BURGESS & NIPLE KZF DESIGN joint venture

525 Vine Street | Suite 1300 | Cincinnati, OH 45202 | 513.579.0042

OFCC/ODOT District 8 Preble FSMF / DOT-200011
Request for Proposals

Addendum No. 1
Issue Date: November 21, 2025

This addendum shall be attached to and become part of the Request for Proposal Documents for OFCC/ODOT District 8 Preble FSMF

MEETING MINUTES

Attached are copies of the Pre-bid Meeting Minutes that include questions and responses raised during the meeting.

Request for Information Responses

1. Is page OO-R.001 missing
    a. The page was omitted from the set. It is included in this addendum
2. Fence - The specifications call for 6' tall and the drawing has 7' tall, which one is it ?
    a. The fence is 7' high
3. Fence - Specification has down 1 7/8" post (2") galvanized Or do they want 2 3/8" post (2 ½") ?
    a. The post dimension is per manufacture specification not to be less than the plan dimension of 2 3/8"
4. Fence - Specification is asking for .192 fabric (6ga) Aluminized and drawing is asking for 11ga with vinyl coating ?
    a. Fence fabric to be .192 in (6ga) Aluminized.
5. Fence - Specification is asking for top and bottom rail and drawing has top rail and bottom tension wire?
    a. Detail should say bottom rail. Sized per manufacture.
6. Fence - Is all of the material Vinyl Coated ?
    a. not applicable
7. Please confirm that third party testing is by the owner?
    a. Third party testing costs are not the responsibility of the bidding contractor
8. Please confirm the owner is to pay for the building permit?

   a. Permit fees have already been paid.

9. Please confirm the owner will pay for any tapping fees?
   a. Tapping fees will be included in the project.
10. Please confirm the owner will pay for any aid to construction cost?
   a. There are no allowances for this project. All Utility connections to be included in contractor's cost.
11. Please confirm if we can leave any spoils onsite?
   a. Site is graded to balance based on provided survey data. Temporary staging of spoils between stages is to be coordinated with the facility owner and shall not impede operations. If there are spoils after construction is complete, they are to be removed. Any contaminated soils discovered during construction are to be removed from the site and disposed of properly.
12. SP-C.001 – Note 8 under grading / earthwork. Can go you into more detail about the areas you are expecting to be undercut and recompacted?
   a. This note is added per the geotechnical report. Boring locations are shown on the existing site plan sheets. The limits of this undercut is not specified within the geotechnical report. Any and all unsuitable soils as detailed within the geotechnical report found during construction should be undercut and replaced with engineered fill or chemically modified with lime or concrete
13. Is the laydown area at the NE corner of the new work permanent?
   a. The laydown area south of the proposed detention basin is permanent for the use of the facility owner post construction. It is not intended for contractor use without permission. Contractor laydown areas are to be coordinated with the facility owner between phases and shall not impede facility operations.
14. Page SP-C.203 note G12. Where is this located at?
   a. The oil stop valve is located within CB6. Additional sump is provided in this catch basin as shown on sheet SP-C.207. Install per manufacture specifications.
15. Are there bollards supposed to be on each side the swing gates / keypad?
   a. Bollards must be located on both sides of the pivot gates and key pad to protect when from vehicles leaving and entering the facility. The swing gates do not have bollards called out on the plans because the are in lawn areas.
16. Please confirm the City of Eaton will supply both the domestic and fire line water meter?
   a. The tap fee includes the domestic water meter. The fire meter must be purchased separately from the City of Eaton Water department. It will be the owner's responsibility to maintain and repair this meter. The owner is not charged for water used by the fire meter. It is used to help detect leaks in the system and must be compatible with City of Eaton software.
17. The building demo – what should we assume the existing slab/footer thickness is?

   a. See attached record drawings for reference.

18. Could the bid date by a week. With the amount of plans/specs/information this would be helpful to make sure we have a competitive number. We will also lose a couple days with Thanksgiving.
   a. We will not be extending the bid date at this time.
19. Spec Section 10 14 23.16 Room-Identification Panel Signage calls for signage to be framed, but drawing OM-A.406 does not show the signage in frames. Please clarify if panel signage is to be framed or not.
   a. Specifications are correct, sign elevations are representational to demonstrate sizes, text, etc.
20. The Plumbing Drawings for the Maintenance Building call out the Truck Wash System as "Delegated Design". There is no spec given, or parameters that we are to design to. Please provide more information.
   a. Refer to attached equipment drawing set for reference
21. In the pre-bid meeting I asked about details of the Brine System that is being re-used. The answer was that the details of the Brine System work to be executed by our plumber is in the bid docs. Sheet SS-MP.101 Coded Note MP03 states "Brine System is to be reused and installed by owner, plumbing contractor to make final connections." Coded Note MP01 states "Refer to OM-P.105 for continuation." OM-P.105 is the Truck Storage Plumbing Plan, and does not have any information on the Brine System. Sheet OO-P.505 shows the tank farm, and a section of a "Remote Fill Box", but for a plumber to properly price this work, we will need details on all connections, valves, pipe sizes, etc. Please provide.
   a. Please refer to sheets P.302, P.102, and C.300. The plumber shall install a backflow preventer and 2" water pipe out to the brine maker system and leave a flanged connection for ODOT to install the brine maker system.
22. Please confirm the prime general contractor does not have to have ODOT certified to be awarded this project
   a. The contract will be with OFCC, not ODOT
23. Should bollards get painted or yellow covers? C drawing state paint. A102 states covers
   a. Exterior bollards to receive paint. Interior bollards to receive protective cover.
24. Please confirm if all exposed steel on the PEMB should get painted?
   a. All exposed structural steel is to be painted P-4 per OM-A.403.
25. Please confirm all exposed duct work and conduit should get painted.
   a. All exposed duct work and conduit should be painted as called out in General Notes.
26. What finish / material goes on the bus wash cmu walls? OM A.312 detail 2. I see there is metal linear on the inside above the cmu, but what goes over the cmu? Finish schedule states epoxy paint. See attached in yellow.
   a. CMU is exposed. Highlighted object is the garage door beyond the wall section.

27. The east and west walls of the room 201. Are these to be metal linear panel or gyp board? The north and south walls get metal linear per 3/A311 & 3/A312. Detail 6/A501 shows the east and west walls to be gyp board.
    a. The finish of rooms of the East and West walls of room 201 are the inside face of the insulated metal panel. Detail 6/A501 was called out as a similar condition for the stack joint, but does not have the gyp bd for this room.
28. The east and west walls of room 301/302/303. Does the metal linear on the inside start at 18’6” per 1/A312 or 3’4” per 3/A312?
    a. The finish of rooms of the East and West walls of rooms 301, 302, and 303 are the inside face of the insulated metal panel. These do not have the metal liner panel. Section 3/OM-A.312 refers to the south wall of the room. There, the metal liner panel begins at 3'4" above the raised concrete walkway of the truck storage.
29. Page OM A402 – items TA-A1,TA-B1,TA-H1. Are these OFCI?
    a. The accessories are to be Owner provided, GC installed.
30. Please confirm note 6 on SS-A.101 is by the owner? SP-C105 note S12 states this is by owner.
    a. Barrier wall will by owner
31. Could Chief Buildings be added to the list of acceptable manufacturers for the PEMB in spec section 133419 Metal Building Systems?
    a. Chief Buildings is an acceptable manufacturer for the PEMB and has been added on line 2.3.A in section 133419, attached to this addendum.
32. Is there a MOT plan where we have to cross 35 with the waterline?
    a. MOT plans are not provided. MOT notes are provided on sheet SP-C.002. Per note 6. The contractor is to provide a maintenance of traffic plan for review at least 2 weeks prior to the start of work.
33. Is the quality control and construction materials testing available to bid for this project?
    a. QA/QC is already contracted under the AEs scope. It is not available to bid on.

End of addendum

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OFCC / ODOT District 8 Preble FSMF / DOT-200011

MEETING DATE: November 18, 2025

LOCATION: Project Site

PROJECT: OFCC/ODOT District 8 Preble FSMF / DOT-200011

REGARDING: Pre-Bid Meeting Minutes

Project Owner: ODOT
Project Management: OFCC
Architect: Burgess & Niple / KZF JV

ATTENDANCE

Megan Dougherty – B&N
Elias Lewis – B&N
Steve DeSalvo – KZF
Ben Trick – OFCC
Paul Wieber - ODOT
Cory Fidler – ODOT
CONTINUE FROM SIGN IN SHEET

AGENDA

- Project Administration Items
  - Sign-In
  - Project Points of Contact
    i. OFCC: Ben Trick
    ii. ODOT: Cory Fidler
    iii. A/E:
      1. PM: Megan Dougherty (B&N) / Chad Kohler (B&N) / Scott Csendes (KZF)
      2. Construction Administrator: Steve DeSalvo (KZF)

- Project Overview
  - OFCC/ODOT Project Introduction and Intent
    i. Project overview was described to the attendees
  - OFCC/ODOT Overview of Bidding Process and Timeline
    i. Required Documents and Forms
      1. **All required forms and processes are described in the project specifications.**

ii. Phase I and II
1. **The phases have been consolidated to 2 phases, a shift from the description on the drawings. Phase 1 consists of construction of the new facility while the existing facility remains operational. The second phase includes the demolition of the existing facility and construction of the parking lots, which would occur when the new facility is fully operational.**

iii. Alternates
1. **Are allowed. Please refer to the specifications for more information.**

iv. EDGE Goal
1. **5%. Please refer to the specifications for more information.**

v. Bid Deadline and Selection Process
1. **Schedule was distributed to the attendees. This is the same schedule in the specifications**

- Confirm bid RFI process
  i. **All RFIs are to be submitted to contact at ODOT.**
- Site Access and Staging Areas
  i. Coordination with ODOT Daily Activities
  1. **Construction trailer shown on drawings is for ODOT purposes and not part of project**
  2. **Construction fence and Construction Trailer locations to be determined.**

- Open Forum
  - **Questions asked on site:**

  - **Brine equipment is shown on drawings as by others. Is this correct? Do the drawings accommodate the connections?**
    i. The Brine equipment will be brought over from the existing facility. The drawings have the utility hookups shown for connection with existing equipment.

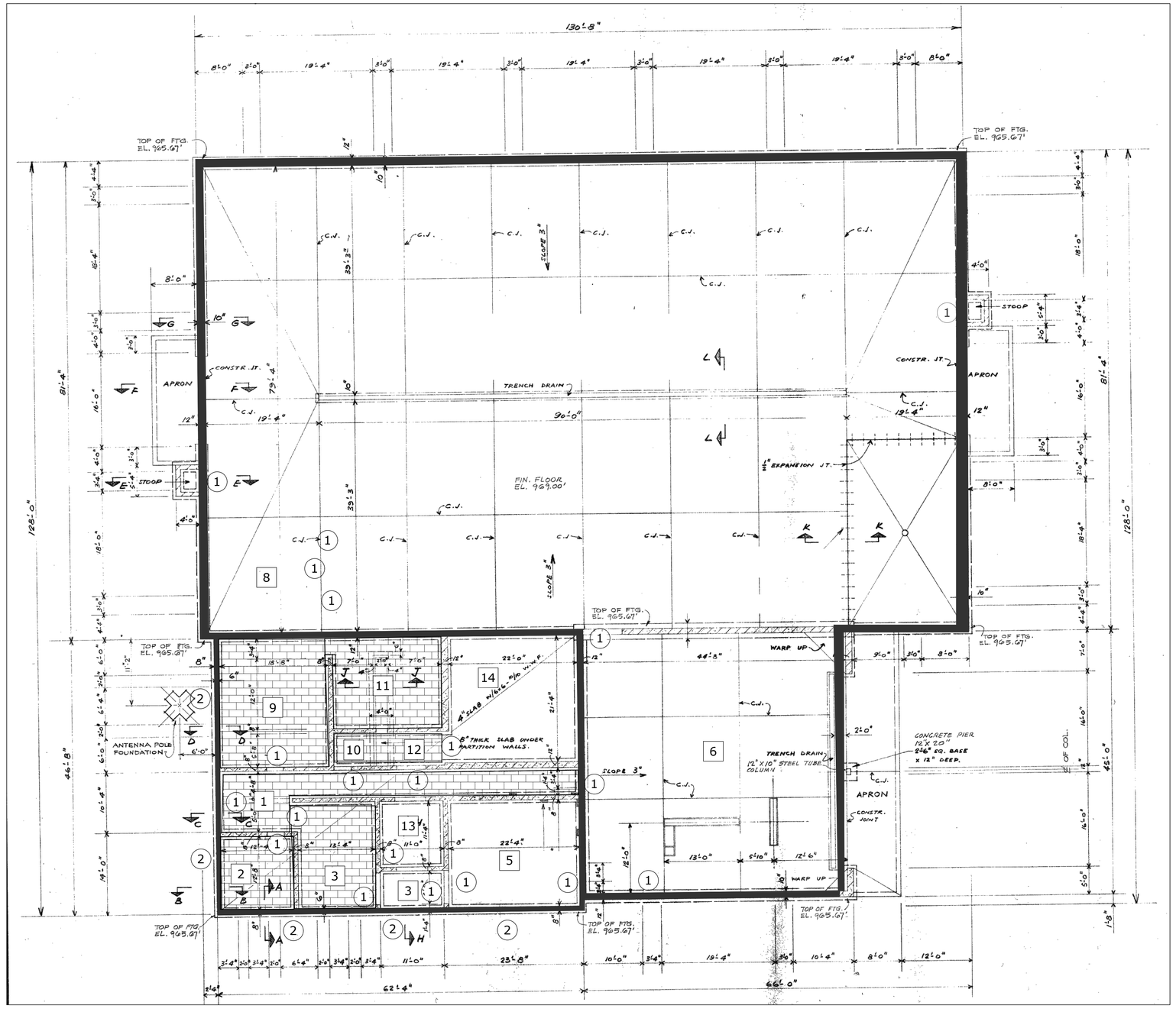
  - **The R sheet is on the drawing index but does not appear in the set**
    i. Sheet was incorrectly omitted. Will be distributed in addendum

  - **Is there a salvage list?**
    i. No. All ODOT items to be brought over to the new site will be done by ODOT. This mostly entails small tool items and hardware.

  - **Which utility provides power to the site? Has switchover been discussed?**
    i. AES Ohio provides electric utility. They are aware of the project and will coordinate with the contractor.

- Conclusion
  - **Minutes and Addendum to be distributed to bidders by 11/21/2025.**

ITEM# 1



LEGEND

- ACM FLOOR TILE
- ACM BROWN CAULK ON ROOF PARAPETS AND FASCIA
- (1) ACM DOOR CAULK
- (2) ACM WINDOW CALK & GLAZING

PLAN PREPARED BY:

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231

ACM PLAN NOTES:

HAZARDOUS MATERIALS REMEDIATION WORK IS TO BE PERFORMED ACCORDING TO THE REQUIREMENTS OF ALL CONTRACT DOCUMENTS, INCLUDING THE HAZARDOUS MATERIALS ABATEMENT SPECIFICATION, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

THE INTENT OF THIS DRAWING IS TO SHOW THE GENERAL LOCATIONS OF ASBESTOS-CONTAINING MATERIALS (ACM). REFER TO SPECIFICATION 02 82 00 FOR ACM TO BE REMOVED AND ADDITIONAL INFORMATION. LOCATIONS OF OTHER HAZARDOUS MATERIALS ARE NOT SHOWN. REFER TO SPECIFICATION 02 83 00 AND SPECIFICATION 02 70 00 FOR ADDITIONAL INFORMATION ON HAZARDOUS COATINGS IN CONSTRUCTION AND RECYCLING OF UNIVERSAL AND HAZARDOUS WASTE.

1. AN ASBESTOS SURVEY WAS PERFORMED THROUGHOUT THE PROJECT AREA. THE CONTRACTOR WILL BE RESPONSIBLE FOR STAFFING THE REQUIRED PERSONNEL TO REMOVE THE FOLLOWING ACM IF THESE MATERIALS WILL BE RENDERED FRIABLE AND CONSIDERED AS REGULATED ACM BY DEMOLITION ACTIVITIES.

   NO ACM WAS IDENTIFIED IN THE SALT DOME BUILDING, SAND/SALT BUILDING, MOBILE TRAILER, POLE BARN OR SMALL PUMP STRUCTURE. ASBESTOS-CONTAINING MATERIALS (ACM) WERE IDENTIFIED AND INCLUDE THE FOLLOWING:

LOCATION	ACM	ACM CAT**	APPROXIMATE QUANTITY*
OFFICE BUILDING/GARAGE			
ROOM NOS. 1, 2, 3, 9, 10, 11 AND 12	12"X12" FLOOR TILE – TAN WITH BROWN	CAT. I	1,900 SF
ALL SINGLE AND DOUBLE SWINGING DOORS THROUGHOUT THE STRUCTURE	TAN DOOR CAULK	CAT. II	20 UNITS
	GRAY CAULK – FLEXIBLE (DOOR FRAME)	CAT. II	
	GRAY CAULK – HARD (DOOR FRAME)	CAT. II	
	BLACK CAULK – DOOR FRAME	CAT. II	
ROOM NOS. 1, 2, 3, 4, 5 AND 9	GRAY WINDOW GLAZING – EXTERIOR	RACM	12 UNITS
	BROWN CAULK – WINDOW	CAT. II	
ROOF PARAPETS AND FASCIA	BROWN CAULK – ROOF 2" STRIPS	CAT. II	930 SF

*SF – SQUARE FEET
**CATEGORY – CATEGORY I NONFRIABLE ACM (CAT. I), CAT. II NONFRIABLE ACM, REGULATED ACM (RACM)

ALL QUANTITIES AND LOCATIONS ARE ESTIMATES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES AND EXACT LOCATIONS IN PREPARING BIDS AND EXECUTING WORK.

THE ACM FLOORING IS CATEGORY I NON-FRIABLE ACM AND IS NOT REQUIRED TO BE REMOVED PRIOR TO DEMOLITION AS LONG AS THE MATERIAL DOES NOT BECOME FRIABLE DURING THE DEMOLITION PROCESS. WHEN CATEGORY I NON-FRIABLE ACM REMAINS IN THE BUILDING DURING DEMOLITION, THE BUILDING DEMOLITION DEBRIS CANNOT BE RECYCLED OR USED AS FILL AND MUST BE DISPOSED OF AS CONSTRUCTION DEMOLITION DEBRIS.

THE ACM DOOR CAULK, WINDOW CAULK, WINDOW GLAZING AND ROOF CAULK ARE CATEGORY II NON-FRIABLE ACM. WHEN CATEGORY II NON-FRIABLE ACM REMAINS IN THE BUILDING DURING DEMOLITION, THE ENTIRE BUILDING DEMOLITION DEBRIS MUST BE DISPOSED OF AT AN EPA LICENSED ASBESTOS LANDFILL AND FOLLOW APPROPRIATE OSHA REQUIREMENTS TO PROTECT WORKERS AND THE PUBLIC DURING DEMOLITION.

THE FOLLOWING BUILDING MATERIALS WERE IDENTIFIED TO CONTAIN LESS THAN 1% ASBESTOS AND ARE NOT REGULATED BY THE OHIO EPA; HOWEVER, ARE REGULATED BY OSHA:

A. OFFICE BUILDING/GARAGE
   - GRAY WINDOW GLAZING - INTERIOR
   - GRAY EPOXY FLOOR COATING - WITH WHITE FLECKS
- WHITE CAULK ON SECURITY GLASS

THE FOLLOWING SUSPECT BUILDING MATERIALS WERE NOT SAMPLED FOR ASBESTOS AS PART OF THIS SURVEY SINCE THE MATERIALS WERE INACCESSIBLE UNTIL DEMOLITION, THE INTEGRITY OF THE MATERIAL WOULD HAVE BEEN COMPROMISED, OR DUE TO THE POTENTIAL DANGER TO THE SAMPLE COLLECTOR. THESE MATERIALS SHOULD BE ANALYZED PRIOR TO DEMOLITION OR TREATED AS IF THEY CONTAIN ASBESTOS AND ABATED UNLESS TESTING INDICATES OTHERWISE.

A. PIPE FLANGE GASKETS
B. FIRE DOORS
C. BOILER INSULATION
D. VAN PACKER BREECHING
E. ELECTRICAL WIRING, TAPE AND EQUIPMENT

THE ASBESTOS SURVEY PERFORMED FOR THIS PROJECT WAS LIMITED TO THE AREAS AND MATERIALS FOR WHICH IT WILL BE NECESSARY TO DISTURB FOR THE WORK SHOWN IN THE CONSTRUCTION DOCUMENTS. DUE TO THE LIMITED NATURE OF THE SURVEY, THE CONTRACTOR IS REQUIRED TO NOTIFY AND SEEK FURTHER GUIDANCE FROM THE PROJECT REPRESENTATIVE IF THE SCOPE OF CONSTRUCTION EXPANDS, OR IF ANY MATERIALS ARE ENCOUNTERED THAT ARE DIFFERENT FROM THOSE INDICATED IN THE ABATEMENT PLANS AND SPECIFICATIONS, OR THAT ARE SUSPECT IN ANY WAY. SUCH NOTIFICATION SHALL BE MADE PRIOR TO ANY DISTURBANCE OF THE SUSPECT MATERIALS.

2. DISPOSAL AND RECYCLING OF SOLID, LIQUID AND GASEOUS CONTAMINANTS SHALL BE IN ACCORDANCE WITH LOCAL CODES, LAWS, ORDINANCES AND REGULATIONS. ALL REFRIGERANTS SHALL BE REMOVED AND RECYCLED BY AN EPA-CERTIFIED HVAC TECHNICIAN.

   IF ANY LUBRICANT TANKS OR OTHER HYDRAULIC OIL EQUIPMENT ARE TO BE DISPOSED, THE PRESENCE OR ABSENCE OF PCBS SHALL BE VERIFIED, BY TESTING IF NECESSARY. COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS INCLUDING 40 CFR 761.

   THE CONTRACTOR SHALL REMOVE AND PACKAGE ALL FLUORESCENT LIGHT BULBS, LIGHT BALLASTS, MERCURY SWITCHES, BATTERIES AND ELECTRONIC WASTE. THESE MATERIALS CANNOT BE DISPOSED OF AS DEMOLITION WASTE AND SHALL BE RECYCLED. ELECTRONIC EQUIPMENT IS CONSIDERED A REGULATED WASTE IF NOT RECYCLED, AND MUST BE EVALUATED TO DETERMINE IF IT EXHIBITS A CHARACTERISTIC OF HAZARDOUS WASTE. PER OAC 3745.51.02, ELECTRONIC WASTE IS NOT REGULATED AS A HAZARDOUS WASTE IF PROPERLY RECYCLED.

3. THE CONTRACTOR IS TO ADHERE TO THE OSHA STANDARD 29 CFR 1926.62 LEAD EXPOSURE IN CONSTRUCTION WHEN PERFORMING DEMOLITION WORK PRACTICES, IMPACTING, OR DISTURBING ANY BUILDING MATERIALS. THE CONTRACTOR SHALL ASSUME THAT ALL COATED SURFACES FOR WHICH REPRESENTATIVE TEST RESULTS ARE NOT AVAILABLE CONTAINS LEAD COATINGS, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT WORKERS PERFORMING TASKS AND BUILDING OCCUPANTS UNDER THIS CONTRACT.

THE CONTRACTOR SHALL REVIEW THE APPROPRIATE DEMOLITION PLANS AND COORDINATE WITH THE GENERAL, ELECTRICAL, PLUMBING, AND MECHANICAL CONTRACTORS, AS NECESSARY, TO VERIFY ALL ITEMS AND LOCATIONS SCHEDULED FOR DEMOLITION OR ABATEMENT ARE CORRECTLY IDENTIFIED PRIOR TO COMMENCEMENT OF ANY ACTIVITIES.

THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING AND ADHERING TO ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE SET FORTH BY THE UNITED STATE ENVIRONMENTAL PROTECTION AGENCY (USEPA), OCCUPATIONAL SAFETY AND HEALTH DEPARTMENT (OSHA), AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OHIO EPA).

NO. | DATE | DESCRIPTION

Preble County Full Service Maintenance Facility
234 Quaker Race Rd.
West Alexandria, Ohio 45381

BURGESS & NIPLE / KZF DESIGN JV
Cincinnati, OH

NAME
LICENSE #
EXP DATE

DESIGNED	COMM. NO.
SHEPARD	8306.00
DRAWN	DATE
SOMMERS	03/07/2025
CHECKED	PROJ. MGR.
SHEPARD	SHEPARD

REMEDIATION ABATMENT PLAN

DRAWING NUMBER ISSUE
OO-R.001

NOT FOR CONSTRUCTION

1/22/2025 2:43:17 PM
T:\PROJECTS\2024\B-24-018 - B&N - Preble Full Service Maintenance Facility - HAZMAT, PHASE I ESA\Drawings\ENV\ENV.DWG

MAY 02, 2025 CONSTRUCTION DRAWINGS

ITEM# 17 (FOR REFERENCE ONLY, NOT TO SCALE)

LIST OF DRAWINGS

ARCHITECTURAL

A-1 PLOT PLAN
A-2 FOUNDATION PLAN
A-3 FLOOR PLAN
A-4 ELEVATIONS
A-5 WALL SECTIONS AND DETAILS
A-6 WALL SECTIONS AND DETAILS
A-7 TWIN POST LIFT AND MISCELLANEOUS DETAILS
A-8 METAL BUILDING - FOUNDATION PLAN
A-9 METAL BUILDING - ELEVATIONS
A-10 EQUIPMENT STORAGE SHED
A-11 SALT STORAGE BUILDING

STRUCTURAL

S-1 STRUCTURAL PLAN
S-2 STRUCTURAL SECTIONS

MECHANICAL

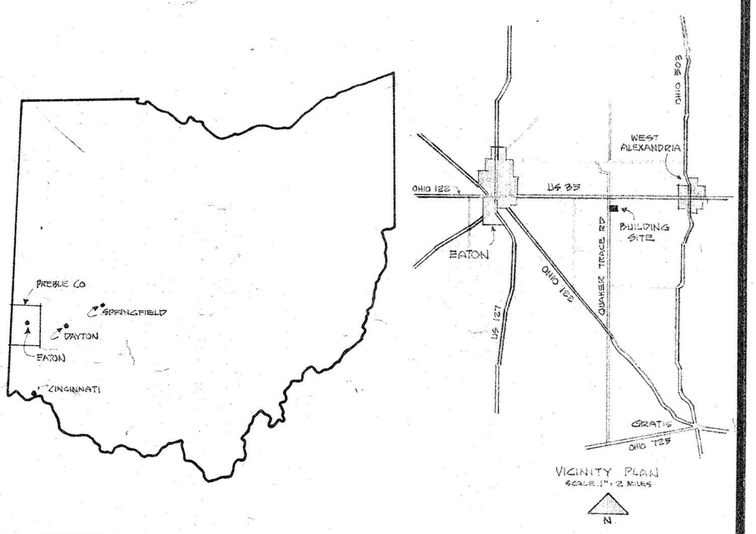
U-1 UTILITY PLOT PLAN
P-1 PLUMBING FLOOR PLAN AND DETAILS
P-2 PLUMBING DETAILS

H-1 HEATING AND VENTILATING FLOOR PLAN & DETAILS
H-2 HEATING DETAILS

ELECTRICAL

E-1 ELECTRICAL FLOOR PLAN AND DETAILS

LOCATION MAP



PREBLE COUNTY HIGHWAY GARAGE EATON OHIO

The structural elements of these drawings have not been checked. The sufficiency of these elements to meet all code requirements is the responsibility of the author of the drawings.

DIVISION OF FACTORY AND BUILDING INSPECTION
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF OHIO

These drawings and plans approved, subject to full compliance with all requirements of Revised Code of Ohio and Ohio State Building Code, Chapter B-11-4-73
Construction and erection in violation of above will nullify and void this approval.

DIVISION OF FACTORY AND BUILDING INSPECTION
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF OHIO

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF FACTORY AND BUILDING INSPECTION
APPROVED
JUN 2 1971
STATE OF OHIO
By William H. Brymer
Architect

WASTE AND VENT PIPING
APPROVED
STATE OF OHIO DEPARTMENT OF HEALTH
BY AUTHORITY OF DIRECTOR OF HEALTH
JOURNAL ENTRY OF BOARD OF HEALTH WAIVED

OHIO DEPARTMENT OF HEALTH
APPROVAL RECOMMENDED
MAY 18 1971
Brian C. Work
Inspector of Plumbing
Data marked

PREPARED FOR

OHIO DEPARTMENT OF HIGHWAYS

J. PHILLIP RICHLEY DIRECTOR

DATE 4-27-71
DIRECTOR DEPARTMENT OF HIGHWAYS

DATE 4-27-71
Alfred C. Gienow
DIRECTOR DEPARTMENT OF PUBLIC WORKS

DATE 4-27-71
Carl E. Bentz
STATE ARCHITECT

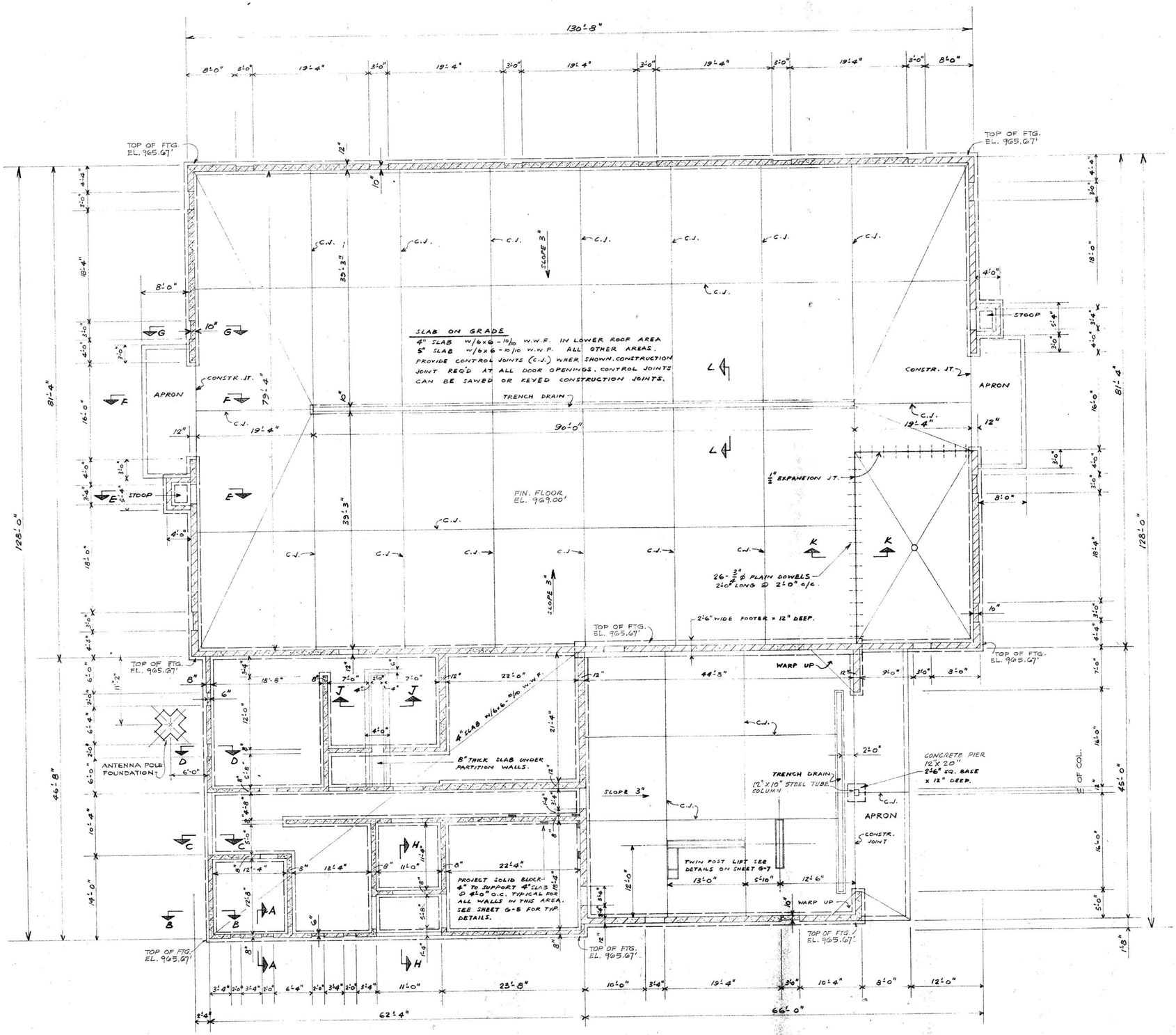
PREPARED BY

DEPARTMENT OF PUBLIC WORKS

ALFRED C. GIENOW DIRECTOR

DIVISION OF STATE ARCHITECT AND ENGINEER

CARL E. BENTZ STATE ARCHITECT



FOUNDATION PLAN 1/8"=1'0"

NOTES

1. REINFORCE ALL FOOTINGS W/4 #6 BARS CONT. 2 BOTT. CONTINUOUS UNLESS OTHER REINFORCING IS SO INDICATED.
2. FOOTING ELEVATIONS ARE TO TOP OF CONCRETE
3. POCHE'D SHOWS FOUNDATION WALLS AT FINISH FLOOR LEVEL. ELIMINATE ONE COURSE OF CONCRETE BLOCK BELOW FINISH FLOOR LEVEL AT INTERIOR DOOR OPENINGS AS DETAILED OR RELEVANT SECTIONS FOR THIS AND CONDITIONS AT EXTERNAL DOORS.
4. STEP FOOTINGS WHERE NOTED. IF BOTT. OF FTG IS LESS THAN 2'-6" BELOW GRADE NOTIFY ARCH PROVIDE DENT BARS AT ALL FTG STEPS AND CORNERS TO MATCH HORIZ. REINFT.
5. DEPTHS OF FOUNDATIONS SHOWN ARE A MINIMUM. UNDERSIDES TO BE TAKEN DOWN WHERE NECESSARY TO ACHIEVE A SATISFACTORY BEARING
6. FOUNDATION SIZES HAVE BEEN DETERMINED USING A SAFE BEARING PRESSURE OF 3000#/ft²
7. FOR SECTIONS A-A TO H-H INCLUSIVE SEE DRG NOS. G-5 & G-6. FOR SECTIONS J-J, K-K & L-L TYPICAL FOOTER SECTIONS, WALL AND SLAB CONTROL JOINT DETAILS

ROOM FINISH SCHEDULE			WALLS ARE SPECIAL COATED OR PAINTED		PAINT EXPOSED JOISTS · BEAMS AND RELATED ITEMS		CEILING HEIGHT		
ROOM NAME	FLOOR	BASE	WALLS		CEILINGS				REMARKS
VEHICLE STORAGE	CONC.	CONC. BLK	CONC. BLK	•	EXPOSED STRUCTURE	•	VARIES	SEE SECTION	
REPAIR GARAGE	DO	DO	DO	•	DO	•	DO		
STOCK ROOM	DO	DO	DO	•	DO	•	DO		
MECHANICAL ROOM	DO	DO	DO	•	DO	•	DO		
JANITOR CLOSET	VIN. ASB.	4" VINYL	DO	•	DO	•	DO		
LUBE AND OIL	CONC.	CONC. BLK	DO	•	DO	•	DO		
HALL	VIN. ASB.	4" VINYL	DO	•	ACOUST. A	A	8'-8 3/8"		
VESTIBULE	DO	DO	DO	•	DO	A	DO		ACOUS B OUTSIDE DOOR ABOVE STOOP
TIME KEEPER	DO	DO	DO	•	DO	A	9'-4"		ACOUS C OUTSIDE DOOR ABOVE DOCK
SUPERINTENDENT	DO	DO	DO	•	DO	A	DO		
READY ROOM	DO	DO	DO	•	DO	A	DO		
TOILET Nº 1	DO	DO	DO		• ACOUST. B	B	DO		
TOILET Nº 2	DO	DO	DO		• DO	B	8'-0"		

ACOUSTIC A - ACOUSTIC TILE ----- SEE SPECS.
ACOUSTIC B - CERAMAGUARD TILE - SEE SPECS.

