PROJECT:
NATHAN BEDFORD FORREST STATE PARK
EVA, BENTON COUNTY, TENNESSEE
SBC No. 126/060-01-2022

HURST-ROSCHE, INC.

ADDENDUM #4 (Date: 10/24/2025)

CONTENTS

Clarifications:

1.Do you have an estimated timeline for when fence installation is expected to begin?

Response: There is no timeline for when the fence shall be installed. The set time of installation of the proposed fencing will depend on the schedule set forth by the General Contractor during construction. Coordination with the General Contractor will be essential for this aspect of construction.

2. Will the fence be set in soil, or does the site involve concrete or asphalt surfaces?

Response: The proposed fence will be set in both soil and concrete. For the fence along Campsite #22 – 34 of Happy Hollow Campground, these are to be placed in soil. For the fence surrounding Camping Spurs #13 and 14 of Lakefront Campground, these shall be placed in concrete. If Alternate #1 is approved, the fence surrounding Campsites #1-12 shall be placed in gravel/soil. See Fence Detail on Sheet C-500 and Segmental Unit Retaining Wall Detail on Sheet C-503.

3. Could you take a moment to review our takeoff and let us know if the dimensions and specifications look generally correct?

Response: Contractor to verify own take-off's with the contract documents.

4. Would you be able to share the official spec sheet (Division 32) for more detailed installation guidance?

Response: Hurst-Rosche does not have a specification for the fence. The detailed fence details are adequate for construction. All applicable building codes and safety clarifications apply to the proposed fence.

5. Are the parking areas at both campgrounds' bathhouses concrete or asphalt?

Response: The parking lots for both Happy Hollow and Lakefront Campgrounds shall be concrete. See detail on sheet C-503.

6. Does the Happy Hollow campground get all new sewer mains and manholes? New sewer main size 8"?

Response: Yes, Happy Hollow Campground will have all new sanitary sewers and manholes. The manholes will have a size of 48" and the sanitary gravity main shall be 8". See details on Sheets C-115 – C-117.

7. A-201 Reflected ceiling drawing calls for the finished ceiling in the shower stalls to be 5/8" gyp with epoxy painting. Please confirm that the ceilings are not intended to have the glass fiber reinforced plastic.

Response: Glass fiber reinforced plastic is not to be installed.

8. Specification section 06 82 00- Glass Fiber Reinforced Plastic was mentioned in addendum 1, but was not altered from the original specifications. Where is this product intended to be used? Can you please provide a basis of design or model for the fabrications mentioned (Kemlite, Nudo, Rideout)? Kemlite Co, Nudo Products Inc, and Rideout Plastics all have multiple systems and product sizes that are similar to what is mentioned in the specification section.

Response: Lakefront Bathhouse: Detail 8 on A-201 calls for gypsum board ceiling. Interior elevations on A-202 call for ceramic or porcelain tile wall finish. Glass fiber reinforced plastic is not in the project scope.

9. If the design intent is for the glass fiber-reinforced plastic to be installed at ceiling locations in the shower stalls, are the Pre-engineered wood trusses specified accordingly to accommodate the anticipated loads of the glass fiber-reinforced plastic?

Response: Glass fiber reinforced plastic is not to be installed.

10. A201 calls for the mechanical room 104 to have an exposed ceiling. If the ceiling is exposed, the specified blanket insulation will be exposed and be susceptible to rodents. Please confirm the ceiling is to be exposed.

Response: A-201 and A-203 revised to include a gypsum board ceiling in mechanical room 104.

11. Please provide a specification for the access doors mentioned in the contract documents.

Response: Specification has been provided under attachments section of this addendum.

12. Please confirm that the exposed concrete located in the mechanical room 104 is not scheduled to receive any type of sealant.

Response: Contract documents shall specify all floor finishes, including any type of sealant.

13. The specs call for 3-4" concrete slab under the playground mat. The specified playground installer has suggested to place aggregate under the mat as this is their standard practice. Please advise which is preferable?

Response: Contractor to adhere to specification requirements.

14. The utility sheets show trenches for utilities, is the intent to run electrical lines in the same trenches? Is boring allowed for electrical service?

Response: Electrical lines may or may not be run in the same trenches shown on the utility sheets, which are intended for other utilities (e.g., water). If in any instance the electrical lines are run in the same trenches, then ensure a separation distance from the other utilities per electric utility company requirements. Boring is allowed for electrical service.

15. The spec for the retaining wall calls to meet ASTM C1372 for freeze-thaw durability. These blocks are not readily available in this area and will incur additional cost. Please advise if this is required.

Response: Contractor to adhere to specification requirements.

16. Sheet E-101: Are the lines drawn on this sheet the path you want us to take or do you want us to consolidate and negate saw cuts in the road?

Response: Only the primary electric line runs need to be routed (i.e., straight) as shown on the electrical site plans. The remaining underground electric lines are shown for connection representation only, and do not necessarily reflect the actual routing to be taken.

17. On keynote 3 it says to reroute and extend existing 300A, are we replacing conductors or splicing and is this where the splice box goes from Detail 5 on page E-108

Response: There is no detail on the plans pertaining to keynote #3. If the existing service conductors to the bath house may be reused and rerouted, that is the intent. Otherwise, new conductors should be used.

18. Sheet E-104: Do the lengths on the one line match the dotted lines shown on the plans?

Response: The lengths on the one-line diagrams are estimates of the feeders represented by the dotted lines on the plans. They are shown mainly for the purpose of voltage drop calculations.

