

ARRO Consulting, Inc.  
201 Thomas Johnson Drive, Suite 207  
Frederick, MD 21702

February 12, 2024

**ADDENDUM NO. 2**

**TOWN OF INDIAN HEAD, MARYLAND**

**TRAILHEAD RESTROOM  
SHA No. CH257B51  
FAP No. AC-TAP-3(871)E**

In accordance with the requirements of the “Instructions to Bidders”, this Addendum shall be attached to and become a part of the Contract Documents for the above referenced project.

*Pre-Bid Questions from Contractors*

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Question 1. The bid sheet has a line item for striping and it is listed as a lump sum, but there are specific unit price items. Should the LS item be deleted?

**Response: No. Line-item ‘e’ in the Schedule of Prices is referencing Topsoil Stripping. All pavement markings are listed in Line-items ‘m’- ‘r’.**

Question 2. Paint is shown with the block unit price. Shouldn’t these be separate?

**Response: No. Include painting of block and masonry in unit prices for Line-items ‘c’ and ‘d’.**

Question 3. The dry well detail shows bank run gravel. Should this be washed gravel?

**Response: No. The dry well detail in MDE’s stormwater manual calls out bank run gravel.**

Question 4. What is the elevation of the ceiling. There are varying elevations throughout the drawings. Should it be 8’-0” in order to accommodate the ductwork?

**Response: Yes. The elevation of the acoustical drop ceiling shall be 8’-0”.**

Question 5. The elevation of the louvers is unclear. If we course the block it appears the intake louvers is both above and below the ACT and the exhaust are shown at an elevation above the bottom of the trusses.

**Response: The bottom of exhaust louvers shall be placed at 10’-0”. Please see ‘Concerning the Drawings’ for an updated plan and detail.**

Question 6. Is there a separation between the two roof sections (bath and pavilion) to keep people from climbing into or out of the building?

**Response: There is no separation between the restroom and pavilion roof sections. The roof shall be continuous.**

Question 7. Please verify whether the flush valves and faucets are electronic. The specs call for both and the plans call out standard but show electric junction boxes.

**Response: All lavatory fixtures shall be electric. Fixtures in the utility room shall be manual. See ‘Concerning the Project Manual’ for updated specifications.**

Question 8. The inside wall chase is small – 20”. This will not meet electrical code.

**Response: Per table 300.5 in the NFPA 70 (2017) National Electrical Code (NEC), the 20” chase is compliant.**

Question 9. Will you be adding a line item for unforeseen subsurface site conditions?

**Response: Yes. Line-item ‘t’ has been added in Schedule of Prices for Unforeseen Subsurface Site Condition Excavation’. See section ‘Concerning the Project Manual’ for updated Schedule of Prices.**

#### *Concerning the Project Manual*

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- A. CP – Proposal Form Packet – Federal – Schedule of Prices: **DELETE** and **REPLACE** in its entirety; Attached to this Addendum.
- B. Section 15400 – **DELETE** and **REPLACE** in its entirety; Attached to this Addendum.

#### *Concerning the Drawings*

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- A. Sheet No. 7 of 13 - **DELETE** and **REPLACE**, Revised on February 9, 2024; Attached to this Addendum.
- B. Sheet No. 8 of 13 - **DELETE** and **REPLACE**, Revised on February 9, 2024; Attached to this Addendum.
- C. Sheet No. 10 of 13 - **DELETE** and **REPLACE**, Revised on February 9, 2024; Attached to this Addendum.

#### *Miscellaneous Items*

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None.

END OF ADDENDUM NO. 2

BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPECIFIED PLACE ON THE BID FORM. THE ABSENCE OF THIS ACKNOWLEDGMENT WILL BE CAUSE FOR REJECTION OF THE BID.

**CONTRACT PROVISIONS  
PROPOSAL FORM PACKET- FEDERAL  
SCHEDULE OF PRICES**

CONTRACT NO. CH257B51  
FAP NO. AC-TAP-3(871)E  
1 of 3

Item No.	Description	Unit	Qty.	Unit Price	Total Price
<b>1</b>	<b>Site</b>				
a	Miscellaneous Grading	LS	1	\$	\$
b	Miscellaneous Excavation	LS	1	\$	\$
c	Sidewalk	SY	210	\$	\$
d	Detectable Warning Surfaces	SF	40	\$	\$
e	Topsoil Stripping	LS	1	\$	\$
f	Install 6" PVC (Include Excavation and Standard Backfill)	LF	246.5	\$	\$
g	Sanitary Sewer Cleanout	EA	1	\$	\$
h	Install 1 1/2" PVC (Include Excavation and Standard Backfill)	LF	33.5	\$	\$
i	1" Water Main	EA	1	\$	\$
j	Silt Fence	LF	230	\$	\$
k	Stabilized Construction Entrance	TON	14	\$	\$
l	Dry Wells	EA	4	\$	\$
m	Pavement Markings Paint Lines (6" White)	LF	480	\$	\$
n	Pavement Marking Paint Lines (5" White)	LF	110	\$	\$
o	Pavement Marking Paint Lines (12" White Thermoplastic)	LF	100	\$	\$
p	Pavement Marking Paint Lines (12" White)	LF	53	\$	\$
q	Pavement Marking Paint Lines (4" White)	LF	38	\$	\$
r	Pavement Markings Paint Legends	SF	60	\$	\$
s	Signs	SF	32	\$	\$
t	Unforeseen Subsurface Site Condition Excavation	CY	20	\$	\$
	Item 1 Subtotal			\$	
<b>2</b>	<b>Building</b>				
a	Concrete Footing (202LF x 2' x1')	CY	15	\$	\$
b	Concrete Slab ( 61.17'x26.67'x0.42")	CY	25.5	\$	\$
c	Masonry (4" brick/8" Block), painted interior	SF	860	\$	\$

**CONTRACT PROVISIONS  
PROPOSAL FORM PACKET- FEDERAL  
SCHEDULE OF PRICES**

CONTRACT NO. CH257B51  
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d	Masonry (8"block), painted interior	SF	794	\$	\$
e	Brick Columns and footings	SF	30	\$	\$
f	Stl Tube Columns (6x6x1/4)	LF	70	\$	\$
g	Hollow Metal Doors	EA	4	\$	\$
h	Interior Plywood Sheathing (Ceiling)	SF	895	\$	\$
I	Exterior Plywood Sheathing (Roof)	SF	2100	\$	\$
m	Acoustical Drop Ceiling (Restrooms)	SF	675	\$	\$
n	Wood Trusses	EA	32	\$	\$
o	Metal Roofing Panels	SF	2100	\$	\$
p	Metal Siding (Gable End)	SF	75	\$	\$
q	Timber Girders (3 - 2x10)	LS	1	\$	\$
r	Misc Metals (WWF, Stl Plates, etc)	LS	1	\$	\$
s	Restroom Flooring (2 part epoxy)	SF	560	\$	\$
t	Alum Gutter & Downspouts	LF	170	\$	\$
	Item 2 Subtotal			\$	
<b>3</b>	<b>Plumbing</b>				
a	WC and partitions	EA	4	\$	\$
b	Handicapped WC and partitions	EA	2	\$	\$
c	Urinals and screens	EA	2	\$	\$
d	Sinks and accessories	EA	5	\$	\$
e	Exterior Drinking Fountains	EA	2	\$	\$
f	1 1/2" copper installed	LF	115	\$	\$
g	1/2" copper installed	LF	73	\$	\$
h	4" PVC installed	LF	36	\$	\$
i	3" PVC installed	LF	65	\$	\$
j	2" PVC installed	LF	11	\$	\$
k	3/4" copper installed	LF	7.5	\$	\$
l	1" copper installed	LF	5.5	\$	\$
	Item 3 Subtotal			\$	
<b>4</b>	<b>HVAC</b>				
a	Exhaust Fans	EA	7	\$	\$
b	24'x16" Louvers and Dampers	EA	2	\$	\$
c	12"x10" Exhaust Duct	LF	81	\$	\$
d	16"x16" Stationary Exhaust Louver	EA	4	\$	\$

**CONTRACT PROVISIONS  
PROPOSAL FORM PACKET- FEDERAL  
SCHEDULE OF PRICES**

CONTRACT NO. CH257B51  
FAP NO. AC-TAP-3(871)E  
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e	Duct to Louver Connector	EA	2	\$	\$
Item 4 Subtotal				\$	
<b>5</b>	<b>Electrical</b>				
a	LED Lights (Picnic Area)	EA	9	\$	\$
b	LED Lights (Restrooms)	EA	8	\$	\$
c	Wall Insert Electric Heaters	EA	3	\$	\$
d	Electrical Service, Wiring, and Panelboard	LS	1	\$	\$
Item 5 Subtotal				\$	
<b>6</b>	<b>Alternate bid Items</b>				
a	Provide & Install 3/4-inch Water House Connection (incl. Excavation, standard Backfill & Meter Setting)	EA	1	\$	\$
b	Provide and install 6" PVC SDR 26 (incl. Excavation, standard Backfill & Meter Setting)	LF	5	\$	\$
c	Provide and install 8" PVC SDR 35 (incl. Excavation, standard Backfill & Meter Setting)	LF	5	\$	\$
Item A Subtotal				\$	
Mobilization and Closeout (5%)				\$	
Bonds and Insurance (2%)				\$	
<b>TOTAL BASE BID</b>				\$	

Grand Total BASE BID PRICE (Figures): \$

Grand Total BASE BID PRICE (Words): \$

Grand Total ALTERNATE BID ITEMS (Figures): \$

Grand Total ALTERNATE BID ITEMS (Words): \$

## **SECTION 15400**

### **PLUMBING**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Installation and materials.

##### **1.02 RELATED SECTIONS**

- A. Trenching, Backfilling, and Compacting: Section 02221.
- B. Basic Mechanical Requirements: Section 15010.
- C. Basic Materials and Methods: Section 15050.
- D. Supports, Anchors, and Seals: Section 15090.

##### **1.03 REFERENCES**

- A. American Society of Mechanical Engineers (ASME) Pressure Vessel Code and Interpretations as applies to specified Products.
- B. American Society of Sanitary Engineering, Stds. ASSE 1011, 1012 & 1013.
- C. International Building Code, Plumbing, 2006 or latest edition adopted by the Town.
- D. Plumbing and Drainage Institute: Standard P.D.I. - WH201.
- E. Underwriters' Laboratories (UL) Listings and Approvals on specified Products.
- F. National Electric Manufacturer's Association (NEMA) Standards as apply to specified Products.
- G. National Fire Protection Association (NFPA).

##### **1.04 SUBMITTALS**

- A. Product Submission: As specified in Section 15010.

- B. Operations and Maintenance Data:
  - 1. Manufacturer's of plumbing fixtures, trim and fittings shall include complete instructions with their products giving directions for replacing renewable parts of their products as well as instructions for cleaning the finished surfaces of such products.
  - 2. Include above stated data as part of the Submittals of Section 15010.

## 1.05 JOB CONDITIONS

- A. Protection:
  - 1. Use non-marring tools when making up plated piping to prevent scarring or other surface damage.
  - 2. Provide adequate protective covering on fixtures and trim to prevent damage or defacement. Maintain such protection until completed work is accepted by the Engineer.
  - 3. Store fixtures and trim at the site and elsewhere, protected from the elements.
  - 4. Protect motors and electrical apparatus from construction debris and water during plumbing work in the vicinity of such equipment. Such protection may be afforded by using impervious membrane material sheets or other impervious materials of Contractor's choosing.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Basic Piping Materials: Pipe and pipe fitting materials, and associated installation materials as specified in Section 15050.
  - 1. Piping system material types for this Section are as abbreviated herein with material particulars specified in Section 15050.
- B. Pipe Supports, Anchors and Seals: Materials as specified in Section 15090.
- C. Contractor Option: Several types of pipe materials are listed herein at the Contractor's option for the various piping systems. However, mixing of pipe materials in a system will not be permitted; except where specified otherwise herein or where directed otherwise by the Engineer. No piping option permitted where only one pipe material is specified for a piping system.
- D. Domestic Hot and Cold Potable Water Piping:
  - 1. Type L Copper with SOLDER joints, aboveground.
  - 2. Type K Copper with FLARED joints, underground.
- E. Soil or Waste and Vent Piping:
  - 1. Plastic (PVC) with SOLVENT WELDED joints, aboveground.



- F. Rainwater Conductor Piping:
  - 1. Plastic (PVC) with SOLVENT WELDED joints, aboveground.

## 2.02 PIPING SPECIALTIES

- A. Flexible Connectors: As specified in Section 15050.
  - 1. Ferrous Metal and Non-Ferrous Metal Unions and Strainers: As specified in Section 15050.
- B. Backflow Preventer (1/2- & 3/4-inch): Sweat type bronze body, double check valve pressure design with intermediate atmospheric vent. Suitable for continuous pressure use, approved under ASSE Standard 1012.
- C. Backflow Preventer (1-inch and larger): Threaded type bronze construction, stainless steel internal parts and flange bolts, and tight-sealing rubber check valve assemblies. Suitable for supply to 175 psi and 140°F. temperature.
  - 1. Complete assembly includes supply strainer, gate valves before and after the device and device composed of a pressure differential relief valve between two positive seating check valves and an intermediate atmospheric vent.
  - 2. Backflow preventer approved under ASSE Standard 1013.
  - 3. Acceptable Manufacturers:
    - a. Watts Regulator Company, No. 909.
    - b. Hersey-Products, Inc.
    - c. ITT Lawler.
    - d. Or Approved Equal.
- D. Water Hammer Arrestors: Threaded type of corrosion-resistant construction and pneumatic displacement, elastomer bellows design.
  - 1. Arrestors tested, certified and sized per P.D.I. Standard WH 201.
  - 2. Acceptable Manufacturers:
    - a. Josam Manufacturing Co., No. 1485-1 to 1485-6.
    - b. Zurn Industries, Inc., No. Z-1700-100 to 400.
    - c. Wade.
    - d. Smith.
    - e. Or Approved Equal.