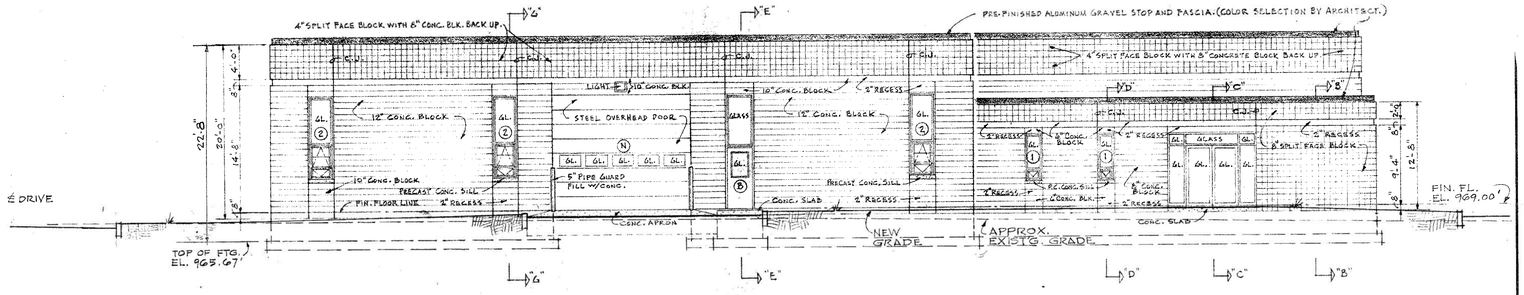
FOUNDATION PLAN-LEFT HAND OFFICE

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

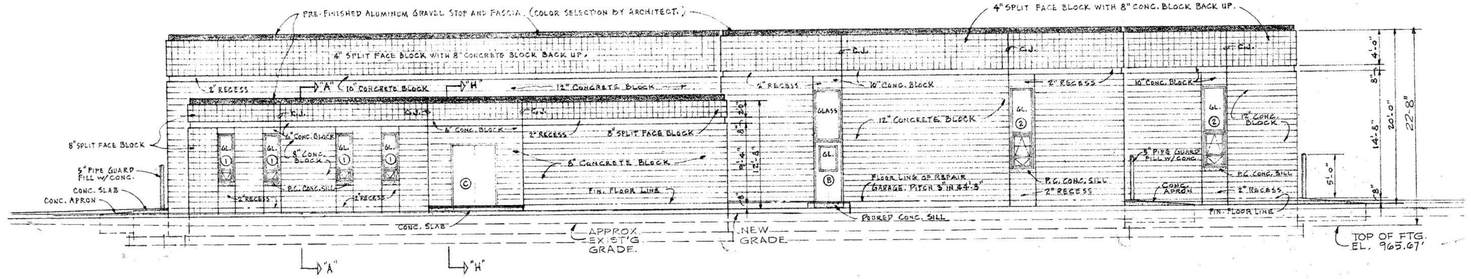
STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
F.A.S.	1971		6-2
	OPERATION		

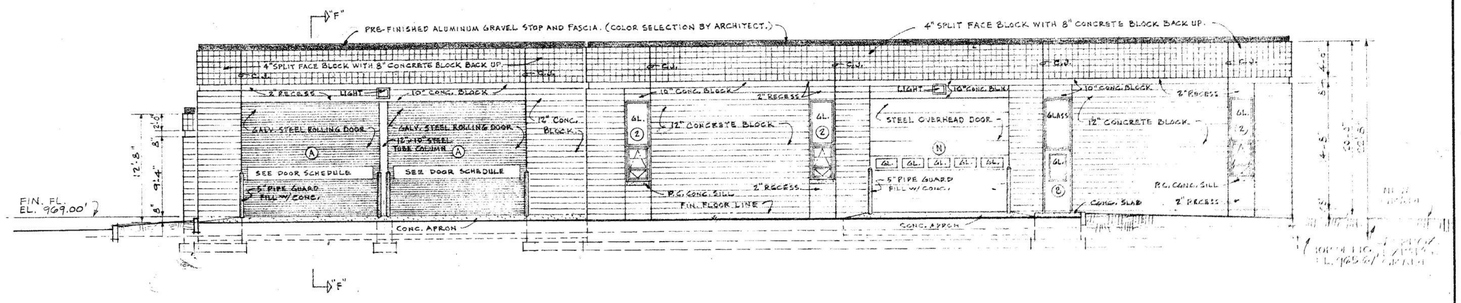
L.H.



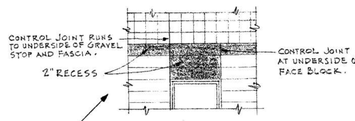
FRONT ELEVATION SCALE 1/8"=1'-0"



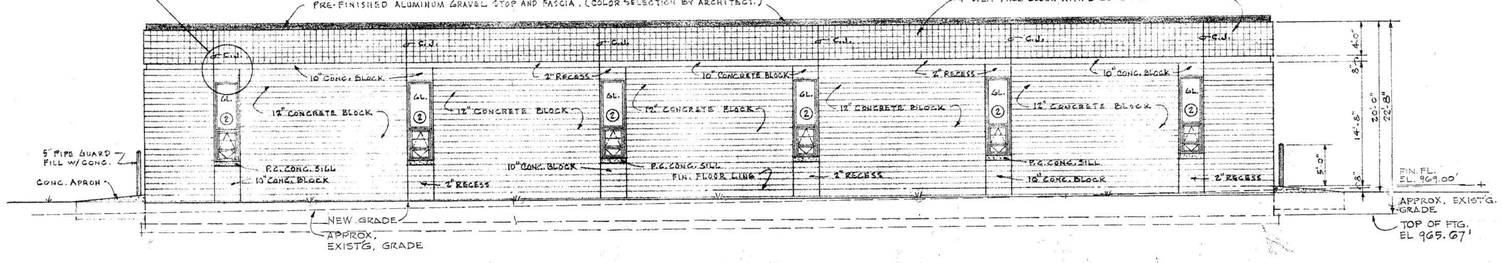
RIGHT ELEVATION SCALE 1/8"=1'-0"



REAR ELEVATION SCALE 1/8"=1'-0"



ELEVATION
TYPICAL AT ALL WINDOWS AND DOORS, UNLESS NOTED OTHERWISE. SCALE 1½"=1'-0"



LEFT ELEVATION SCALE 1/8"=1'-0"

ELEVATIONS LEFT HAND OFFICE

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL L. BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
	OPERATION		G-4

WALL SECTIONS AND DETAILS

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW, DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ, STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
	OPERATION		G-5

SEE DETAIL "1-1" SHEET G-

FOR STRUCTURAL SECTIONS SEE SHEET S-2.

4" SPLIT FACE BLOCK W/8" CONC. BLOCK BACK UP.

AT OVERHEAD DOORS ONLY PLATE ON LINTEL HAS 3" VERTICAL FLANGE

10" CONC. BLOCK

ROLLING DOOR HOOD - ONLY WHERE SCHEDULED, SECTIONAL OVERHEAD DOOR MECHANISM AT OTHER OPENINGS.

LINTEL - SEE SCHEDULE SHEET S-1

12" CONC BLOCK

13'-4 OVERHEAD DOOR TO FINISH FLOOR

13'-7" ROLLING STEEL DOOR TO FINISH FLOOR

CURTAIN GUIDE

HEAD

INTERLOCKING SLATS GALV.

12'-0" M.O.

JAMB

ROLLING DOOR

CONC. FILL ROUNDED OFF.

CURTAIN GUIDE

5'-0"

12" CONC. BLOCK

5" REINF. CONC. SLAB SEE SHEET G-7, SEC. L-L FOR TRENCH DATA.

6" GRAVEL FILL

SILL

SILL HEIGHT AT ROLLING STEEL DOORS OF REPAIR GARAGE - EL. 968'-9" AT OVERHEAD DOORS OF VEHICLE STORAGE GARAGE - EL. 969'-0"

3'-0"

STEEL PIPE GUARD IN 1'-0" DIA. CONCRETE FILLED HOLE.

LOW POINT EL. 968'-9" AT FINISH FLOOR LINE IN REPAIR GARAGE.

SLOPE

5" REINF. CONC. SLAB

6" GRAVEL FILL

5" SLOPE AT ROLLING STEEL DOORS OF REPAIR GARAGE. 2" SLOPE AT OVERHEAD DOORS OF VEHICLE STORAGE GARAGE.

VARIES

2'-0"

8"

APPROX. EXIST'G. GRADE

SECTION "F-F"

SCALE 3/4" = 1'-0"

NOTE: FOR OVERHEAD DOORS SEE FLOOR PLAN FOR TRENCH LOCATION.

TYPICAL

BUILT-UP ROOF, GRAVEL SURFACE

1½" RIGID INSULATION

1½" METAL DECK

FASCIA CAP

INSULATION STOP 18 GA. G.I.

FASCIA

¼" STEEL MOUNTING PLATES WITH ANCHORS FURNISHED BY DOOR MFGR. INSTALLED BY MASON, LOCATION BY DOOR MFGR. ANCHORS 1" x ¼" x 7" INDICATED THUS -

6" SPLIT FACE BLOCK W/8" CONC. BLOCK BACK UP.

F

COPE ANGLE AROUND MASONRY AT HEAD AND EXTEND AS REQUIRED BY DOOR MFGR.

ANGLE 3 x 3 x ¼ WITH ANCHORS DETAIL THIS SHEET BY MISC. METALS MASON INSTALLS

13'-4"

F

TYPICAL OVERHEAD DOOR OPN'G.

ELEVATION FROM INSIDE SCALE 1/2" = 1'-0"

12"

BAR ANCHORS 1" x 1/8" x 1'-0" 4'-0" O.C. WELD TO L 4 REQUIRED EACH JAMB

L 3 x 3 x ¼

SECTIONAL OVERHEAD DOOR

16'-0" M.O.

TYPICAL OVERHEAD DOOR JAMB

2'-2⅝"

10" CONC. BLOCK

LINTEL - SEE SCHEDULE SHEET S-1

TYPICAL

SUB-FRAME AT HEAD AND JAMBS.

12" CONC. BLOCK

9'-7"

4'-5" W.D.

10'-0" M.O.

13'-4"

5"

REINF. PRECAST CONC. SILL.

3'-4"

12" CONC. BLOCK

10" CONC. BLOCK

3'-4"

12" CONC. BLOCK.

10"

TOP OF FTG. EL. 965.67'

2'-0"

SECTION "G-G"

SCALE 3/4" = 1'-0"

1½" RIGID INSULATION

1½" METAL DECK

STEEL JOIST SEE SHEET S-1

8" SPLIT FACE BLOCK.

SUSPENSION ROD OR WIRE

6" CONC. BLOCK

BEAM - SEE SCHEDULE SHEET S-1

SUSPENDED CERAMAGUARD ACOUSTIC TILE CEILING WITH ALUMINUM TEES AND HEAVY DUTY HOLD DOWN CLIPS.

8" CONC. BLOCK.

8" CONC. BLOCK

GLASS

GLASS

8" 2" 3'-0" 2" 1'-6" 2" 1'-4"

8'-8⅜"

8'-8"

H.M. DOOR AND FRAME

NOTE: THIS SECTION TAKEN THRU RIGHT HAND OFFICE AS SHOWN, LEFT HAND OFFICE WOULD BE A PAIR OF 2'-8" DOORS AS INDICATED BY DOTTED LINES. SEE FLOOR PLAN FOR EXACT LOCATION AND DIMENSIONS.

2" SLOPE

H.M. FRAME

4" REINF. CONC. SLAB

VAPOR BARRIER 1" SAND BED

1 - #5 ℄ CONT. 6" GRAVEL FILL

12" CONC. BLOCK SPACED @ 4'-0" O.C. SEE FOUNDATION PLAN.

6" GRAVEL FILL

REINF'D. CONC. SIDEWALK

APPROX. EXIST'G. GRADE

8" CONC. BLOCK.

8" CONC. BLOCK

TOP OF FTG. 965.67'

10"

1'-8"

1'-8"

SECTION "H-H"

SCALE 3/4" = 1'-0"

11⅝"

12" NOMINAL 11⅜"

2"

3 13/16"

1½"

5"

3½"

4 - #4 ℄ CONT.

9⅝"

10" NOMINAL

1½"

½"

TYPICAL SCALE 3" = 1'-0"

REINF. PRECAST CONC. SILL FOR 10" CONC. BLOCK WALLS.

7⅝"

8" NOMINAL 7⅛"

2"

1½"

5"

3½"

4 - #4 ℄ CONT.

5⅝"

6" NOMINAL

1½"

½"

TYPICAL SCALE 3" = 1'-0"

REINF. PRECAST CONC. SILL FOR 6" CONC. BLOCK WALLS

WALL SECTIONS AND DETAILS

PREBLE COUNTY

HIGHWAY GARAGE

DIVISION 8 EATON, OHIO

STATE OF OHIO

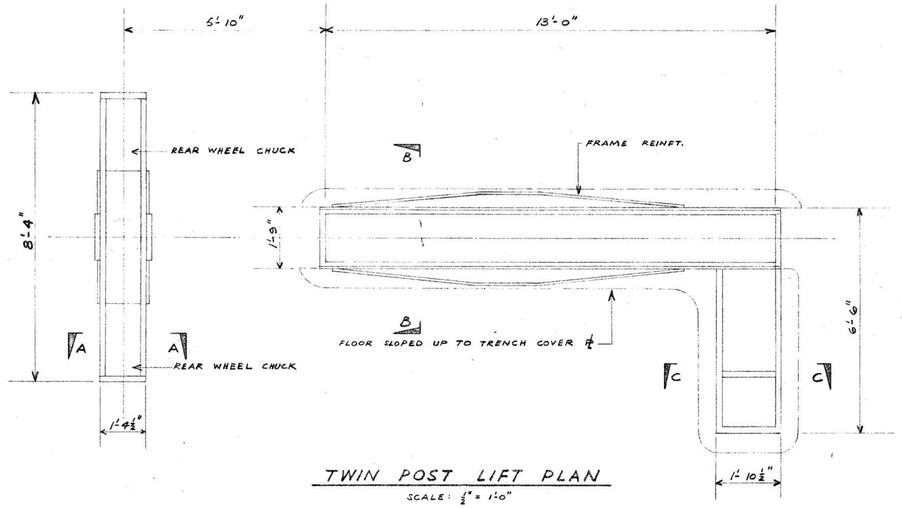
DEPARTMENT OF PUBLIC WORKS

ALFRED C. GIBNOW DIRECTOR

DIVISION OF STATE ARCHITECT & ENGINEER

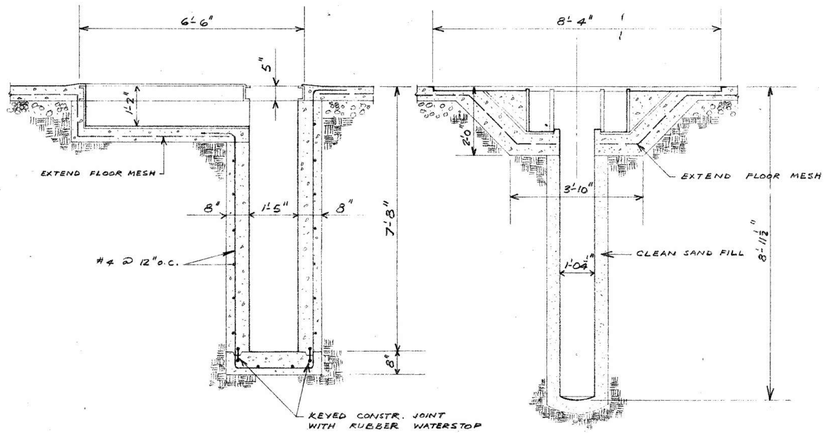
CARL E. BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE / OPERATION	SET OF	SHEET
			G-6



TWIN POST LIFT PLAN

SCALE: ½" = 1'-0"

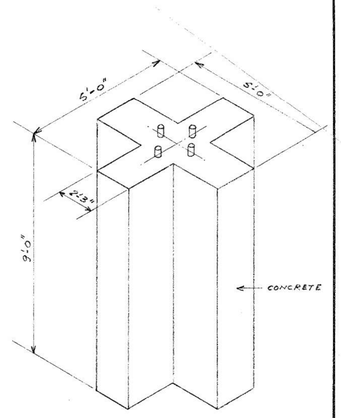


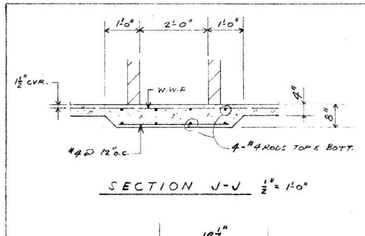
END VIEW FRONT

SCALE: ½" = 1'-0"

END VIEW, REAR POST

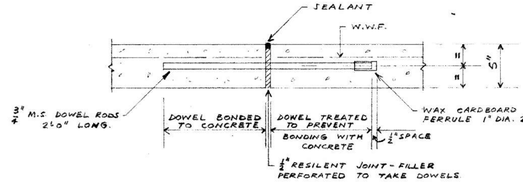
SCALE: ½" = 1'-0"





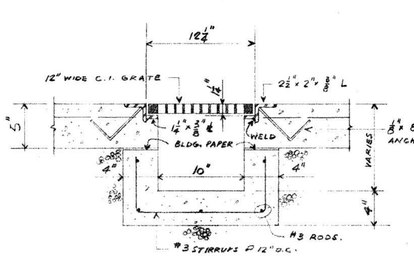
SECTION J-J

½" = 1'-0"



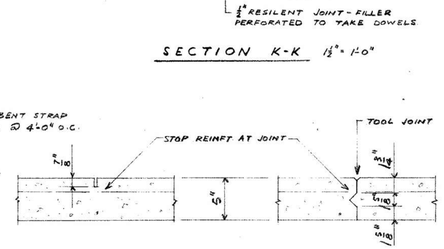
SECTION K-K

½" = 1'-0"



SECTION L-L

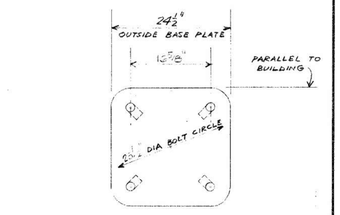
½" = 1'-0"

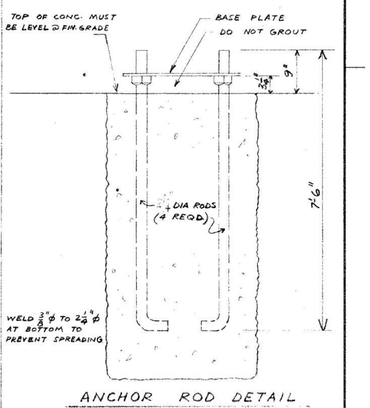


JOINT DETAILS FOR SLAB ON GRADE

1½" = 1'-0"

NOTE: JOINTS CAN BE SAWED OR FORMED CONSTR. JOINTS.

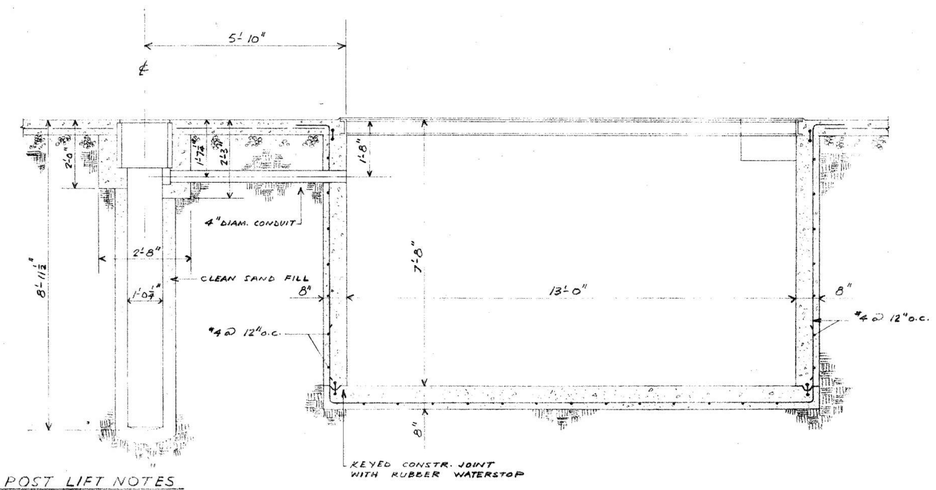




ANCHOR ROD DETAIL

ANTENNA FOUNDATION DETAILS

NOT TO SCALE

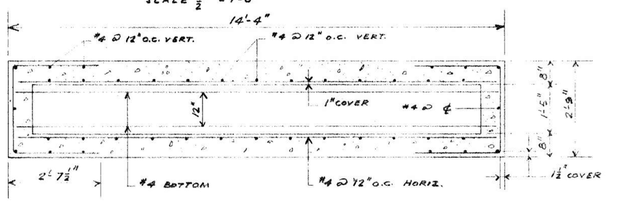


TWIN POST LIFT NOTES

1. WEAVER TWIN POST LIFT TYPE EC-10B-M INCLUDING METAL PIT FRAME, 4" CONDUIT, POWER UNIT, COVER PLATE AND METAL FORMS SHALL BE FURNISHED AND AND INSTALLED BY PLUMBING CONTRACTOR.
2. PRESSURE AND RETURN LINES SHALL BE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR.
3. EXCAVATION AND CONCRETE WORK SHALL BE PERFORMED BY GENERAL CONTRACTOR.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY SWITCHES, ELECTRICAL CONDUIT, WIRE, CONNECTIONS, ETC. FOR THE OPERATION OF THE LIFT.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL DATA AND INSTRUCTIONS.

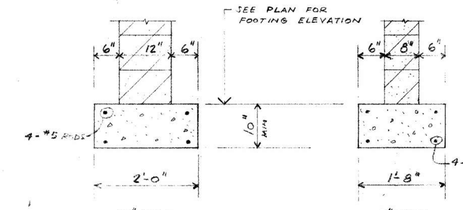
LONGITUDINAL SECTION THRU' ℄

SCALE ½" = 1'-0"



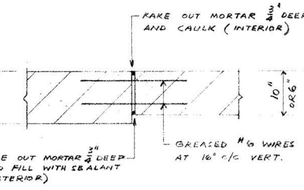
FRONT TRENCH REINFORCING

SCALE: ½" = 1'-0"



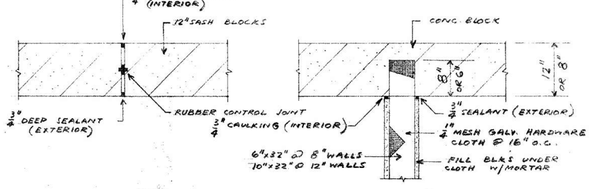
TYPICAL FOOTINGS

¾"=1'-0" (UNLESS OTHERWISE INDICATED ON PLAN)



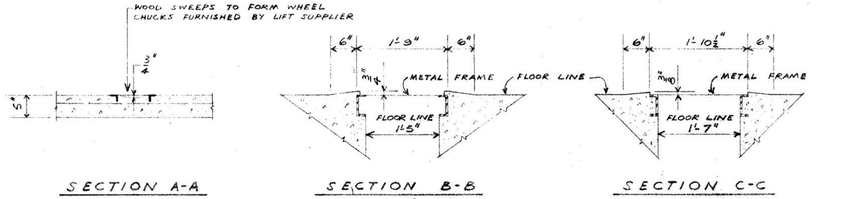
CONTROL JOINT AT CHANGE IN WALL THICKNESS

(NOTE: SEE ELEVATIONS FOR LOCATION)



WALL CONTROL JOINT DETAILS

(NOTE: SEE ELEVATIONS AND STRUCTURAL DRGS. FOR LOCATION)



SECTION A-A

SECTION B-B

SCALE: ¾" = 1'-0"

SECTION C-C

TWIN POST LIFT AND MISC. DETAILS

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ STATE ARCHITECT-ENGINEER

DRAWN BY	DATE	SET OF	SHEET
F.A.S.	1971		G-7
	OPERATION		

NOTES

1. THE METAL BUILDING MANUFACTURER WILL GUARANTEE AND BE FULLY RESPONSIBLE THAT HIS BUILDING WILL MEET THE JOB CONDITIONS AND FIT THE DETAILS AS SHOWN ON THIS DRAWING. THE METAL BUILDING MAY VARY IN DIMENSIONS ACCORDING TO MANUFACTURERS STANDARDS BUT ANY CHANGES THAT WOULD AFFECT THE SUPPORTING SUB-STRUCTURE WILL BE MADE AT THE EXPENSE OF THE METAL BUILDING MANUFACTURER AT NO ADDITIONAL COST TO THE STATE OF OHIO.
2. READ THIS DRAWING IN CONJUNCTION WITH DRAWING G-2 (R.H.) AND THE NOTES SHOWN THEREON.
3. FOUNDATION SIZES HAVE BEEN DETERMINED USING A SAFE BEARING PRESSURE OF 3000 p.s.f.

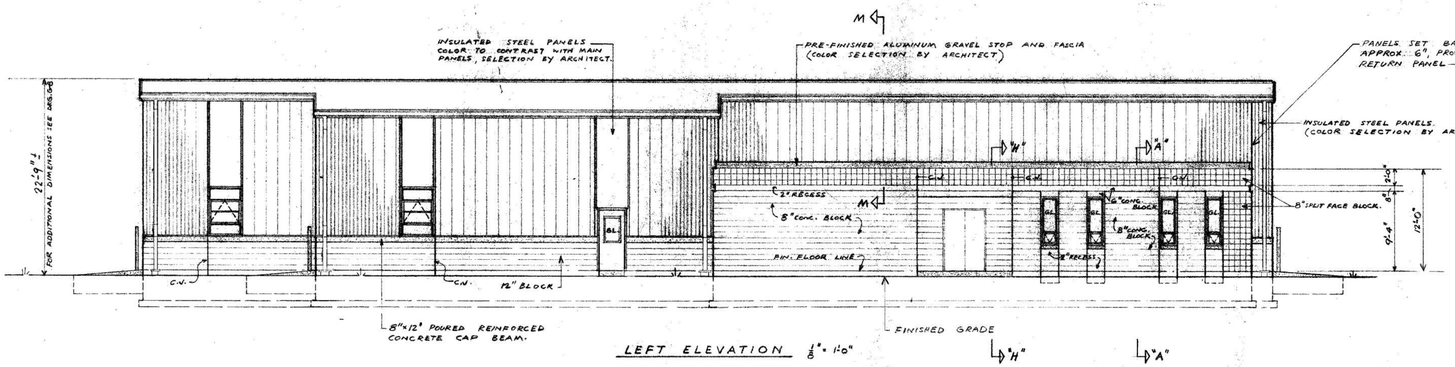
METAL BUILDING - RIGHT HAND OFFICE

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

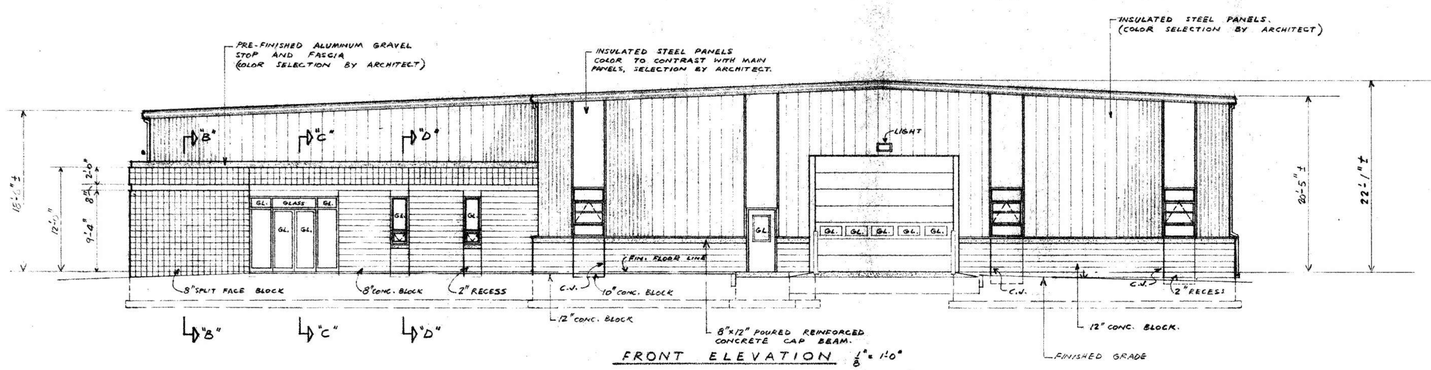
STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C GIENOW DIRECTOR

DIVISION OF STATE ARCHITECT & ENGINEER
CARL E BENTZ STATE ARCHITECT - ENGINEER

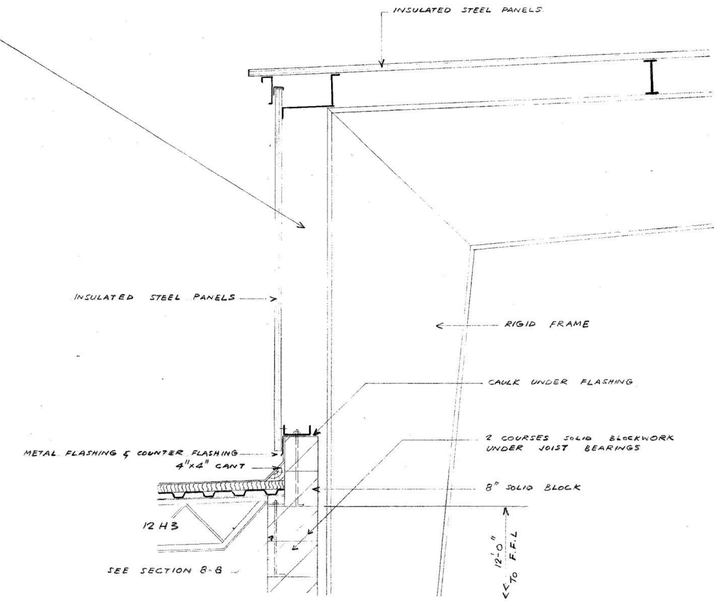
DRAWN BY F.A.S.	DATE APRIL 1971 / OPERATION	SET OF	SHEET G-8



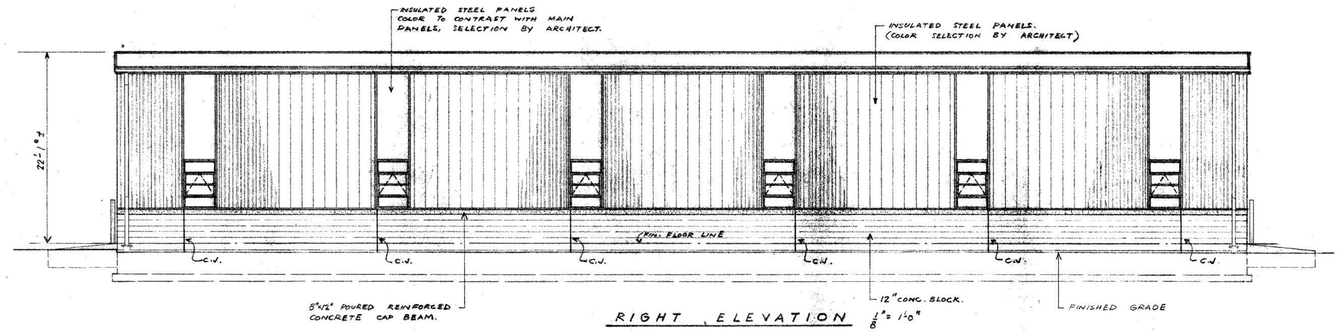
LEFT ELEVATION 1/8" = 1'-0"



