contractor shall provide and install all material required for finished assemblies.
6. All reports, plans, specifications, computer files, field data, notices, and other documents and instruments prepared by the Architect as instruments of service shall remain the property of the Architect. The Architect shall retain all common law statutory, and other reserved rights, including the copyright thereto.

revisions

1 Bidding Addendum 04.01.2025

project title

Owner:
The Housing Authority of the City of Pittsburgh
412 Boulevard of the Allies
Pittsburgh,Pennsylvania,15219

Project Location:
Renovation of 10 Scattered Sites
1318 Orangewood Avenue
Pittsburgh, Pennsylvania 15216

drawing title

2024-08-19 Specifications

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As Noted
date
August 20th, 2024
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9
of.
9

Sheet No.
A9
Project #2326