## 2.03 VALVES

- A. Basic Valves: As specified in Section 15050.
- B. Balancing Valve: Solid Bronze construction for applications 1¼-inch and under, and iron body bronze plug for applications 1-inch and above. Valve rated 200 psi water non-shock, 240°F maximum water temperature. Balance position set and locked by allen screw.
  - 1. Acceptable Manufacturers:
    - a. Sarco Company, Inc.; Type V Sarcoflow.

- b. Crane Company.
  - c. ITT Hoffman Specialty.
  - d. DeZurik.
  - e. Or Approved Equal.
- C. Hose Bibbs (Interior): Solid bronze construction, angle pattern, renewable washer, sweat copper to standard 3/4-inch hose end outlet.
- D. Non-Freeze Hose Bibbs: Provide non-freeze design wall hydrant for standard 3/4-inch hose end outlet and of length suited to wall thickness.
- 1. Hydrant of cast bronze construction with removable T handle operator, brass operating mechanism, adjustable locknut, removable nylon seat, 3/4-inch sweat inlet, polished brass face, and supplied with vacuum breaker, ASSE Standard 1011.
  - 2. Acceptable Manufacturers:
    - a. Josam Manufacturing Co., No. 71200(-53) (-81).
    - b. Zurn Industries, Inc., No. Z-1315-5.
    - c. Wade.
    - d. Smith.
    - e. Or Approved Equal.

#### 2.04 TRAPS, DRAINS, AND CLEANOUTS

- A. Pipe Traps: Provide traps in piping systems, as required by local prevailing code, composed of fittings of materials as specified for the particular system piping.
- 1. This requirement does not apply to plumbing fixtures where the trap is specified in the plumbing fixture description.
- B. Drains:
- 1. Materials: Gray iron castings produced to PDI standards and having a 25,000 psi minimum tensile strength. Castings finished in manufacturer's standard rust inhibitive coating except for plated surfaces.
  - 2. Acceptable Manufacturers:
    - a. Josam Manufacturing Co.
    - b. Zurn Industries, Inc.
    - c. Wade Division-Tyler Pipe.
    - d. Jay R. Smith Manufacturing Co.
    - e. Or Approved Equal.
- C. Drain Accessories: Provide the following for those drains as indicated on Drawings.
- 1. Backwater Valve: Similar to Josam No. 11000 Series with extension to finished floor.
  - 2. Trap Seal Primer Valve: Similar to Josam No. 1465 Series.

- D. Cleanouts, Cover Plates and Caps: Designed for inside caulked connection with lead sealed brass plugs, adjustable housing, and heavy scoriated brass cover.
  - 1. Floor Cleanout (CONCRETE); Josam Series No. 56040-2.
  - 2. Wall Cleanout Cover Plate; Josam Series No. 58600-18.
  - 3. Cleanout Ferrule; Josam Series No. 58500.
  - 4. Cleanout Tee; Josam Series No. 58790-18.
  - 5. Wall Cleanout and Access Cover; Josam Series No. 58710-18.
  - 6. Or Approved Equal.

2.05 PLUMBING FIXTURES

- A. General: Provide glazed finish fixtures free from discoloration, chips, flaws, craze and absorbency. Vitreous ware shall be fired first quality china, thoroughly fused and homogeneous in color, close grained and free from pores.
- B. Fittings and Trim:
  - 1. Provide fixture fittings and trim of chrome plated brass, and unless specified otherwise, of the same manufacturer as the fixtures, including P-traps, supply pipes, supply stops, union connections and escutcheons.
  - 2. Use fixture trim of such design that working threads, seats and discs are easily renewed without taking the body of the fitting apparatus from the fixture or supply lines.
- C. Fixture Supports and Carriers: Provide fixture supports and carriers designed to accommodate the fixture types as specified and as suited to the particular installation requirements of such fixtures.
  - 1. Acceptable Manufacturers:
    - a. Josam Manufacturing Co.
    - b. Zurn Industries, Inc.
    - c. Wade Division-Tyler Pipe.
    - d. Jay R. Smith Manufacturing Co.
    - e. Or Approved Equal.
- D. Fixture Color: White except where indicated otherwise in the Fixture Schedule.
- E. The following gallons per flush or flow in gallons per minute are required water use baseline for project:

Water Closets Flushometer Valve	1.28 gallons per flush
Urinals Flushometer Valve	0.125 gallons per flush
Lavatory Faucet	0.5 gallons per minute at 60 psi

Provide automatic (electronic hand free) capacitive-sensor-operated controls for all fixtures. Sensor module shall be water-conserving, vandal resistant, capacitive-sensing with omni-directional sensing zone, timing turn-off delay and stationary object automatic timed cutoff.

Fixtures shall be water conservation type, in accordance with ASHRAE 189.1 Section 6.3.2.1 (Plumbing Fixtures and Fittings). Fixtures for use by the physically handicapped shall be in accordance with ADA/ANSI A117.1.

F. Fixture Schedule:

P-1 Water Closet:

- a. Bowl: Water-saver, wall-mounted, elongated bowl, vitreous china, siphon jet action, back outlet with flushometer. Acceptable Manufacturers:
  - 1) American Standard; 2477.016 AFWALL (3.5) ((OR)) 2257.103 AFWALL (1.6).
  - 2) Kohler; K-4430-ET KINGSTON.
  - 3) Eljer; 111-0405 AUBURN.
  - 4) Or Approved Equal.
- b. Seat: White, hydraulically compressed plastic, elongated open front less cover, self-sustaining, with stainless steel hinge posts and concealed check. Acceptable Manufacturers:
  - 1) Church; 5320.536.
  - 2) Kohler; K-4666-SC.
  - 3) Olsonite; 95CC-SS.
  - 4) Or Approved Equal.
- c. Flush Valves: Polished Chrome finish, hardwired automatic sensor with manual push button override, 1-inch I.P.S. screwdriver angle stop, with protective cap, adjustable tailpiece, vacuum breaker flush connection and spud coupling for 1½-inch top spud, wall and spud flanges and override button. Acceptable Manufacturers:
  - 1) Sloan; Royal 111 SFMS-1.28-TMO-LT
  - 2) Zurn; ZEMS6000-IS
  - 3) Or Approved Equal.

P-2 Water Closet (For Physically Handicapped):

- a. Bowl: Water-saver, wall-mounted, vitreous china, siphon jet action, elongated bowl, 1½-inch top spud. Acceptable Manufacturers:
  - 1) American Standard; 2477.016 AFWALL.
  - 2) Kohler; K-4430-ET KINGSTON.
  - 3) Eljer; 111-0405 AUBURN.
  - 4) Or Approved Equal.
- b. Seat: White, hydraulically compressed plastic, elongated open front less cover, self-sustaining, with stainless steel hinge posts and concealed check; Acceptable Manufacturers:
  - 1) Church; 5320.536.
  - 2) Kohler; K-4666-SC.
  - 3) Olsonite; 95CC-SS.
  - 4) Or Approved Equal.
- c. Flush Valve: Polished Chrome finish, hardwired automatic sensor with manual push button override, 1-inch I.P.S. screwdriver angle stop, with protective cap, adjustable tailpiece, vacuum breaker flush connection and

spud coupling for 1½-inch top spud, wall and spud flanges and override button; Acceptable Manufacturers:

- 1) Sloan; Royal 111 SFSM-1.28-TMO-LT
- 2) Zurn; ZEMS6000-IS
- 3) Or Approved Equal.

P-3 Urinal:

- a. Shell: Vitreous china washout, wall hung, siphon jet type, integral trap, extended side shields, ¾-inch inlet spud, outlet connection threaded 2-inch inside. Acceptable Manufacturers:
  - 1) American Standard; 6501.010 WASHBROOK (1.0 GPF).
  - 2) Kohler ; K-4980-T BARDON.
  - 3) Eljer; 161-1030 CORRECTO.
  - 4) Or Approved Equal.
- b. Flush Valve: Polished Chrome finish, hardwired automatic sensor with manual push button override, ¾-inch I.P.S. screwdriver bak-chek angle stop with protective cap, adjustable tailpiece, vacuum breaker, flush connection and spud coupling for ¾-inch top spud, wall and spud flanges. Acceptable Manufacturers:
  - 1) Sloan; Royal 186 SFSM-0.125-TMO-LT
  - 2) Zurn; ZEMS6195AV-ULF
  - 3) Or Approved Equal.

P-4 Urinal (For Physically Handicapped):

- a. Shell: Vitreous china washout, wall hung, siphon type, integral trap, ¾-inch inlet spud, outlet connection threaded 2-inch inside; Acceptable Manufacturers:
  - 1) American Standard; 6501.010 WASHBROOK (1.0 GPF).
  - 2) Kohler; K-4960-T BARDON.
  - 3) Eljer; 161-1030 CORRECTO.
  - 4) Or Approved Equal.
- b. Flush Valve: Polished Chrome finish, hardwired automatic sensor with manual push button override, ¾-inch I.P.S. screwdriver bak-chek angle stop with protective cap, adjustable tailpiece, vacuum breaker, flush connection and spud coupling for ¾-inch top spud, wall and spud flanges; Acceptable Manufacturers:
  - 1) Sloan; Royal 186 SFSM-0.125-TMO-LT
  - 2) Zurn; ZEMS6195AV-ULF
  - 3) Or Approved Equal.

P-5 Lavatory:

- a. Bowl: Countertop design, self-rimming lavatory, fitting ledge, enameled cast iron construction with front overflow and 8-inch centers punch, deck mounted faucets and 32 oz. liquid soap dispensers made of stainless steel, oval configuration (20 x 17-inches). Acceptable Manufacturers:
  - 1) American Standard; 3302.015 OVAL HORIZON.
  - 2) Kohler; K-2905 FARMINGTON.
  - 3) Eljer; 052-2078.
  - 4) Or Approved Equal.

- b. Faucet: Hardwired sensor faucet, 4 inch center set, 1.5 GPM, and ADA compliant. Acceptable Manufacturers:
  - 1) American Standard
  - 2) Kohler
  - 3) Sloan
  - 4) Or Approved Equal.
- c. Supply Piping: 3/8-inch angle valve, wheel handle, 3/8-inch male threaded inlet, escutcheon, flexible tube riser, chrome finish.
- d. Drain: Adjustable cast brass 'P'-trap, swivel-ell, 1/4-inch inlet, 1/4-inch outlet, cleanout plug, chrome finish.

P-6 Lavatory (For Physically Handicapped):

- a. Bowl: Countertop design with fitting ledge, front overflow, acid-resisting enameled cast iron, 8-inch centers; Acceptable Manufacturers:
  - 1) American Standard; 3210.044 LEDGELYN.
  - 2) Kohler; K-2902 FARMINGTON.
  - 3) Eljer; 052-0248 CLEMENT.
  - 4) Or Approved Equal.
- b. Faucet: Hardwired sensor faucet, 4 inch center set, 1.5 GPM, and ADA compliant. Acceptable Manufacturers:
  - 1) American Standard
  - 2) Kohler
  - 3) Sloan
  - 4) Or Approved Equal.

P-7 Service Sink:

- a. Sink: Wall-mounted design, enameled cast iron service sink with wall hanger for through-back faucet, rim guard and standard P-trap with enameled strainer; Acceptable Manufacturers:
  - 1) American Standard; 7692.049 LAKEWELL.
  - 2) Kohler; K-6716.
  - 3) Eljer; 242-0135.
  - 4) Or Approved Equal.
- b. Faucet: Renewable seats, hose outlet spout end, bucket hook, indexed lever handles, inlets 1/2-inch female adjustable union couplings; Acceptable Manufacturers:
  - 1) American Standard; 8340.234.
  - 2) Kohler; 8924.
  - 3) Eljer; 749-0500.
  - 4) Or Approved Equal.

G. Dual Accessible Water Fountain:

- 1. Easy-Touch Push bar activation
- 2. Extra deep basin to minimize splashing; with integral drain
- 3. Vandal resistant bubbler
- 4. Valve with built-in flow regulator to provide constant stream from 20 to 105 psi water pressure.

5. For outdoor applications.
6. Bubbler outlet orifice shall be located within 36” of the floor.
7. Bubbler outlet orifice shall be located within 6” of the front edge of the drinking fountain.
8. The water stream from the bubbler shall be substantially parallel to the front edge of the drinking fountain – or – for round or oval fountains, positioned so that the flow of water is within 3” of the front edge of the drinking fountain.
9. The spout shall provide a flow of water at least 4” high so as to allow the insertion of a cup or glass under the flow of water.