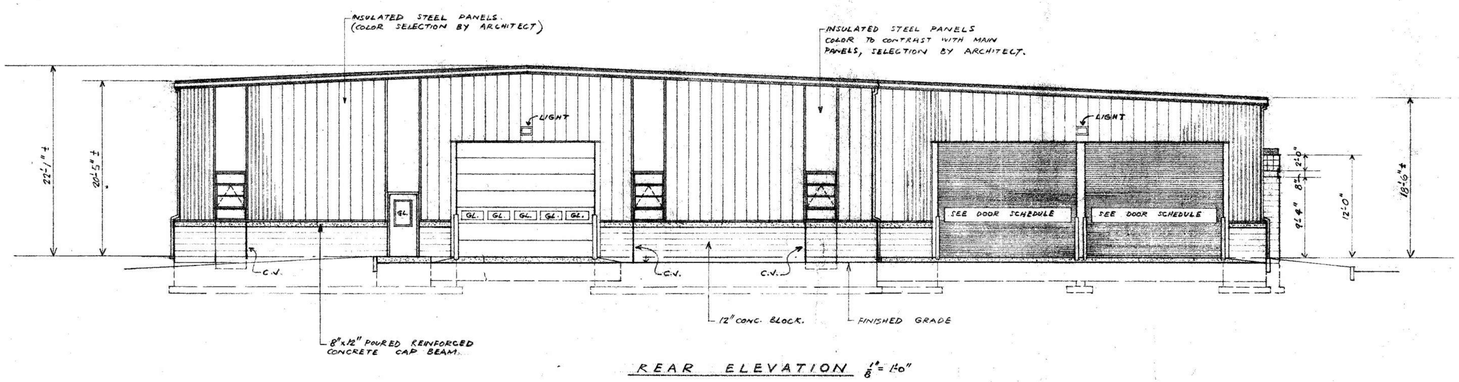
FRONT ELEVATION 1/8" = 1'-0"



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



RIGHT ELEVATION 1/8" = 1'-0"



REAR ELEVATION 1/8" = 1'-0"

NOTE
AFTER CONTRACTS ARE AWARDED THIS DRAWING WILL BE REVERSED, WITHOUT ANY OTHER CHANGES

METAL BUILDING - ELEVATIONS R. HAND OFFICE

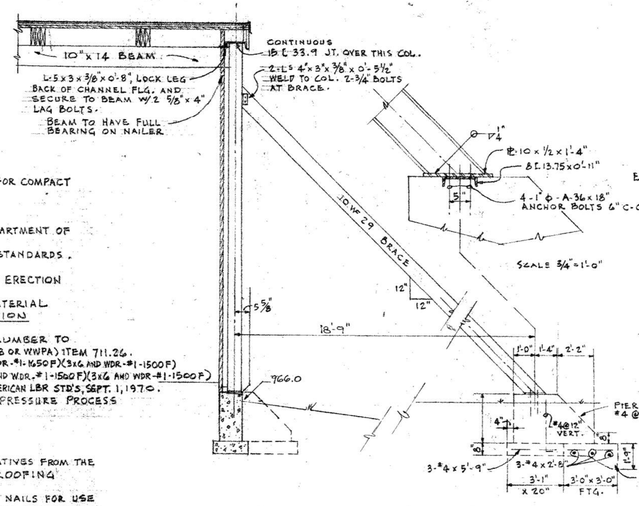
PREBLE	COUNTY
HIGHWAY	GARAGE
DIVISION 8	EATON OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ STATE ARCHITECT-ENGINEER

DRAWN BY	DATE	SET OF	SHEET
H.W.H & F.H.S.	APRIL 1971		G-9
	OPERATION		

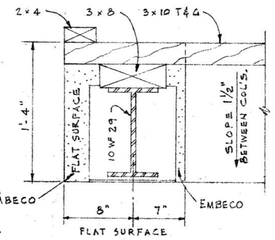
SPECIFICATIONS
SALT STORAGE BIN

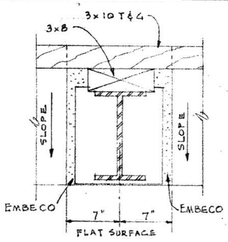
1. NOTE:
(a) REFER TO "INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS" AND "SPECIAL CONDITIONS", (PRECEDING) WHICH FORM A PART OF THIS SPECIFICATION.
2. EXTENT OF WORK:
(a) PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED, AND CONSTRUCT (COMPLETE) ON THE LOCATION INDICATED BY THE DRAWINGS, THE SALT STORAGE BIN IN ACCORDANCE WITH THE DRAWINGS AND AS HEREIN SPECIFIED. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY UTILITIES TO CARRY ON HIS FIELD OPERATIONS.
(b) TOTAL LENGTH OF BUILDING SHALL BE AS NOTED.
(C) BUILDING TO BE STAKED OUT ON THE SITE BY GENERAL CONTRACTOR.
3. EXCAVATION AND GRADING:
(a) SITE SHALL BE CLEARED BY THIS CONTRACTOR. STRIP TOPSOIL AND STOCKPILE AS DIRECTED. GRADE AREA A MINIMUM OF SIX FEET BEYOND ALL SIDES OF BUILDING AND PROVIDE NATURAL DRAINAGE FOR SURFACE RUN OFF. REFER TO OHIO DEPARTMENT OF HIGHWAYS SPECIFICATION FOR COMPACT SUB-BASE, ☐ 304 AND FINISH FLOOR, ☐ 404, MATERIALS AND CONSTRUCTION METHODS.
(b) GRADING, SUB-BASE AND FINISH FLOOR BY GENERAL CONTRACTOR.
4. MATERIALS:
(a) MATERIALS FOR SUB-GRADES AND PAVING SHALL COMPLY WITH APPLICABLE SECTIONS OF OHIO DEPARTMENT OF HIGHWAYS SPECIFICATIONS. (O.D.H.S.).
(b) CONCRETE MATERIALS SHALL CONFORM WITH APPLICABLE SECTIONS OF O.D.H.S. AND A.S.T.M. STANDARDS. CONCRETE SHALL BE A SIX-BAG MIX MINIMUM WITH A 4" SLUMP.
(C) STRUCTURAL STEEL SHALL CONFORM WITH A.I.S.C. "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
(d) LUMBER SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS, JANUARY 1, 1971. THE BIDDERS ATTENTION IS DIRECTED TO THE INSPECTION REQUIREMENTS FOR LUMBER ITEM 711.26 AND 712.06.
1. LUMBER SPECIE MAY BE SOUTHERN YELLOW PINE OR WEST COAST DOUGLAS FIR. ALL LUMBER TO BE S4S OR T & G AS SHOWN BY THE PLAN. D.F.I. ASSOCIATION GRADE MARKED (SPIB, WCLB OR WWPA) ITEM 711.26.
2. LUMBER GRADES SHALL BE AS FOLLOWS: SOUTHERN YELLOW PINE (2"x4"-#2 MG-1650F)(2"x6" AND WDR-#1-1650F)(3"x6" AND WDR-#1-1500F) (4"x4"#2 MG-1450F)(6"x6" AND THICKER-#1 DENSE SR-1500F). WEST COAST DOUGLAS FIR (2"x4"-#2-1450 P)(2"x6" AND WDR.-#1-1500F)(3"x6" AND WDR-#1-1500F) (4"x4"#2-1450F)(6"x6" AND THICKER-SELECT STRUCTURAL-1500F). SIZES AND GRADES ARE IN ACCORDANCE WITH AMERICAN LBR STD'S, SEPT. 1, 1970.
3. ALL LUMBER SHALL HAVE A PENTACHLOROPHENOL PRESERVATIVE TREATMENT BY THE PRESSURE PROCESS (SPEC. ITEM 712.06) WITH RETENTION OF EIGHT (8) POUNDS PER CUBIC FOOT.
4. LUMBER SIZES AND PATTERNS SHALL BE AS SHOWN ON DRAWINGS.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
(e) FASTENINGS SHALL BE OF SIZE AND TYPE NOTED ON DRAWINGS.
(f) A PRE-JOB CONFERENCE SHALL BE HELD BEFORE THE BUILT-UP ROOFING IS APPLIED, REPRESENTATIVES FROM THE FOLLOWING SHALL ATTEND THIS MEETING, OWNER, ROOFER, GENERAL CONTRACTOR, ROOFING MANUFACTURER REPRESENTATIVE AND ARCHITECTS REPRESENTATIVE.
(g) OVER THE COMPLETED AND APPROVED INSULATION INSTALL "20 YEAR BOND" TYPE ROOF, NAILS FOR USE WITH INSULATION SHALL BE OF SUFFICIENT LENGTHS TO PASS THROUGH THE INSULATION AND MAKE A MAXIMUM PENETRATION INTO THE DECK WITHOUT PROTRUDING THROUGH IT. NAILS SHALL BE GALVANIZED AND DRIVEN THROUGH MINIMUM ONE (1) INCH DIAMETER STURDY GAUGE TIN CAPS, OR NAILS SUCH AS "SIMPLEX" OR EQUAL.
(h) QUALITY - THE STANDARDS OF QUALITY FOR THE ROOF IS THAT ESTABLISHED BY KOPPERS CO, INC., SPECIFICATION NO. 17-4 PLY - 20 YEAR GRAVEL SURFACE OLD STYLE PITCH BUILT-UP ROOF, OR ROOFS OF EQUAL QUALITY AS MANUFACTURED BY BARRETT, CARBY OR RUBEROID WILL BE ACCEPTABLE.
(i) PROVIDE 4" x 4" x 16 OZ. COPPER FASCIA AROUND PERIMETER OF ROOF. SET IN FLASHING CEMENT AROUND EDGE OF ROOF, FORM WITH DRIP EDGE AND NAIL AT 4" O.C.
(j) NAILS USED FOR FASTENING COPPER SHALL BE COPPER OF STRONGHOLD TYPE OR EQUAL WITH LARGE FLAT HEADS AND NEEDLE POINT AND OF SUFFICIENT LENGTH TO PENETRATE THE ROOF WOOD DECK NOT LESS THAN 7/8". NAILS SHALL BE NOT SMALLER THAN NO. 12 STUBS GAUGE (0.109 INCH).
5. CONSTRUCTION:
(a) POUR FOOTING AND FOUNDATION WALLS COMPLETE WITH REINFORCING AND ANCHORS AS SHOWN. LEVEL TOP TO RECEIVE PLATES AND COLUMNS WHERE COLUMNS REST ON FOOTINGS. FINISH LEVEL TO PREVENT SHIMMING.
(b) STRUCTURAL AND FRAMING MEMBERS SHALL BE ACCURATELY SPACED AND SET TO THE REQUIRED LINES AND LEVELS, CLOSELY FITTED, AND RIGIDLY SECURED IN PLACE. STAGGER JOINTS - SHALL OCCUR AT COLUMNS.
(SHOP COAT) 1ST COAT - NO. 9373 RUST-OLEUM HEAVY DUTY RUST-INHIBITIVE EPOXY SYSTEM ORANGE PRIMER.
(FIELD COAT) 2ND COAT - NO. 9373 RUST-OLEUM HEAVY DUTY RUST-INHIBITIVE EPOXY SYSTEM ORANGE PRIMER.
(FIELD COAT) 3RD COAT - NO. 9379 RUST-OLEUM BLACK GLOSS CHEMICAL AND ABRASION RESISTANT PAINT. PAINT SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS AS TO SURFACE PREPARATION, PRIMING AND FINISH PAINTING.
6. WRITTEN GUARANTEE:
(a) ALL WORKMANSHIP AND MATERIALS SHALL BE GUARANTEED FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE, EXCEPT ROOFING, (SEE ITEM "B" BELOW).
(b) THIS CONTRACTOR SHALL FURNISH TO THE OWNER, A WRITTEN GUARANTEE (IN TRIPLICATE) COVERING ALL OF HIS WORK FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF THE COMPLETION OF THE BUILDING AND THE ACCEPTANCE BY THE OWNER; GUARANTEE SHALL COVER ALL ROOFING AND METAL WORK AGAINST LEAKS OR FAULTY WORKMANSHIP AND THE REPAIR OF ANY DAMAGE TO STRUCTURE ATTRIBUTED TO THE WORK. NO ROOFING BOND WILL BE REQUIRED. THE ROOFING CONTRACTOR AND MANUFACTURER, JOINTLY SHALL FURNISH A WRITTEN GUARANTEE TO COVER THE ABOVE.
7. HIGHWAY SPECIFICATIONS:
(a) HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS, DEPARTMENT OF HIGHWAYS, DATED JANUARY 1, 1969, IS AVAILABLE FROM THE BUREAU OF CONTRACT SALES, HIGHWAY DEPARTMENT BUILDING, 25 SOUTH FRONT STREET, COLUMBUS, OHIO. 43215. PHONE: A.C. 614-469-3200 OR 469-3778
8. ADDRESS INQUIRES ON THESE SPECIFICATIONS TO:
(a) OHIO DEPARTMENT OF HIGHWAYS
DEPUTY ADMINISTRATOR
ENGINEERING SECTION
BUREAU OF TRANSPORTATION AND SUPPLY
1620 WEST BROAD STREET
COLUMBUS, OHIO. 43223
PHONE: A.C. 614-469-4731 OR 469-4733
ATTENTION: MR. JACK FAUBERT

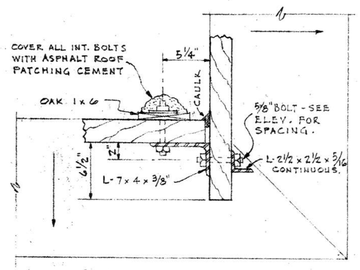


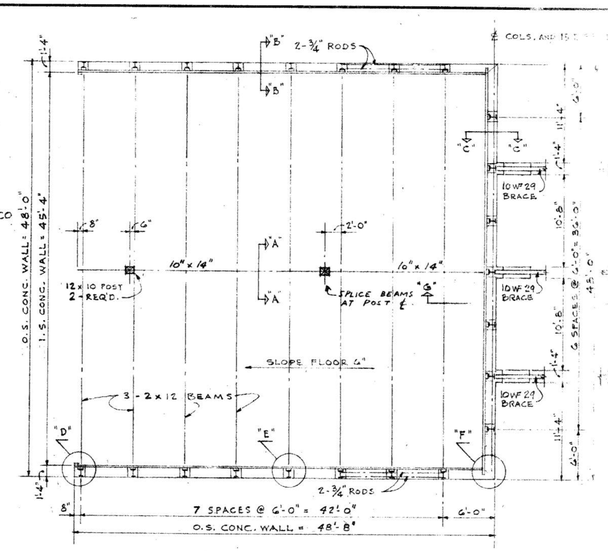
SECTION "G-G" SCALE 1/4" = 1'-0"

TYPICAL (3 BRACES REQUIRED, SEE PLAN.)

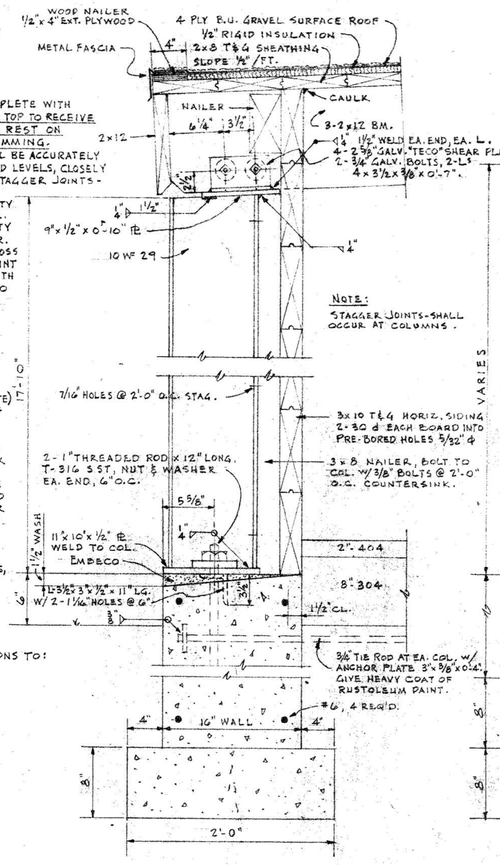




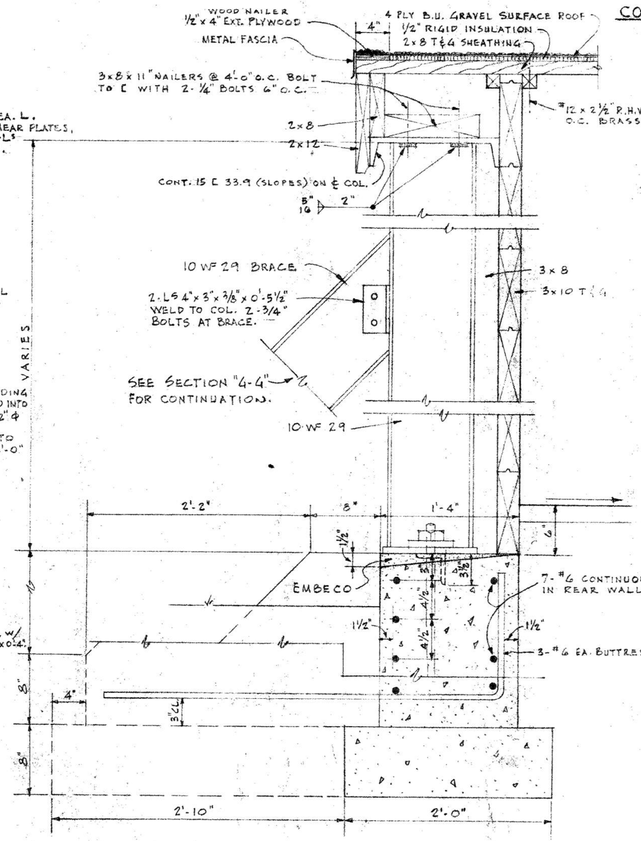




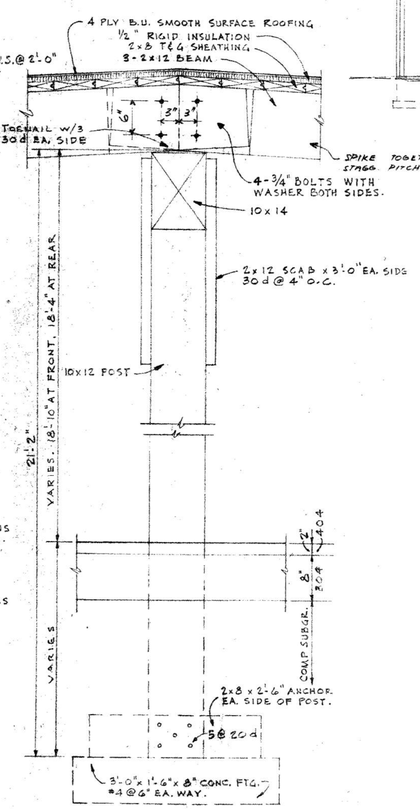
PLAN SCALE 1/8" = 1'-0"



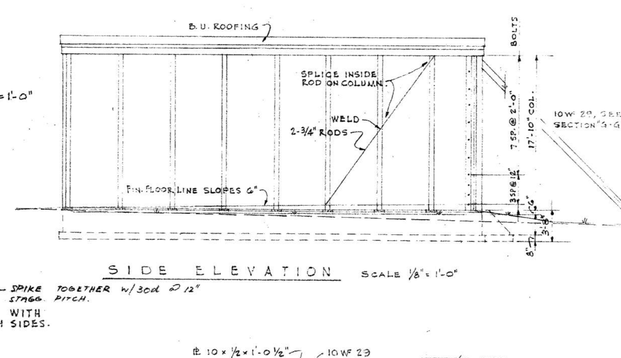
SECTION "B-B" SCALE 1 1/2" = 1'-0"



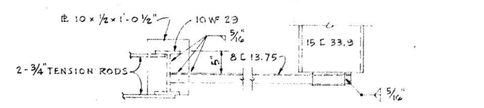
SECTION "C-C" SCALE 1 1/2" = 1'-0"



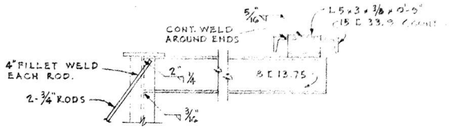
SECTION "A-A" SCALE 1" = 1'-0"



SIDE ELEVATION SCALE 1/8" = 1'-0"



PLAN OF STEEL AT ROOF AT CORNERS SCALE 3/4" = 1'-0"



ELEVATION OF STEEL AT ROOF AT CORNERS SCALE 3/4" = 1'-0"

NOTES

ALL WOOD POSTS, POST ANCHORS, 2 x 12 FASCIA AND 3 x 10 SIDING SHALL BE PENTA TREATED. ALL NAILS NOT-DIP GALVANIZED, HOT-DIP GALVANIZED NAIL CAN BE PURCHASED AT THE PORTAGE PLATING CO. KENT, OHIO. IN 3 OR 4 DAYS DELIVERY. OR CASHMAN-IZED FASTENERS, CORP. 300 EAST 5TH AVENUE COLUMBUS, OHIO. 43201 PHONE: A.C. 614-294-3164

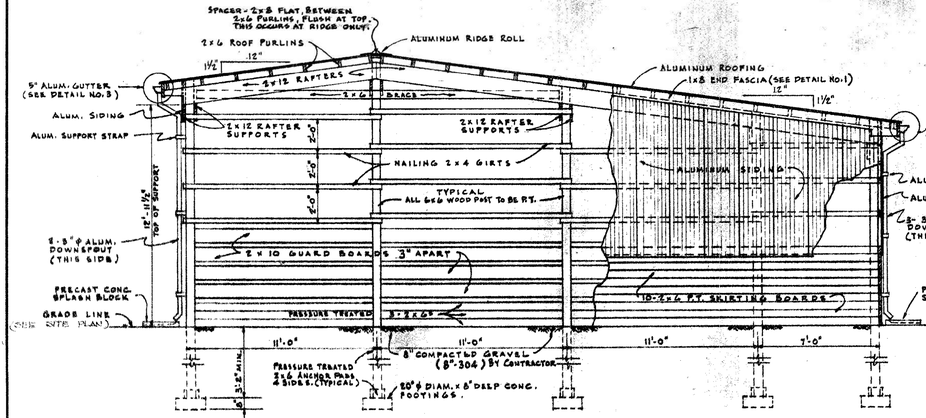
SALT STORAGE BIN

PREBLE COUNTY HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIESOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ STATE ARCHITECT - ENGINEER

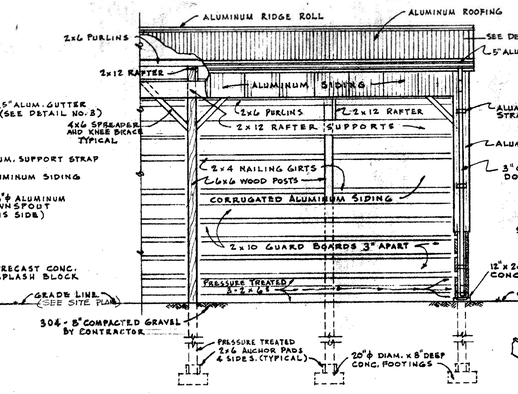
DRAWN BY	DATE:	SET OF	SHEET
	OPERATION		G-10

SPEC. REV. DECEMBER 15, 1970
REV. 'A' 11-19-1970



SIDE ELEVATION SHOWING TYPICAL CONSTRUCTION

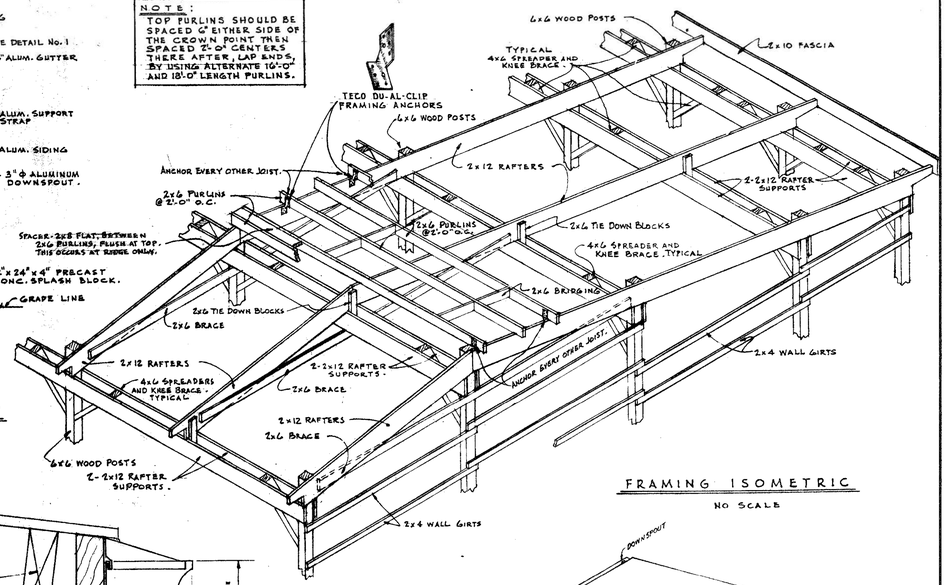
SCALE: 1/4" = 1'-0"



FRONT ELEVATION OF TYPICAL BAY

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

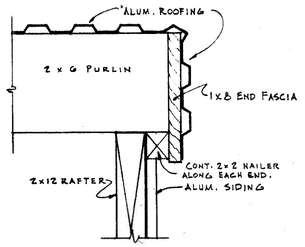
NOTE:
TOP PURLINS SHOULD BE SPACED 6" EITHER SIDE OF THE CROWN POINT THEN SPACED 2'-0" CENTERS THERE AFTER, LAP ENDS, BY USING ALTERNATE 10'-0" AND 18'-0" LENGTH PURLINS.



FRAMING ISOMETRIC

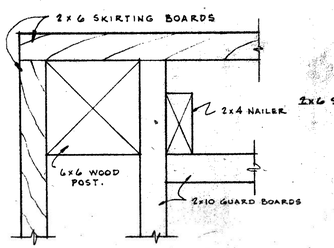
NO SCALE

NOTE: ALL 6x6 WOOD POST BELOW AND ABOVE GRADE SHALL BE PRESSURE TREATED.
EXTERIOR 10-2x6 SKIRTING BOARDS SHALL BE PRESSURE TREATED.
INTERIOR 3-2x6 SKIRTING BOARDS SHALL BE PRESSURE TREATED.
(2x6 SKIRTING BOARDS SHALL BE TONGUE-AND-GROOVE.)



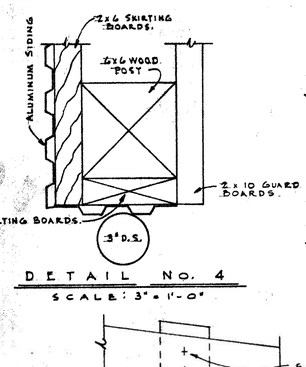
DETAIL NO. 1

SCALE: 3" = 1'-0"



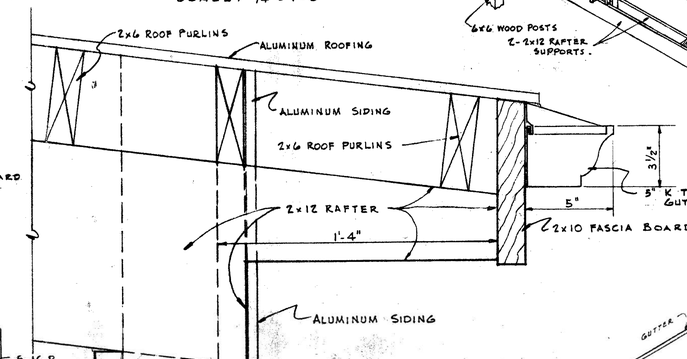
DETAIL NO. 2

SCALE: 3" = 1'-0"



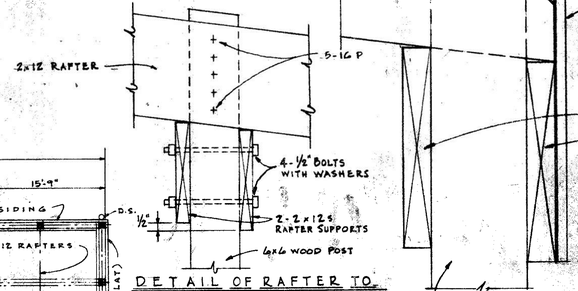
DETAIL NO. 4

SCALE: 3" = 1'-0"

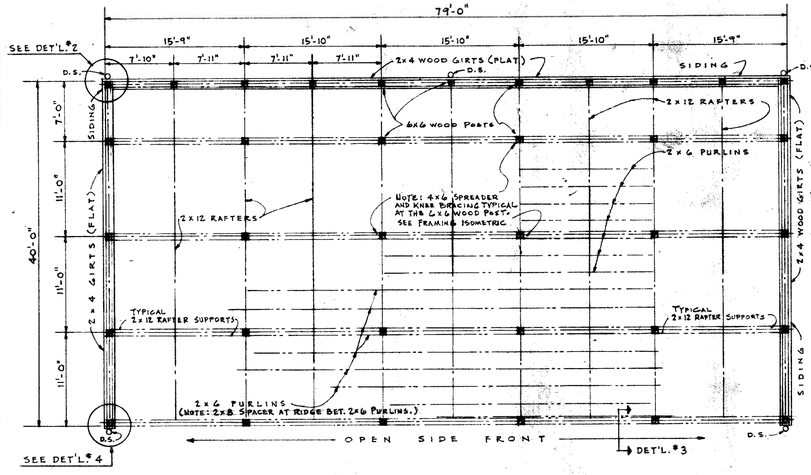


DETAIL NO. 3

SCALE: 3" = 1'-0"



DETAIL OF RAFTER TO POST CONNECTION SCALE: 1½" = 1'-0"



EQUIPMENT STORAGE SHED PLAN

SCALE: 1/8" = 1'-0"

GEN. NOTE: FIRE EXTINGUISHERS PROVIDED BY THE OWNER.

SPECIFICATIONS

EQUIPMENT STORAGE SHED

1. NOTE

a) Refer to "Instructions to Bidders and General Conditions" and "Special Conditions", (preceding), which form a part of these specifications.

2 EXTENT OF WORK

a) Provide all materials, labor and equipment and construct, complete, in the location shown on Plot Plan, the equipment storage shed shown in accordance with the drawings and as herein specified. The contractor shall provide all temporary utilities to carry on his field operations.

b) 8"- 304 COMPACTED GRAVEL BY CONTRACTOR.

3. EXCAVATION AND GRADING

a) Site shall be cleared by this contractor. Strip topsoil and stockpile as directed. Level site as required. Provide natural drainage for surface run-off.

b) Building to be staked out on the site by General Contractor.

4. MATERIALS

a) Materials for subgrades and paving shall comply with applicable sections of Ohio Department of Highways Specifications (O.D.H.S.).

b) Concrete materials shall conform with applicable sections of O.D.H.S. and A.S.T.M. standards. Concrete shall be a six-bag mix minimum with a 4" slump.

c) HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS, DATED JANUARY 1, 1969, IS AVAILABLE FROM THE BUREAU OF CONTRACT SALES, HIGHWAY DEPARTMENT BUILDING, 25 SOUTH FRONT ST. COLUMBUS, OHIO. 43215. PHONE: A.C. 614-469-3200 OR 469-3778.

d) Lumber shall conform to the State of Ohio Department of Highways Construction and Material Specifications, January 1, 1971. The Bidders attention is directed to the Inspection Requirements for lumber, Ttem 711.26 and 712.06.

1. LUMBER SPECIE MAY BE SOUTHERN YELLOW PINE OR WEST COAST DOUGLAS FIR. ALL LUMBER TO BE S4S AND DET EXCEPT 2x6 SKIRTING BOARDS WHICH SHALL BE S2S. AND C.M. LUMBER TO BE ASSOCIATION GRADE MARKED (SPIB, WCLB OR WWPA). ITEM 711.26.

2. LUMBER GRADES SHALL BE AS FOLLOWS: SOUTHERN YELLOW PINE (2x4 #2 MC-1550 F) (2x6 AND WIDER #1-1650 F) (4"x4" #2 MC-1650 F) 6"x6" AND THICKER- #1 DENSE SR-1800 F). (1" BOARDS #2 COMMON K.D.): WEST COAST DOUGLAS FIR (2"x4"-#2-1450 F) (2"x6 AND WIDER #1-1500 F) (4"x4"-#2-1650 F) (6"x6" SELECT STRUCTURAL-1500 F) (1" BOARDS CONSTRUCTION K.D.). SIZES AND GRADES ARE IN ACCORDANCE WITH AMERICAN LUMBER STANDARDS SEPTEMBER 1, 1970.