19. Per the attached responsibility matrix are we supplying and assisting the utility company with secondary feeders?

RESPONSIBILITY MATRIX

TAG (#)	DESCRIPTION	FURNISH	INSTALL	WIRE	EXPENSE BY	NOTES
1	PRIMARY FEEDER	----	----	----	----	5
2	PAD MTD TRANSFORMER	U	U**	U	U**	5
3	SECONDARY FEEDER	C*	C*	U	C	5
4	MAIN DISCONNECT	C	C	C	C	2, 5
5	DISTRIBUTION PANEL	C	C	C	C	3, 5
6	LOAD SIDE SECONDARY	C	C	C	C	1, 5
7	BRANCH CIRCUIT FEEDER	C	C	C	C	4, 5

LEGEND: U = UTILITY COMPANY; C = CONTRACTOR * = UTILITY CO. INSTALLS WIRING.

NOTES: ** = CONTRACTOR INSTALLS AND PAYS FOR PAD.

1 CONTRACTOR SHALL INSTALL FEEDER INDICATED IN ACCORDANCE WITH NEC.
2 SERVICE RATED 240 VOLT, 2 POLE SAFETY SWITCH IN NEMA 3R/12 ENCLOSURE.
3 DISTRIBUTION PANEL AND ALL BRANCH CIRCUIT BREAKERS.
4 BRANCH CIRCUIT FEEDERS SHALL BE IN CONDUIT WHERE EXPOSED. TRANSITION TO DIRECT BURY UNDERGROUND.
5 SEE ELECTRIC SERVICE DETAIL ON SHEET E-108.

Response: Yes. The utility company is responsible for final terminations. Coordinate with the utility company for any further information regarding installation of the secondary wiring.

20. Currently the Electrical contractors are unable to get a fixed cost on the Electrical service fees from Benton County Electric System. Would the state consider creating an allowance for the Benton County Electric System fees or please provide the electrical fee cost from Benton County Electric System?

Response: An allowance has now been provided. Please see attached specification 01 21 13 Allowances.

21. Can you please provide top and Bottom of wall for the retaining wall in front of the lake front bathhouse?

Response: The wall height is called out on sheet C-114.

Project Manual:

1. Section 01 21 13 – Allowances: **Delete** section in its entirety and **Replace** with the attached Section 01 21 13 Allowances.
2. **Delete** Document 06 82 00 Glass-Fiber-Reinforced Plastic. Previously added to the project via Addendum #1.
3. **Add** Document 08 31 13 Access Doors and Frames
4. **Add** Document 09 77 00 Fiberglass Reinforced Wall Panels

Drawings:

Sheet A-201 – **Delete** in its entirety and **Replace** with the attached **A-201**.

Sheet A-203 – **Delete** in its entirety and **Replace** with the attached **A-203**.

Attachments:

A-201 (1 PAGE)

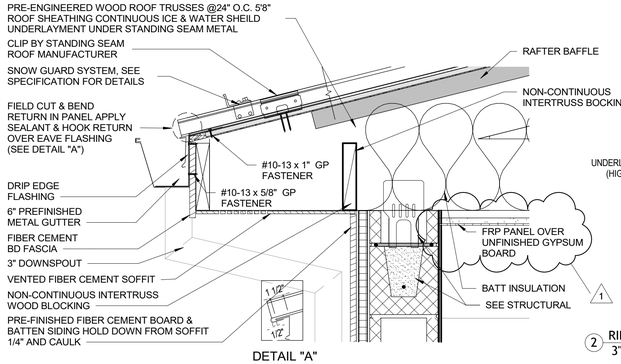
A-203 (1 PAGE)

01 21 13 Allowances (1 PAGE)

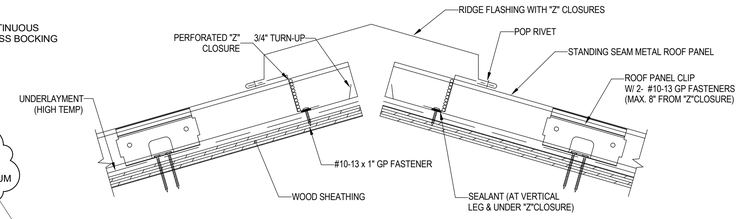
08 31 13 Access Doors and Frames (3 PAGES)

09 77 00 Fiberglass Reinforced Wall Panels (6 PAGES)

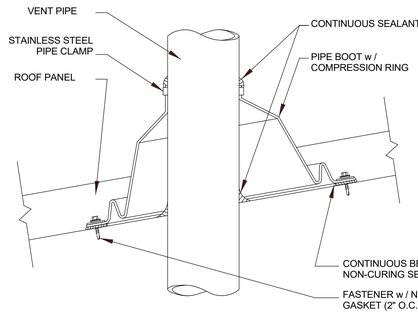
ADDENDUM DATE: 10/24/2025 LICENSE EXPIRES: 03/31/2027

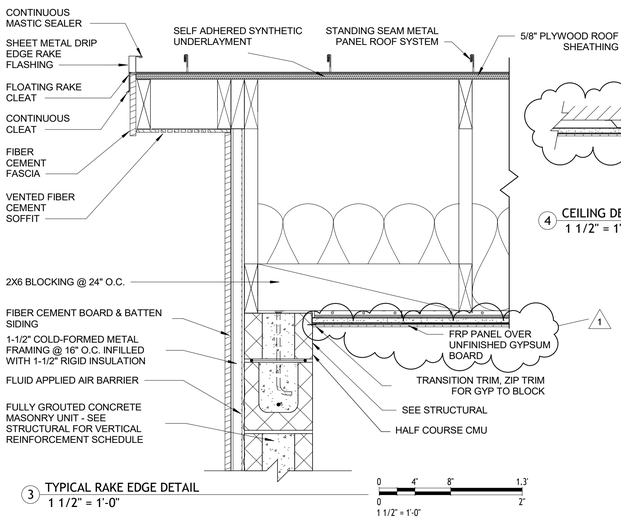


1 TYPICAL EAVE EDGE DETAIL
1 1/2" = 1'-0"

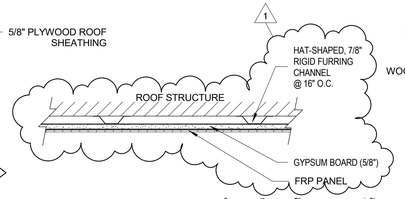


2 RIDGE VENT DETAIL W/ FLASHING
3" = 1'-0"

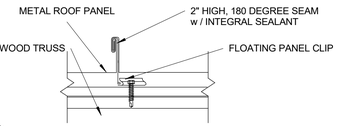




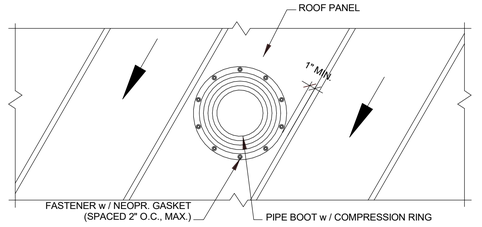
3 TYPICAL RAKE EDGE DETAIL
1 1/2" = 1'-0"