H. Hand Blower

1. Wall mount, 110 volt hand blow dryer, vandal resistant of stainless steel construction.

I. Baby Changing Station

1. Fixed-type baby changing station constructing of maintenance free solid surface material.

## 2.06 PLUMBING EQUIPMENT

A. Small Capacity Electric Water Heater: UL Listed electric heater with high carbon steel glass or stone lined tank suitable for 150 psig working pressure with ¾” inlet and ¾” outlet and front-mounted drain valve.

1. Tank protected with high-density magnesium anode and an ASME rated pressure temperature relief valve. Tank insulated with 1-inch minimum, dense glass fiber and encased in an enameled steel jacket.
2. UL Listed electric heating elements of low watt density immersion type, zinc-plated copper sheathed and flange-mounted with no-simultaneous element operation control, immersion type thermostat set at 120°F., high limit cut-off, and factory wired from an integral junction box.
3. Acceptable Manufacturers:
  - a. A.O. Smith Pro-Max EJC-6
  - b. W. L. Jackson Mfg. Co., Inc.
  - c. Rudd Mfg. Co.
  - d. Or Approved Equal.

## PART 3 - EXECUTION

### 301 INSPECTION

- A. Condition of Rough-Ins: Inspect rough-ins and determine exact fixture location with respect to the Drawings.
- B. Do not proceed until fixture positions are verified, or any adjustments in fixture locations are approved by the Engineer.

### 3.02 PERFORMANCE

- A. Installation Instructions: Install those Products, as specified previously under PART 2 and not specifically covered for installation herein under PART 3, in strict accordance with manufacturer's installation instructions and at locations indicated on the Drawings.
- B. Electrical Interface: As specified in Section 15010.
- C. Equipment Start-Up: Perform equipment start-up and ensure its proper operation prior to acceptance of Work by the Engineer.

### 3.03 PIPING INSTALLATION

- A. Fabrication: Make up piping runs as specified in Section 15050.
- B. Installation: Place and support piping runs as specified in Section 15090.
- C. Trenching: Perform earthwork for buried piping as specified in Section 02221.
- D. Piping Pitch: Unless otherwise indicated, pitch piping not less than the following:
  - 1. Potable Water: One inch in fifty feet.
  - 2. Soil or Waste and Vent: One inch in four feet.
  - 3. Horizontal Rainwater: One inch in four feet.
- E. Reduced Pitch: Where overhead runs of sanitary, waste and vents and rainwater piping reduce headroom substantially, the pitch may be reduced to 1/8-inch per foot, when approved by the Engineer. In no case shall horizontal piping runs be installed lower than 7 feet above finished floor.
- F. Supply Piping Installation Requirements:
  - 1. Cross and Inter-Connections: Do not install piping in a manner which can create a direct cross connection or an inter-connection between potable water and polluted water, or in a manner whereby a backflow of polluted water into the potable water system could occur.
  - 2. Valve Installation: Install a valve where each branch leaves the main and at Plumbing Fixtures to facilitate repairs or replacements of such while the system is in operation. Unless indicated otherwise on the Drawings install gate valves in water lines. Install globe valves in water lines where throttling, control or bypass is required.
  - 3. In the case where fixture fittings are equipped with screw drive stops, and supply pipes are equipped with stops, such stops shall serve as the shut-off valve.
  - 4. Hose Bibb Installation:
    - a. Interior: 30 inches above finished floor.
    - b. Non-Freeze: Unless indicated otherwise, 30 inches above grade.
  - 5. Water Hammer Control: Install Water Hammer Arrestors on each Plumbing fixture supply branch and for individual runs to remote fixtures or items of equipment in accordance with P.D.I.-WH201.



- G. Soil or Waste and Vent Piping Installation Requirements:
1. Changes in Direction: Make changes in direction in soil or waste piping using the appropriate sanitary fittings according to the International Plumbing Code; except that sanitary tees may be used on vertical stacks, and short quarter bends or elbows may be used where the change in direction of flow is from horizontal to vertical.
  2. Where it becomes necessary to use short radius fittings because of space limitations, do so only with prior approval of the Engineer.
  3. Slip Joints: Slip joints permitted only in factory fabricated chrome plated trap seals for fixtures. Use drainage fitting unions for making union connections wherever practicable. The use of continuous thread bushings is prohibited.
  4. Traps: Provide a trap at the connection of each plumbing fixture, drain (except roof and outside drains) and piece of equipment requiring connection to soil or waste piping except where noted on the Drawings. Install traps as close as possible to the fixture, drain or piece of equipment; double trapping not permitted.
  5. Test Tees: Install test tees at the base of vertical soil or waste piping runs and at the base of vertical rainwater conductor runs. Install threaded brass or bronze plug to close test opening. Test Tees may be omitted where cleanouts are required at test tee locations.
  6. Cleanout Locations: Install cleanouts at locations indicated on the Drawings and as follows:
    - a. No more than 50 feet apart in horizontal soil or waste lines of four-inch nominal diameter or less and not more than 100 feet apart for larger pipes.
    - b. At each change of direction greater than 45 degrees in soil or waste lines.
    - c. Locate cleanouts on piping three inches and larger to provide 24 inches of clearance from obstruction and 18 inches clearance on piping less than three inches. Where such minimum clearances cannot be obtained report the situation to the Engineer for further instruction.
    - d. Size cleanouts same size as the pipe up to and including four inches, and not less than four inches for larger piping.
  7. Vents: Extend vent pipes to not less than 10 inches nor more than 18 inches above the roofline. Additional installation requirements as follows:
    - a. Where vents extend to the roofline in less than four-inch pipe size, increase such to four inches at least one foot below the roof and extend through the roof.
    - b. Vents on grade, or in a high foot-traffic area on the roof, shall terminate in a 180° bend with bird screen cap on the end; or extend such vents straight and install a Hooded Vent Cap on the end.
    - c. Where vents are taken on horizontal runs of soil or waste piping make such connections above the center line of the piping, either on the top or at 45 degree angle. Additionally, make such vent connections at least six inches above the flood-level rim at the highest fixture served by the same piping run.

### 3.04 PLUMBING FIXTURE INSTALLATION

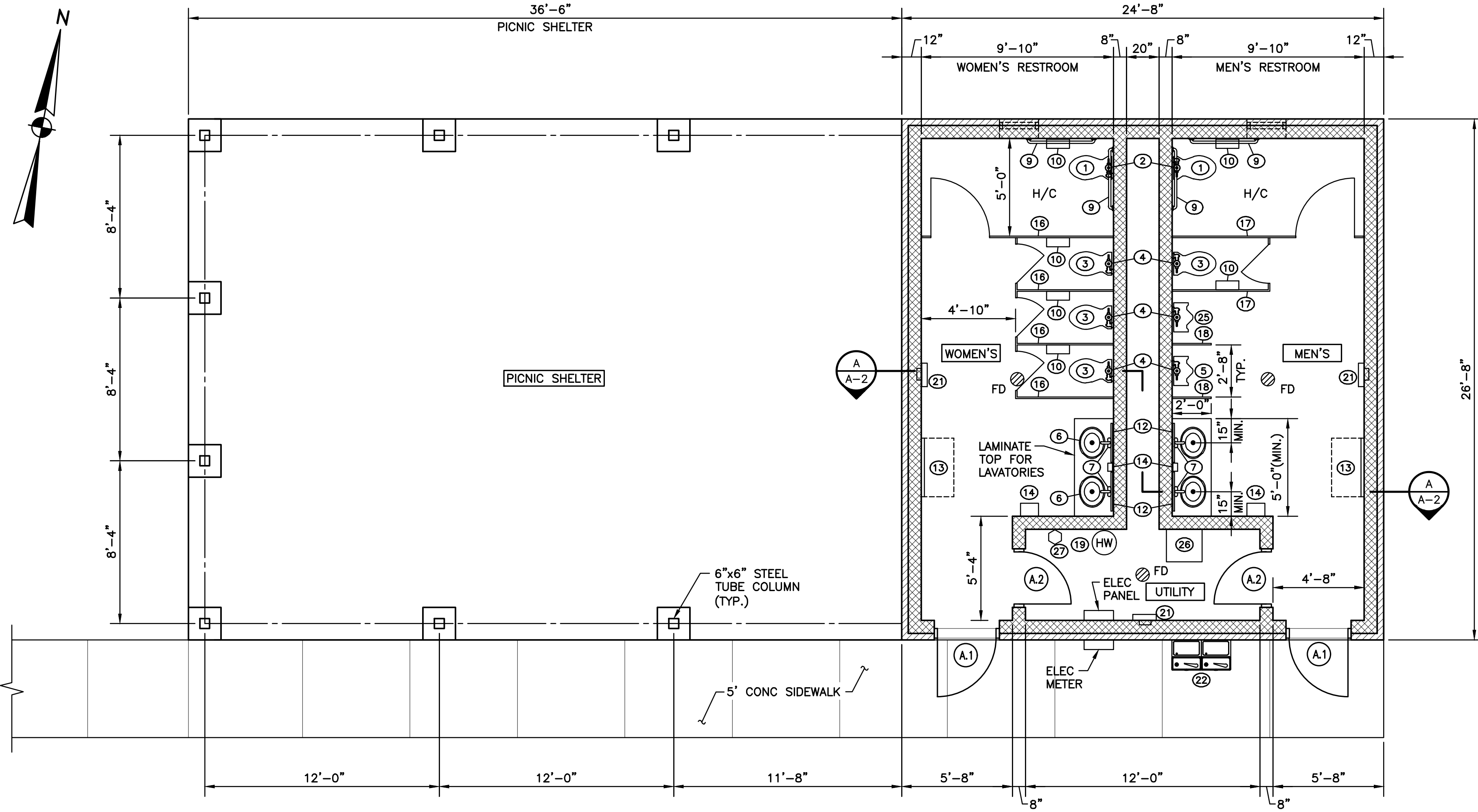
- A. Fixture Supports: Securely anchor surface-mounted fixture hangers and supports into the structure using Fasteners as specified in Section 15090.
  - 1. Install fixture Carriers according to manufacturer's installation instructions using Fasteners as previously referenced.
  - 2. Provide chrome-plated nuts, cap nuts, screw heads and washers where such are required in an exposed installation.
  
- B. Fixture Installation:
  - 1. Install wall hung fixtures plumb and square with respect to the visible structure lines.
  - 2. Set floor-mounted fixtures securely anchored in position symmetrical with the floor plan.
  - 3. Install water closets with sponge rubber closet flange gaskets; substitutes not permitted.

### 3.05 FIELD QUALITY CONTROL

- A. Tests: Do not conceal piping systems in any manner until such have been tested and approved.
  - 1. Furnish tools, materials (including water), equipment and instruments necessary for pipe testing as specified herein.
  - 2. Repair leaks discovered during testing and repeat the particular test involved. Repairs and retesting at no increase in Contract price.
  - 3. Perform tests involving water in the test, only when the structure is sufficiently heated to prevent freezing.
  - 4. Locate test pressure source on upstream side on lines containing check valves.
  
- B. Potable Water Piping Test: Hydrostatic at 50 percent over the system working pressure, but not less than 100 pounds per square inch. Prior to pressure testing take the following precautions.
  - 1. Free piping of trapped air prior to testing.
  - 2. Locate test pressure source on upstream sides on lines containing check valves, if any, and set control valves in open position for test duration.
  - 3. Do not subject equipment, piping specialties or plumbing fixtures to test pressures.
  - 4. Isolate all such items in lines that may be damaged by test pressures.
  - 5. Maintain test pressure to within 3 psi of initial test pressure, without introduction of additional pressure, until a visual examination is made of every joint and connection, but in no case less than 4 hours actual test time.
  
- C. Soil or Waste and Vent System Tests: Perform tests in accordance with applicable requirements of International Plumbing Code.

- D. Rainwater Conductor Test: Perform same tests on rainwater conductors as used for sanitary and waste and vent piping testing.
- E. Potable Water Systems Disinfection: Following successful testing of systems, perform disinfection of piping from shut-off valve at source of supply throughout the systems including connected plumbing fixtures and equipment. Disinfect in accordance with the following:
  - 1. Flush systems until sediment free.
  - 2. Fill systems with solution of calcium hypochlorite and water containing 50 parts per million of available chlorine. Use H.T.H., Perchlore, Maxochlor, or equal.
  - 3. Retain solution in systems for at least 24 hours, then drain and thoroughly flush systems until potable water is test proven comparable to water quality in the municipal water main.