3. THE FOLLOWING LUMBER SHALL HAVE A PENTACHLOROPHENOL PRESERVATIVE TREATMENT BY THE PRESSURE PROCESS (SPEC. ITEM 712.06) WITH RETENTION OF EIGHT (8) POUNDS PER CUBIC FOOT.
(a) ALL 6x6 WOOD POST BELOW AND ABOVE GRADE SHALL BE PRESSURE TREATED.
(b) EXTERIOR 10-2x6 SKIRTING BOARDS SHALL BE PRESSURE TREATED.
(c) INTERIOR 3-2x6 SKIRTING BOARDS SHALL BE PRESSURE TREATED.

4. LUMBER SIZES AND PATTERNS SHALL BE AS SHOWN ON DRAWINGS.

5. All bolts, nuts and washers shall be galvanized.

e) Aluminum roofing and siding shall be similar and equal to Alcoa Rib Roofing, .018- metal thickness, section 9/16" deep, weighing ¾ lbs. per square.

f) Ridge Roll or Cap shall be of .017 inch thick aluminum, or formed stock design to fit roofing ribs, or closed with rubber filler strips.

g) Roofing nails shall be spiral shank aluminum roofing nails with neoprene washer attached. Siding nails shall be spiral shank aluminum.

h) All other nails and spikes shall be of suitable types and sizes to draw the timbers into place and securely hold same.

5. CONSTRUCTION

a) Accurately locate post centers and dig post hole, using auger or post hole digger. Dig holes to a minimum depth of 3' 2" so that pole bottom rests on 8" concrete footing. Hole diameter shall be 20".

b) All post shall be plumbed and rigidly braced in the holes.

c) Structural and framing members shall be accurately spaced and set to the required lines and levels, closely fitted, and rigidly secured in place. STAGGER JOINTS, SHALL OCCUR AT COLUMNS.

d) Joists shall be anchored with Teco Du-Al-Clips as shown on the plans.

e) Aluminum roofing and siding shall be erected square and true and securely fastened to framing, using spiral shank aluminum nails. All nails for roof attachment shall have black neoprene washers. Lap roofing 6 inches at ends and rib at side laps.

f) Siding shall be lapped 4" at ends and 1 rib at side laps.

g) Aluminum ridge roll shall be fastened with aluminum nails having neoprene washers. Nail on the top of ribs and not in the valley. Do not overdrive nails.

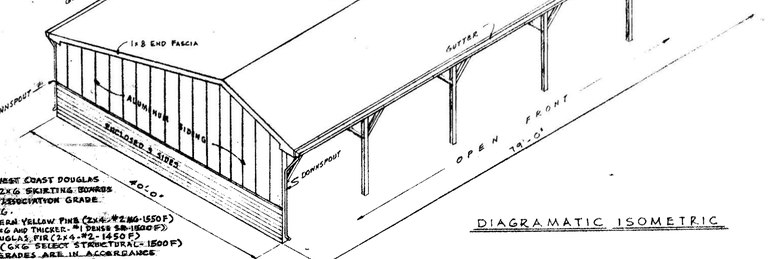
h) Furnish and install aluminum gutters and downspouts as indicated and detailed on the drawings. Gutters shall be .027 guage. Downspouts shall be .020 guage. Include: 3 support straps for each downspout, 1 stainless steel strainer in each leader head. Install box braces and strap hangers 3' 0" max. o.c. 1-12" x 24" x 4" precast concrete splash block for each downspout.

i) Concrete may be either ready mixed or job mixed. All ready-mix concrete shall be in strict accordance with "specifications for Ready-Mixed Concrete of the A.S.T.M., Serial Designation C 94, except as hereinafter modified and specified. Non-agitating type of transportation equipment shall be used only upon written permission of the owner.

j) No painting required.

6. GUARANTEE

a) All workmanship and material shall be guaranteed for 1 year from date of acceptance.



DIAGRAMATIC ISOMETRIC

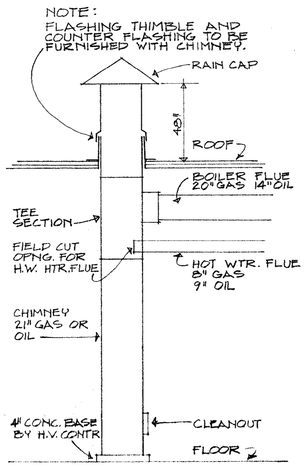
REVISED DEC. 17, 1970.

EQUIPMENT STORAGE SHED

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

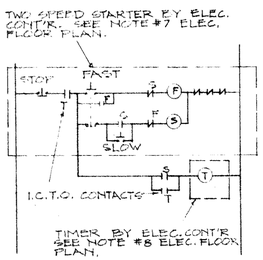
STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIEKOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
	OPERATION		G-11

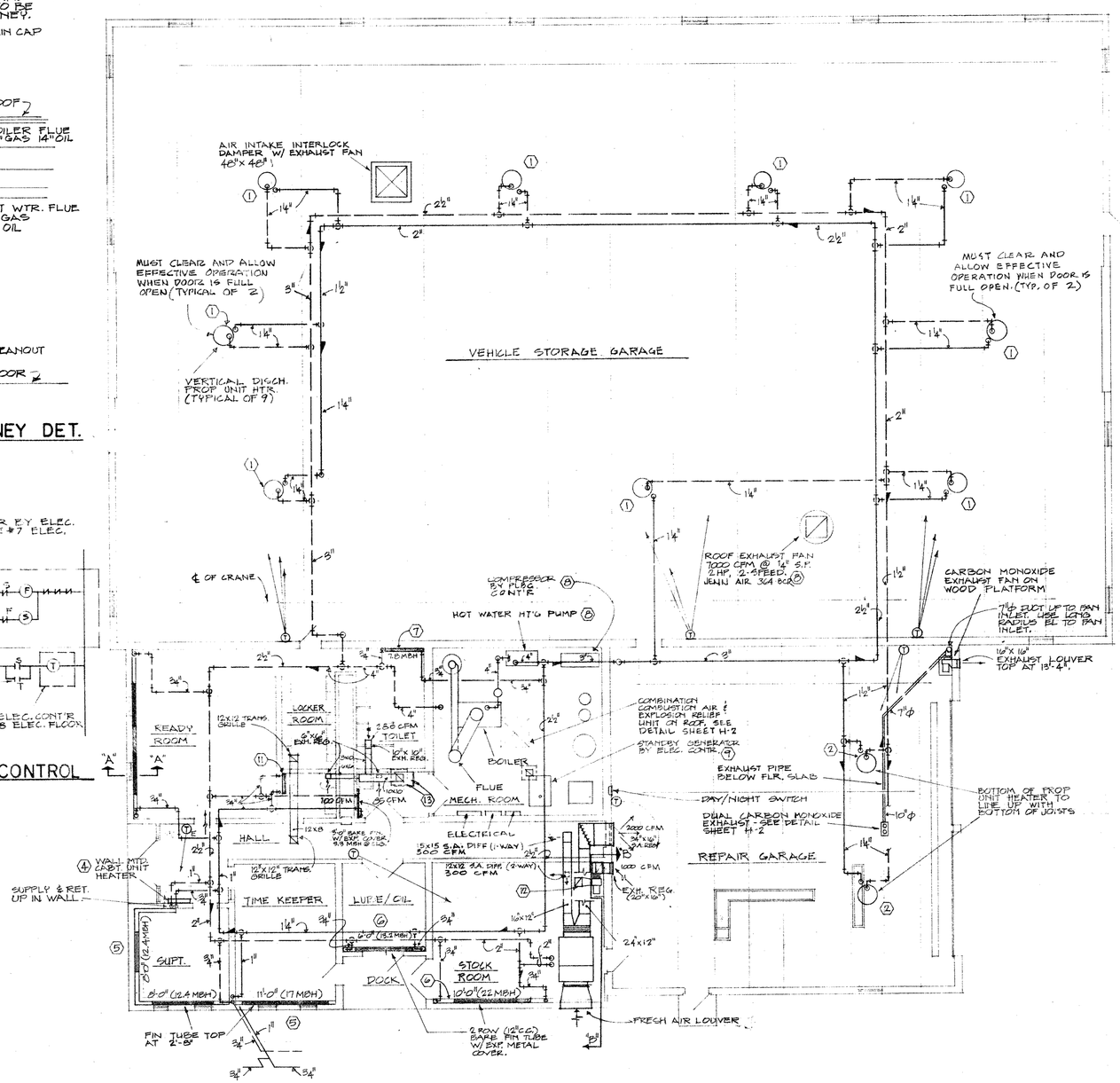


SCHEMATIC CHIMNEY DET.

N.T.S



EXHAUST FAN CONTROL WIRING DIAGRAM #1



HEATING & VENTILATING FLOOR PLAN

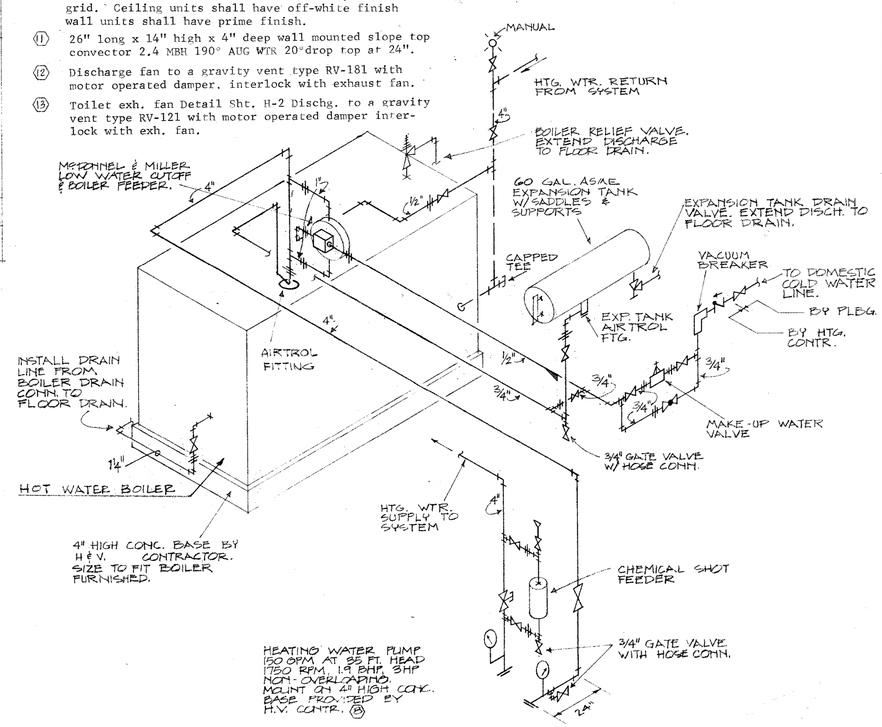
SCALE : 1/8" = 1'-0"

NOTES

1. Vertical Discharge Projection Unit Heater. 83.7 MBH, 8.63 GPM, 200°F. EST, 180°F. LWT, 60°F. EAT, 1790 CFM, 1070 RPM, 1/10 HP 120/60/1.
2. Vertical Discharge Projection Unit Heater. 105.2 MBH, 10.84 GPM, 200°F. EWT, 180°F. LWT, 60°F EAT, 2220 CFM, 1070 RPM, 1/6 HP 120/60/1.
3. All Finned Radiation capacities shown are based on 200°F. EWT, 180°F. LWT, 65°F EAT, 3 FPS WTR velocity. Elements shown based on 1550 BTUH/FT. with slope top cover and 1100 BTU/FT with expanded metal cover.
4. Wall Mounted, Inverted Flow, Cabinet Unit Heater. 20 MBH, 200°F. EWT, 2 GPM, 400 CFM, 60°F. EAT 120/60/1.
5. Finned Radiation with slope top enclosure, wall to wall.
6. Finned Radiation mounted high with expanded metal cover.
7. 38" long x 20" high x 6" deep wall mounted, slope top convector with damper, 7.8 MBH, 190°F. Ave. WTR., 10° drop. Top at 2'-8".
8. See notes on Electrical Drawings for Electrical characteristics of motor.
9. Provide 2-1/2" Yoloy exhaust pipe and install flexible connection and muffler furnished by Electrical Contractor. Provide sleeve, flashing, and counter-flashing thru roof and turn discharge horizontally with 45° cutoff. Provide 6" x 10" air duct thru roof to 12" x 12" gravity vent. Make-up connection to generator with canvas connection. Gravity vent to have m.o. damper wired to open when unit runs.
10. Supply air registers shall be T&B T647 & 45. Exhaust air registers shall be T&B T77D & 45 in toilets and T77DG & 45 in repair garage. Transfer grilles shall be T&B T70D & 45. Supply diffusers shall be T&B "ME" with M7 damper & M6 grid. Ceiling units shall have off-white finish wall units shall have prime finish.
11. 26" long x 14" high x 4" deep wall mounted slope top convector 2.4 MBH 190° AUG WTR 20°drop top at 24".
12. Discharge fan to a gravity vent type RV-181 with motor operated damper, interlock with exhaust fan.
13. Toilet exh. fan Detail Sht. H-2 Dischg. to a gravity vent type RV-121 with motor operated damper interlock with exh. fan.

SYMBOL LIST

——	Heating Water Supply
— — —	Heating Water Return
	Gate Valve
	Globe Valve
	Check Valve
	Balancing Valve
	Motor Operated Valve
	Strainer
	Union
	Air Vent - Man. or Auto as Noted
	Pressure Gauge
	Thermometer
T	Thermostat Pneumatic Electric
	Eccentric Reducer



BOILER PIPING DIAGRAM

N.T.S.

PHILIP E. ABSI & ASSOC.
CONSULTING ENGINEERS
33 WEST COOKE ROAD
COLUMBUS, OHIO 43214

STATE OF OHIO PHILIP E. ABSI 29771 REGISTERED PROFESSIONAL ENGINEER

HEAT. & VENT. FLOOR PLAN & DETAILS

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO.

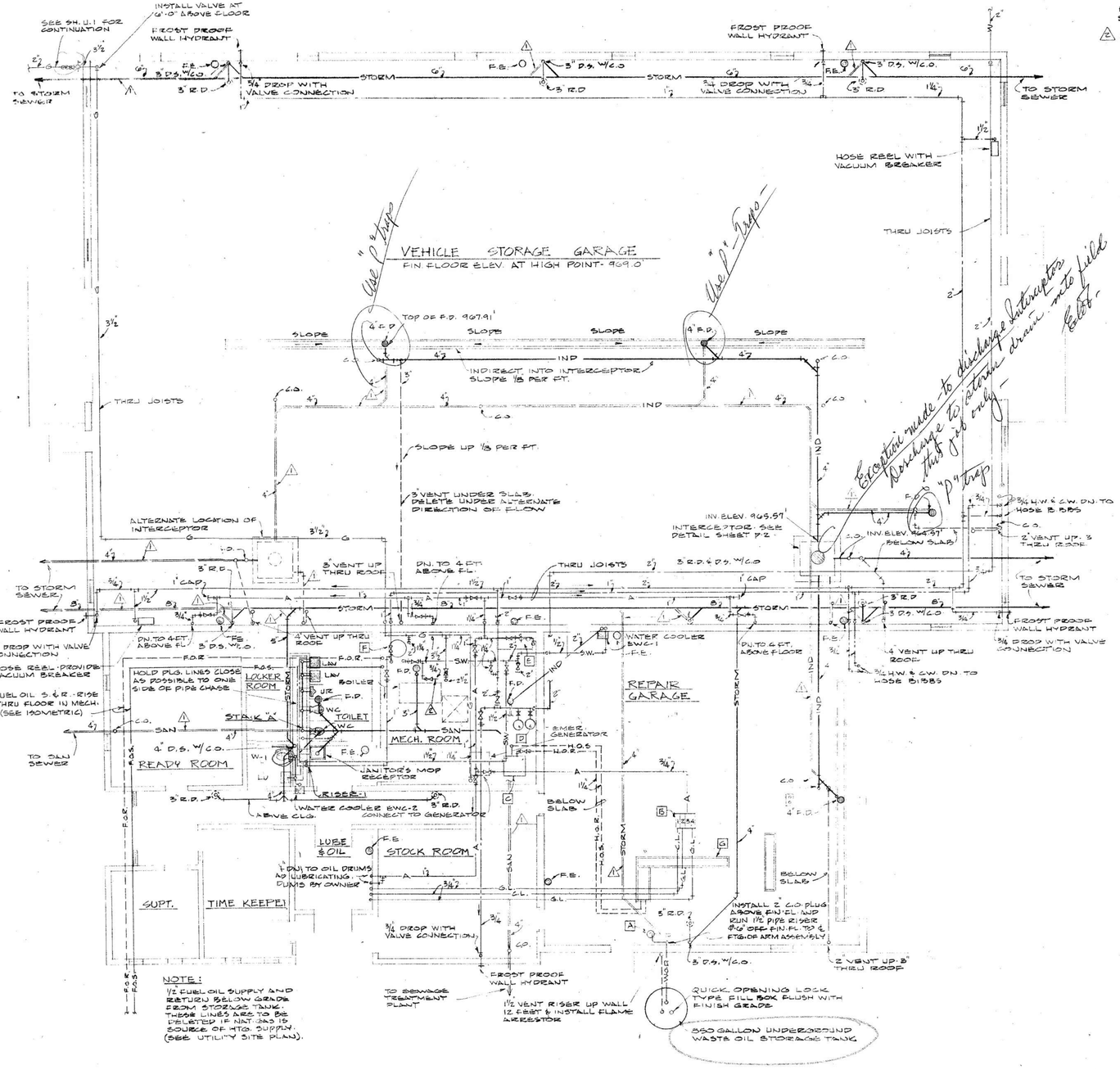
STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BEHNTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
P.E.A. W.W.W.	OPERATION		H-1

L.H.

NOTES

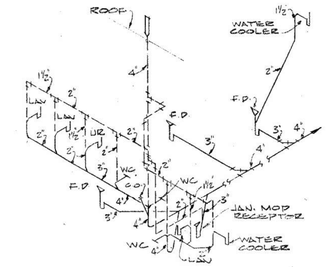
1. ALTERNATE DIRECTION OF FLOW. SEE UTILITY SITE PLAN FOR DISCHARGE DIRECTION
   EACH WATER OUTLET W/HOSE CONNECTION SHALL BE PROVIDED WITH A BACKFLOW PREVENTOR
2. CONNECTION TO VALVE BY H.&V. CONTRACTOR



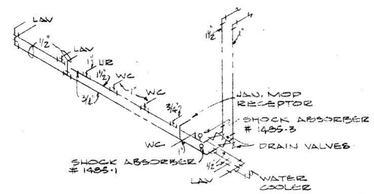
NOTE:
½" FUEL OIL SUPPLY AND RETURN BELOW GRADE FROM STORAGE TANK. THESE LINES ARE TO BE DELETED IF NAT. GAS IS SOURCE OF HTG. SUPPLY (SEE UTILITY SITE PLAN).

PLUMBING FLOOR PLAN

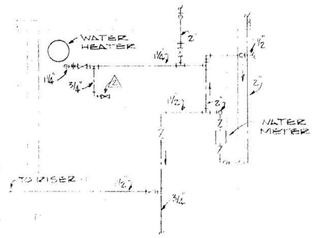
1/8" = 1'-0"



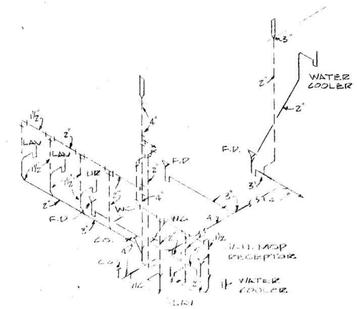
STACK "A"
N.T.S



RISER - 1
N.T.S.



MECHANICAL ROOM (H) PIPING (CITY SUPPLY)
¾", 1", 1½"



STACK "B"
N.T.S
SEE NOTE A

LEGEND

—SAN—	SANITARY SEWER
—STORM—	STORM SEWER
═══	ALTERNATE DIRECTION OF FLOW FOR SEWER SEE NOTE 1
— — — —	VENT PIPING
———	COLD WATER PIPING
——A———	AIR PIPING
——IND———	INDIRECT WASTE
——G———	GAS PIPING
—S.W—	SOFTENED COLD WATER
—W.O.D—	WASTE OIL DRAIN
—F.O.S—	FUEL OIL SUPPLY
—F.O.R—	FUEL OIL RETURN
—H.O.S—	HYDRAULIC OIL SUPPLY
—H.O.R—	HYDRAULIC OIL RETURN
—C.L—	CHASSIS LUBRICATING
—⋈—	GATE VALVE
—N—	CHECK VALVE
—⋈—	GAS COCK

EQUIPMENT

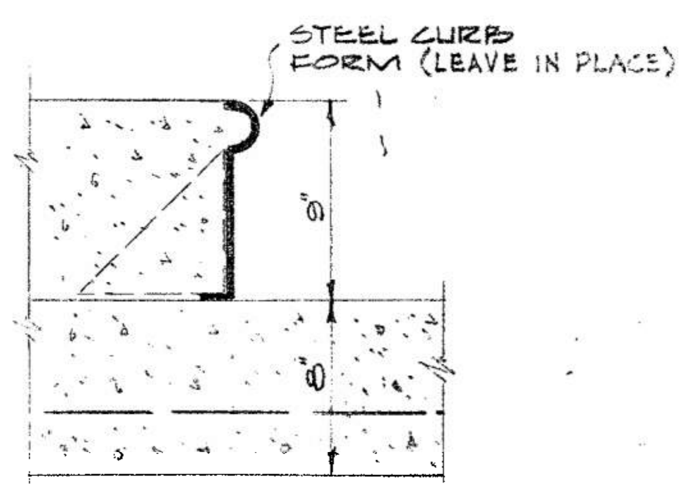
- (A) WASTE OIL ARM ASSEMBLY
- (B) HOSE REEL BRACK ASSEMBLY
- (C) HYDRAULIC POWER UNIT
- (D) PRESSURE TANK
- (E) AIR COMPRESSOR
- (F) WATER HEATER
- (G) TWIN POST LIFT

PLUMBING FLOOR PLAN & DETAILS

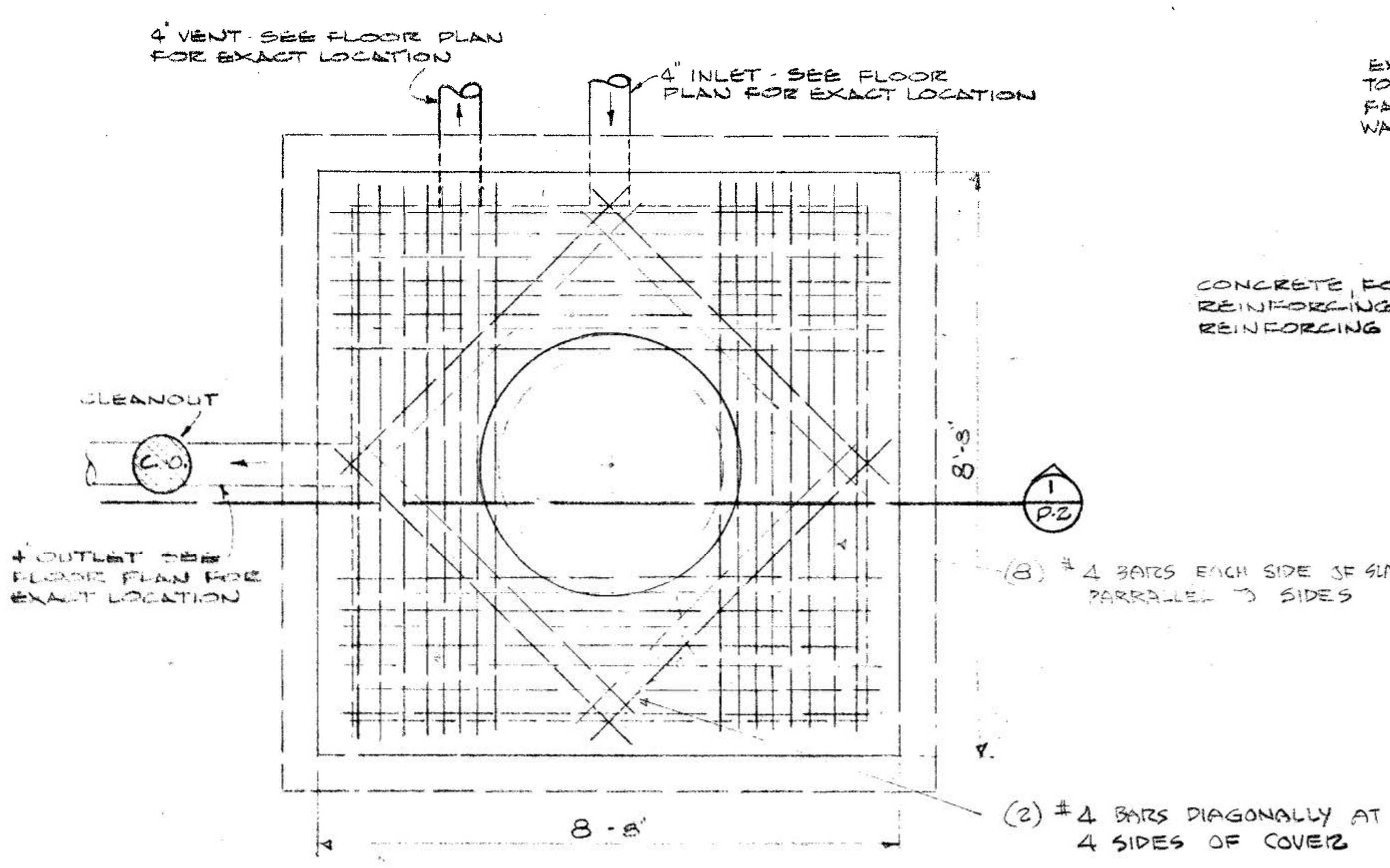
PREBLE COUNTY
HIGHWAY MAINTENANCE GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL BENTZ STATE ARCHITECT - ENGINEER

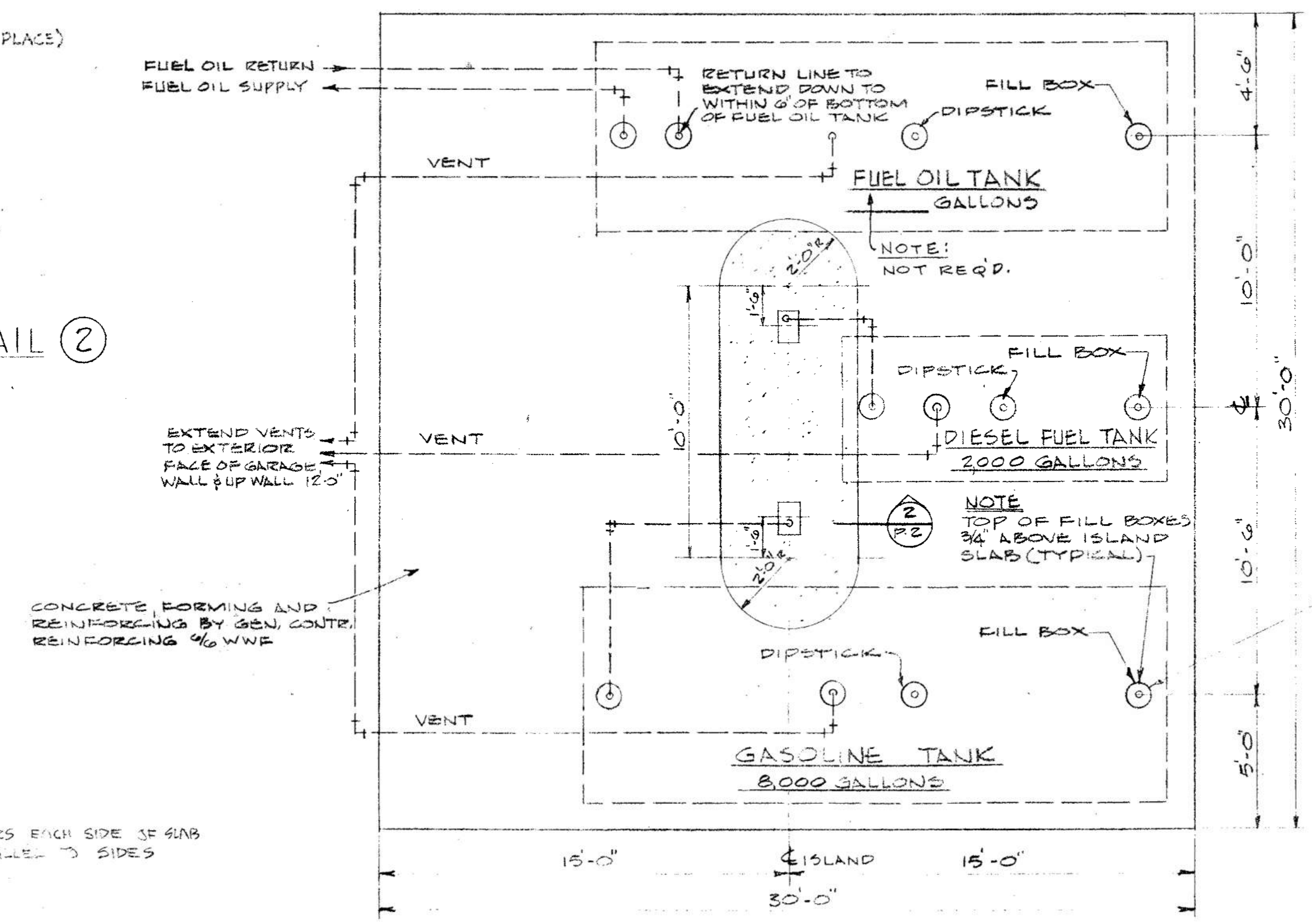
DRAWN BY	DATE	SET OF	SHEET
JO	OPERATION		P-1



ISLAND CURB DETAIL (2)
SCALE 1½" = 1'-0"

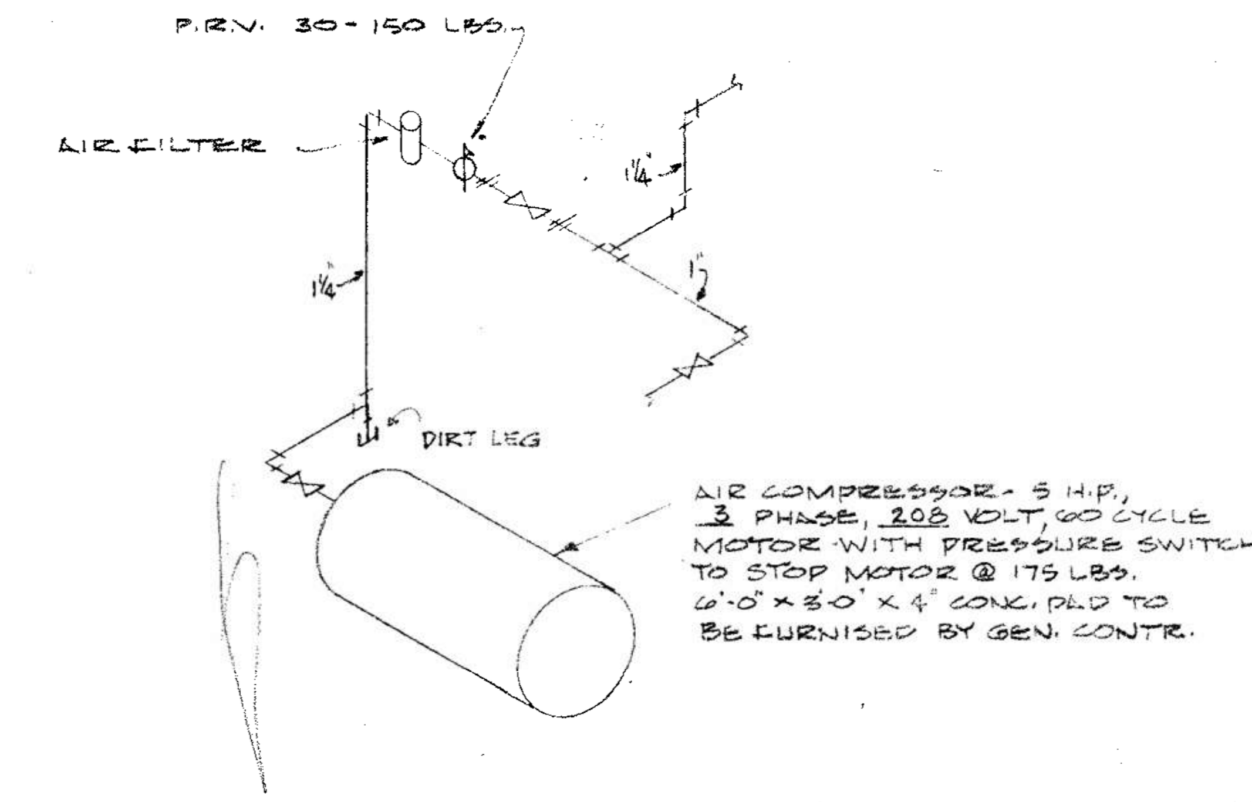


PLAN
SLAB OVER INTERCEPTOR SHOWING REINFORCING BARS
¾" = 1'-0"

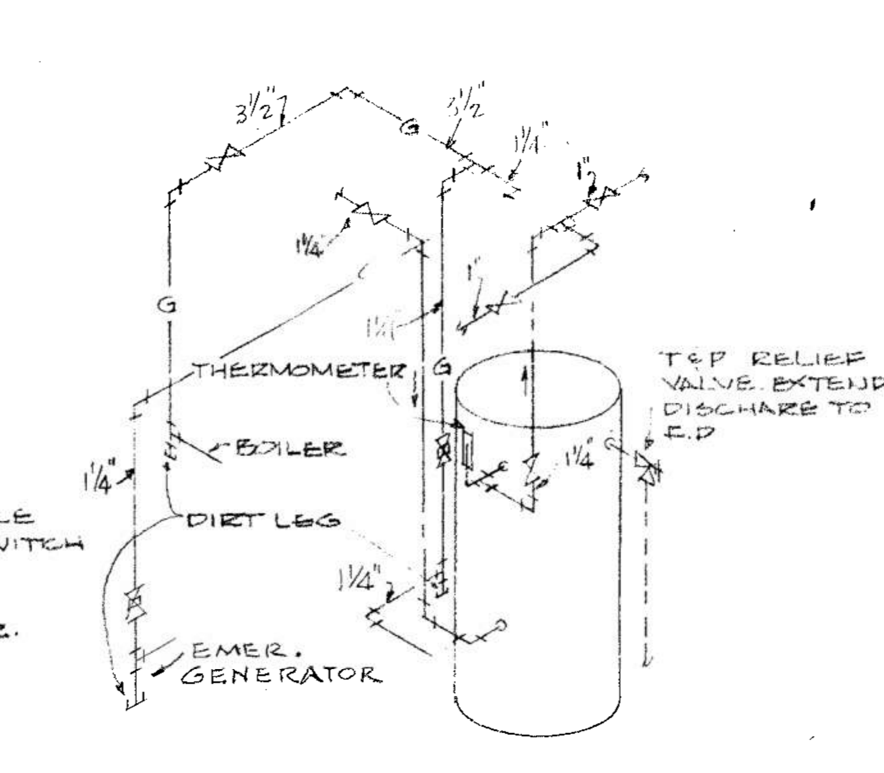


NOTE: TOP OF FILL BOXES INSTALLED ¾" ABOVE TOP OF SLAB (TYPICAL)

FUELING ISLAND
SCALE ¼" = 1'-0"
TYPICAL WHERE FUEL OIL IS USED FOR HEATING

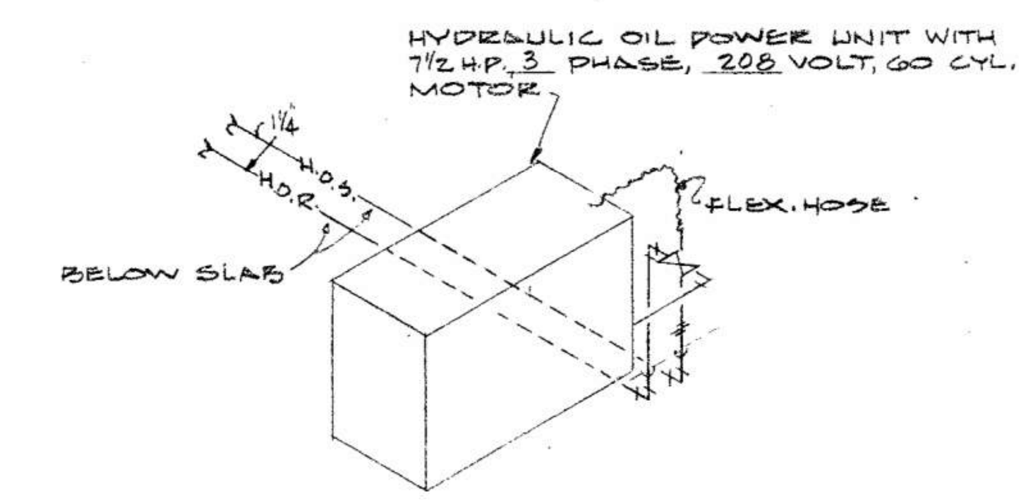


COMPRESSED AIR PIPING
N.I.S.