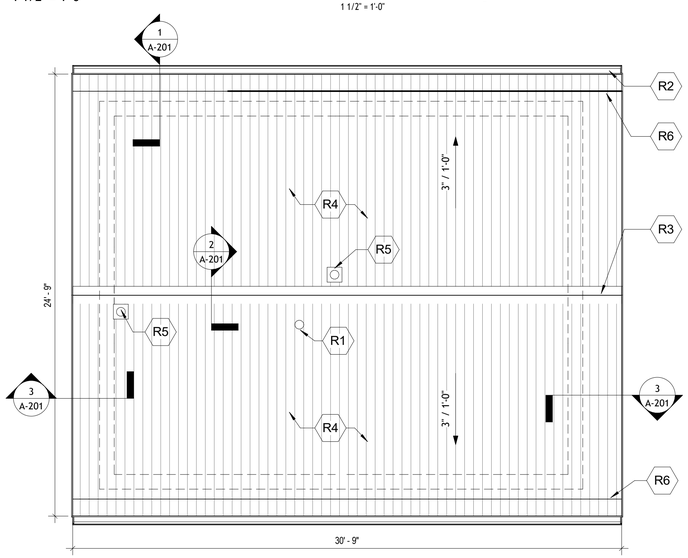
4 CEILING DETAIL
1 1/2" = 1'-0"



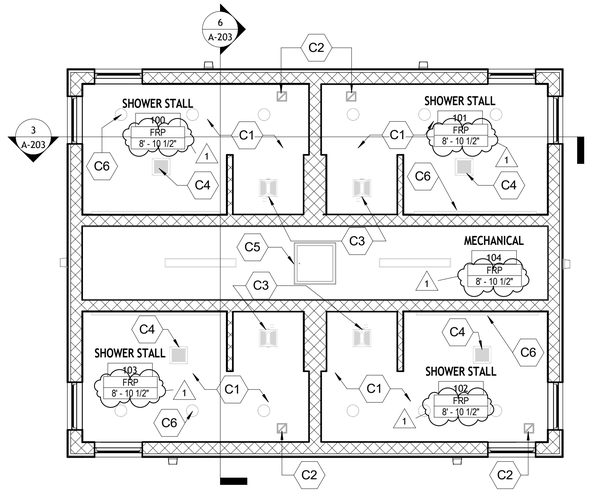
5 TYPICAL STANDING SEAM
3" = 1'-0"



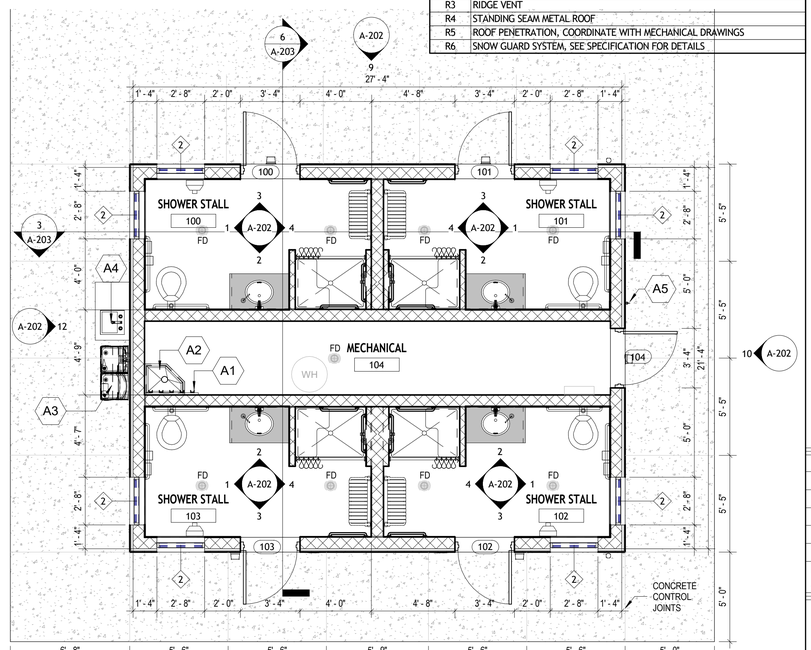
6 TYPICAL ST. SEAM PIPE FLASHING DETAIL
3" = 1'-0"



7 ROOF PLAN
1/4" = 1'-0"



8 REFLECTED CEILING PLAN
1/4" = 1'-0"



9 FLOOR PLAN
1/4" = 1'-0"

GENERAL FLOOR PLAN NOTES

1. HEIGHT ELEVATION DIMENSIONS ARE FROM FINISH FLOOR SURFACE.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
3. PLAN DIMENSIONS ARE TO FACE OF STUD, CORNER OF MASONRY, FACE OF CONCRETE UNLESS NOTED OTHERWISE. DO NOT SCALE DRAWINGS - USE DIMENSIONS.
4. PROVIDE AND INSTALL ADEQUATE BLOCKING BEHIND ALL WALL MOUNTED ITEMS INDICATED IN THESE DRAWINGS OR SPECIFICATIONS.
5. UNLESS OTHERWISE NOTED OR DIMENSIONS. ALL DOORS SHALL BE INSTALLED WITH A MINIMUM OF 12" CLEAR SPACE FROM EDGE OF DOOR TO NEAREST WALL OR OBSTRUCTION ON PUSH SIDE OF DOOR AND WITH MINIMUM OF 18" CLEAR SPACE FROM EDGE OF DOOR TO NEAREST WALL OR OBSTRUCTION ON PULL SIDE OF DOOR.
6. REFER TO PARTITION TYPES FOR THICKNESS OF WALLS AND PARTITIONS.
7. WALL AND PARTITION DIMENSIONS ARE SHOWN TO FINISHED FACE OF WALL.