**END OF SECTION**

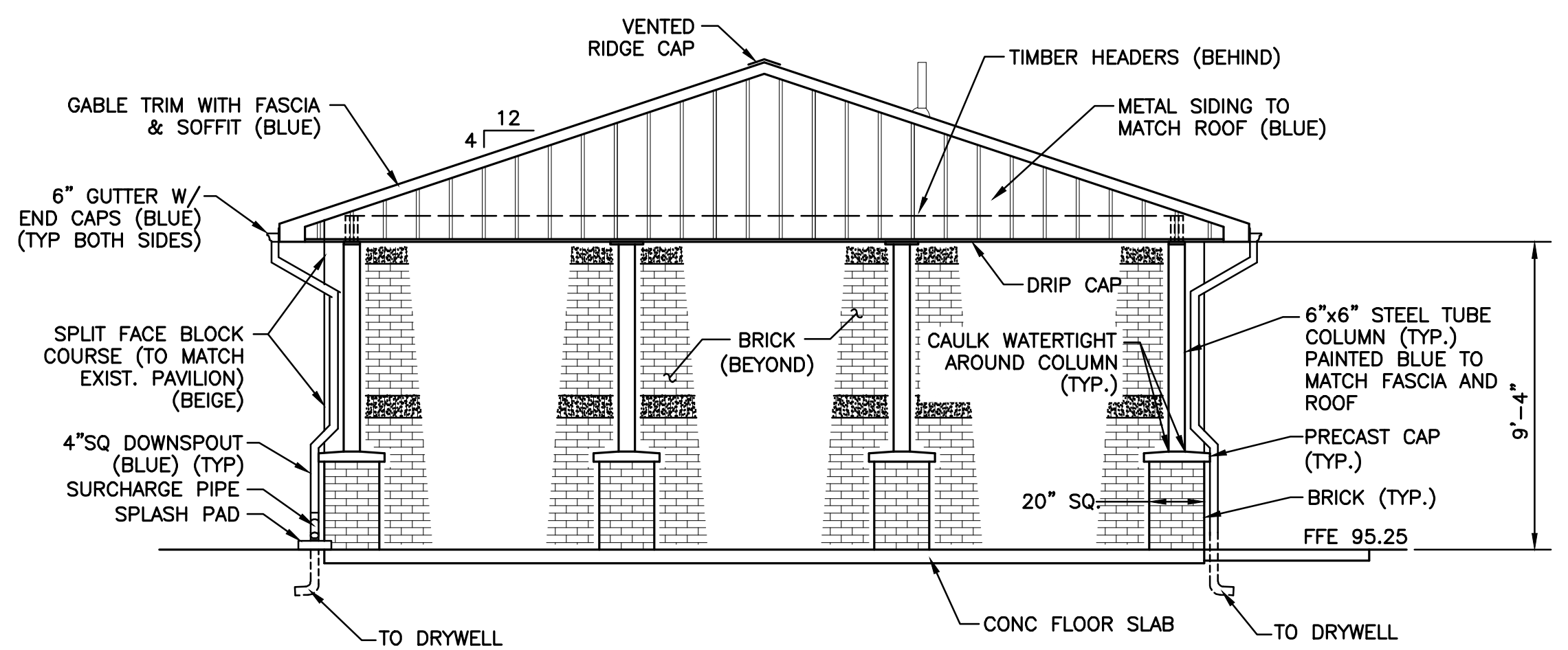


FLOOR PLAN

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

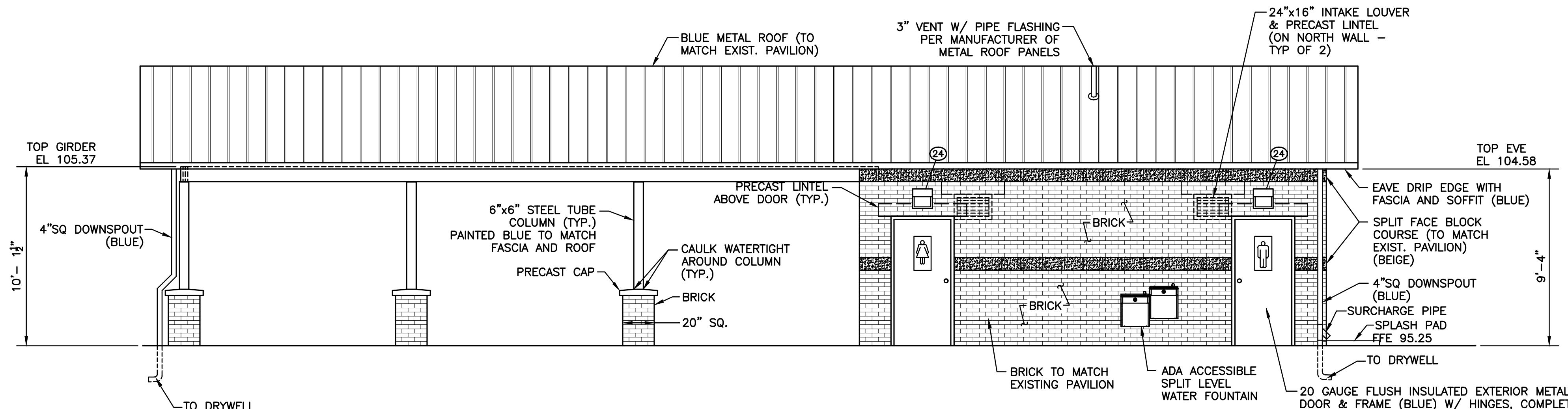
KEY LEGEND AND QUANTITY CHART						
NO	ITEM DESCRIPTION	COMPANY CONTACT	MAKE/MODEL (OR APPROVED EQUAL)	ITEM NUMBER	QUANTITY	REMARKS
1	ADA COMPLIANT TOILET	P-2 PER SPEC 15400			2	WALL HUNG
2	ADA FLUSH VALVE	P-2 PER SPEC 15400			2	WALL HUNG
3	STANDARD TOILET	P-1 PER SPEC 15400			4	
4	STANDARD FLUSH VALVE	P-1 PER SPEC 15400			4	
5	STD URINAL	P-3 PER SPEC 15400			1	
6	LAVATORY	P-5 PER SPEC 15400			4	
7	ADA COMPLIANT LAVATORY FAUCET	P-6 PER SPEC 15400			4	
8	ADA LAVATORY INSULATION KIT		RECESSED IN COUNTER TOP	N/A	4	
9	ADA GRAB BAR KIT (3 PIECES)		RECESSED IN COUNTER TOP	812	2	
10	TOILET PAPER DISPENSER	AMERAPRODUCTS	T-BRO 102EZ HANDI LAV GUARD	2328185	2	
11	SOAP DISPENSER	AMERAPRODUCTS	GRAB BAR CONCEALED ENDS	31001	6	
12	WALL MIRROR	AMERAPRODUCTS	ALTERA 12" TOILET PAPER DISPENSER	781	2	
13	BABY CHANGING STATION	AMERAPRODUCTS	SOAP DISPENSER	6583	2	
14	HAND BLOW DRYER	AMERAPRODUCTS	ROLLED FRAME CHANNEL 24"x36"	100-EH-TRF	2	
15	(NOT USED)		BROCAR HORIZONTAL BABY STATION	E88	2	110-120V, 1850 WATTS MOUNTED 40" FROM FLOOR FOR HC
16	LADIES STALL PARTITION		SANIFLOW PUSH BUTTON HAND DRYER		3	
17	MENS STALL PARTITION		DOUBLE STALL/STANDARD HANDICAP		1	PER SPEC SECTION 10160
18	MENS URINAL PARTITION		SINGLE STALL HANDICAP		1	PER SPEC SECTION 10160
19	ELECTRIC WATER HEATER	A. O. SMITH	URINAL SCREEN	EJC-6	1	PER SPEC SECTION 10160
20	(NOT USED)		FRG-MAX EJC-6		1	120V, 1650 WATT, 6-GALLON
21	ELECTRIC WALL HEATER (RECESSED)				3	SEE HVAC PLAN & SPECIFICATIONS (DWG MEP-1)
22	DUAL ACCESSIBLE WATER FOUNTAIN	ACORN AQUA	DUAL LEVER OUTDOOR SQUARED DRINKING FOUNTAIN, FREEZE RESISTANT, POWDER COATED BLUE	A1G2700B-BP6-FRA4	1	OUTDOOR APPLICATION
23	(NOT USED)				2	SEE ELECTRICAL PLAN & SPECIFICATIONS (DWG MEP-1)
24	EXTERIOR LIGHT				1	WALL HUNG
25	ADA URINAL	P-4 PER SPEC 15400			1	
26	UTILITY SLOP SINK	P-7 PER SPEC 15400			1	
27	FIRE EXTINGUISHER				1	

- NOTES:
- ALL POCKETS FOR RECESSED ACCESSORIES TO BE FORMED WITH SOLID 4" CMU BEHIND OPENINGS.
  - ALL ACCESSIBLE ELEMENTS & FIXTURES SHALL COMPLY WITH ANSI/ICC A117.1.98. SUBJECT TO FIELD INSPECTION & APPROVAL.
  - ALL EXPOSED PIPING TO BE INSULATED.



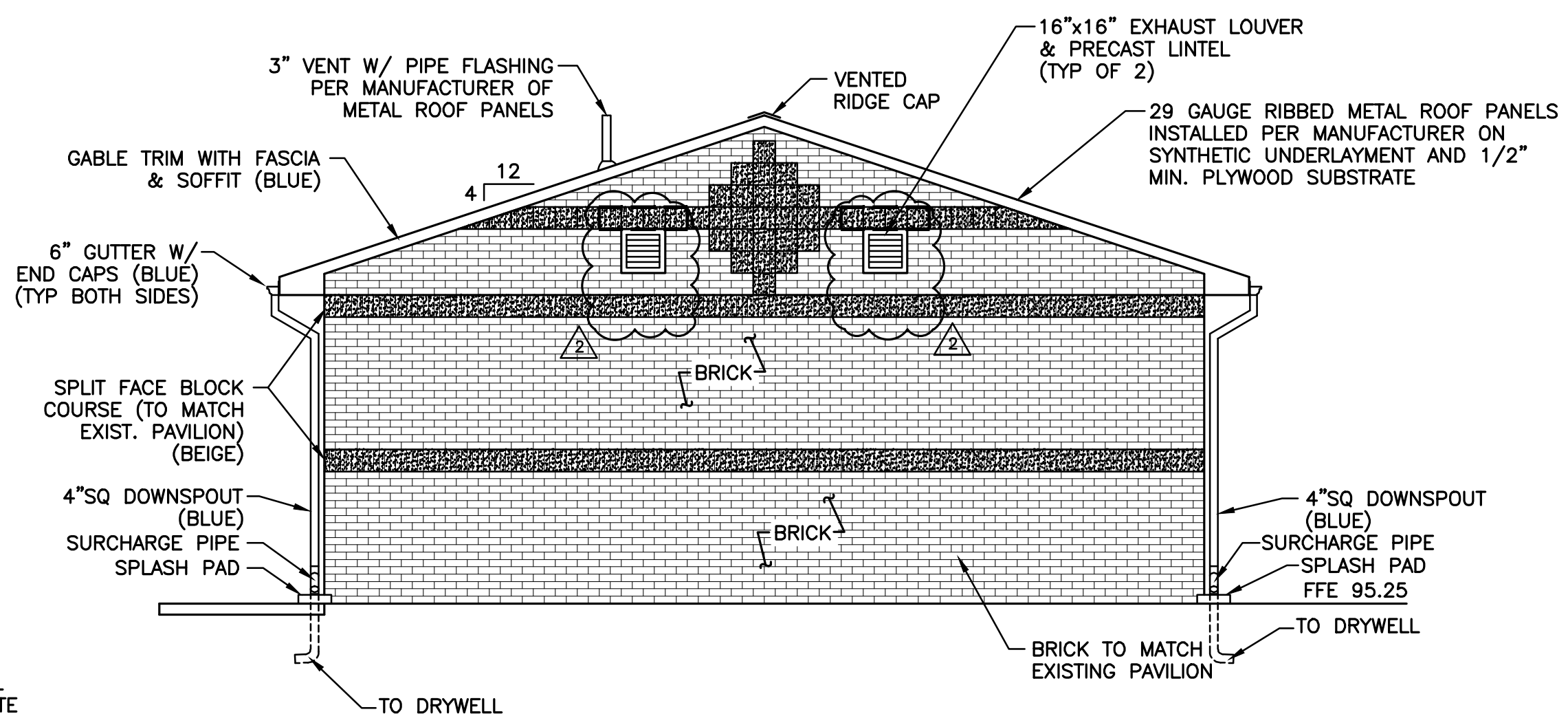
WEST ELEVATION

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



SOUTH ELEVATION

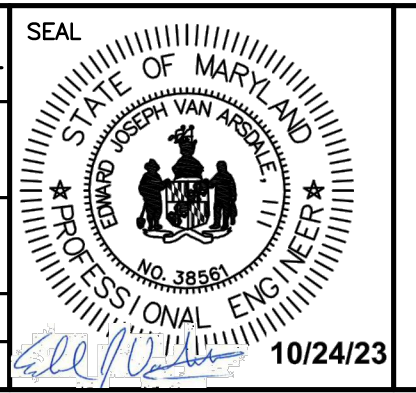
SCALE: 1/4"=1'-0"



EAST ELEVATION

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

NO	REVISION	DATE	BY	APP.	NO	REVISION	DATE	BY	APP.
1	ISSUED FOR CONSTRUCTION								
0	ISSUED FOR BID								
D	CLIENT COMMENTS	02/02/16	JLW	RD					
C	CLIENT COMMENTS	11/13/13	AM	RD					
B	CLIENT COMMENTS	3/21/13	AM	RD					
A	ISSUED TO CLIENT	2/18/13	AM	RD					