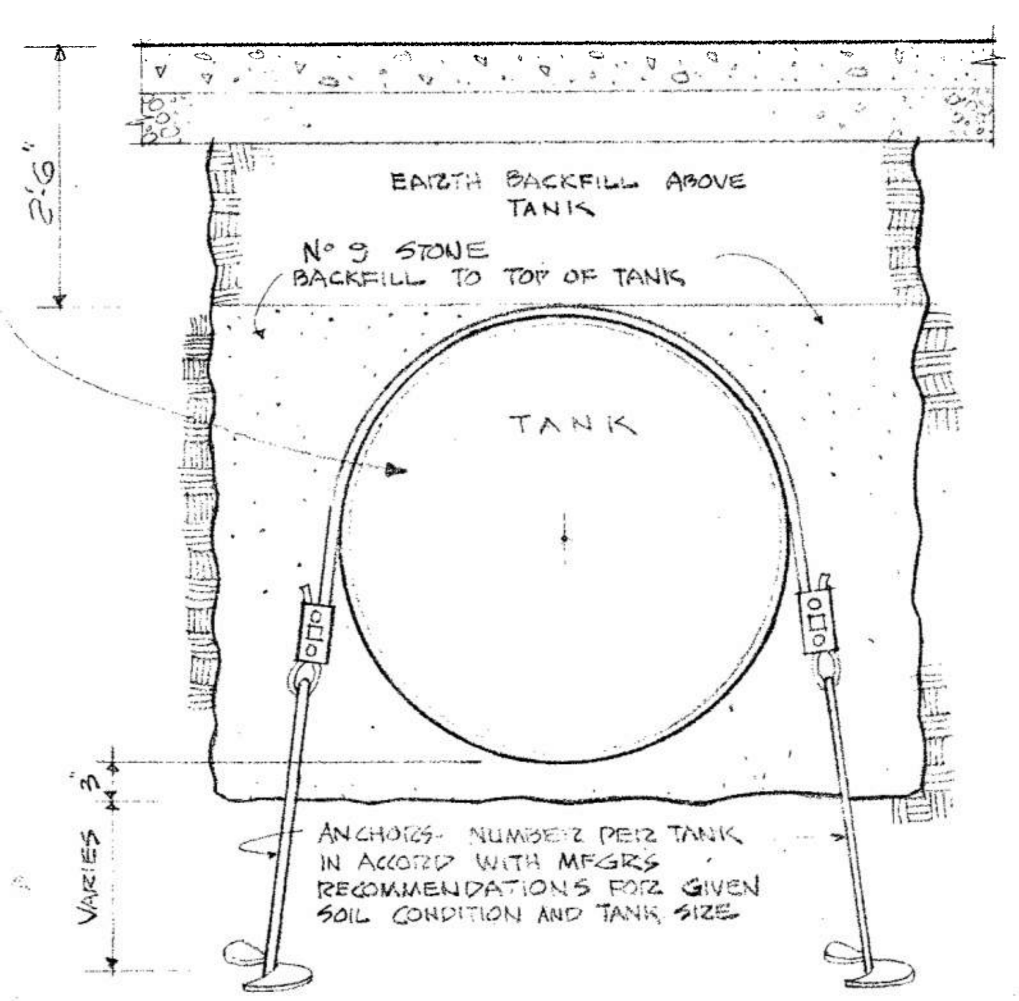


WATER HEATER PIPING - (GAS)
N.I.S.

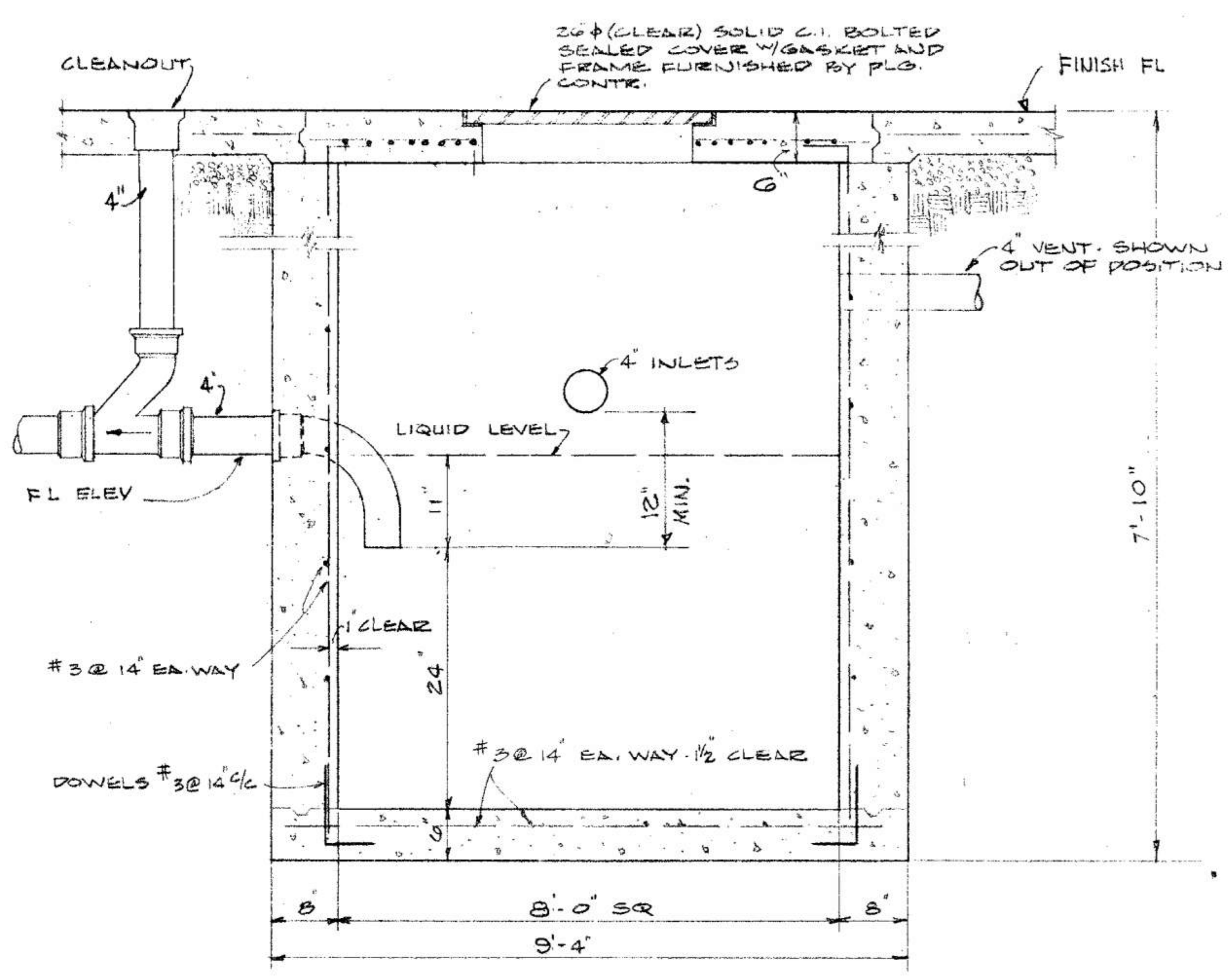
TANK CAP GALLONS	NET BUOYANCY OF TANK (LBS.)
1000	7,500
2000	15,000
6000	45,000
8000	60,000



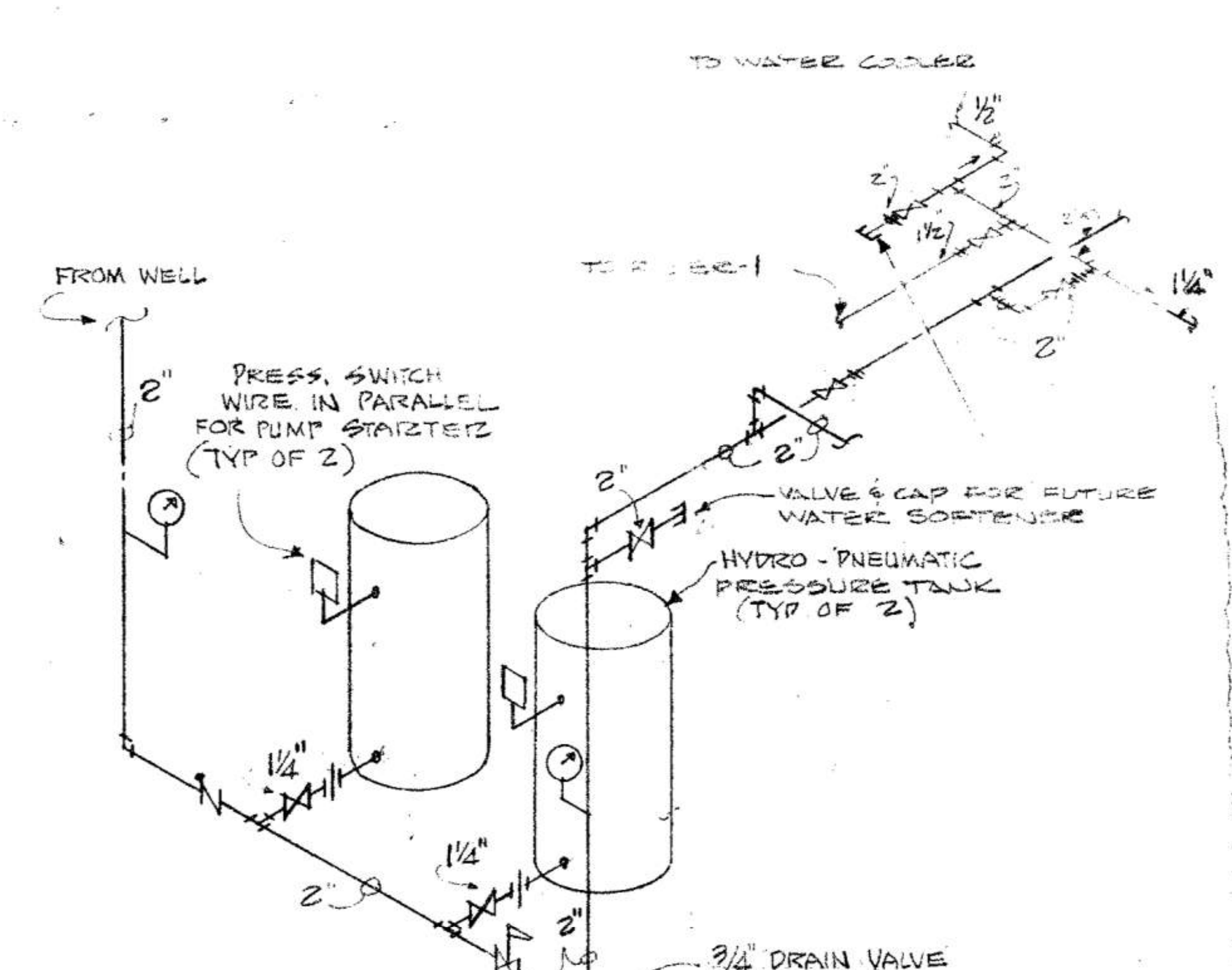
HYDRAULIC OIL LIFT SYSTEM
N.I.S.



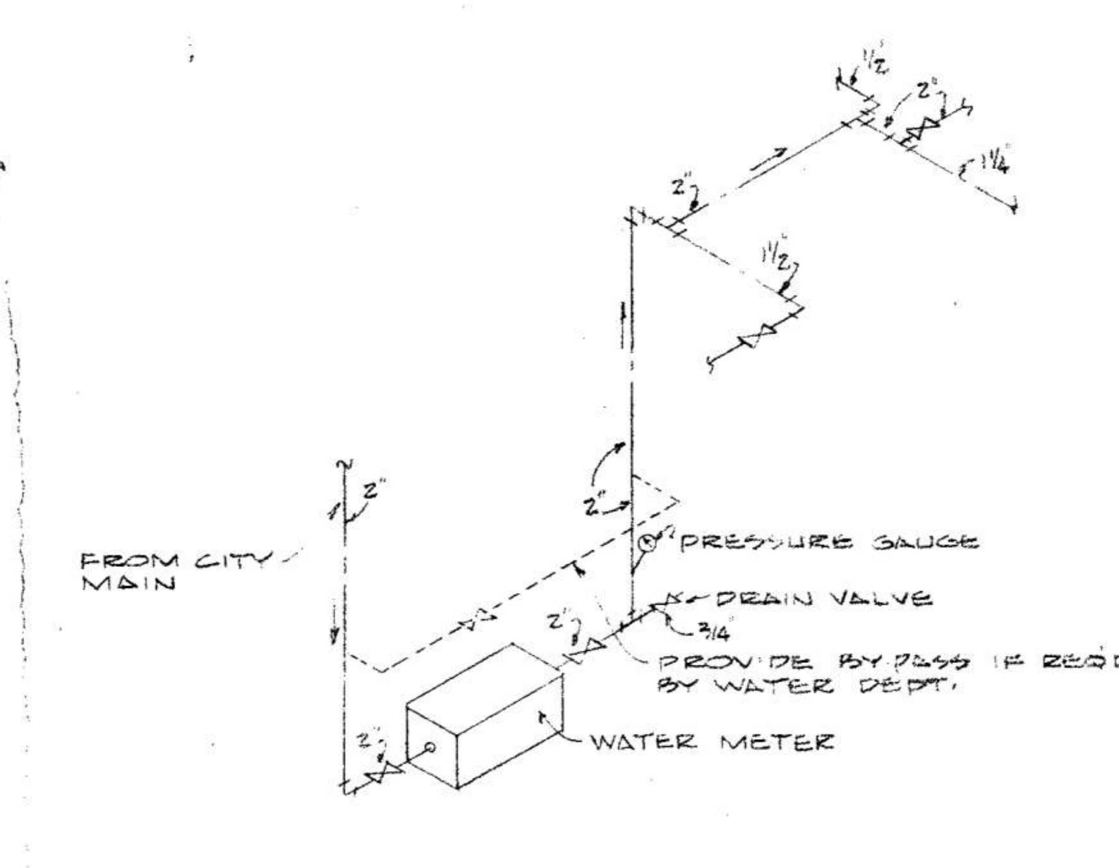
UNDERGROUND STORAGE TANK DETAIL
N.I.S.



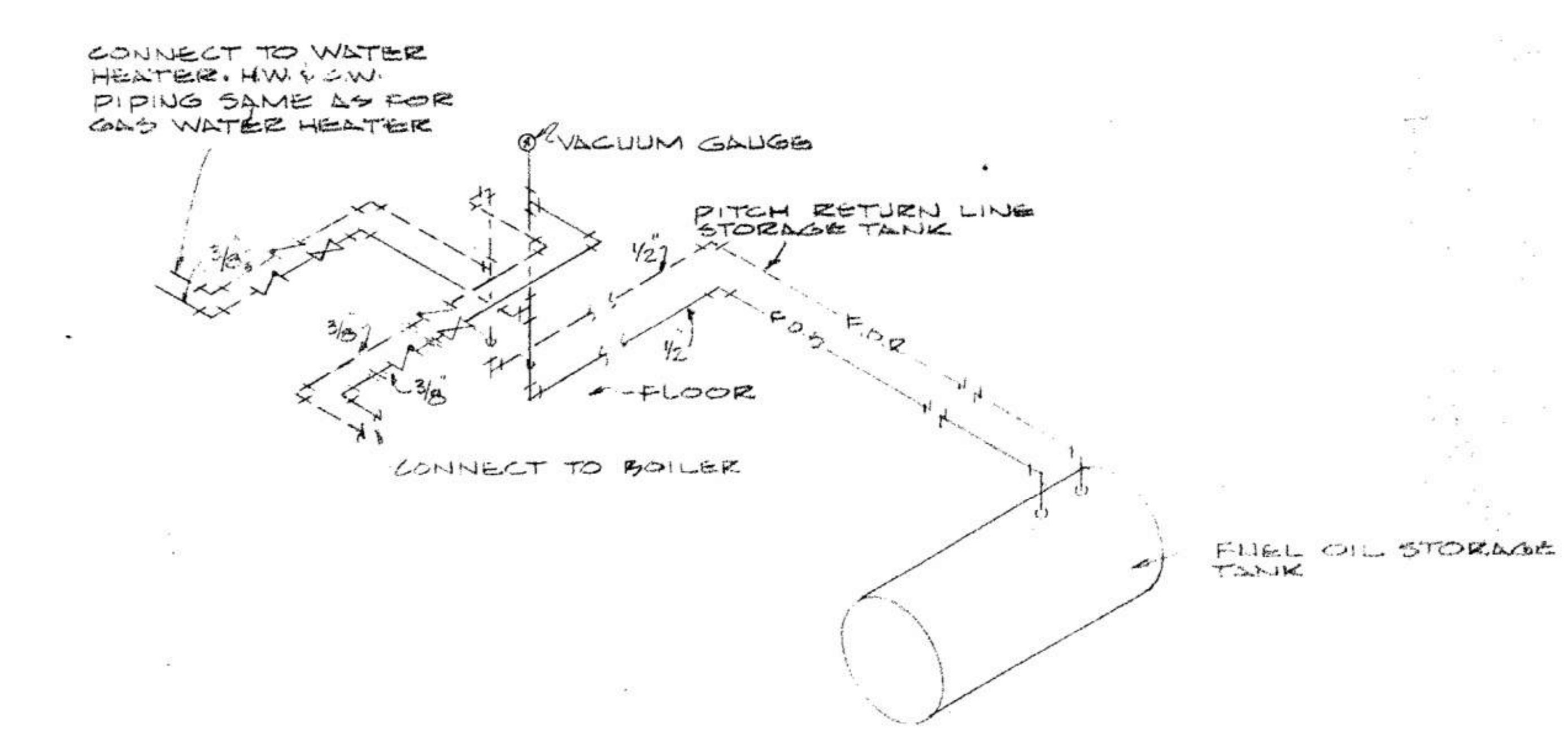
INTERCEPTOR (1) SCALE ¾" = 1'-0"
REINFORCED CONC. PIT BY THE GENERAL CONTRACTOR. ALL PIPE FURNISHED AND INSTALLED BY THE PLG. CONTRACTOR



WELL WATER SUPPLY PIPING
N.I.S.



CITY WATER SUPPLY PIPING
N.I.S.



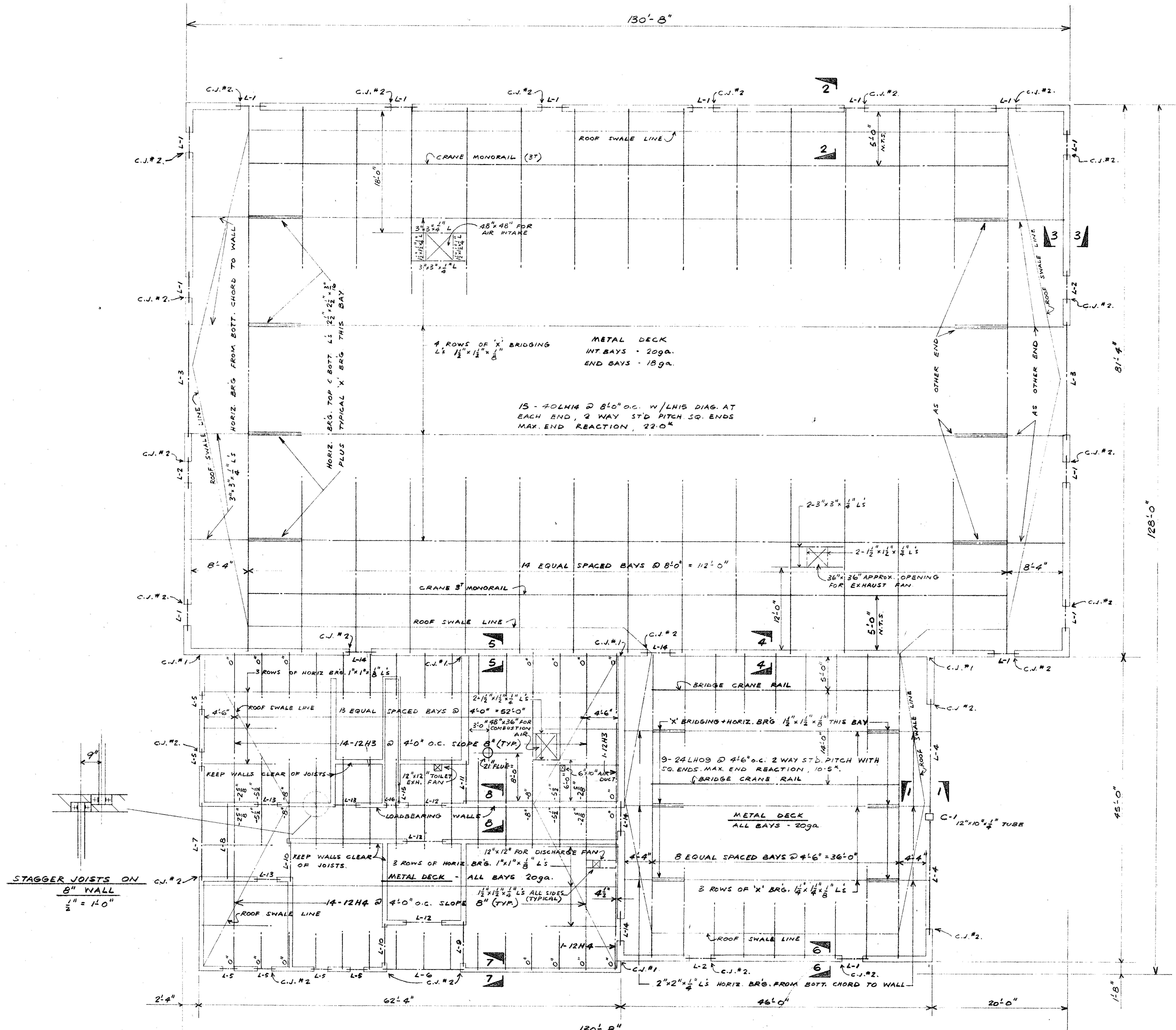
FUEL OIL PIPING
N.I.S.

PLUMBING DETAILS

PREBLE COUNTY HIGHWAY GARAGE
DIVISION 8 EATON, OHIO.

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C. GIENOW, DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E. BENTZ, STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
	OPERATION		P-2



ROOF FRAMING PLAN $\frac{1}{8}" = 1'-0"$

NOTE: 0" DENOTES UNDERSIDE OF JOIST BEARING BEING 12'-0" ABOVE F.F.L.
FIGURES THUS $(-2\frac{5}{8})$ DENOTE UNDERSIDE OF JOIST BEARING BELOW 0".
UNDERSIDES OF JOIST BEARINGS IN VEHICLE STORAGE & REPAIR GARAGE ARE 18'-8" ABOVE F.F.L.
C.J. DENOTES CONTROL JOINTS SEE GENERAL DRG. NO. G-7 FOR DETAILS.

LINTEL SCHEDULE

MARK	NO.	DESCRIPTION	CLEAR SPAN	END B'RGS	TOTAL L'GTH.
L-1	14	$3/3" \times 3" \times \frac{1}{4}"$ L's	3'-0"	6"	4'-0"
L-2	3	$3/3" \times 3" \times \frac{1}{4}"$ L's	3'-4"	6"	4'-4"
L-3	2	W8 × 24 w/ $9\frac{1}{2}" \times 1/4"$ PL + $3" \times 2" \times 1/4"$ L	16'-0"	12"	18'-0"
L-4	2	W8 × 24 w/ $9\frac{1}{2}" \times \frac{1}{4}"$ PL	16'-0"	6" @ COL. 12" @ WALL	17'-6"
	NOTE: L-4 CAN BE ONE CONTINUOUS BEAM			w/12"	35'-0"
L-5	6	$2/2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{1}{4}"$ L's	2'-0"	6"	3'-0"
L-6	1	W8 × 13	11'-0"	8"	12'-4"
L-7	1	$6" \times 6" \times \frac{7}{16}"$ L	10'-4"	8"	11'-8"
L-8	1	$6" \times 6" \times \frac{3}{8}"$ L	10'-4"	4"	11'-0"
L-9	1	$2/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	5'-8"	6"	6'-8"
L-10	2	$2/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	5'-0"	6"	6'-0"
L-11	1	$3/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	5'-4"	6"	6'-4"
L-12	3	$2/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	5'-4"	6"	6'-4"
L-13	3	$2/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	3'-4"	6"	4'-4"
L-14	4	$3/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L's	3'-4"	6"	4'-4"
L-15	1	$1/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L	2'-0"	4"	2'-8"
L-16	1	$2/3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{1}{4}"$ L	2'-0"	4"	2'-8"

NOTES

1. SECTIONS INDICATED ON THIS PLAN ARE SHOWN ON DRAWING NO. S-2
2. UNDER BEARINGS OF ALL LINTELS PROVIDE 8" OF SOLID BLOCKS, EXCEPT AT BEARINGS OF LINTELS L-3 AND L-4 WHERE SOLID BLOCKS ARE TO BE PROVIDED DOWN TO FOOTING. ALL SOLID BLOCKS TO BE LAID WITH FULL MORTAR JOINTS.

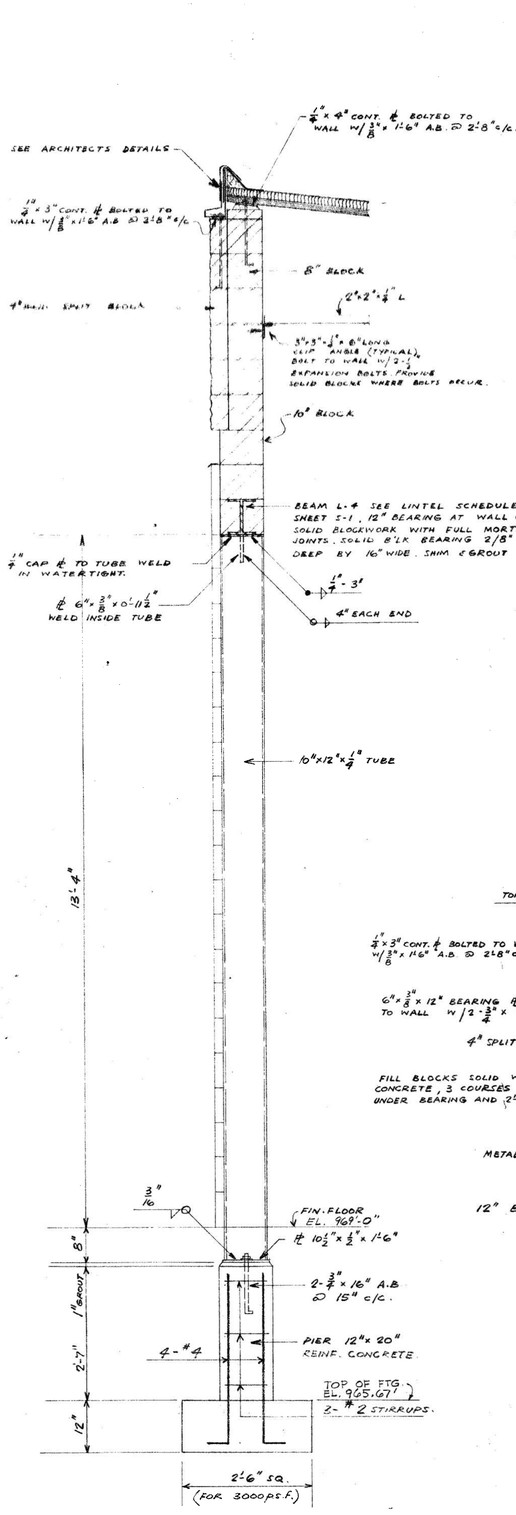
STRUCTURAL PLAN - LEFT HAND OFFICE

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO

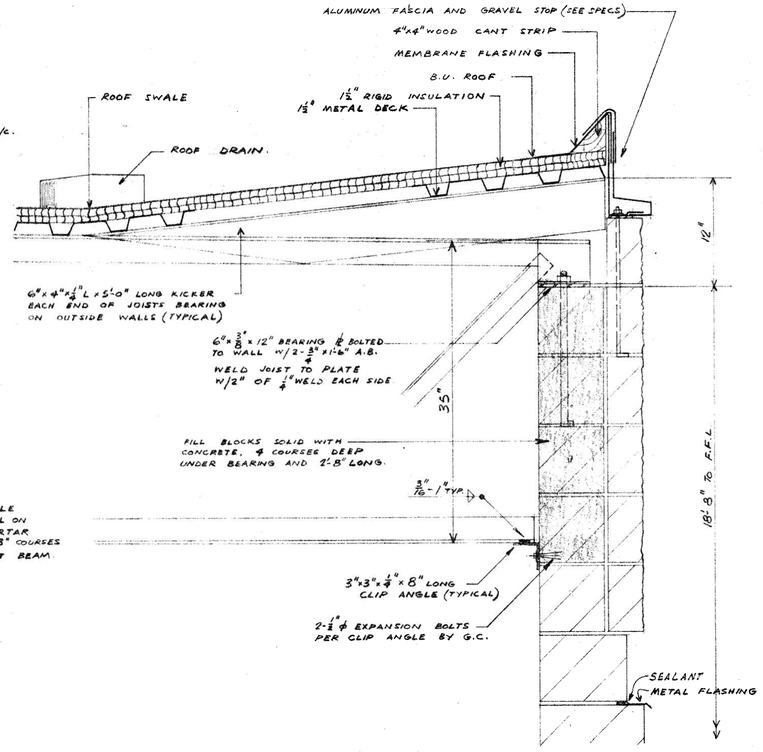
STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY F.A.S.	DATE 1971	SET OF	SHEET
	OPERATION		S-1

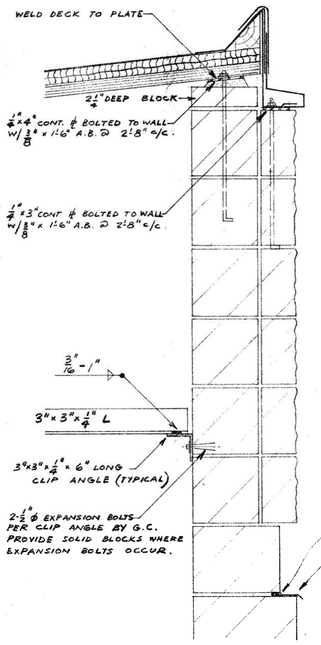
L.H.