GENERAL REFLECTED CEILING PLAN NOTES

1. REFER TO G-SERIES SHEETS FOR TYPICAL ABBREVIATIONS, SYMBOLS & TAGS.
2. REFLECTED CEILING PLANS AND MEP DRAWINGS ARE COMPLEMENTARY. GENERALLY SEE REFLECTED CEILING PLAN FOR LOCATION AND ARRANGEMENT OF FIXTURES AND DEVICES. SEE MEP DRAWINGS FOR MEP REQUIREMENTS. PROVIDE COORDINATED DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.
3. CONTRACTOR IS TO LOCATE MECHANICAL ITEMS AROUND LIGHTING LAYOUT AND IN THE APPROXIMATE LOCATION OF THE MECHANICAL DRAWINGS.
4. DO NOT ATTACH CEILING HANGERS TO ROOF DECKS. ATTACH CEILING HANGERS TO STRUCTURAL BEAMS AND JOISTS ONLY. ATTACH CEILING HANGERS TO FLOOR DECKS USING SPECIFIED INSERTS ONLY.
5. SUPPORT CONDUIT, BOXES AND OTHER EQUIPMENT WITH UNISTRUT HANGERS ATTACHED TO STRUCTURAL ELEMENTS.
6. ALL PARTITION AND SOFFIT FRAMING SHALL EXTEND TO UNDERSIDE OF STRUCTURE, UNLESS NOTED OTHERWISE.
7. ALL EXPOSED INTERIOR AND EXTERIOR LINTELS THAT ARE NOT PREFINISHED ARE TO BE FINISHED. FINISH TO BE COORDINATED WITH DESIGNER.

GENERAL ROOF NOTES

1. REFER TO G-SERIES SHEETS FOR TYPICAL ABBREVIATIONS, SYMBOLS & TAGS.
2. COORDINATE ROOF PENETRATIONS WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

FLOOR PLAN KEYED NOTES

TAG	DESCRIPTION
A1	WALL MOUNTED MOP AND BROOM HOLDER
A2	FLOOR MOP SINK
A3	DRINKING FOUNTAIN WITH BOTTLE FILLER
A4	NEW WEATHERPROOF STAINLESS STEEL SINK WITH DRAINBOARD AND SPRING LOADED GOOSE NECK FAUCET
A5	NEW LOOSE KEY HOSE BIB

CEILING PLAN KEYED NOTES

TAG	DESCRIPTION
C1	EPOXY PAINTED GYPSUM BOARD CEILING
C2	EXHAUST FAN, SEE MECHANICAL FOR MORE INFORMATION
C3	EXHAUST FAN WITH LIGHT, SEE MECHANICAL AND ELECTRICAL FOR MORE INFORMATION
C4	VRF HEAT PUMP, SEE MECHANICAL FOR MORE INFORMATION
C5	24 X 24 CEILING ACCESS PANEL
C6	LIGHTING (SEE ELECTRICAL)

ROOF PLAN KEYED NOTES

TAG	DESCRIPTION
R1	PLUMBING VENT, COORDINATE WITH PLUMBING DRAWINGS
R2	6" PREFINISHED METAL GUTTER W/ DOWNSPOUT
R3	RIDGE VENT
R4	STANDING SEAM METAL ROOF
R5	ROOF PENETRATION, COORDINATE WITH MECHANICAL DRAWINGS
R6	SNOW GUARD SYSTEM, SEE SPECIFICATION FOR DETAILS

HURST-ROSCHE, Inc.
PROFESSIONAL DESIGN NUMBER: 164-000298
1100 KERMIT DRIVE, SUITE 204
NASHVILLE, TN 37217
PH:615.454.6615

HILLSBORO, IL
EAST ST. LOUIS, IL
SPRINGFIELD, IL
MARION, IL
ARNOLD, MO

DAVID DEAN POOL REGISTERED ARCHITECT STATE OF TENNESSEE

SIGNATURE

DATE 10/24/2025

LICENSE EXPIRES 03-31-2027

NATHAN BEDFORD FORREST STATE PARK CAMPGROUND RENOVATIONS
NATHAN BEDFORD FORREST STATE PARK
EVA, BENTON COUNTY, TENNESSEE
SBC PROJECT NUMBER: 126/060-01-2022

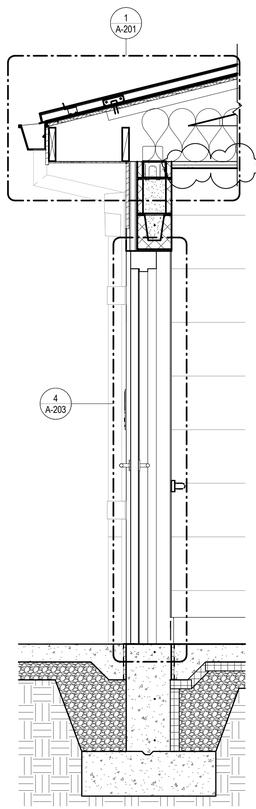
MARK	DATE	DESCRIPTION
1	10/24/2025	ADDENDUM #4