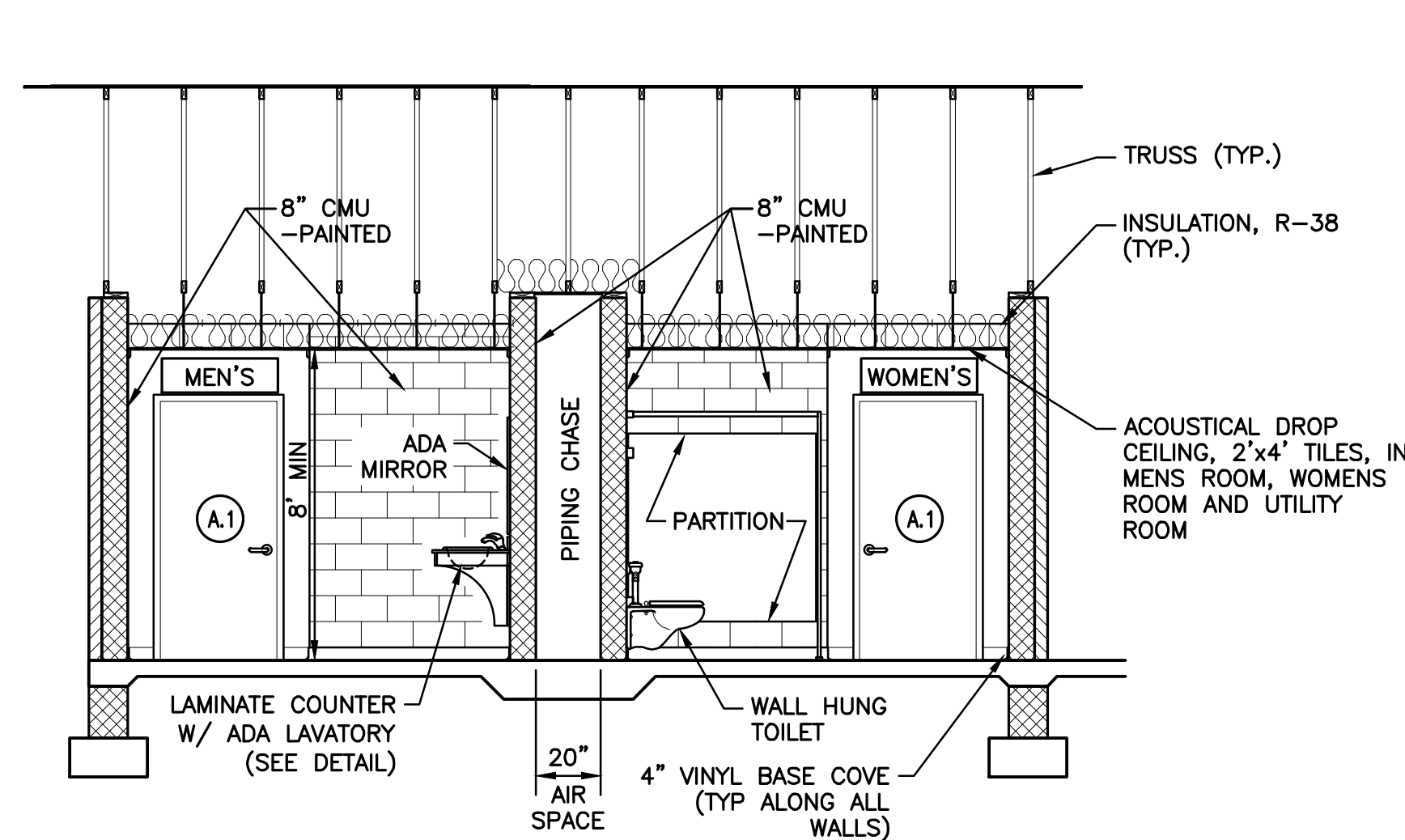


PROFESSIONAL CERTIFICATION  
 I, EDWARD JOSEPH VAN ARSDALE, III, P.E. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 36561, Expiration Date: 3/31/2024

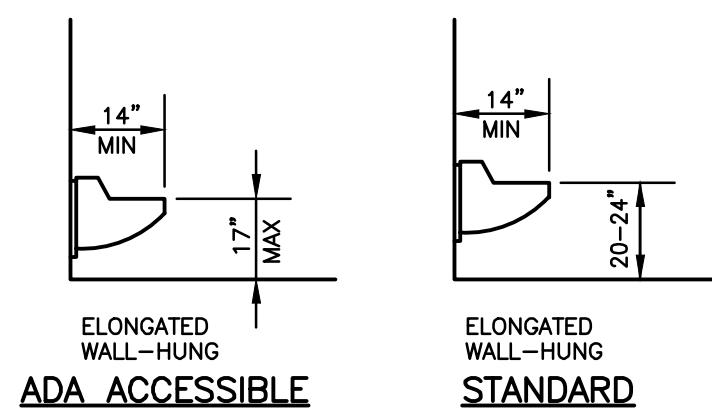
CLIENT & PROJECT  
 TOWN OF INDIAN HEAD  
 4195 INDIAN HEAD HIGHWAY  
 INDIAN HEAD, MARYLAND, 20640  
 INDIAN HEAD RESTROOM FACILITY  
 INDIAN HEAD, CHARLES COUNTY, MARYLAND

ARRG  
 201 Thomas Johnson Drive, Suite 207  
 Frederick, Maryland 21702  
 Tel 301.791.1100

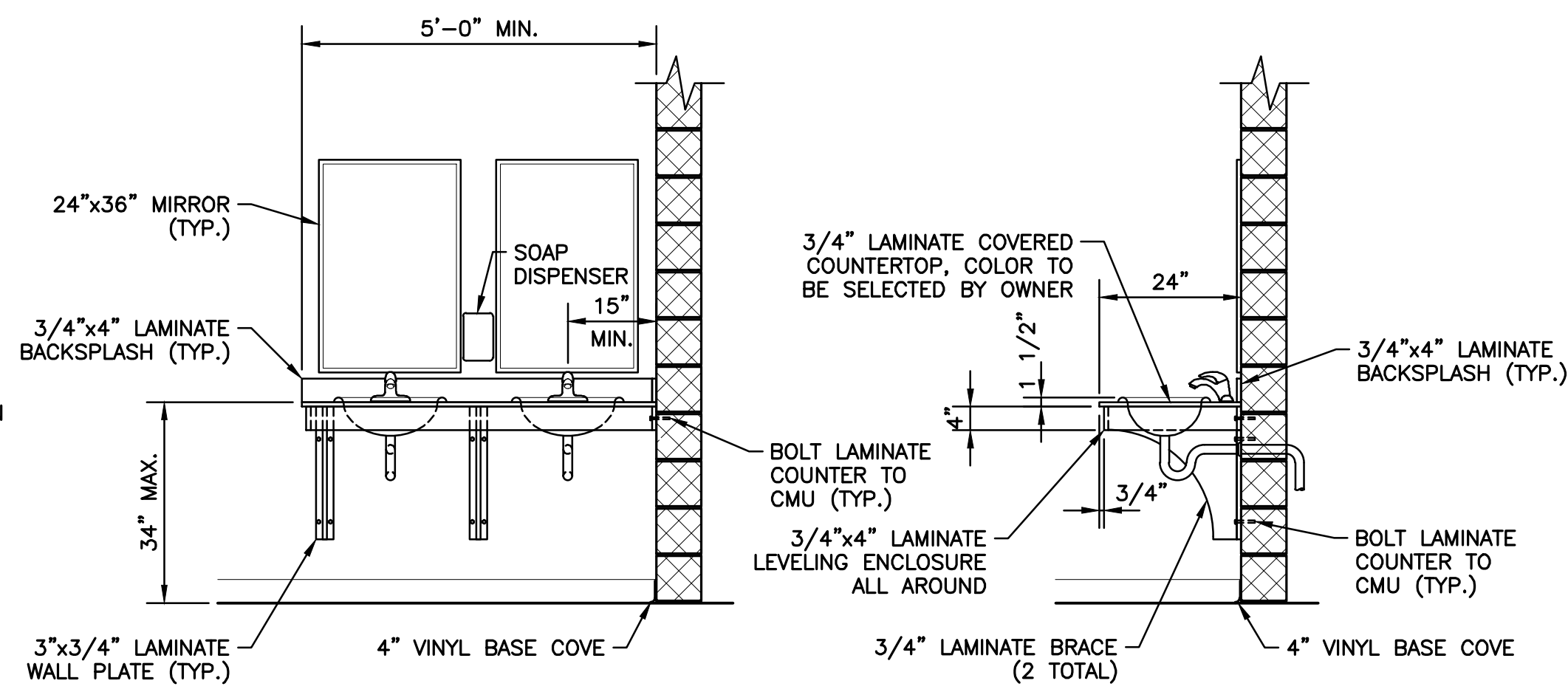
TITLE		PICNIC SHELTER/RESTROOM ARCHITECTURAL FLOOR PLAN & ELEVATIONS	
SCALE	0 2 4 8 12	DWG. NO.	A-1
PROJECT NO.		SCALE: 1/4" = 1'-0"	
10611	7 OF 13	REV.	



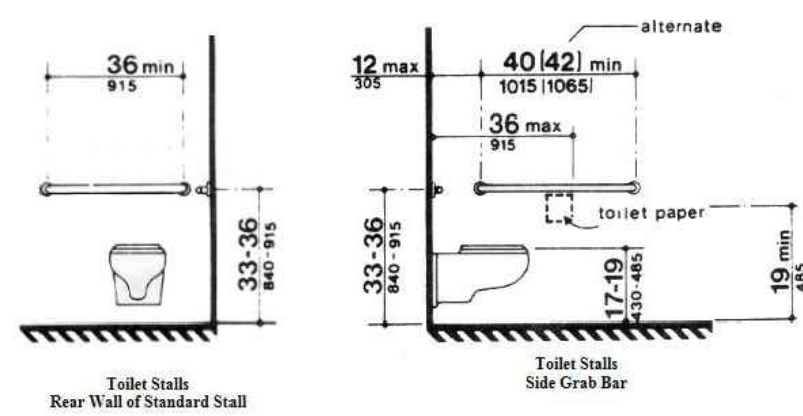
**SECTION A-A**  
SCALE: 1/4" = 1'-0"



**URINAL INSTALLATION**  
N.T.S.



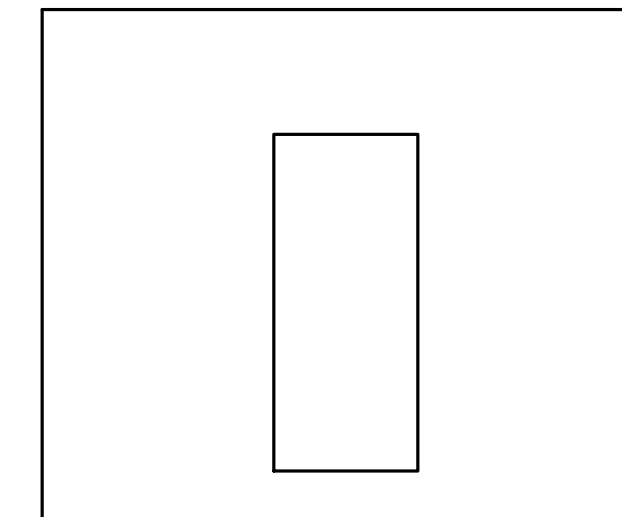
**LAMINATE LAVATORY COUNTER DETAIL**  
SCALE: 1/2" = 1'-0"



**WATER CLOSET INSTALLATION**  
N.T.S.

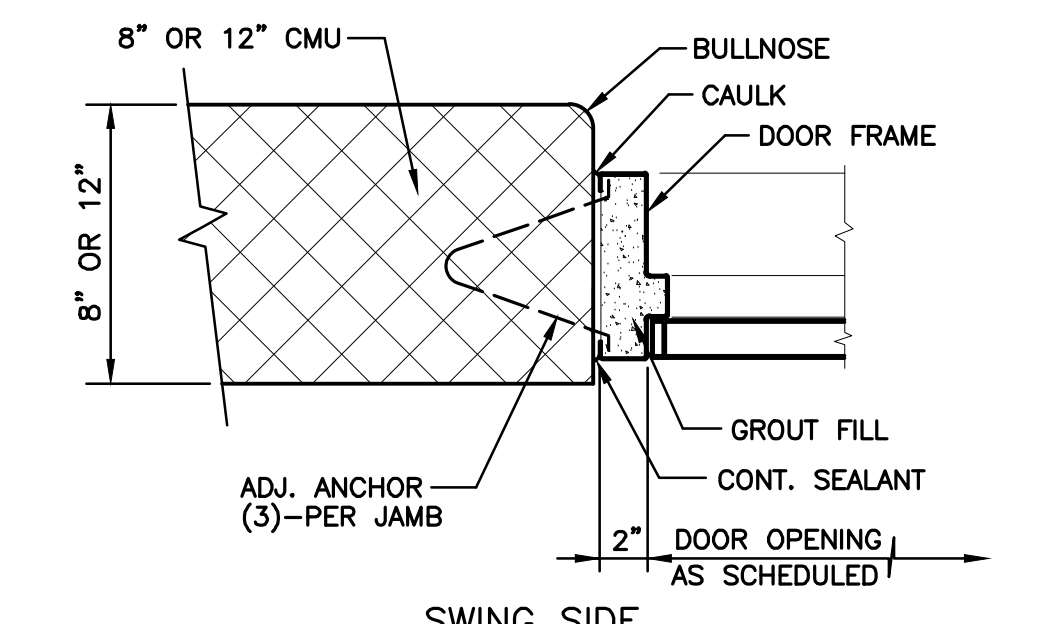
INTERIOR FINISH SCHEDULE									
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS		CEILING		HEIGHT	
				MATERIAL	FINISH	MATERIAL	FINISH		
1	WOMEN'S REST RM	CONC. W/ HARDENER	VINYL BASE COVE	CMU	2-PART EPOXY COATING SYSTEM BY RUST-OLEUM OR EQUAL W/ COLOR FLAKES	ACCOUSTICAL TILE		8'-0"	
2	MEN'S REST RM	CONC. W/ HARDENER	VINYL BASE COVE	CMU	2-PART EPOXY COATING SYSTEM BY RUST-OLEUM OR EQUAL W/ COLOR FLAKES	ACCOUSTICAL TILE		8'-0"	
3	UTILITY ROOM	CONC. W/ HARDENER	VINYL BASE COVE	CMU	2-PART EPOXY COATING SYSTEM BY RUST-OLEUM OR EQUAL W/ COLOR FLAKES	ACCOUSTICAL TILE		8'-0"	
4	OUTSIDE PICNIC SHELTER	CONC. W/ HARDENER	--	--	--	1/2" PLYWOOD	PAINTED	10'-1"	