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

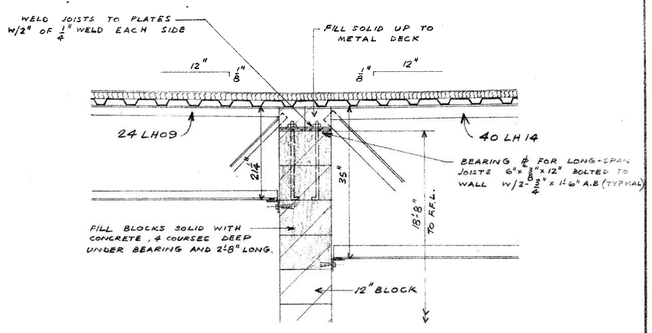


SECTION 2-2 1 1/2" = 1'-0"

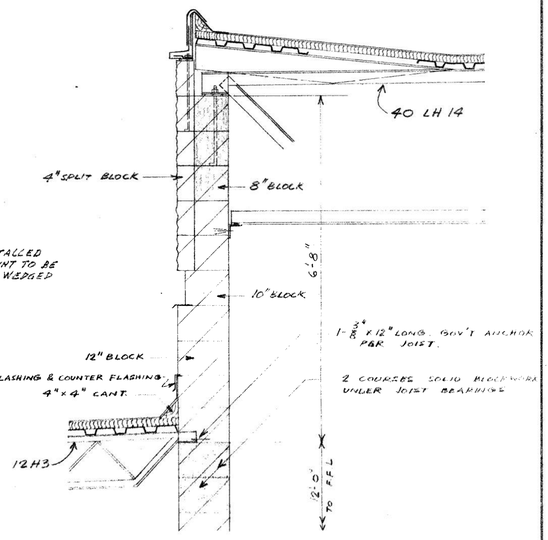


NOTE: FLASHING TO BE INSTALLED AFTER WALL IS LAID UP. JOINT TO BE RAKED OUT AND FLASHING WEDGED IN AS INDICATED.

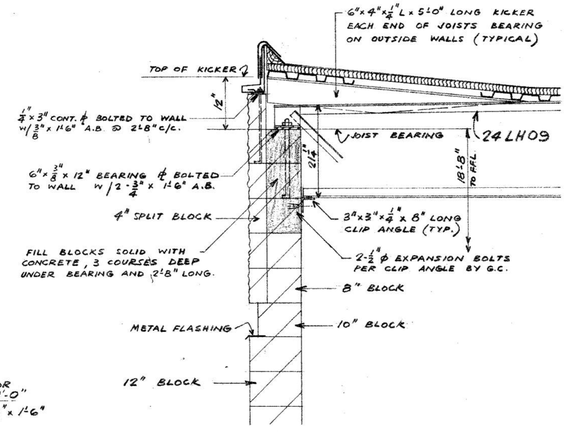
SECTION 3-3 1 1/2" = 1'-0"



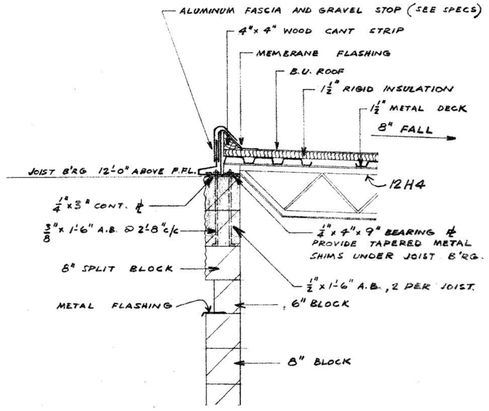
SECTION 4-4 3/4" = 1'-0"



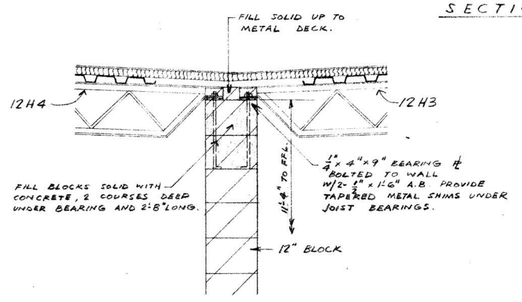
SECTION 5-5 3/4" = 1'-0"



SECTION 6-6 3/4" = 1'-0"



SECTION 7-7 3/4" = 1'-0"



SECTION 8-8 3/4" = 1'-0"

STRUCTURAL - SECTIONS

PREBLE COUNTY
HIGHWAY GARAGE
DIVISION 8 EATON, OHIO.

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
ALFRED C GIENOW DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL E BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY F.A.S.	DATE 1971	SET OF	SHEET S-2
	OPERATION		

ELEC. FLOOR PLAN NOTES

(15) 7-1/2 KW, 120/208 volt, 3-phase, 4-wire generating set, with natural gas driven engine, air cooled. Heating Contractor shall provide exhaust connection from the engine to outside thru roof.

(16) Discharge duct and connection by Heating Contractor.

(17) NEMA Size 1 magnetic starter in NEMA I Enclosure for lift pump surface wall mounted with top at 4'-6" above floor. See wiring diagram #2 sheet E-1. Run 3 #8 in 3/4" conduit to 50 ampere, 3-pole breaker in Panel B.

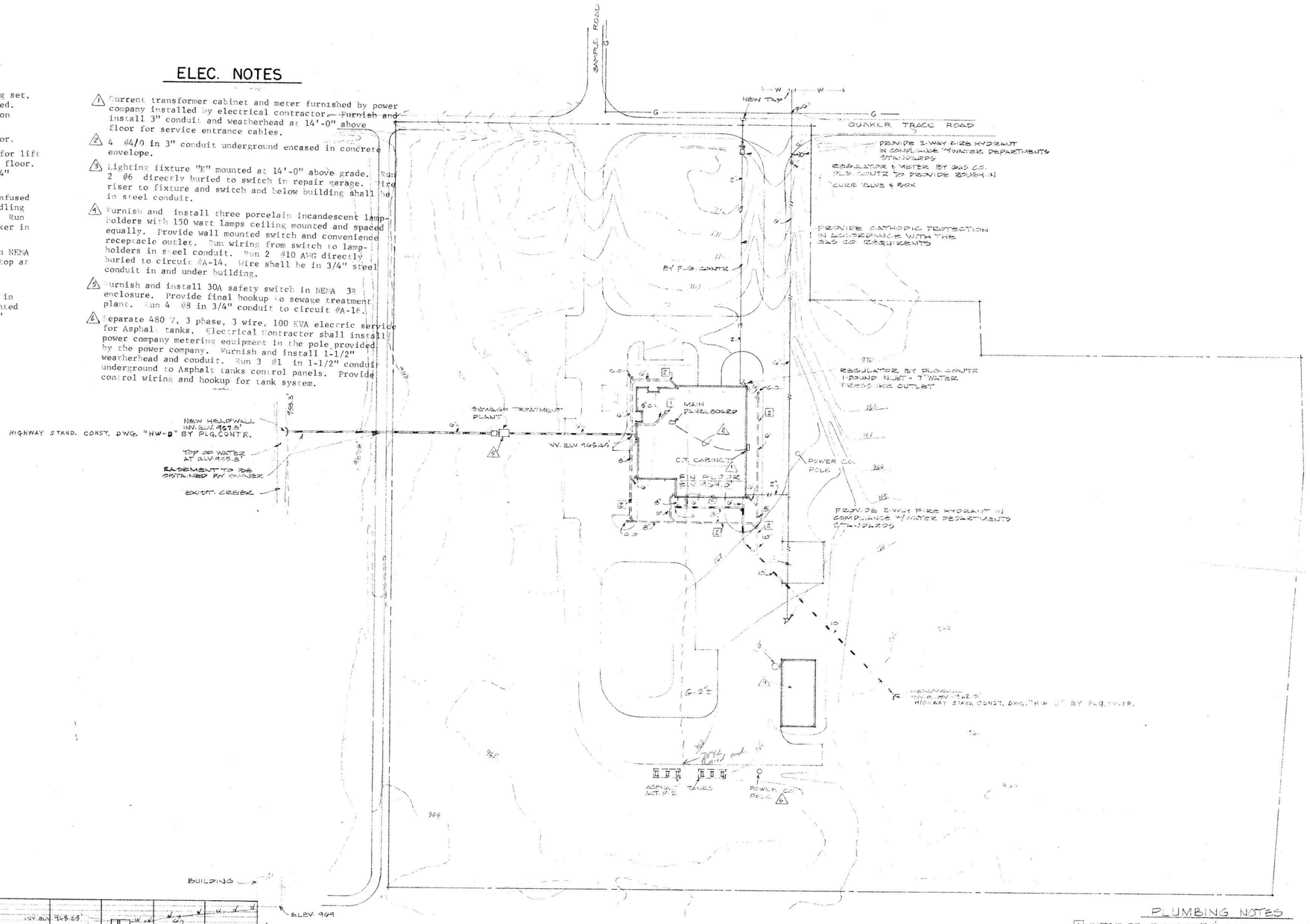
(18) Combination NEMA Size "0" magnetic starter with unfused disconnect switch in NEMA I Enclosure for Air Handling Unit, wall mounted with top at 4'-6" above floor. Run 3 #12 in 3/4" conduit to 20 ampere, 3-pole breaker in Panel "B".

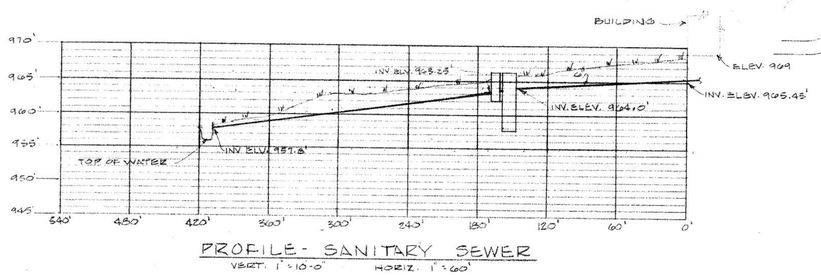
(19) NEMA Size 1 magnetic starter with H.O.A. switch in NEMA I Enclosure for Air Compressor wall mounted with top at 4'-6" above floor. Run 3 #10 in 3/4" conduit to 30 ampere, 3-pole breaker in Panel B.

(20) NEMA Size "0" magnetic starter with H.O.A. switch in NEMA I Enclosure for Heating Water Pump, wall mounted with top at 4'-6" above floor. Run 3 #12 in 3/4" conduit to 20 ampere, 3-pole breaker in Panel EM.

ELEC. NOTES

1. Current transformer cabinet and meter furnished by power company installed by electrical contractor. Furnish and install 3" conduit and weatherhead at 14'-0" above floor for service entrance cables.
2. 4 #4/0 in 3" conduit underground encased in concrete envelope.
3. Lighting fixture "K" mounted at 14'-0" above grade. Run 2 #6 directly buried to switch in repair garage. Wire riser to fixture and switch and below building shall be in steel conduit.
4. Furnish and install three porcelain incandescent lamp-holders with 150 watt lamps ceiling mounted and spaced equally. Provide wall mounted switch and convenience receptacle outlet. Run wiring from switch to lamp-holders in steel conduit. Run 2 #10 AWG directly buried to circuit #A-14. Wire shall be in 3/4" steel conduit in and under building.
5. Furnish and install 30A safety switch in NEMA 3R enclosure. Provide final hookup to sewage treatment plant. Run 4 #8 in 3/4" conduit to circuit #A-16.
6. Separate 480 Y, 3 phase, 3 wire, 100 KVA electric service for Asphalt tanks. Electrical Contractor shall install power company metering equipment in the pole provided by the power company. Furnish and install 1-1/2" weatherhead and conduit. Run 3 #1 in 1-1/2" conduit underground to Asphalt tanks control panels. Provide control wiring and hookup for tank system.





PROFILE - SANITARY SEWER

VERT. 1" = 10'-0" HORIZ. 1" = 60'

PLUMBING NOTES

1. INTERIOR DOWNSPOUT & DIRECTION OF FLOW (ALT P-1)
2. STORM SEWERS & DIRECTION OF FLOW (ALT. P-1)

UTILITY SITE PLAN

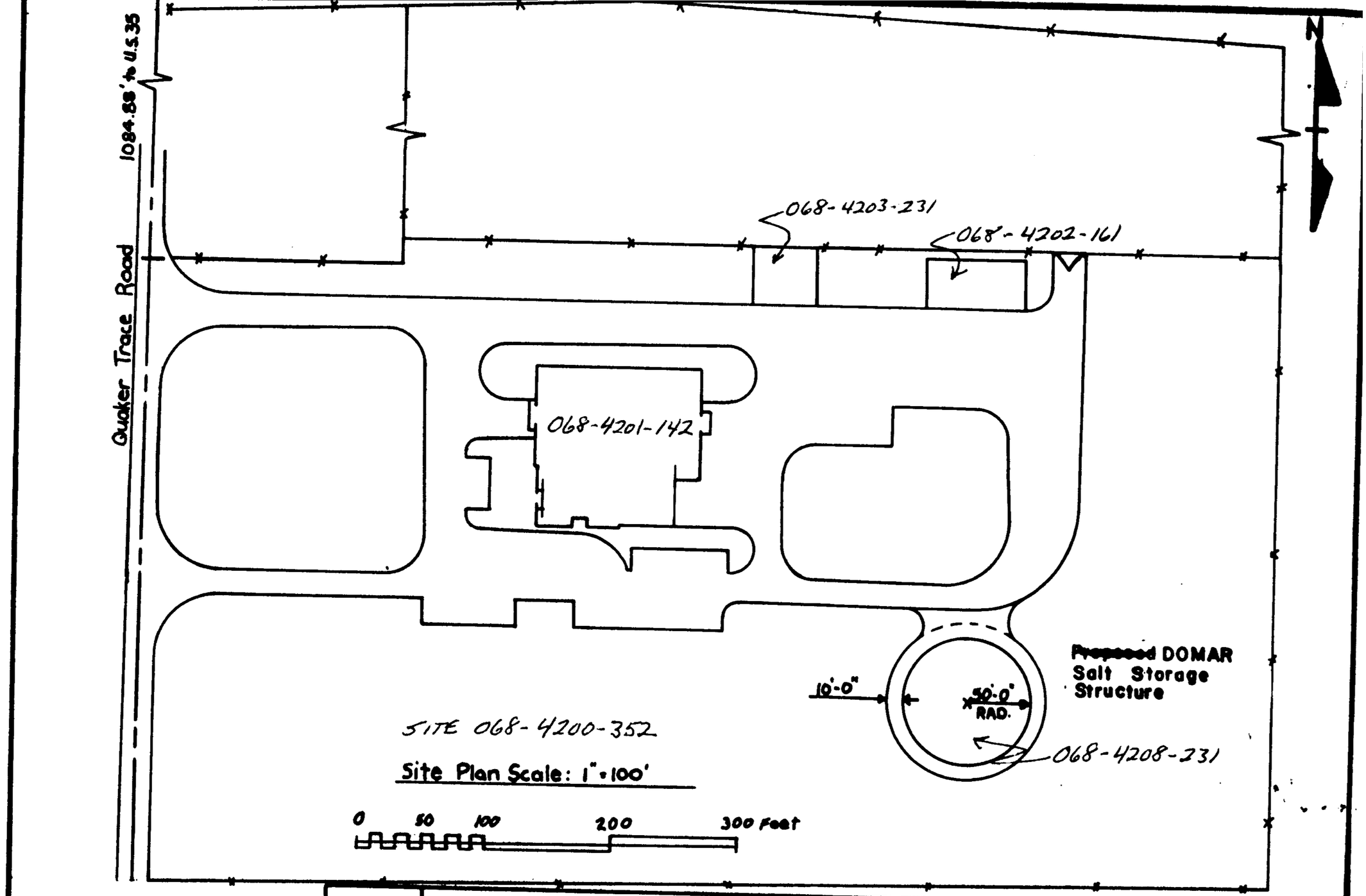
SCALE: 1" = 60'-0"

UTILITY SITE PLAN

PREBLE COUNTY
HIGHWAY MAINTENANCE GARAGE
DIVISION 8 EATON, OHIO

STATE OF OHIO
DEPARTMENT OF PUBLIC WORKS
DIRECTOR
DIVISION OF STATE ARCHITECT & ENGINEER
CARL BENTZ STATE ARCHITECT - ENGINEER

DRAWN BY	DATE	SET OF	SHEET
J.O.	OPERATION		U1



	PROPOSED SALT STORAGE DOME		STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT EIGHT HIGHWAY MAINTENANCE GARAGE
	March 10, 1980	Preble Garage	
	DATE DRAWN	NAME OF SITE	
DATE REVISED	By Dave Heckler	Lanier Twp., Preble County, City of Eaton, Ohio	

NOTE

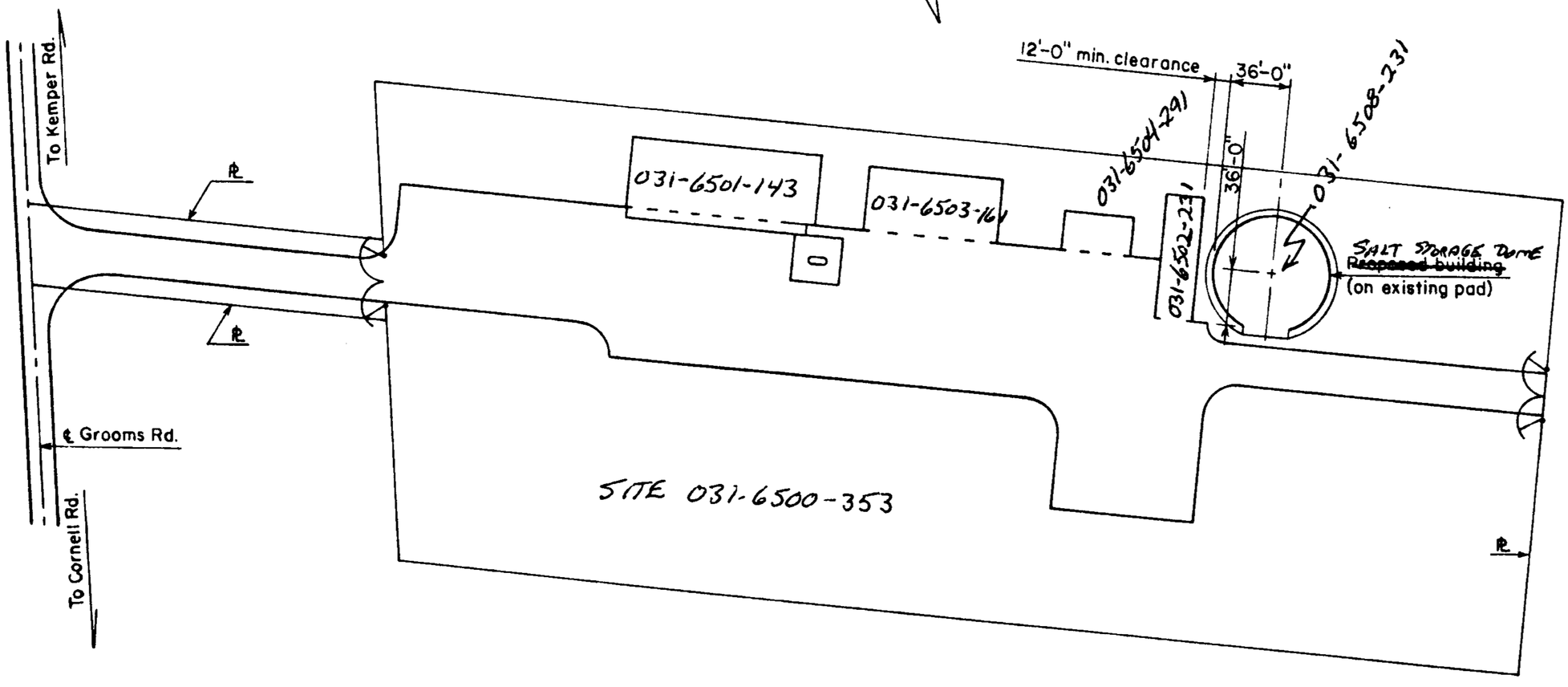
1. The Ohio Department of Transportation will stake the radial point and the symmetrical centerline of the proposed building.

N

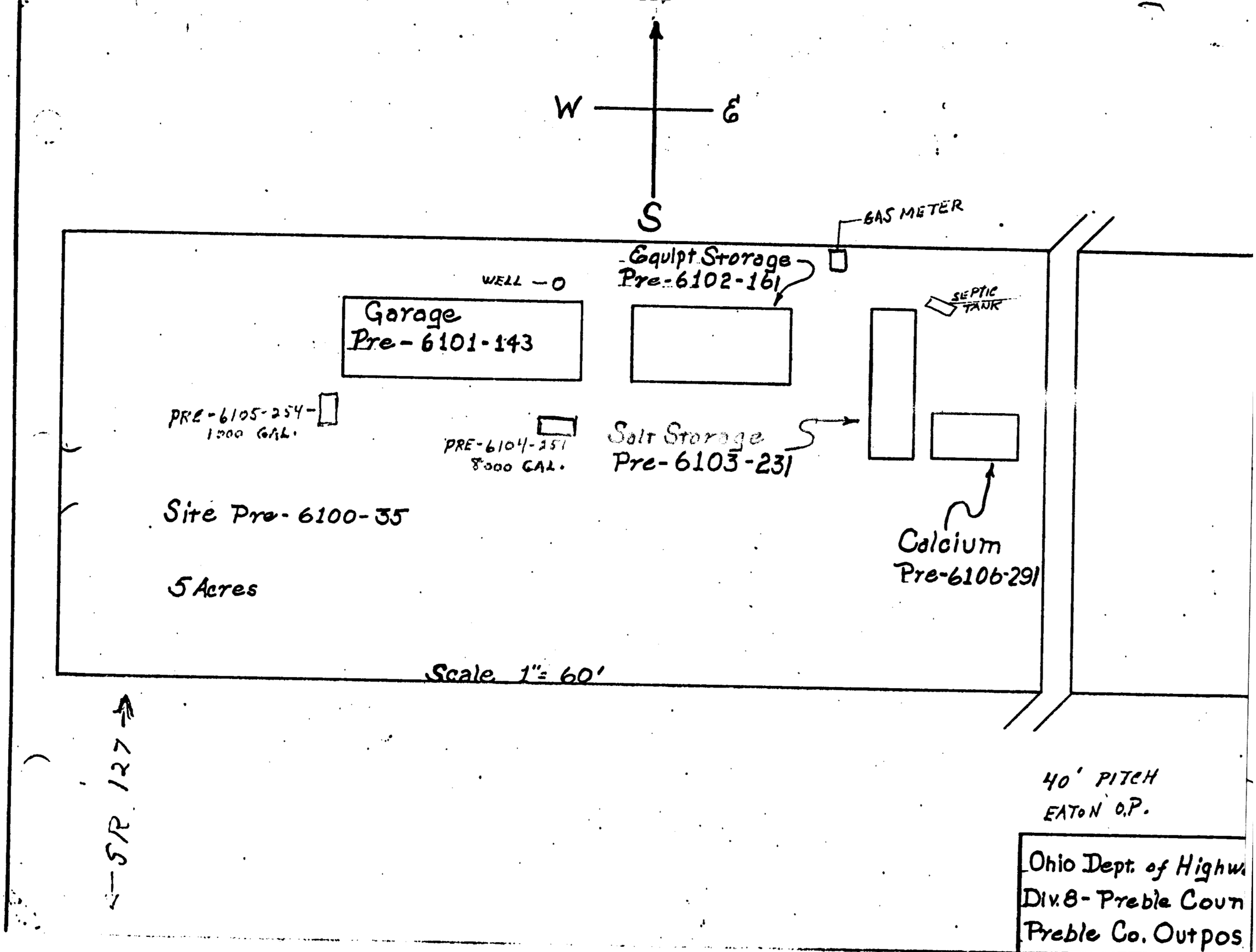
0 100 200 Feet

0 10 20 30 40 50 60 Meters

SCALE



	PROPOSED SALT STORAGE BUILDING		STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT EIGHT HIGHWAY MAINTENANCE OUTPOST
	April 8, 1983	Blue Ash Outpost	
	DATE DRAWN	NAME OF SITE	
DATES REVISED	BY J. E. Foote	Sec. 12, Range 1, Town. 4, Sycamore Twp., Hamilton County, Ohio	


W
E
S
GAS METER
Equipt Storage
Pre-6102-161
WELL -O
Garage
Pre-6101-143
SEPTIC TANK
PRE-6105-254-
1000 GAL.
PRE-6104-251
8000 GAL.
Salt Storage
Pre-6103-231
Site Pre-6100-35
5 Acres
Calcium
Pre-6106-291
Scale 1"= 60'
S/R 127
40' PITCH
EATON O.P.
Ohio Dept. of Highw
Div. 8 - Preble Coun
Preble Co. Outpos

ITEM# 20

DRAWING INDEX

DRAWING NUMBER	DESCRIPTION
#LY22-012-00	DRAWING INDEX
#LY22-012-01	3D VIEW
#LY22-012-02	PLAN VIEW
#LY22-012-03	SIDE VIEW
#LY22-012-04	END VIEW
#LY22-012-05	PLUMBING SCHEMATIC
#LY22-012-06A	ELECTRICAL
#LY22-012-06B	SINGLE LINE DIAGRAM
#LY22-012-07	BILL OF MATERIALS
#LY22-012-08	UNDERGROUND CONDUITS

THESE DRAWINGS ARE PROVIDED AS AN EXAMPLE OF THE DELEGATED DESIGN AND DEFERRED SUBMITTAL REQUIRED BY THE SUCCESSFUL BIDDING CONTRACTOR. THESE DRAWINGS ARE INTENDED TO CONVEY SCOPE OF THE VEHICLE WASH SYSTEM AND ARE NOT INTENDED TO BE FINAL DESIGN OR BID DOCUMENTS. FINAL VEHICLE WASH SYSTEM SHALL BE DESIGNED AROUND THE FLOOR PLAN OF THE PREBLE COUNTY FULL SERVICE MAINTENANCE GARAGE.

INTER CLEAN

709 James L Hart Parkway
Ypsilanti, MI 48197

Web Site: www.interclean.com
E-mail: sales@interclean.com
Phone: (734) 961-3300
(800) 468-3725
Fax: (734) 961-0092

CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

System List

Prefix	Description
ACS	Air Compressed System
CPS	Customer Provided System
CSD	Control System Device
DES	Dedicated Electrical System
DET	Detergent System
FWS	Fresh Water System
PHS	PH Control System
ROS	Reverse Osmosis (RO) System
RWS	Reclaim Water System
WCS	Wheel/Chassis System

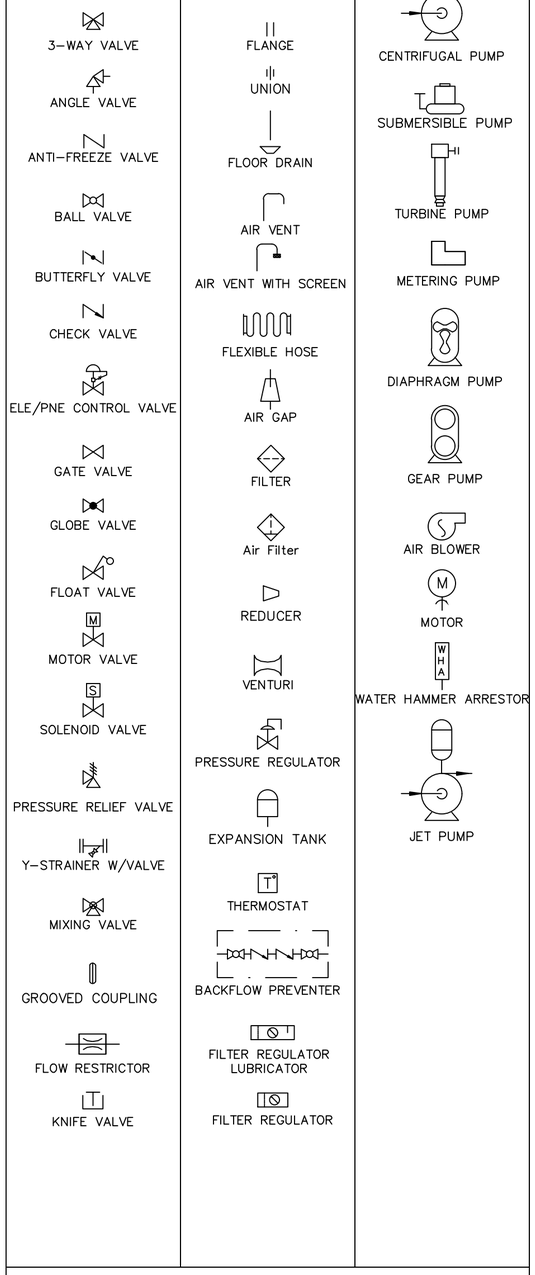
Component List

Prefix	Description
ACD	Acid Chemical
ALK	Alkaline Chemical
AC	Air Compressor
BL	Blower
BR	Brush
CD	Customer Device
DSP	Distributed I/O Panel
F	Filter
MCP	Main Control Panel
MDP	Main Distribution Panel
OS	Oil Skimmer
P	Pump
PCP	Pneumatic Control Panel
SCP	Slave Control Panel
TK	Tank
WS	Water Softener
WH	Water Heater

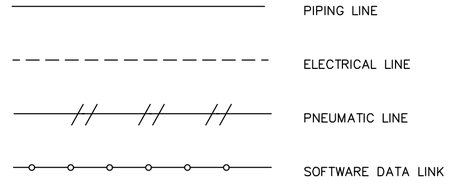
Device List

Prefix	Description
AI	Analog Inupt
AO	Analog Outupt
AU	Air Condition Unit
BV	Ball Valve
BFV	Butterfly Valve
CAV	Co-Ax Valve
CXV	Customer Device
CV	Check Valve
DI	Digital Input
DO	Digital Output
ES	Emergency Stop
FI	Flow Rate Indicator
FT	Flow Rate Transmitter
FIT	Flow Rate Transmitter w/Indicator
FV	Flow Regulator
HMI	Touchscreen
HRN	Audible Alarm/Horn
LI	Level Indicator
LT	Level Transmitter
LIT	Level Transmitter w/Indicator
LSHH	High High Level Alarm Sensor
LSH	High Level Alarm Sensor
LSL	Low Level Alarm Sensor
LSLL	Low Low Level Alarm Sensor
LSO	Overflow Level Sensor
NA	Motor Run Status
PB	Push Button
PCV	Pneumatic Control Valve
PHS	Ph Sensor
PI	Pressure Indicator
PIT	Pressure Transmitter w/Indicator
PT	Pressure Transmitter
PV	Pressure Regulator
SPI	Speed Display
SSW	Select Switch
STB	Stobe Light/Visual Annuciator
SV	Solenoid Valve
TI	Temperature Indicator
TIT	Temperature Transmitter w/Indicator
TT	Temperature Transmitter
TTB	Traffic Light, Red/Green
WCD	Wireless Control Device
YE	Photoelectric Source Sensor
YES	Photoelectric Receiver Sensor
YEL	Limit Switch
YS	Proximity Sensor
XFM	Transformer
XSS	Motor Start/Stop Switch

P&ID SYMBOL



P&ID LINE TYPE



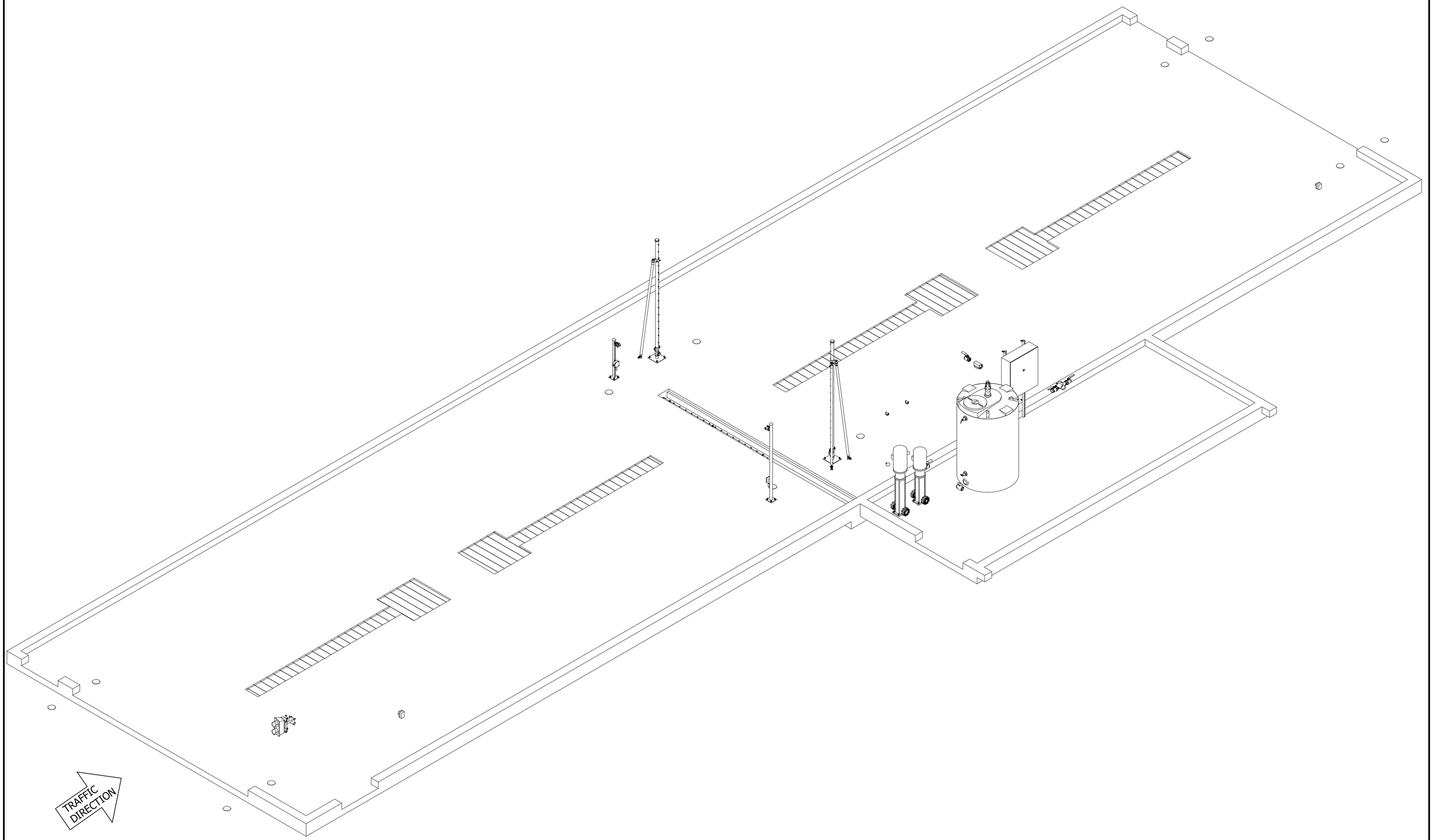
REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
Cr	Cr
CHECK:	APPR:
Sil	Sil
SCALE: NO SCALE	