DATE: 07-08-2025
PROJECT NO: HR: 530-0423

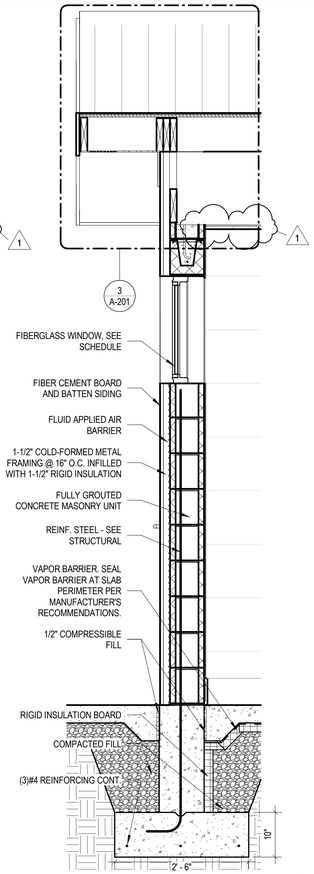
DESIGN:	DRAWN:	CHECK:
ALG	MLF	RE

LAKEFRONT BATHHOUSE - BUILDING PLANS & DETAILS

A-201

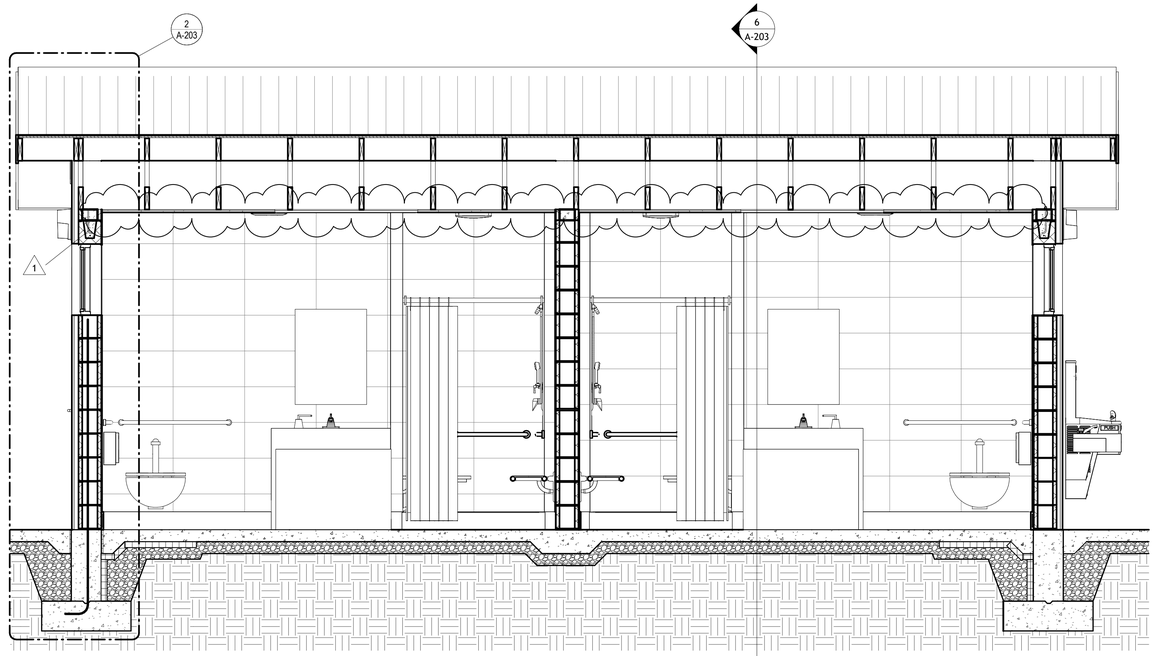


1 WALL SECTION
3/4" = 1'-0"



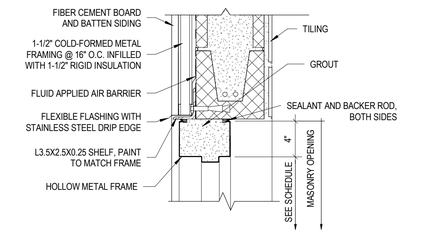
2 WALL SECTION
3/4" = 1'-0"

0 8" 1.3' 2.7'
0 2'
3/4" = 1'-0"

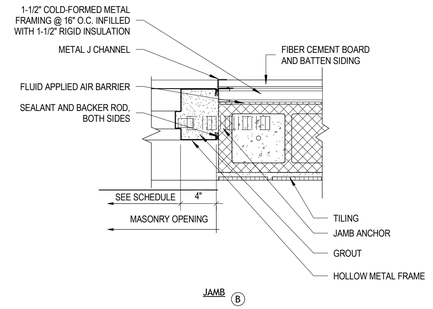


3 BUILDING SECTION
1/2" = 1'-0"

0 1' 2' 4'
0 2'
1/2" = 1'-0"

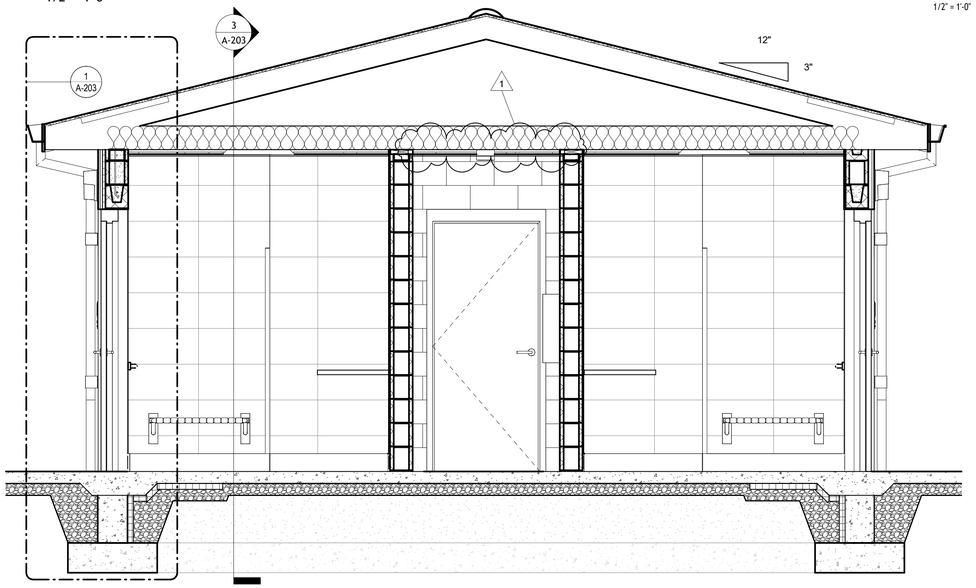


HEAD (A)