**DOOR SCHEDULE / ELEVATIONS**  
NO SCALE

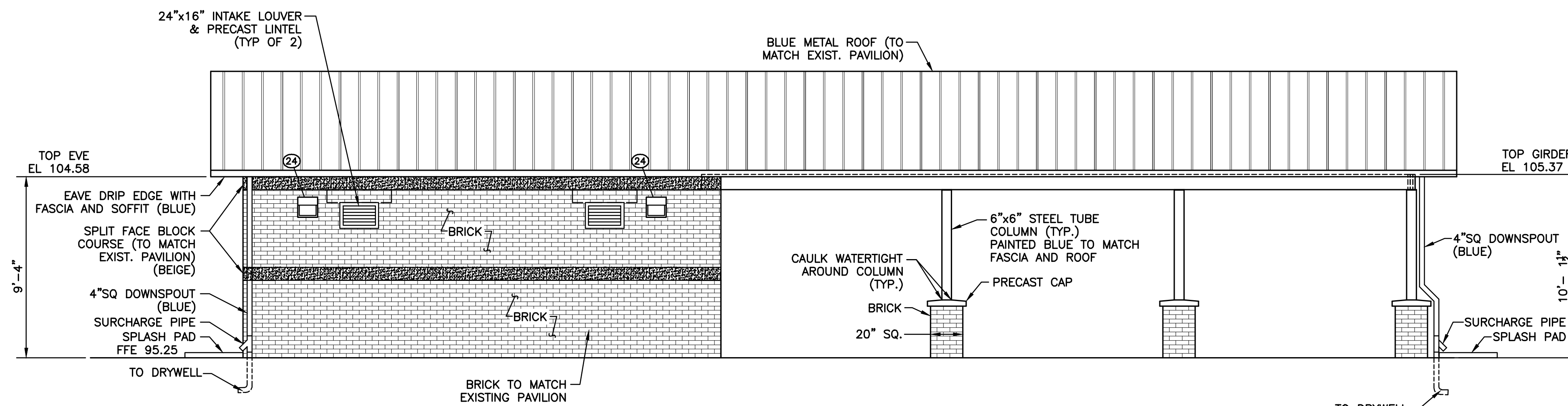


FLUSH HOLLOW METAL		
TYPE	SIZE	REMARKS
A.1	W 3'-0" H 7'-2" T 1 3/4"	INSULATED; WEATHERSTRIP; THRESHOLD (NOTES 1 & 2)
A.2	W 3'-0" H 7'-2" T 1 3/4"	NON-INSULATED; UNDERCUT 1"

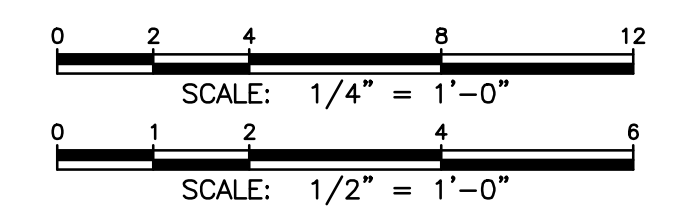
- NOTES:  
1. EXTERIOR DOORS A.1 SHALL BE PROVIDED WITH PANIC EXIT DEVICE.  
2. EXTERIOR DOORS A.1 SHALL BE PAINTED BLUE TO MATCH ROOF.



**INTERIOR DOOR - JAMB**  
(HEAD SIMILAR - LINTEL AS DETAILED)

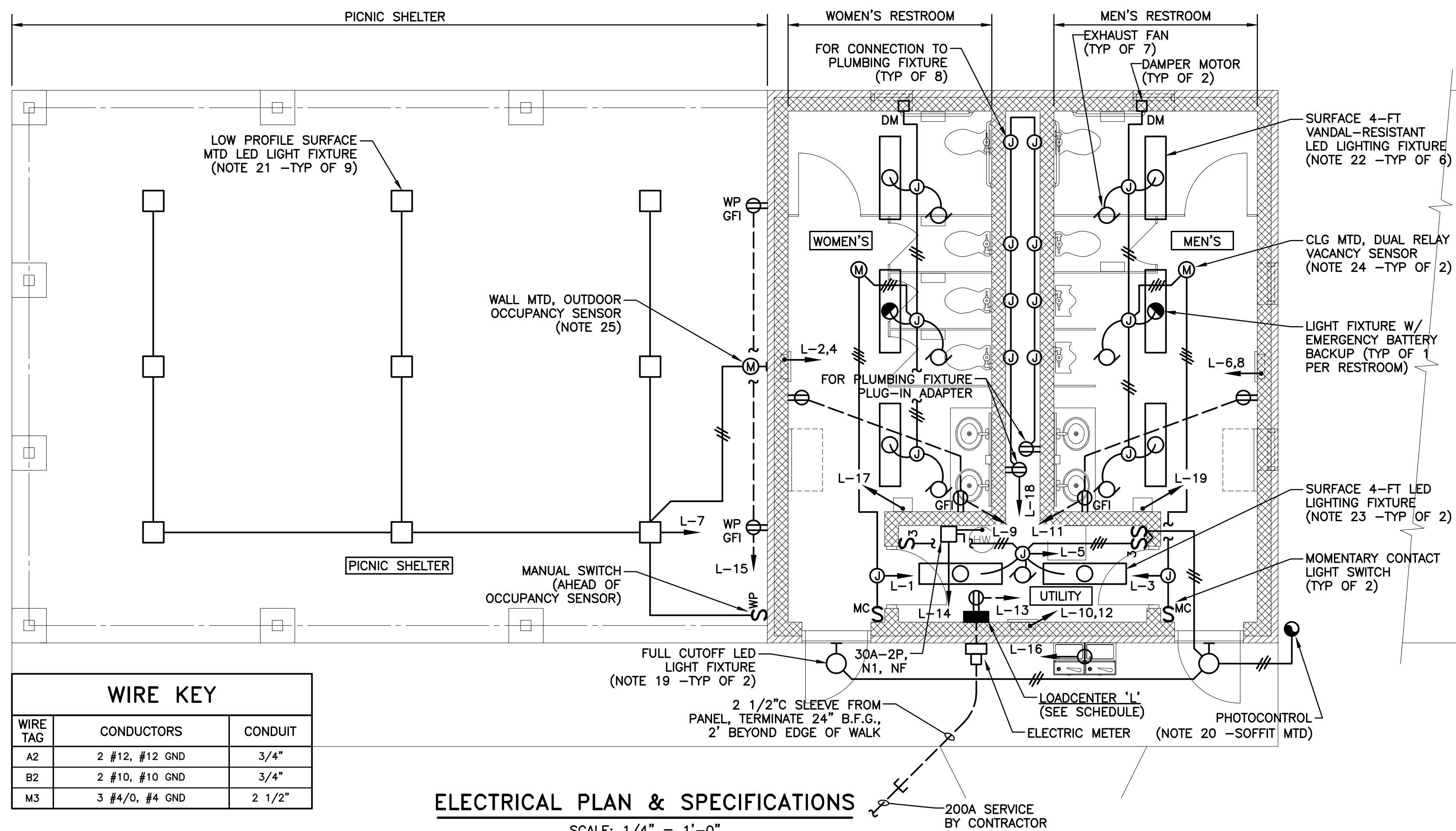


**NORTH ELEVATION**  
SCALE: 1/4" = 1'-0"



1 ISSUED FOR CONSTRUCTION 0 ISSUED FOR BID D CLIENT COMMENTS 02/02/16 JLW RDP C CLIENT COMMENTS 11/13/13 AM RDP B CLIENT COMMENTS 3/21/13 AM RDP A ISSUED TO CLIENT 2/18/13 AM RDP				EDWARD J. VAN ARSDALE, PE RELEASED BY DESIGN R.D. PARKS, P.E. DRAWN SAM DATE MARCH 2022				PROFESSIONAL CERTIFICATION I, EDWARD JOSEPH VAN ARSDALE, III, P.E. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 33661 Expiration Date: 3/31/2024		CLIENT & PROJECT TOWN OF INDIAN HEAD 4195 INDIAN HEAD HIGHWAY INDIAN HEAD, MARYLAND, 20640  INDIAN HEAD RESTROOM FACILITY INDIAN HEAD, CHARLES COUNTY, MARYLAND		TITLE PICNIC SHELTER/RESTROOM ARCHITECTURAL DETAILS  SCALE AS NOTED PROJECT NO. 10611 SHEET NO. 8 OF 13 REV. A-2	
NO REVISION DATE BY APP. NO. REVISION DATE BY APP.				SEAL 		201 Thomas Johnson Drive, Suite 207 Frederick, Maryland 21702 Tel 301.791.1100		DWG. NO. A-2					