ODOT Pickaway County, Circleville OH.
FW Wheel and Chassis Wash
Drawing Index

DATE:	4/11/22
PART NO:	#LY22-012-00
WEIGHT	



CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Sil	Sil
SCALE:1/4"=1'	

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
3D View

DATE: 3/17/2022
PART NO: #LY22-012-01
WEIGHT

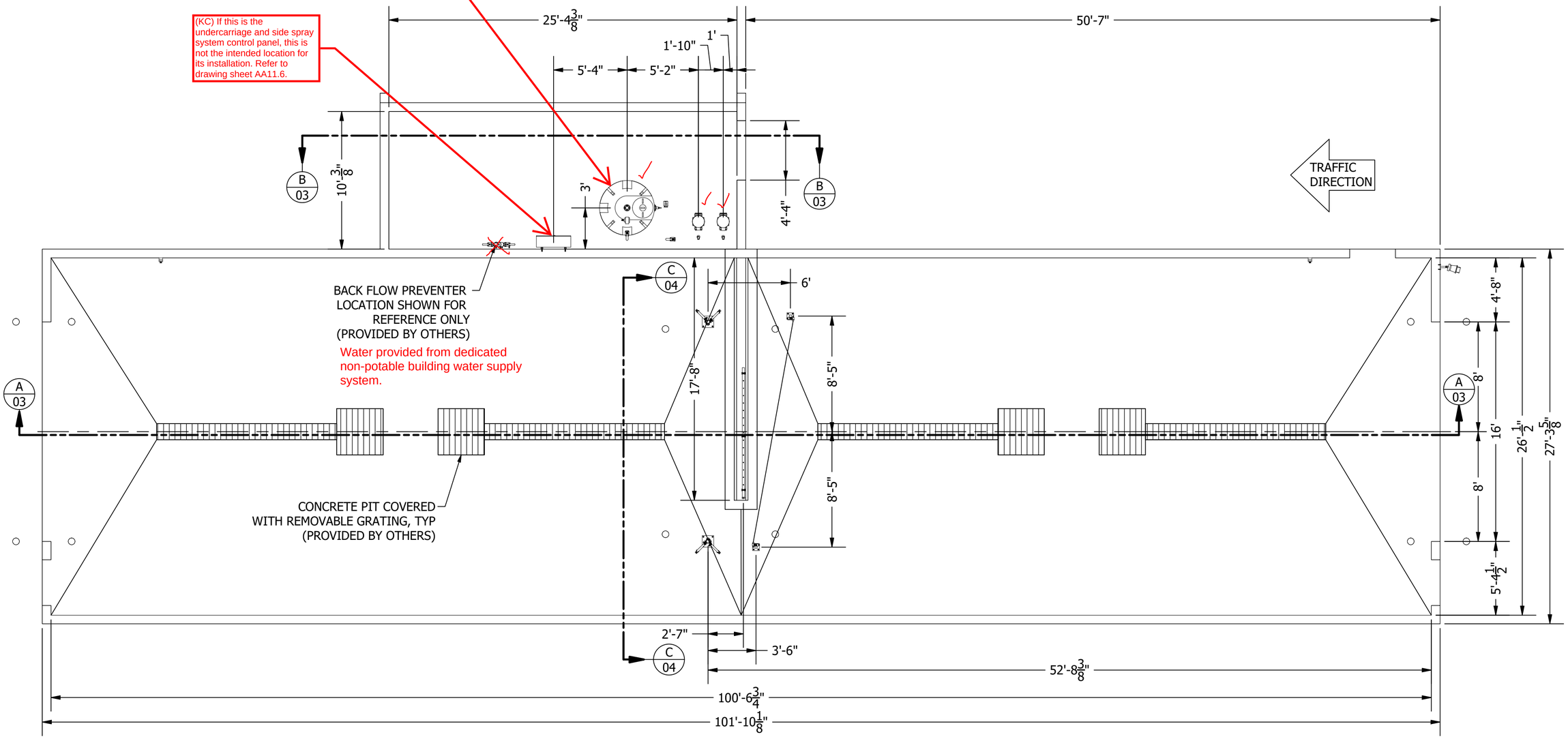
NOTE:
DURING INSTALLATON, MAKE SURE THE TIRE GUIDE AND ARCHES DO NOT INTERFERE WITH THE ENTRANCE OR EXIT OVERHEAD DOORS

NOTE:
THE CONCRETE MUST CURE FOR 27 DAYS BEFORE INSTALLING TIRE GUIDES

(KC) Tire guides are not a part of this Project.

(KC) Contractor shall verify tank dimensions and clearances of other components of Work including, but not limited to, the housekeeping pad.

(KC) If this is the undercarriage and side spray system control panel, this is not the intended location for its installation. Refer to drawing sheet AA11.6.



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REV	DATE	DESCRIPTION	BY	APPR

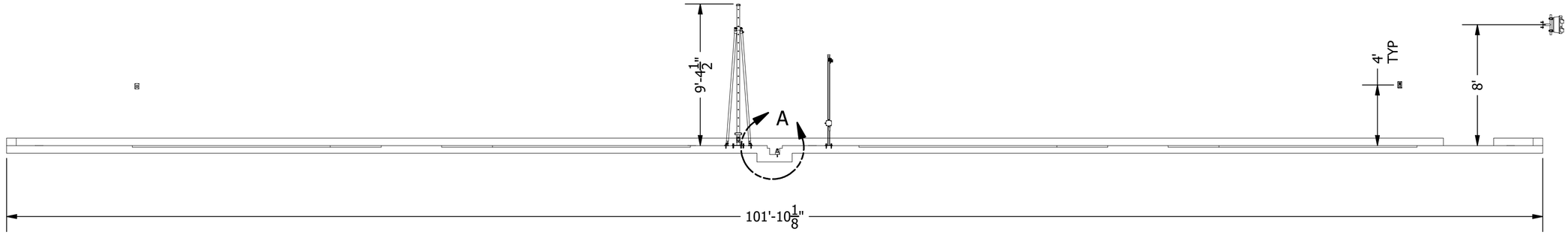
InterClean Equipment

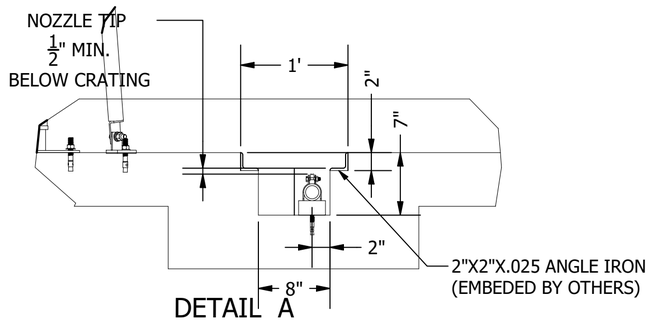
DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Sil	Sil
SCALE:3/16"=1'	

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
Plan View

DATE: 3/17/2022
PART NO: #LY22-012-02
WEIGHT

SECTION A/03
SCALE 3/16"=1'

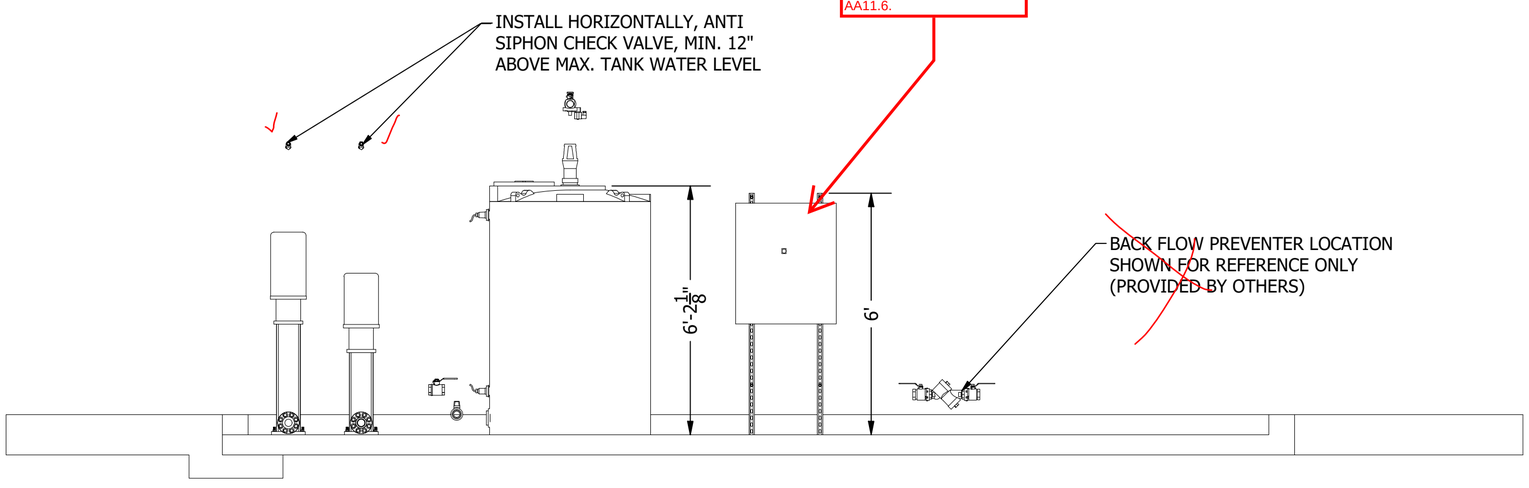




DETAIL A
SCALE 1" = 1'-0"

TRAFFIC DIRECTION

VIEW B-03-B-03
SCALE 3/8"=1'



CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

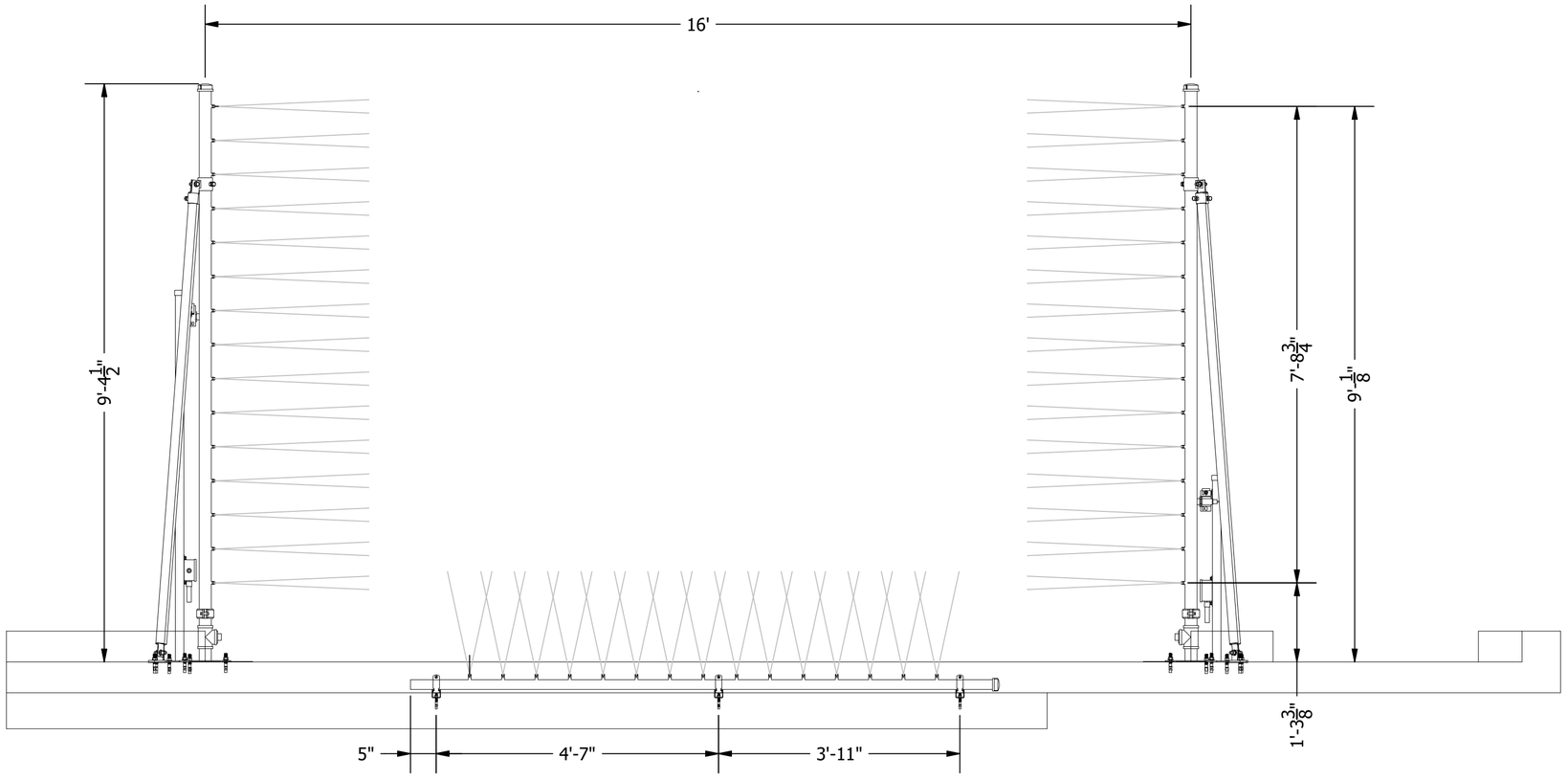
DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Sil	Sil
SCALE:Varies	

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
Side View

DATE: 3/17/2022
PART NO: #LY22-012-03
WEIGHT

SECTION C/04
SCALE 1 / 20

CHASSIS SPRAY/
SIDE SPRAY



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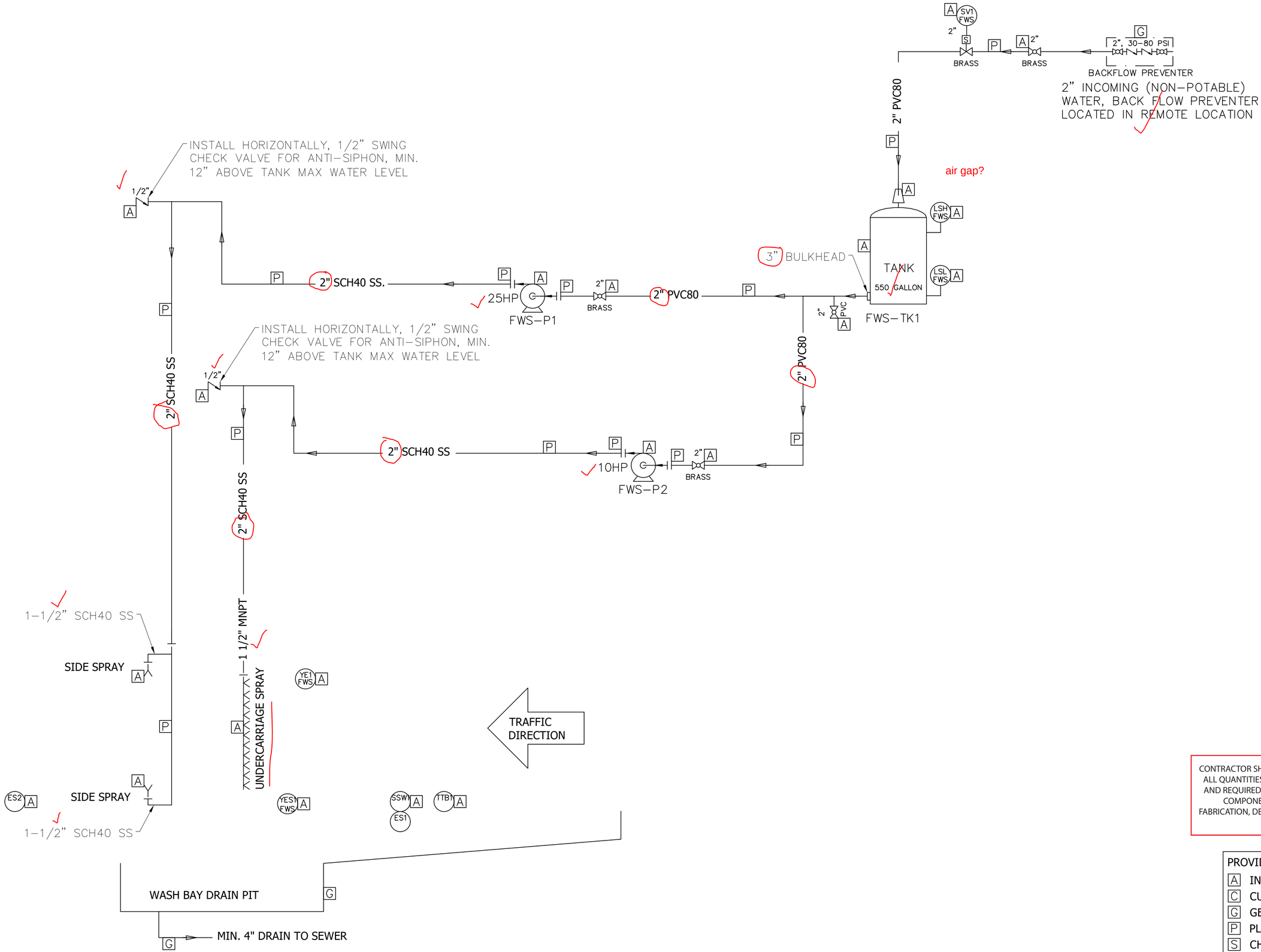
REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Sil	Sil
SCALE:1 / 20	

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
End View

DATE: 3/17/2022
PART NO: #LY22-012-04
WEIGHT



CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

PROVIDED BY:
- A INTERCLEAN
- C CUSTOMER
- G GENERAL CONTRACTOR
- P PLUMBING CONTRACTOR
- S CHEMICAL SUPPLIER

NOTE:
PIPES MUST BE SECURELY FASTENED AT MAX. 3' INTERVALS AND MAX 1' FROM ANY ELBOW.

REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
Cr	Cr
CHECK:	APPR:
Sil	Sil
SCALE: NO SCALE	

ODOT Pickaway County, Circleville OH.
FW Wheel and Chassis Wash
Plumbing Schematic

DATE: 4/11/22
PART NO: #LY22-012-05
WEIGHT

1S PHOTO EYE, SOURCE SENSOR, 24 VDC
1R PHOTO EYE, RECEIVER SENSOR, 24 VDC

10 SOLENOID VALVE, FOR FRESH WATER TANK FILL, 24 VDC
11 HIGH LEVEL FLOAT, FOR FRESH WATER TANK, 24 VDC
12 LOW LEVEL FLOAT, FOR FRESH WATER TANK, 24 VDC
13 SELECTOR SWITCH + EMERGENCY STOP, WASH ON/OFF, 24 VDC
14 EMERGENCY STOP, 24 VDC
15 TRAFFIC LIGHT, GREEN/RED, 24 VDC

20 PUMP, HIGH PRESSURE, FWS-P1, 25 HP, 208 VAC
21 PUMP, UNDER-CHASSIS, FWS-P2, 10 HP, 208 VAC
22 MASTER CONTROL PANEL (MCP), 208 VAC, FLA 109
23 FEEDER & DISCONNECT FOR MASTER CONTROL PANEL (MCP), 208 VAC

PANEL AMP LOADS

MCP - 109A (3 PH)

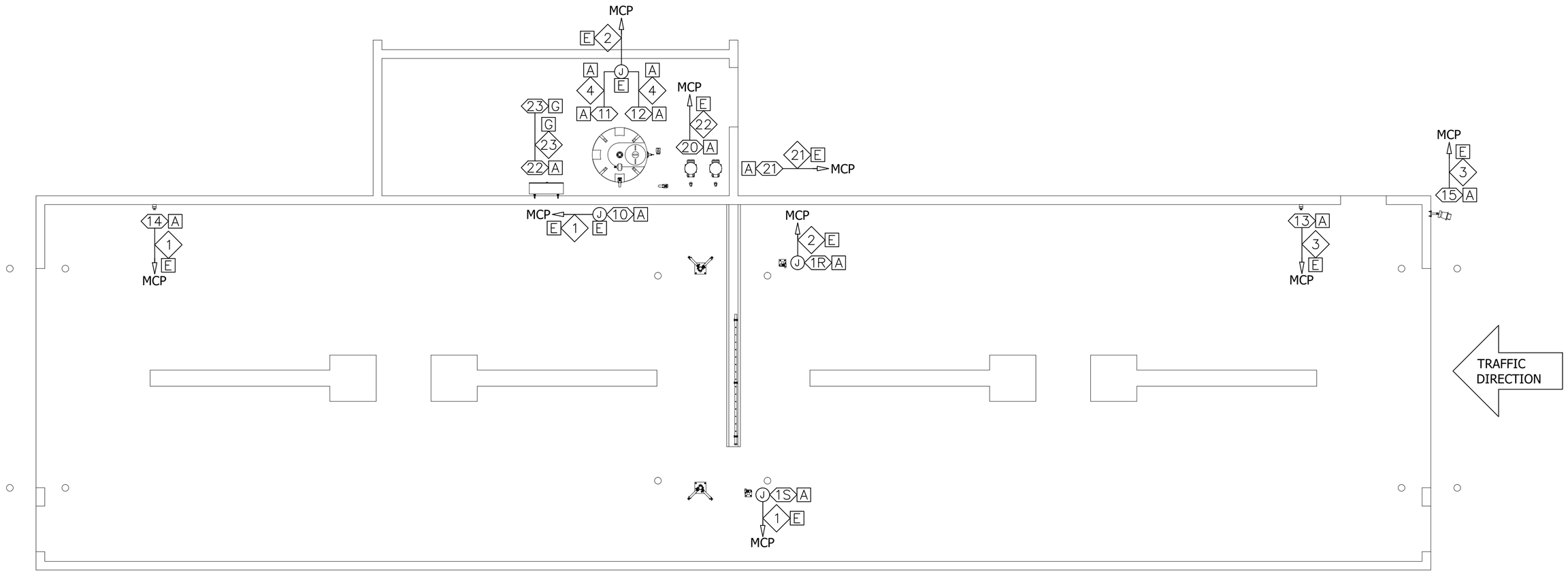
WIRING LEGEND

DC CONTROL WIRES

1 2-#16, 1/2" CONDUIT
2 3-#16, 1/2" CONDUIT
3 4-#16, 1/2" CONDUIT
4 FLEXIBLE CORD, COMES W/SENSOR

AC THREE PHASE WIRES

20 3-#12, 1-#12 GND, 1/2" CONDUIT
21 3-#8, 1-#10 GND, 3/4" CONDUIT
22 3-#3, 1-#8 GND, 1-1/4" CONDUIT
23 3-#1, 1-#6 GND, 1-1/4" CONDUIT



CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

LEGEND:

- DEVICE
- RECEPTACLE
- JUNCTION BOX
- BRANCH CIRCUIT/FEEDER
- MCP — CONNECTED TO MAIN CONTROL PANEL

PROVIDED BY:

- A INTERCLEAN
- C CUSTOMER
- E ELECTRICAL CONTRACTOR
- G GENERAL CONTRACTOR

NOTE:

1. ALL ELECTRICAL CONDUCTORS, CONDUITS, AND CODES LISTED MAY BE SUBJECT TO SUPERSEDING LOCAL CODES AND REGULATIONS.
2. ELECTRICAL CONDUIT AND CONDUCTORS SIZES ARE MINIMUM SIZES REQUIRED BY THE NFPA NATIONAL ELECTRICAL CODE BASED ON CONDUCTORS WITH A TEMPERATURE RATING OF 75°C (167°F) IN AN AMBIENT TEMP OF 30°C (86°F).
3. ALL CONDUCTORS SHALL BE THHN OR EQUIVALENT.
4. ALL ELECTRICAL METHODS AND MATERIALS SHALL BE SUITABLE FOR USE IN WET LOCATION PER APPLICABLE NEC CODES.
5. CONDUITS MAY BE COMBINED TO MINIMIZE RUNS, BUT DO NOT COMBINE AC AND DC CIRCUITS.
6. BRANCH CIRCUITS ARE SIZED FOR 500' MAXIMUM RUNS/DO NOT ACCOUNT FOR ASSOCIATED VOLTAGE DROPS ON RUNS LONGER THAN 500'.
7. MINIMUM SIZE FEEDER AMPACITY PER NEC 215.2(A).

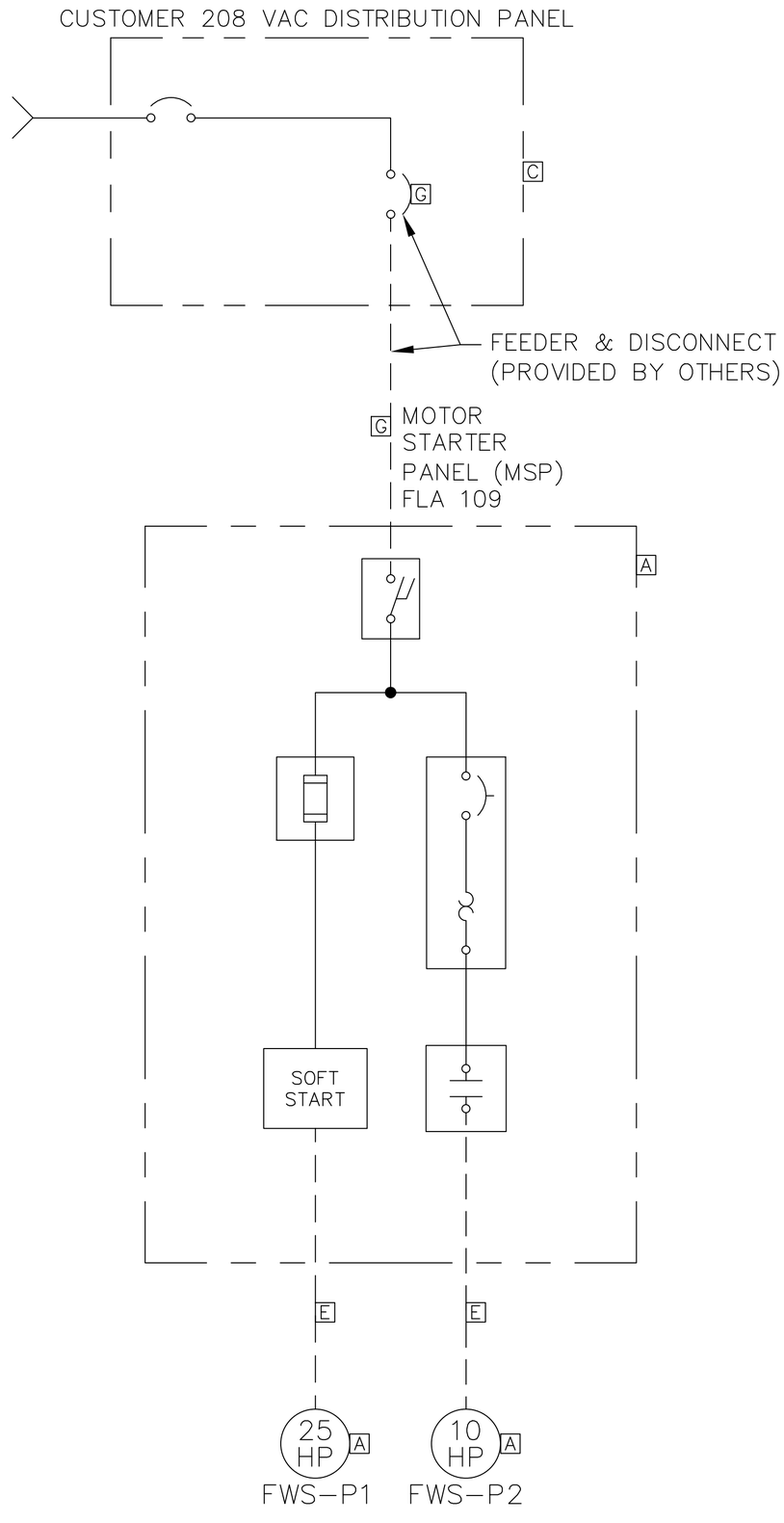
REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
Cr	Cr
CHECK:	APPR:
JR	JR
SCALE: NO SCALE	

ODOT Pickaway County, Circleville OH.
FW Wheel and Chassis Wash
Electrical

DATE: 4/11/22
PART NO: #LY22-012-06A
WEIGHT



PROVIDED BY:

- A INTERCLEAN
- C CUSTOMER
- E ELECTRICAL CONTRACTOR
- G GENERAL CONTRACTOR

LEGEND:

- DISCONNECT
- CIRCUIT BREAKER
- FUSE/FUSE BLOCK
- OVERLOAD
- LINE REACTOR
- CONTACTOR
- SOFT START
- VFD
- XX HP — MOTOR
- FIELD WIRING

CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
Cr	Cr
CHECK:	APPR:
JR	JR
SCALE: NO SCALE	

ODOT Pickaway County, Circleville OH.
FW Wheel and Chassis Wash
Single Line Diagram

DATE:	4/11/22
PART NO:	#LY22-012-06C
WEIGHT	

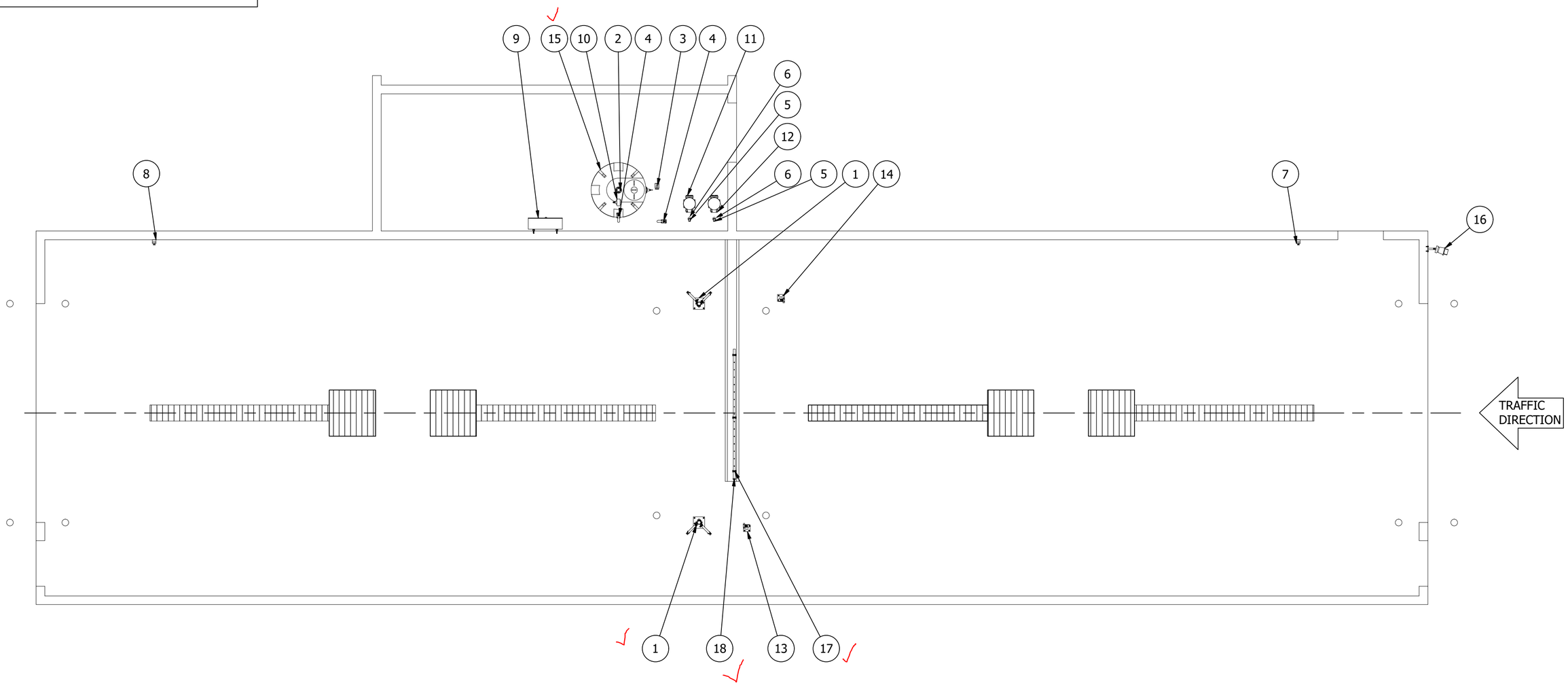
why? system is protected with backflow preventer

PARTS LIST				
ITEM	QTY	PART NUMBER	PRODUCT NAME	FILE NAME
1	2	#DY18-264_1	Side Spray Ass'y, Floor Mnt, 304SS, H=9'-4", w/15x0507 Nozzles	AR3228-05.iam
2	1	CO161e-00	Fixed Air Gap, Inlet 2", Outlet Threaded 3", Cast Iron	CO161e-00.ipt
3	1	CO2111-2	Valve, Ball, 2", Compact, Socket, EPDM O-Ring Seals	CO2111-2.ipt
4	2	CO2211-2	Valve, Ball, 2", NPT, Brass	CO2211-2.ipt
5	2	CO2231-050	Valve, Swing Check, 1/2" F.NPT, Bronze	CO2231-050.ipt
6	2	CO7414-00	Gauge, Pressure, 0-600 psi , 1 / 4" Inlet, Birch or Equivalent	CO7414-00.ipt
7	1	#DY20-1180_1	Remote Control Station Ass'y T.P., On/Off Switch w/E. Stop, 24 VDC	COc4712-00TP.iam
8	1	#DY19-997_1	Remote Control Station, Emergency Stop, Gray, Plastic, Shop Ass'y	COc4712-32.iam
9	1	#DY20-1179_1	Chassis Control Panel, 208V, CCP2082510, NEMA 4, Field Ass'y	EP1211153-00.iam
10	1	FT2115-32VXR	Valve, Solenoid, Brass, 2" NPT, 24VDC, Slow Close, SMC VXR2390-20N-5DZ	FT2115-32VXR.ipt
11	1	#DY18-285_1	Pump Assembly, eSV, Floor Mount, 10HP, 208/230-460v, 60Hz, tefc	PU2141243212-01.iam
12	1	#DY18-282_1	Pump Assembly, eSV, Floor Mount, 25HP, 208/230-460v, 60Hz, tefc	PU2141256212-01.iam
13	1	#DY08-433_1	Photo Eye, Field Ass'y, Receiver, H=3', SS 304, Floor Mount	SEN1211211-00.iam
14	1	#DY08-342_1	Photo Eye, Field Ass'y, Sender, H=6', SS 304, Floor Mount	SEN1212212-00.iam
15	1	#DY03-230_1	Tank Assembly, 550 Gal., w/2 Float Level Switches	TA2119-00.iam
16	1	#DY17-509_1	Traffic Light, Wall Mount, SS304, 2 LED Lights (Red/Green), 24V	TC33121121-00.iam
17	3	#DY15-780_1	Pipe Clamp Ass'y, SS 304, 1-1/2" Pipe, Floor Mount	UC2421-00.iam
18	1	#DY18-286_1	Under Chassis Spray Bar, SS304, 1 1/2" w/15x2510 Noz	UC11231-14.iam

PANEL(S) NAME:
-CCP2082510

CONTRACTOR SHALL VERIFY AND COORDINATE ALL QUANTITIES, DIMENSIONS, CLEARANCES, AND REQUIRED ITEMS FOR INSTALLATION OF COMPONENTS OF WORK PRIOR TO FABRICATION, DELIVERY, AND INSTALLATION OF THAT WORK.