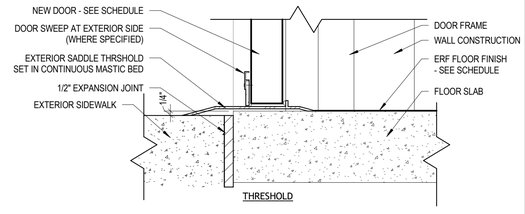


JAMB (B)

4 DOOR DETAILS
1 1/2" = 1'-0"



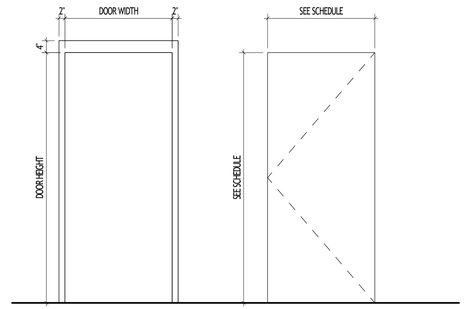
6 BUILDING SECTION
1/2" = 1'-0"



THRESHOLD

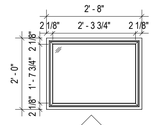
7 THRESHOLD DETAIL
3" = 1'-0"

0 2" 4" 8"
0 2"
3" = 1'-0"



5 DOOR & FRAME ELEVATIONS
1/2" = 1'-0"

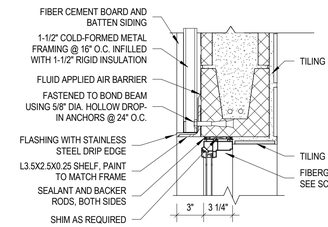
0 1' 2' 4'
0 2'
1/2" = 1'-0"



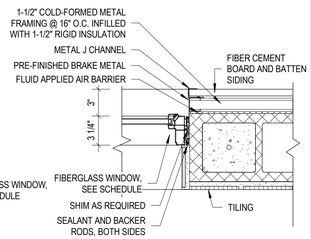
GLASS TYPE:

GL-1 11/16" LOW-E INSULATED OBSCURE GLASS

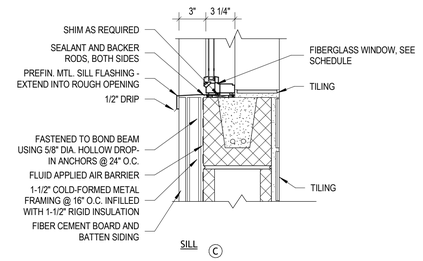
8 WINDOW & FRAME ELEVATION
1/2" = 1'-0"



HEAD (A)



JAMB (B)



SILL (C)

9 WINDOW DETAILS
1 1/2" = 1'-0"

0 4" 8" 1.3'
0 2"
1 1/2" = 1'-0"

DOOR SCHEDULE

MARK	DOOR SIZE WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	FRAME MATERIAL	TYPE	FINISH	HEAD	JAMB	THRESHOLD	HARDWARE SET NO.	ROOM	COMMENTS
100	3' - 0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PT-2	HOLLOW METAL	S-1	PT-2	A	B	C	2	100	
101	3' - 0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PT-2	HOLLOW METAL	S-1	PT-2	A	B	C	2	101	
102	3' - 0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PT-2	HOLLOW METAL	S-1	PT-2	A	B	C	2	102	
103	3' - 0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PT-2	HOLLOW METAL	S-1	PT-2	A	B	C	2	103	
104	3' - 0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PT-2	HOLLOW METAL	S-1	PT-2	A	B	C	1	104	

WINDOW SCHEDULE

MARK	COUNT	SIZE WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	DETAIL HEAD	JAMB	SILL	GLAZING THICKNESS	TYPE	HEAD HEIGHT	COMMENTS
2	8	2' - 8"	2' - 0"	FIXED RECTANGULAR	FIBERGLASS	FACTORY	A	B	C	11/16"	GL-1	8' - 0"	OPAQUE GLASS

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DATE: 07-08-2025
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DESIGN:	DRAWN:	CHECK:
ALG	MLF	RE

LAKEFRONT BATHHOUSE - SECTIONS & DETAILS

A-203

SECTION 01 21 13
ALLOWANCES

PART 1 - GENERAL

1.01 Include allowances stated in the Contract Documents in the Contract Sum. Designate in the construction progress schedule the delivery dates for products specified under each allowance.

1.02 Refer particularly to paragraph 3.8 of the Conditions of the Contract for inclusions and exclusions not specified below.

1.03 Administration of allowances

A. Contractor's duties in selection of products under allowances

1. Assist the Designer and Owner in determining qualified suppliers or installers.
2. Obtain bids from suppliers and installers when requested by the Designer.
3. Make appropriate recommendations for consideration of the Designer.
4. Notify the Designer promptly of:
   - **a.** Reasonable objections against a supplier, or party under consideration for installation.
   - **b.** Effect on the Construction Schedule anticipated by selections under consideration.

B. Adjustment of costs

1. Should the net cost be more or less than the specified amount of the allowance, the Contract Sum will be adjusted accordingly by Change Order or Construction Change Directive.
2. At Contract Close-out, reflect approved changes to the Contract Sum in the final application for payment.