DWG. NAME: 10611-ARCHITECTURAL.DWG PLOT DATE: 2/9/2024 12:21 PM

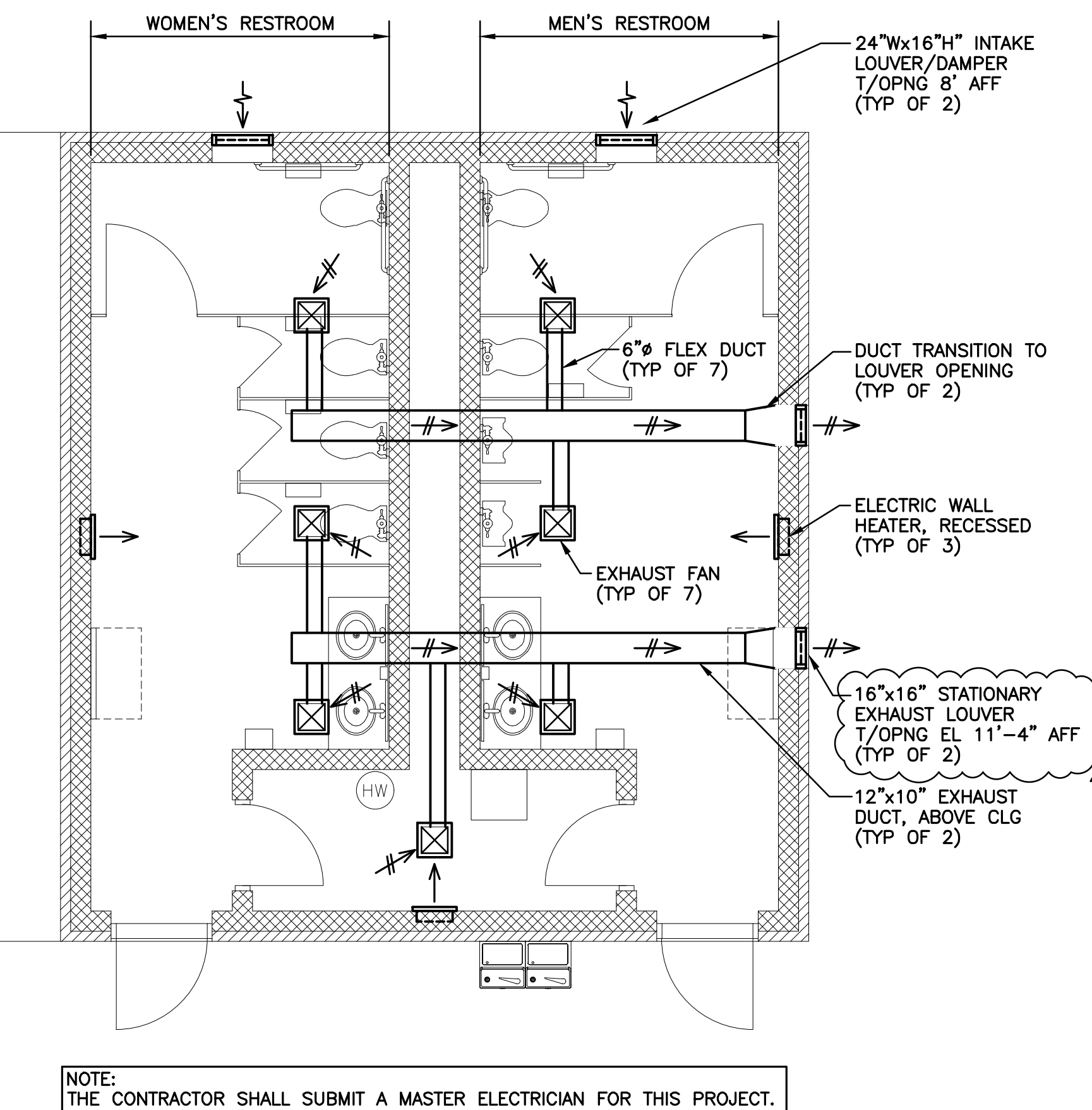


**ELECTRICAL PLAN & SPECIFICATIONS**

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

- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE STANDARDS OF THE OWNER. INSTALLATION OF EQUIPMENT AND CONTROLS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND RECOMMENDATIONS, THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL LOCAL CODES.
- PROVIDE SHOP DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR: LOADCENTERS, SECONDARY SURGE ARRESTERS, CIRCUIT BREAKERS, DISCONNECT SWITCHES, LIGHTING, HEATERS. INFORMATION SHALL BE ORIGINAL PRINTED DOCUMENTS, NOT PHOTOCOPIES. INFORMATION SHALL STATE PROJECT NAME, MODEL NUMBERS, SERIAL NUMBERS, ETC.
- AN ELECTRICAL INSPECTION CERTIFICATE SHALL BE PROVIDED FROM A STATE LICENSED AND OWNER APPROVED INSPECTION AGENCY.
- ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER.
- ALL EQUIPMENT SHALL BE UL LISTED AND LABELED WHERE APPLICABLE.
- SURFACE MOUNTED, RECESSED OR ABOVE CEILING INDOOR WIRING MAY BE IN EMT WITH SET-SCREW FITTINGS; 3/4" MINIMUM SIZE FOR ALL CONDUIT; STUB-UP FROM BELOW GRADE MUST BE RGS CONDUIT COATED WITH BITUMASTIC PAINT; METALLIC FLEXIBLE CONDUIT LIMITED TO 24 INCH LENGTH.
- BUILDING WIRE SHALL BE THWN, #12 GAUGE MINIMUM SIZE, COPPER; SOLID CONDUCTOR FOR #8 GAUGE AND SMALLER, STRANDED FOR LARGER CONDUCTORS.
- GROUNDING SHALL BE IN ACCORDANCE WITH THE NEC, DRIVE 3/4" X 10' - 0 COPPER-CLAD STEEL GROUND ROD. BELOW GRADE WIRE SHALL BE STRANDED BARE COPPER; BELOW GRADE GROUNDING AND GROUND ROD CONNECTIONS SHALL BE MADE USING THE EXOTHERMIC METHOD.
- EXPOSED OUTLET, JUNCTION BOXES, AND FITTINGS SHALL BE CAST; NO WHITE METAL FITTINGS OR BOXES. STEEL BOXES PERMITTED ONLY WHERE RECESSED OR ABOVE CEILING.
- RECEPTACLES - PASS & SEYMOUR, HUBBELL, OR COOPER WIRING DEVICES OR EQUAL, 20-AMP, 120 VOLTS, SPEC-GRADE; CORROSION RESISTANT WHERE NOTED; AND GFI #XHG20B; FS COVER PLATES INDOORS; IN-USE WP COVERS FOR OUTDOORS.
- SWITCHES, 20-AMP, 120/277 VOLTS, SPEC-GRADE, PASS&SEYMOUR, HUBBELL, COOPER WIRING DEVICES #2221B OR EQUAL, FS COVER PLATE INDOORS, WP COVER OUTDOORS.
- TRENCHING AND BACKFILL AS REQUIRED; 24-INCH MINIMUM DEPTH FOR CONDUITS; REMOVE ALL VEGETATION AND STONES LARGER THAN 2-INCHES IN DIAMETER FROM THE BACKFILL; TAMP IN 6-INCH LAYERS; RESTORE AREA.
- DISCONNECT SWITCH, NEMA 1 ENCLOSURE, GENERAL-DUTY, NONFUSED, PADLOCKABLE; SQUARE D, EATON CUTLER-HAMMER, SIEMENS, OR EQUAL.
- LOADCENTER TO BE SQUARE D TYPE QO OR EQUAL FOR 120/240 VOLT, SINGLE-PHASE, THREE-WIRE, NEMA 1 SURFACE MOUNT ENCLOSURE.
- SECONDARY SURGE ARRESTER, HARD WIRED, 36 KA PER PHASE SURGE RATING, 120/240, SINGLE-PHASE THREE-WIRE; MEETS ANSI/IEEE C62.11-1993 AND NEC ARTICLE 285; SERVICE ENTRANCE RATED; NEMA 4X; PANELBOARD MOUNTING BRACKET; SQUARE D SDSA1175, QOSAMK (BRACKET) OR EQUAL.
- ALL HARDWARE SHALL BE GALVANIZED STEEL.
- WORK WITH TOWN OF INDIAN HEAD TO PROVIDE ALL NECESSARY MATERIALS, EQUIPMENT, AND LABOR TO EFFECT A COMPLETE INSTALLATION.
- SERVICE COORDINATION: CONTRACTOR TO PROVIDE LOADCENTER WITH CONDUIT STUBBED TO OUTSIDE OF BUILDING AS INDICATED ON PLAN. CONTRACTOR TO PROVIDE UNDERGROUND SERVICE CONDUCTORS INTO BUILDING AND MAKE CONNECTION TO LOADCENTER MAIN BREAKER. TOWN OF INDIAN HEAD TO PROVIDE ALL COORDINATION WITH ELECTRIC UTILITY COMPANY REGARDING PROVISION OF SERVICE AND METERING AND WILL PAY FOR ALL UTILITY INSTALLATION COSTS.

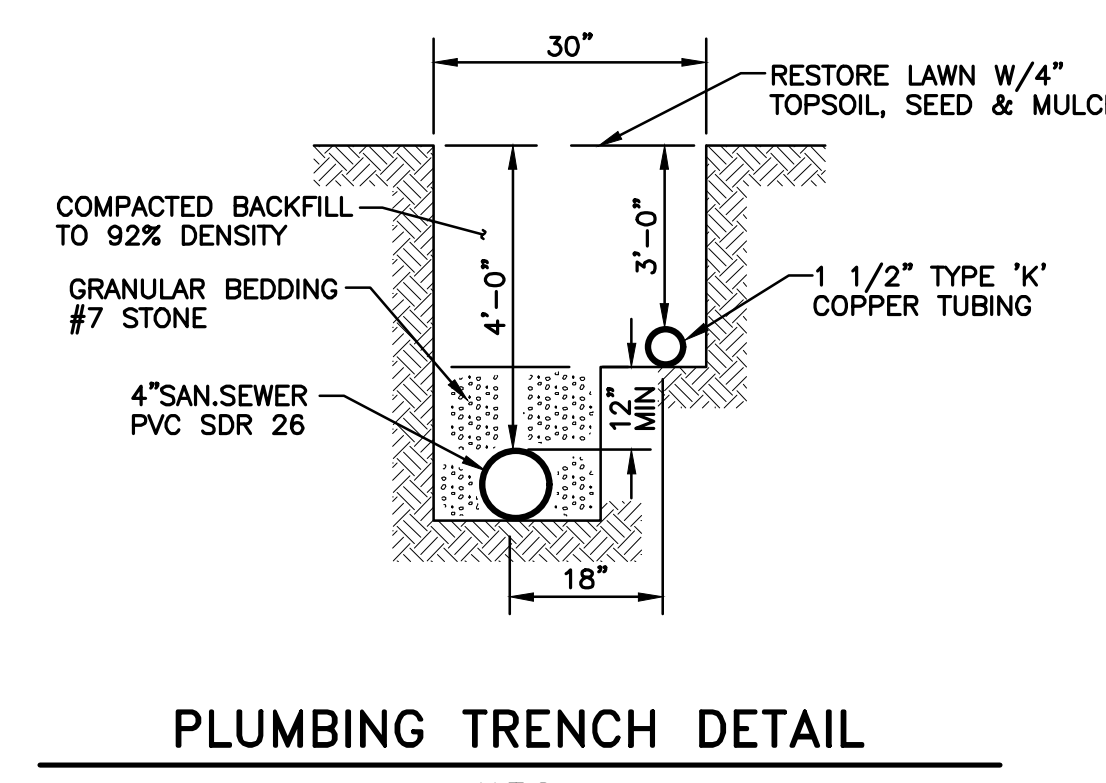
- EXTERIOR LIGHT FIXTURES: FULL CUT-OFF WALL MOUNT LED; 120 VOLT; IMPACT RESISTANT POLYCARBONATE HOUSING; DIE-CAST ALUMINUM DRIVER HOUSING; CLEAR POLYCARBONATE LENS; 26 WATT LED, 5000K, 1963 LUMENS; DARK BRONZE FINISH; INTEGRAL EMERGENCY BATTERY BACKUP; UL LISTED WET LOCATION; KENALL CAT.#FN15L-4-7-DB-26L50K-120-LEL OR EQUAL.
- PHOTOCONTROL: HIGH IMPACT HOUSING WITH CLEAR WINDOW; LIGHT SENSITIVE ELEMENT, HERMETICALLY SEALED; 1 TO 4 TURN-ON-TURN-OFF RATIO; 1.5 FC STANDARD TURN-ON; 15 SECOND TIME DELAY; -50°F TO +150°F; NORMALLY CLOSED CONTACTS DURING NIGHT; RATED AT 1900 VA BALLASTED; 120 VOLTS; CONDUIT OR BOX-MOUNT; SWIVEL BASE; PARAGON #CW201S OR EQUAL.
- PICNIC SHELTER LIGHT FIXTURES: LOW PROFILE 12-INCH SQUARE VANDAL RESISTANT LED; DIE-CAST ALUMINUM BASEPLATE; IMPACT RESISTANT PEARLESCENT POLYCARBONATE LENS; 20 WATT LED, 5000K, 1437 LUMENS; DARK BRONZE FINISH; CEILING MOUNTED TO RECESSED BOX; UL LISTED WET LOCATION; KENALL CAT.#MS11FL-PP-DB-20L50K-SCC-120 OR EQUAL.
- MEN'S & WOMEN'S RESTROOM LIGHT FIXTURES: 4-FOOT SURFACE MOUNTED, VANDAL-RESISTANT LED; MARINE GRADE ALUMINUM HOUSING; IMPACT RESISTANT PEARLESCENT POLYCARBONATE LENS; 45 WATT LED, 3500K, 4632 LUMENS; WHITE FINISH; UL LISTED WET LOCATION (COVERED CEILING MOUNT); KENALL CAT.#MLH4B-48-R-NW-PP-45L35K-120 OR EQUAL. PROVIDE LED EMERGENCY BATTERY BACKUP, CAT.#LEL, IN FIXTURES INDICATED ON PLAN.
- UTILITY ROOM LIGHT FIXTURES: 4-FOOT SURFACE MOUNTED LED STRIP; STEEL HOUSING; WHITE BAKED ENAMEL FINISH; 23 WATT LED, 3500K, 2800 LUMENS; UL LISTED DAMP LOCATION; COLUMBIA LIGHTING CAT.#LCS4-35LW-EU OR EQUAL.
- MEN'S & WOMEN'S VACANCY SENSORS: CEILING MOUNTED, DUAL RELAY, MANUAL-ON/AUTO-OFF, 1000SF COVERAGE, LOAD RELAY 1-LIGHTS; LOAD RELAY 2-EXHAUST FANS DELAYED 10 MIN OFF; PROTECTIVE CAGE; LEVITON CAT.#04C10-MDW W/ ODCCG-ooW CAGE.
- PICNIC SHELTER OCCUPANCY SENSOR: OUTDOOR RATED; 200' FIELD OF VIEW; 120V; AMBIENT LIGHT OVERRIDE; PROTECTIVE CAGE; LEVITON CAT.#PS200-10 W/ CAGE.



**HVAC PLAN & SPECIFICATIONS**

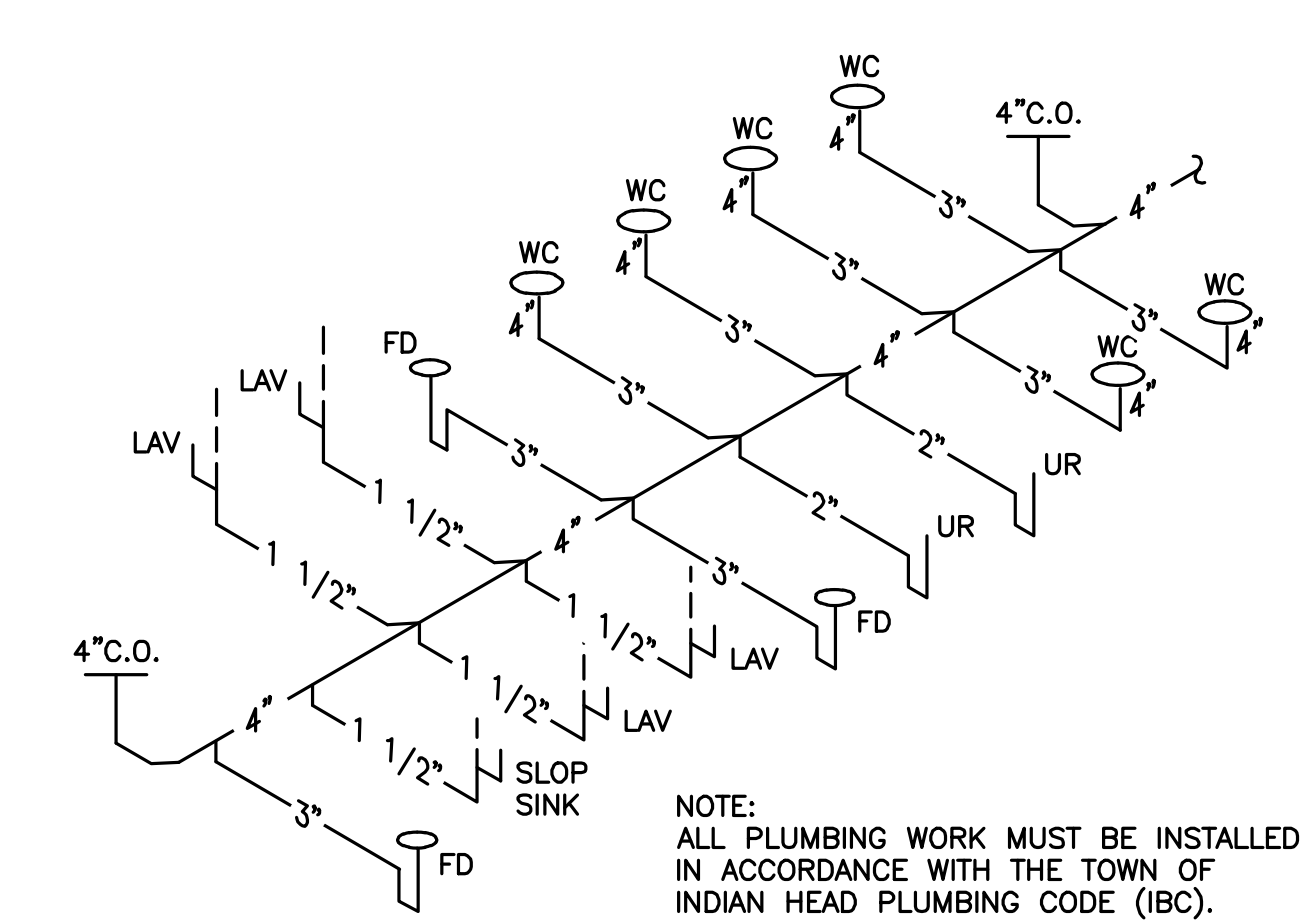
SCALE: 1/4" = 1'-0"

- ALL WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE LATEST STANDARDS SET FORTH BY THE FOLLOWING:
  - AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE)
  - AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)
  - AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)
  - SHEET METAL AND AIR-CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
  - UNDERWRITERS' LABORATORIES, INC. (UL)
  - LOCAL BUILDING CODES
- COORDINATE INSTALLATION AND INTERFACING OF ALL EQUIPMENT WITH THE BUILDING & ELECTRICAL CONTRACTORS.
- PROVIDE SHOP DRAWINGS, OPERATIONS AND MAINTENANCE (O&M) MANUALS, AND PARTS LISTS, FOR: FAN/LIGHTS, LOUVERS, WALL HEATERS.
- SHOP DRAWINGS, O&M MANUALS, AND PARTS LISTS SHALL IDENTIFY AND HIGHLIGHT THE INFORMATION AND DATA THAT IS SPECIFIC TO THE EQUIPMENT THAT IS SUPPLIED FOR THIS PROJECT. MODEL NUMBERS, PART NUMBERS, AND SERIAL NUMBERS SHALL ALSO BE HIGHLIGHTED AND IDENTIFIED THROUGHOUT THE O&M MANUALS.
- ALL EQUIPMENT SHALL BE UL LISTED AND LABELED WHERE APPLICABLE.
- SHOP FABRICATED DUCTWORK: SHOP FABRICATE DUCTWORK OF GALVANIZED SHEET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A527 AND STANDARDS SET FORTH BY SMACNA. GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A525. COATING DESIGN 900. DUCT SHALL BE CAPABLE OF WITHSTANDING 5 INCHES POSITIVE/NEGATIVE STATIC PRESSURE. DUCT SHALL BE SEALED IN ACCORDANCE WITH SEAL CLASS C.
- PREFABRICATED FLEXIBLE METAL DUCT: NON-INSULATED HELICAL CORRUGATED ALUMINUM ROUND DUCT DESIGNED TO RETAIN ITS ROUND SHAPE, AS WELL AS ITS STRENGTH AND CROSS SECTION, WHILE BEING BENT TO ALMOST ANY CONFIGURATION. DUCT SHALL REMAIN RIGID BEFORE AND AFTER BENDING. UNITED SHEET METAL DIVISION OF UNITED MCGILL CORP., OR EQUAL.
- INSTALL DUCTWORK AND PROVIDE SUPPORT IN ACCORDANCE WITH SMACNA STANDARDS.
- COMBINATION INTAKE LOUVER/DAMPERS: 16"H X 24"W, 4" DEEP, DRAINABLE, 6063T5 EXTRUDED ALUMINUM FRAME AND 0.081 INCH NOMINAL WALL THICKNESS, INSECT SCREEN IN REMOVABLE FRAME ON INSIDE, VINYL BLADE EDGE SEALS AND COMPRESSIBLE STAINLESS STEEL JAMB SEALS, KYNAR FINISH, COLOR BY TOWN, GREENHECK #ECD-401 OR EQUAL; 120-VOLT MOTOR OPERATOR, SPRING CLOSE - POWER OPEN.
- STATIONARY EXHAUST LOUVERS: 16"H X 16"W, 4" DEEP, DRAINABLE, 6063T5 EXTRUDED ALUMINUM FRAME AND 0.081 INCH NOMINAL WALL THICKNESS, 1/2" BIRD SCREEN IN REMOVABLE FRAME ON INSIDE, EXTENDED SILL, KYNAR FINISH, COLOR BY TOWN, GREENHECK #ELF445DX OR EQUAL.
- EXHAUST FAN: CORROSION RESISTANT GALVANIZED STEEL HOUSING; REMOVABLE BLOWER ASSEMBLY WITH PERMANENTLY LUBRICATED MOTOR; NON-METALLIC BACKDRAFT DAMPER/DUCT CONNECTOR FOR 6" ROUND DUCTWORK; AIR DELIVERY NO LESS THAN 150 CFM @ 0.1" PS; SOUND LEVEL NO GREATER THAN 2.5 SONES @ 0.1" PS; UL LISTED FOR USE IN INSULATED CEILING; NUTONE #QTXEN150 OR EQUAL. CONTROLLED THROUGH LIGHT SWITCH AND VACANCY SENSOR (SEE ELECTRICAL PLAN & SPECIFICATIONS).
- WALL HEATERS: RECESSED MOUNTED FAN FORCED WALL HEATER; VANDAL-RESISTANT DESIGN; HEAVY-DUTY WELDED STEEL LOUVERED GRILLE; TAMPERPROOF; INTEGRAL TAMPER-RESISTANT THERMOSTAT, BREAKS ALL UNGROUNDING CONDUCTORS IN OFF; TOTALLY ENCLOSED, CORROSION-RESISTANT FINNED HEATING ELEMENT; MEN'S & WOMEN'S RESTROOMS -5KW, 240V-1Ø, TRANE CAT.#UHWAO21B2T20; UTILITY ROOM -2KW, 240V-1Ø, TRANE CAT.#UHWAO21B2T20; OR APPROVED EQUAL.



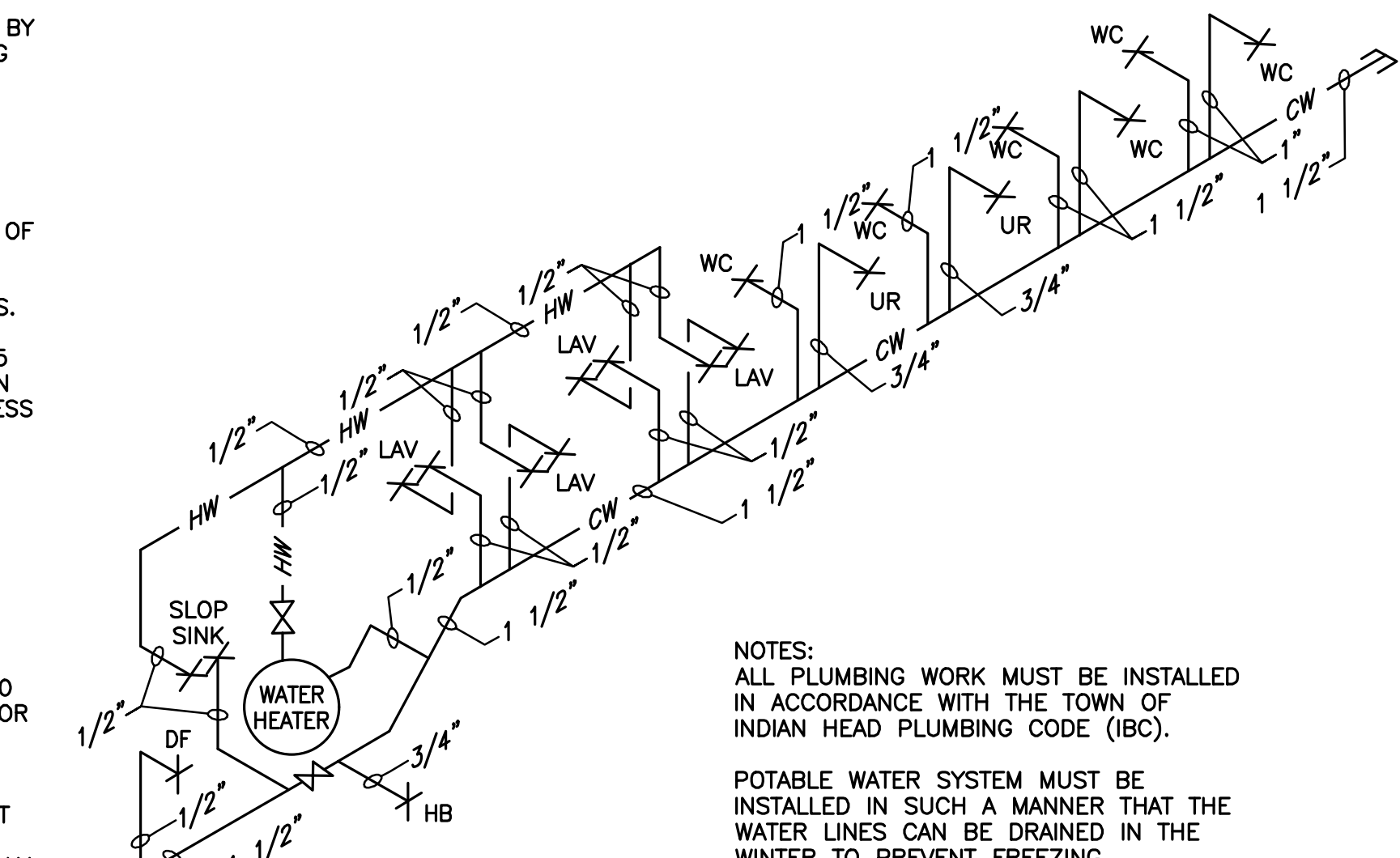
**PLUMBING TRENCH DETAIL**

N.T.S.



**PLUMBING - WASTE RISER DETAIL**

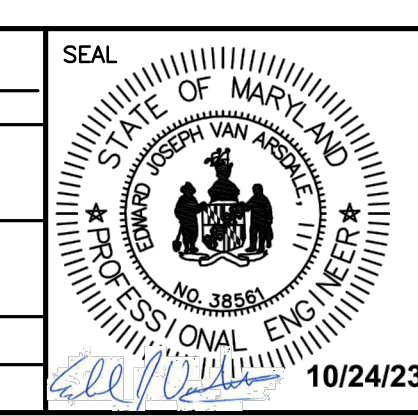
N.T.S.



**PLUMBING - WATER RISER DETAIL**

N.T.S.

NO	REVISION	DATE	BY	APP.	NO	REVISION	DATE	BY	APP.
1	ISSUED FOR CONSTRUCTION								
0	ISSUED FOR BID								
D	CLIENT COMMENTS	02/02/16	JLW	RDP					
C	CLIENT COMMENTS	11/13/13	AM	RDP					
B	CLIENT COMMENTS	3/21/13	AM	RDP					
A	ISSUED TO CLIENT	2/18/13	AM	RDP					



PROFESSIONAL CERTIFICATION  
I, EDWARD JOSEPH VAN ARSDALE, III, P.E. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 36561  
Expiration Date: 3/31/2024

CLIENT & PROJECT  
TOWN OF INDIAN HEAD  
4195 INDIAN HEAD HIGHWAY  
INDIAN HEAD, MARYLAND, 20640  
  
INDIAN HEAD RESTROOM FACILITY  
INDIAN HEAD, CHARLES COUNTY, MARYLAND



TITLE			
PICNIC SHELTER/RESTROOM MECHANICAL/ELECTRICAL/PLUMBING PLANS, SPECIFICATIONS & DETAILS			
SCALE	0 2 4 8 12	DWG. NO.	
SCALE: 1/4" = 1'-0"			
PROJECT NO.	SHEET NO.	REV.	
10611	10 OF 13		MEP-1