1.04 Provide the following allowances:

A. Each campsite shall have a furnishings budget of $2000.00 total per campsite with an overall total budget of $98,000.00, based on 49 total number of campsites. The contractor shall be responsible for procuring and installing the items listed below. The item numbers, model, and manufacturer shall be provided to the contractor by the designer, based upon information TDEC provides to the designer, Hurst-Rosche. Tennessee Department of Environment and Conservation has trusted manufacturers for each furnishing item listed in the allowance. Coordinate with Owner on the selection of each campsite furnishing item listed:

1. Fire Ring and gravel base
2. Pedestal Grill
3. Lantern Holder
4. Picnic Table and gravel base
5. Campsite Marker

B. Contractor shall provide $30,000 allowance for fees from BCES (Benton County Electric System) utility company incurred by the project.

END OF SECTION

SECTION 08 31 13 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Attic Access Doors and Frames.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each type of access door and frame and for each finish specified, complete assembly minimum 6 by 6 inches in size.

C. Product Schedule: For access doors and frames.

PART 2 - PRODUCTS

2.1 ACCESS DOORS AND FRAMES

A. Exterior Flush Access Doors See Architectural Drawings – Elevations and Sections:

1. Basis-of-Design: LT-4000 Universal Flush Lightweight Aluminum Access Door by Acudor. Approved Equal is acceptable.
2. Description: Weatherproof assembly, with face of door fit flush with frame and with exposed frame.
3. Neoprene door gasketing, 1/8” x 3/8” closed cell.
4. Continuous Aluminum Piano Hinge with exposed knuckle, 180 degree opening.
5. Location: Mechanical 104 ceiling as described in drawings.
6. Door Size: 24”x 24”.
7. Aluminum Panel for Door: Nominal 0.064-inch, 16 gage, factory finished, lined with ¾” polystyrene insulation.
8. Frame Material: Match Door.
9. Cam latch operated with keyed lock.

2.2 MATERIALS

A. Aluminum Extrusions: ASTM B221, Alloy 6063.

B. Aluminum Sheet: ASTM B209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

C. Frame Anchors: Same material as door face.

D. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A153/A153M or ASTM F2329.

2.3 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish mounting holes, attachment devices and fasteners of type required to secure access doors to types of supports indicated.

D. Latch and Lock Hardware:

1. Quantity: Furnish one lock.
2. Keys: Furnish two keys per lock.

2.4 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Painted Finishes: Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

1. Factory Primed: Apply manufacturer's standard, lead- and chromate-free, universal primer immediately after surface preparation and pretreatment.
2. Factory Finished: Apply manufacturer's standard baked-enamel or powder-coat finish immediately after cleaning and pretreating, with minimum dry-film thickness of 1 mil for topcoat.

a. Color: As selected by Designer from full range of industry colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing access doors and frames.

B. Provide wood framing at each side of frame as required to bridge truss spacing.

C. Install access doors such that top of door is no higher than the bottom of new roof trusses.

3.3 FIELD QUALITY CONTROL

A. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.

B. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.

3.4 ADJUSTING

A. Adjust doors and hardware, after installation, for proper operation.

END OF SECTION

SECTION 09 7700

FIBERGLASS REINFORCED WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Prefinished polyester glass reinforced plastic sheets and adhered to unfinished gypsum wallboard.
   1. Aluminum trim.
   2. PVC Wall base.

B. Products Not Furnished or Installed under This Section:
   1. gypsum substrate board.

1.2 RELATED SECTIONS

A. Section 09 29 00 – Gypsum board.

B. Section 09 90 00 – Painting & Coating.

1.3 REFERENCES

A. American Society for Testing and Materials: Standard Specifications (ASTM)
   1. ASTM D 256 - Izod Impact Strengths (ft #/in)
   2. ASTM D 570 - Water Absorption (%)
   3. ASTM D 638 - Tensile Strengths (psi) & Tensile Modulus (psi)
   4. ASTM D 790 - Flexural Strengths (psi) & Flexural Modulus (psi)
   5. ASTM D 2583- Barcol Hardness
   6. ASTM D 5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels.
   7. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

A. Product Data: Submit sufficient manufacturer's data to indicate compliance with these specifications, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

B. Shop Drawings: Submit elevations of each wall showing location of paneling and trim members with respect to all discontinuities in the wall elevation.

C. Selection Samples: Submit manufacturer's standard color pattern selection samples representing manufacturer's full range of available colors and patterns.

D. Samples for Verification: Submit appropriate section of panel for each finish selected indicating the color, texture, and pattern required.
   1. Submit complete with specified applied finish.
   2. For selected patterns show complete pattern repeat.
   3. Exposed Molding and Trim: Provide samples of each type, finish, and color.

E. Manufacturers Material Safety Data Sheets (MSDS) for adhesives, sealants and other pertinent materials prior to their delivery to the site.

1.5 QUALITY ASSURANCE

A. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
   1. ASTM E 84 (Method of test for surface burning characteristics of building Materials)
      a. Wall Required Rating – Class [A] [C].

B. Sanitary Standards: System components and finishes to comply with:
   1. United States Department of Agriculture (USDA) / Food Safety & Inspection Services (FSIS) requirements for food preparation facilities, incidental contact.
   2. Food and Drug Administration (FDA) 2013 Food Code 6-101.11.
   3. Canadian Food Inspection Agency (CFIA) requirements.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials factory packaged on strong pallets.

B. Store panels and trim lying flat, under cover and protected from the elements. Allow panels to acclimate to room temperature (range of 60 to 75°F) for 48 hours prior to installation.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Building are to be fully enclosed prior to installation with sufficient heat (70°) and ventilation consistent with good working conditions for finish work

B. During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used and recommendation of adhesive manufacturer.
   1. Provide ventilation to disperse fumes during application of adhesive as recommended by the adhesive manufacturer.

1.8 WARRANTY

A. Furnish one-year guarantee against defects in material and workmanship.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Basis of Design: Marlite
   1. Product: Standard FRP

B. Crane Composites
   1. Product: Glasbord – White Embossed Finish

C. Approved Equal

2.2 PANELS

A. Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM D 5319.
   1. Dimensions:
      a. Thickness – 0.090 " (2.29mm) nominal
      b. Width - 4'-0" (1.22m) nominal
      c. Length – As indicated on the drawings nominal
   2. Tolerance:
      a. Length and Width: +/-1/8 " (3.175mm)
      b. Square - Not to exceed 1/8 " for 8 foot (2.4m) panels or 5/32 " (3.96mm) for 10 foot (2.4m) panels

B. Properties: Resistant to rot, corrosion, staining, denting, peeling, and splintering.
   1. Flexural Strength - 1.7 x 10^4 psi per ASTM D 790.
   2. Flexural Modulus – 6.0 x 10^5 psi per ASTM D 790.
   3. Tensile Strength – 8.0 x 10^3 psi per ASTM D 638.
   4. Tensile Modulus – 9.43 x 10^5 psi per ASTM D 638.
   5. Water Absorption - 0.17% per ASTM D 570.
   6. Barcol Hardness (scratch resistance) of 30 as per ASTM D 2583.
   7. Izod Impact Strength of 7.0 ft. lbs./in ASTM D 256

C. Back Surface: Smooth. Imperfections which do not affect functional properties are not cause for rejection.

D. Front Finish: As Indicated on the Drawings – or approved equal
   a. Surface Pebbled
   b. Fire Rating Class C (III)
   c. Size: as indicated on drawings
      1) Standard FRP
         a) 48" x 96" [1.2m x 2.4m] x .090" (3mm) nom.
         b) 48" x 108" [1.2m x 2.7m] x .090" (3mm) nom.
         c) 48" x 120" [1.2m x 3m] x .090" (3mm) nom.

2.3 BASE

A. Base Molding for 0.090” (2.29mm) thick FRP Panels
   1. Color: White
   2. Profiles:
      a. M 612 FRP Base Molding, 10’ length
      b. M 651 Inside Corner
      c. M 660 Outside Corner
      d. M 620 LH End Cap
      e. M 625 RH End Cap

2.4 MOLDINGS

A Aluminum Anodized Trim: Heavy weight extruded aluminum 6063-T5 alloy prefinished at the factory.
   1. Profiles :
      a. F 550 Inside Corner, 8’ length
      b. F 561 Outside Corner, 8’ length
      c. F 565 Division, 8’ length
      d. F 570 Edge, 8’ length
      Color: Brite Satin Anodized

B. PVC Trim: Thin-wall semi-rigid extruded PVC.
   1. M 350 Inside Corner, [8’ length][10’ length]
   2. M 360 Outside Corner, [8’ length][10’ length]
   3. M 365 Division, [8’ length][10’ length]
   4. M 370 Edge, [8’ length][10’ length]
   5. V 177 135° Inside Corner [8’ length] [White only]
   6. V 179 135° Outside Corner [8’ length] [White only]
   7. Color: White

C. Outside Corner Guard:
   1. F 560SS Stainless Corner Guard, [8’ length][10’ length]
   2. Finish: #4 brushed satin

2.5 ACCESSORIES

A. Fasteners: Non-staining nylon drive rivets.
   1. Match panel colors.
   2. Length to suit project conditions.

B. Adhesive: Either of the following (or manufacturer approved equal) construction adhesives complying with ASTM C 557.
   1. Marlite C-551 FRP Adhesive - Water- resistant, non-flammable adhesive.
   2. Marlite C-915 Construction Adhesive - Flexible, water-resistant, solvent based adhesive, formulated for fast, easy application.
   3. Titebond Advanced Polymer Panel Adhesive – VOC compliant, non-flammable, environmentally safe adhesive.

C. Sealant (or manufacturer approved equal):

1. Marlite Brand MS-250 Clear Silicone Sealant.
2. Marlite Brand MS-251 White Silicone Sealant.
3. Marlite Brand - Color Match Sealant.

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine backup surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.
   1. Verify that stud spacing does not exceed 24” (61cm) on-center.

B. Repair defects prior to installation.
   1. Level wall surfaces to panel manufacturer’s requirements. Remove protrusions and fill indentations.

3.2 INSTALLATION

A. Comply with manufacturer's recommended procedures and installation sequence.

B. Cut sheets to meet supports allowing 1/8” (3 mm) clearance for every 8 foot (2.4m) of panel.
   1. Cut and drill with carbide tipped saw blades or drill bits, or cut with shears.
   2. Pre-drill fastener holes 1/8” (3mm) oversize with high speed drill bit.
      a. Space at 8” (200mm) maximum on center at perimeter, approximately 1” from panel edge.
      b. Space at in field in rows 16’ (40.64cm) on center, with fasteners spaced at 12” (30.48 cm) maximum on center.

C. Apply panels to board substrate, above base, vertically oriented with seams plumb and pattern aligned with adjoining panels.
   1. Install panels with manufacturer's recommended gap for panel field and corner joints.
      a. Adhesive trowel and application method to conform to adhesive manufacturer’s recommendations.
      b. Drive fasteners for snug fit. Do not over-tighten.

D. Apply panel moldings to all panel edges using silicone sealant providing for required clearances.
   1. All moldings must provide for a minimum 1/8 “(3mm) of panel expansion at joints and edges, to insure proper installation.
   2. Apply sealant to all moldings, channels and joints between the system and different materials to assure watertight installation.

3.3 CLEANING

A. Remove excess sealant from panels and moldings. Wipe panel down using a damp cloth and mild soap solution or cleaner.

B. Refer to manufacturer's specific cleaning recommendations Do not use abrasive cleaners.

END OF SECTION