NOTE:
ITEMS SPECIFIED AND DETAILS INDICATED MAY BE SUBJECT TO SUPERSEDING PER LOCAL CODES AND REGULATIONS



REV	DATE	DESCRIPTION	BY	APPR

InterClean Equipment

DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Sil	Sil

SCALE:1/4"=1'

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
Equipment Layout

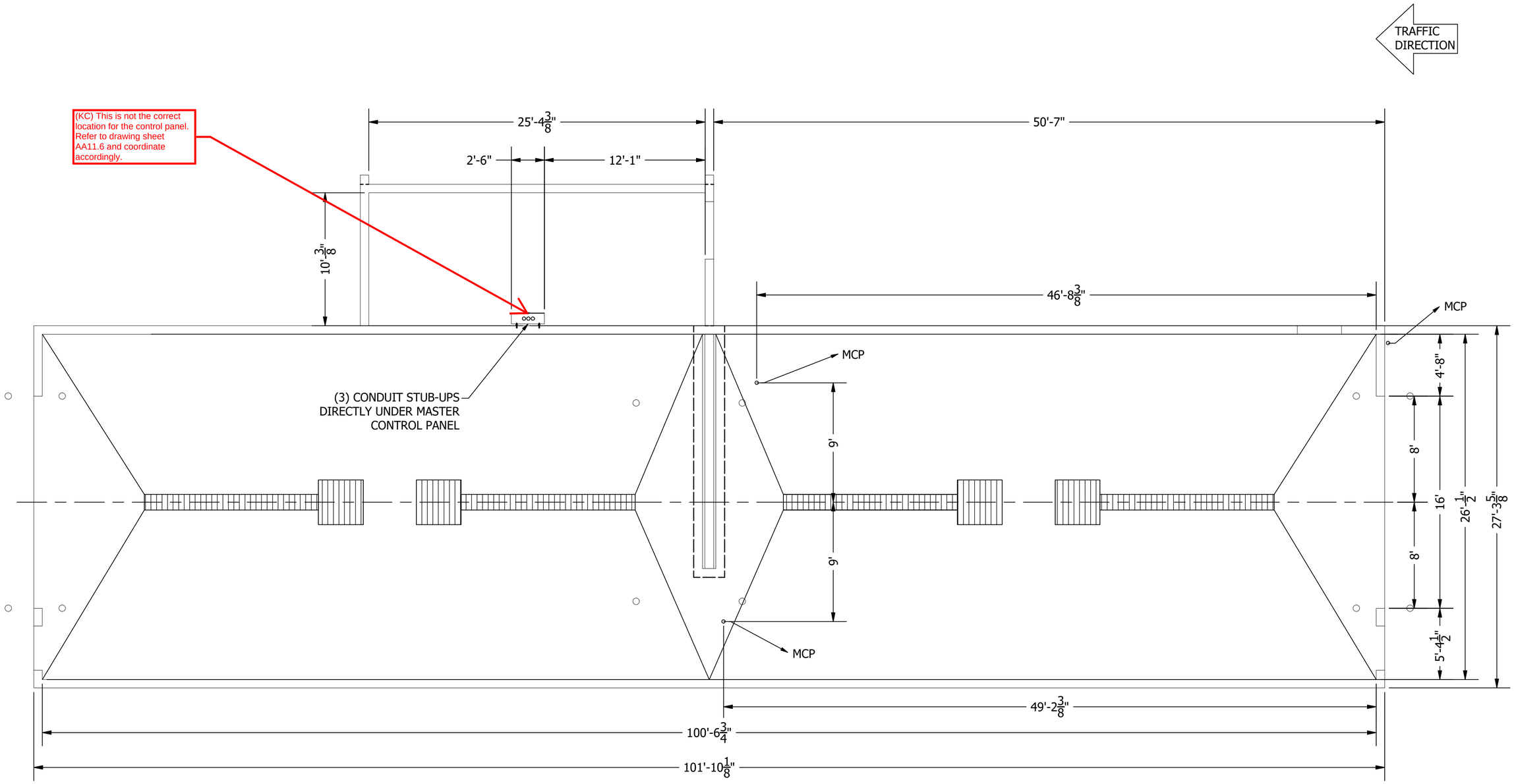
DATE: 3/17/2022
PART NO: #LY22-012-07
WEIGHT

NOTE:
ALL UNDERGROUND PIPE, UNDERGROUND CONDUITS AND SLEEVES ARE PROVIDED BY GENERAL CONTRACTOR

○ CONDUIT STUB-UP, 6" ABOVE FLOOR

– — — – 1/2" UNDERGROUND CONDUIT UNLESS OTHERWISE NOTED

MCP TO MASTER CONTROL PANEL



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REV	DATE	DESCRIPTION	BY	APPR

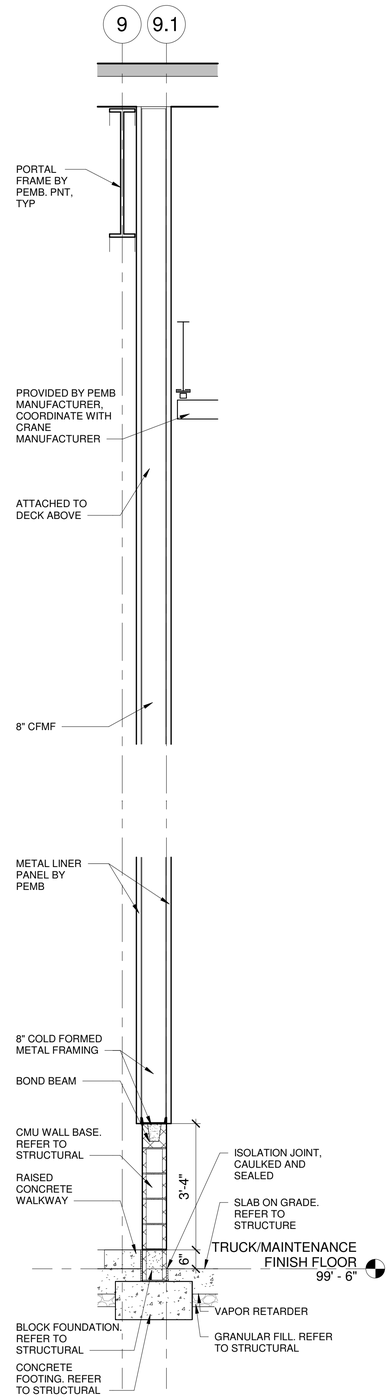
InterClean Equipment

DESIGN:	DRAWN:
CR	CR
CHECK:	APPR:
Jr	Jr
SCALE:3/16"=1'	

ODOT, Pickaway, OH
Fresh Water Chassis Wash System
Underground Conduits

DATE: 3/17/2022
PART NO: #LY22-012-08
WEIGHT

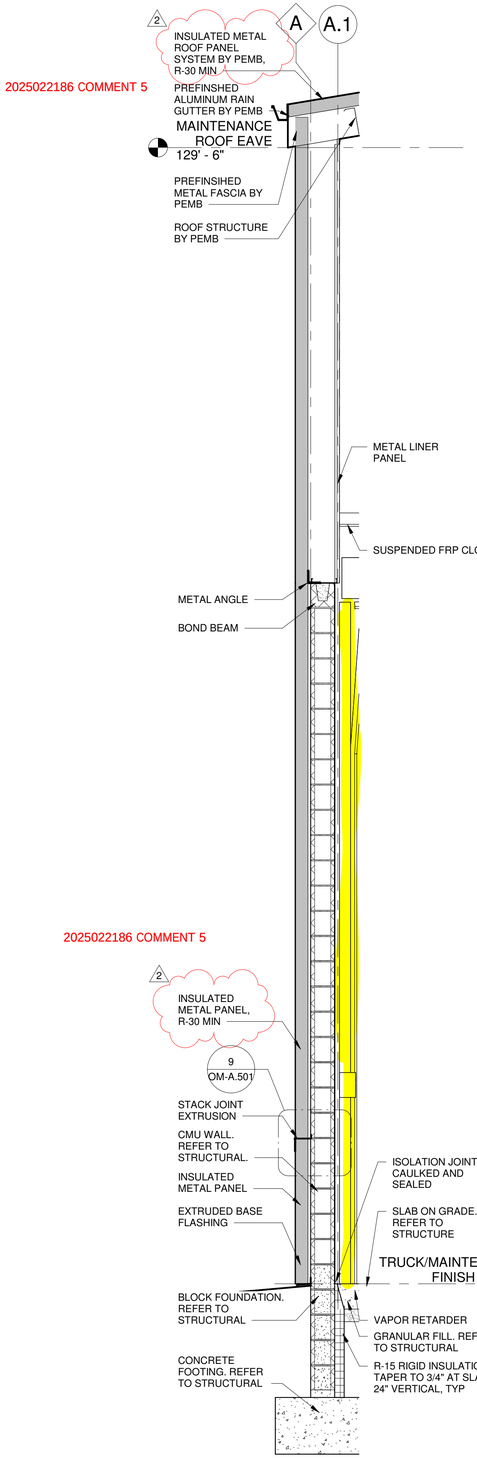
ITEM# 26



WALL SECTION - TRUCK STORAGE/MAINTENANCE SEPARATION

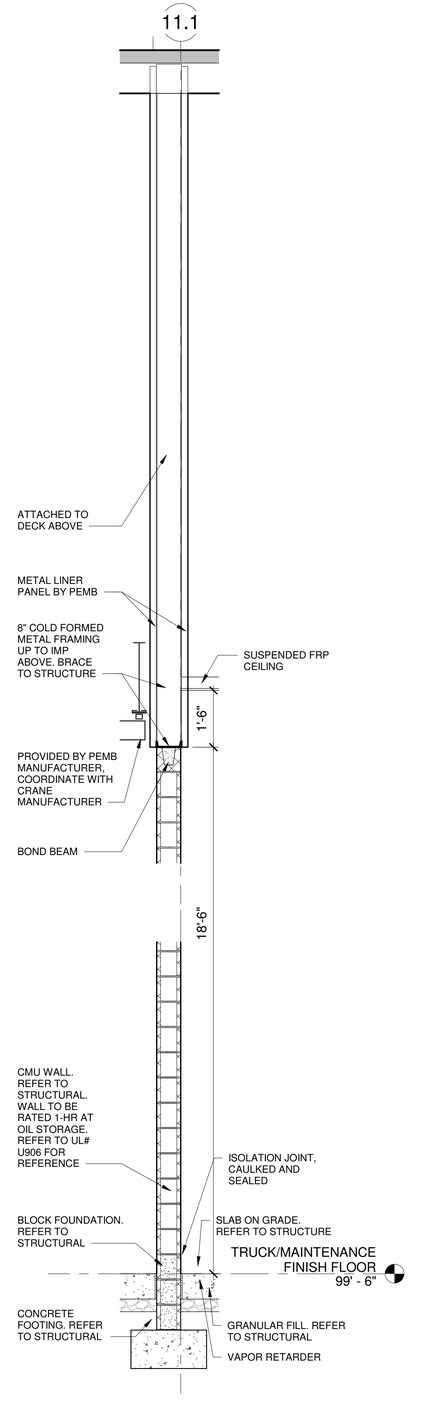
3 OM-A.312 1/2" = 1'-0"

2025022186 COMMENT 5



WALL SECTION - WASH BAY TYPICAL

2 OM-A.312 1/2" = 1'-0"



WALL SECTION - WASH BAY/MAINTENANCE SEPARATION

1 OM-A.312 1/2" = 1'-0"

0 4' 8' 16'
SCALE: 1/8"=1'-0"

NO.	DATE	DESCRIPTION
1	09/19/2025	ISSUE FOR PERMIT
2	10/17/2025	ADDENDUM A

Preble County Full Service Maintenance Facility

234 Quaker Trace Rd.
West Alexandria, Ohio 45381

BURGESS & NIPLE / KZF DESIGN JV
Cincinnati, OH

STATE OF OHIO
CHAD R. KOHLER
1215550
REGISTERED ARCHITECT

CHAD KOHLER #1215550 EXP 12/31/2025

DESIGNED	COMM. NO.
SCHMITZ	8306.00
DRAWN	DATE
LEWIS	09/19/2025
CHECKED	PROJ. MGR.
WILLIAMS	KOHLER

WALL SECTIONS - BASE BID

DRAWING NUMBER ISSUE
OM-A.312 2

ITEM# 31

November 18, 2025

Burgess & Niple
Chad R. Kohler
525 Vine Street
Cincinnati, Ohio, 45202

RE: ODOT - Preble County Full Service Maintenance Facility — Metal Building System Request for Approval

To Whom It May Concern:

The purpose of this letter is to respectfully request your consideration of Chief Buildings as an approved supplier for the metal building system for the ODOT - Preble County Full Service Maintenance Facility project. Chief Buildings, a division of Chief Industries based in Grand Island, Nebraska, has been a manufacturer of custom-engineered building systems for over 50 years. We are an active member of the MBMA and are IAS-MB Accredited. We can meet or exceed the criteria set forth in Specification

Section 13 34 19, 07 42 13.16, 07 42 13.19.

Exceptions: None

Please refer to the attached documentation for reference, and kindly visit us at www.chiefbuildings.com for additional information.

Thank you for your consideration.

Respectfully,

Larry Heckman
District Manager
larry.heckman@chiefind.com
614.572.6233

INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

CHIEF BUILDINGS, A DIVISION OF CHIEF INDUSTRIES, INC.

2391 SOUTH NORTH ROAD
GRAND ISLAND, NEBRASKA 68803, U.S.A.

Inspection Program for Manufacturer of Metal Building Systems MB-123

has met the requirements of AC472, *IAS Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems*, Part A-*Fabrication of Structural Weldments and Cold-formed Products Requiring Welding*, Part B-*Fabrication of Cold-formed Products Not Requiring Welding*, Part C-*Design of Metal Building Systems*, and the in-plant inspection program is in compliance with Section 1704.2.5.1 of the 2015, 2018, 2021 and 2024 *International Building Code*®, Section 1704.2.5.2 of the 2012 *International Building Code*®, and Section 1704.2.2 of earlier code editions. Periodic plant inspections are conducted by Benchmark Holdings L.L.C. (AA-660) to monitor compliance with the requirements of AC472.

In addition, this organization's in-plant nondestructive testing is in compliance with Section 1705.2.1 of the 2015, 2018, 2021 and 2024 *International Building Code*®. The organization has demonstrated in-house capabilities for nondestructive testing of structural steel elements (following the requirements of performing ultrasonic testing) in accordance with Chapter N of the 2010 and 2022 Edition of American Institute of Steel Construction's Specification for Structural Steel Buildings (AISC 360).

IAS ACCREDITED

This certificate is valid up to December 1, 2025

International Accreditation Service
Issued under the authority of IAS management

Visit www.iasonline.org for current accreditation information.

CERTIFICATE OF ACCREDITATION

This is to attest that

CHIEF BUILDINGS - RENSSELAER INDIANA
A DIVISION OF CHIEF INDUSTRIES, INC.

1225 EAST MAPLE STREET
RENSSELAER, INDIANA 47978, U.S.A.

Inspection Program for Manufacturer of Metal Building Systems MB-124

has met the requirements of AC472, *IAS Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems*, Part A-*Fabrication of Structural Weldments and Cold-formed Products Requiring Welding*, and the in-plant inspection program is in compliance with Section 1704.2.5.1 of the 2015, 2018, 2021 and 2024 *International Building Code*®, Section 1704.2.5.2 of the 2012 *International Building Code*®, and Section 1704.2.2 of earlier code editions. Periodic plant inspections are conducted by Benchmark Holdings L.L.C. (AA-660) to monitor compliance with the requirements of AC472.

In addition, this organization's in-plant nondestructive testing is in compliance with Section 1705.2.1 of the 2015, 2018, 2021 and 2024 *International Building Code*®. The organization has demonstrated in-house capabilities for nondestructive testing of structural steel elements (following the requirements of performing ultrasonic testing) in accordance with Chapter N of the 2010 and 2022 Edition of American Institute of Steel Construction's Specification for Structural Steel Buildings (AISC 360).

This certificate is valid up to December 1, 2025

International Accreditation Service
Issued under the authority of IAS management

Visit www.iasonline.org for current accreditation information.

INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

CHIEF BUILDINGS-LANCASTER

992 QUALITY DRIVE
LANCASTER, SOUTH CAROLINA 29720

Inspection Program for Manufacturer of Metal Building Systems MB-296

has met the requirements of AC472, IAS *Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems*, Part A-*Fabrication of Structural Weldments and Cold-formed Products Requiring Welding*, Part B-*Fabrication of Cold-formed Products Not Requiring Welding*, and the in-plant inspection program is in compliance with Section 1704.2.5.1 of the 2015, 2018, 2021 and 2024 *International Building Code*®, Section 1704.2.5.2 of the 2012 *International Building Code*®, and Section 1704.2.2 of earlier code editions. Periodic plant inspections are conducted by Benchmark (AA-660) to monitor compliance with the requirements of AC472.

This certificate is valid up to December 1, 2025

IAS ACCREDITED

International Accreditation Service
Issued under the authority of IAS management

Visit www.iasonline.org for current accreditation information.

METAL BUILDING MANUFACTURERS ASSOCIATION®
Research | Leadership | Education

1300 SUMNER AVE., CLEVELAND, OHIO 44115-2851 • (216) 241-7333
mbma@mbma.com • www.mbma.com

March 14, 2025

To Whom It May Concern:

SUBJECT: Membership

This letter will serve to advise that Chief Buildings has been a member in good standing of the Metal Building Manufacturers Association since May of 1973.

We trust this information will be of assistance.

Sincerely,

Tony Bouquot
General Manager

TPB:jme

CHIEF®
BUILDINGS

ELECTROCOATING

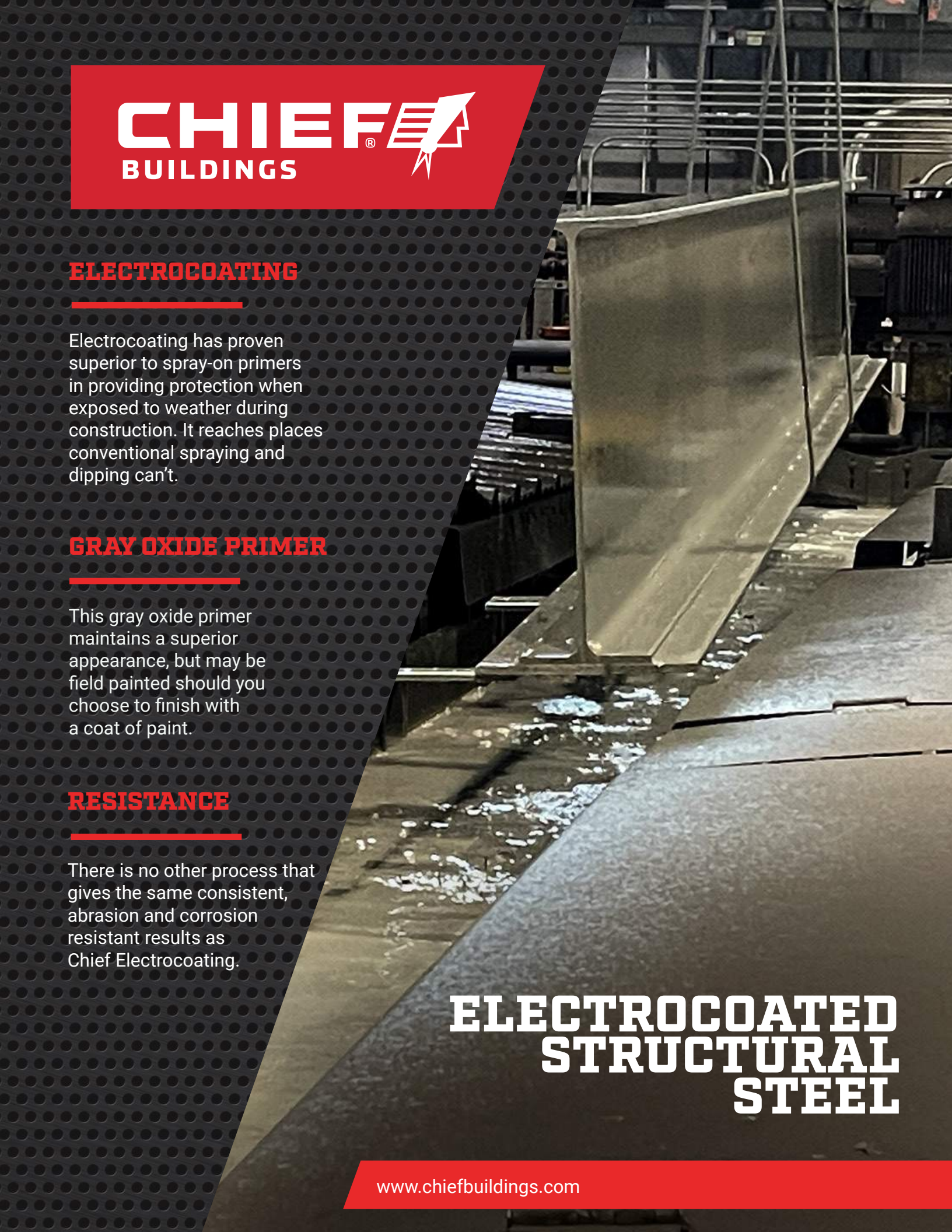
Electrocoating has proven superior to spray-on primers in providing protection when exposed to weather during construction. It reaches places conventional spraying and dipping can't.

GRAY OXIDE PRIMER

This gray oxide primer maintains a superior appearance, but may be field painted should you choose to finish with a coat of paint.

RESISTANCE

There is no other process that gives the same consistent, abrasion and corrosion resistant results as Chief Electrocoating.



ELECTROCOATED STRUCTURAL STEEL

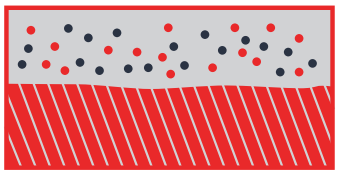
www.chiefbuildings.com

THE RESULTS

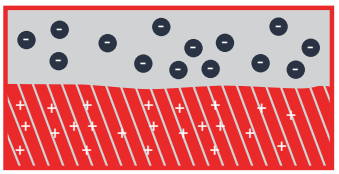
During the plating process, taking one to two minutes, electro-chemical reactions take place on the surface of the structural parts, changing the salts in the paint back to their original acid state. The voltages involved (200-300 VDC) act as an electronic pressure to add density to the resin. The result is a paint film that is not only water insoluble, but virtually 100% solid.

After coating, the parts are baked in an oven, converting the paint films to an enamel composition that is hard and abrasive resistant. With this process, superior corrosion resistance is achieved.

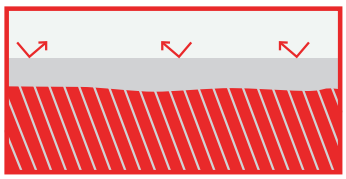
THE PROCESS



Chief Electrocoating, being a liquid submersion process, penetrates virtually everywhere, most notably the places that spray primer can't reach.



Introducing electricity into the process creates a current, forcing the negatively charged primer to plate the positively charged steel member.



Oven baking the plated steel results in a smooth, hard, abrasion and corrosion resistant enamel film.

CURED FILM PROPERTIES

COLOR: Gray	REVERSE/DIRECT IMPACT: 80 In/lbs
GLOSS: 45-55 @ 60°	1/8 CONICAL MANDREL: Pass
FILM Thickness: 0.8-1.2 Mils	18 HR DI WATER SOAK: Pass
MEK Rubs: 100+	4 HR HYDROCARBON SOAK: PassV
PENCIL HARDNESS: 2H	100 HR SALT SPRAY: 1/4 inch Creep
MAR RESISTANCE: Excellent	HUMIDITY RESISTANCE: 1,000+ hrs
CROSS HATCH ADHESION: 100%	

CHIEF BUILDINGS

CHIEF BUILDINGS
P.O. Box 2078
1821 S. North Road
Grand Island, NE 68802-2078
800-845-1767

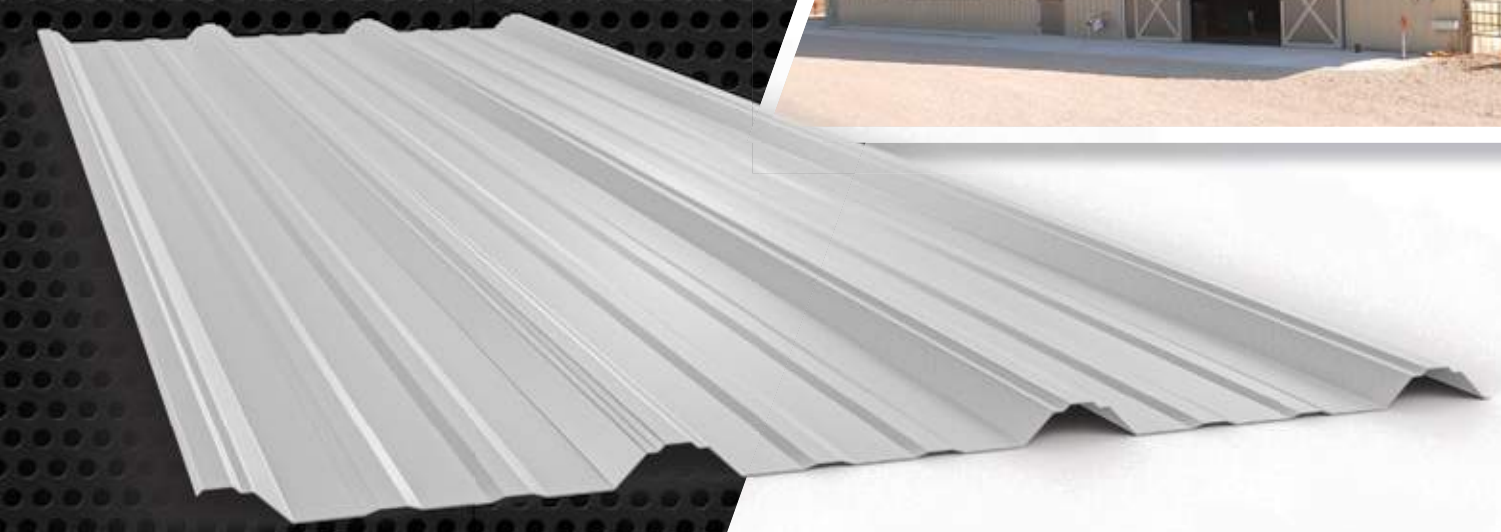
chiefbuildings.com

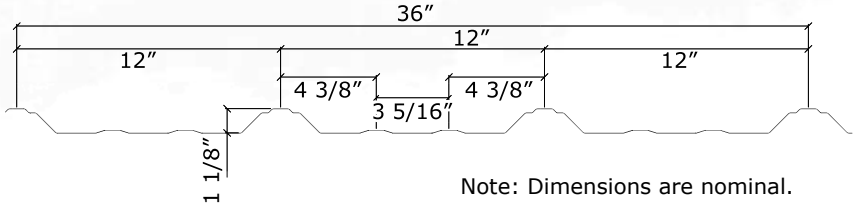
CHIEF®
BUILDINGS

CS PANELS

Chief® Standard (CS) panels combine premium finishes with versatile design, making them an excellent choice for steel wall or roof applications. Their durability and strength suit a wide range of uses, including interior liners, fascias, canopies, and soffits.

At 36 inches wide, **CS panels** allow for quick and efficient installation, helping to streamline your project timeline. Available in a variety of standard colors, they offer flexibility to match your aesthetic preferences while maintaining quality and cost-efficiency.





Note: Dimensions are nominal.

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CS PANELS

Specifications and Color Options

CHIEF® BUILDINGS

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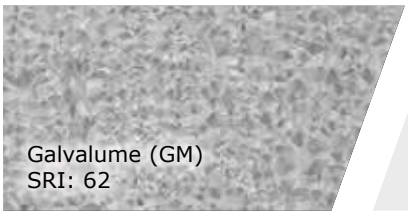
Grand Island, NE 68802-2078


Galvalume (GM)
SRI: 62

White Polyester (WP)
29 ga. interior liner
panel ONLY


Emerald Green (EG)
PVDF SRI: 30

Polar White (PW)
PVDF SRI: 81


Royale Blue (RB)
PVDF SRI: 29

Parchment (PA)
PVDF SRI: 73


Cherokee (CK)
FEVE SRI: 41

Ash Gray (AG)
PVDF SRI: 53


Carbon (CB)
FEVE SRI: 28

Fieldstone (FS)
PVDF SRI: 48


Charcoal Gray (CG)
PVDF SRI: 35

Sierra Madre (SM)
PVDF SRI: 63


Antique Bronze (AQ)
PVDF SRI: 33

35 YEAR LIMITED FINISH WARRANTY

PVDF - POLYVINYLIDINE FLUORIDE

Chief's PVDF finish is made with polyvinylidene fluoride resin, where a minimum of 70% of the resin is PVDF. The result is a proven ability to resist ultraviolet radiation in sunlight for maximum protection against general weathering effects, chalking, and fading.

35 YEAR LIMITED FINISH WARRANTY

FEVE - FLUOROETHYLENE VINYL ETHER

Chief's FEVE finish is a fluoropolymer resin-based coating similar to PVDF but formulated for bright, fade-prone colors.

25 YEAR LIMITED FINISH WARRANTY

GM - ACRYLIC COATED GALVALUME®

Chief's exterior roof, wall and trim material is available in an industry standard ASTM A792 Acrylic Coated Galvalume® finish. Galvalume® is a unique coating of 55% aluminum and 45% zinc that resists corrosion. The Galvalume® sheet is coated with a thin, clear acrylic coating applied to both sides.

WP - WHITE POLYESTER

Chief's White Polyester is an economical finish intended for interior applications only and is a non-warranty product. Available in 29 ga. only.

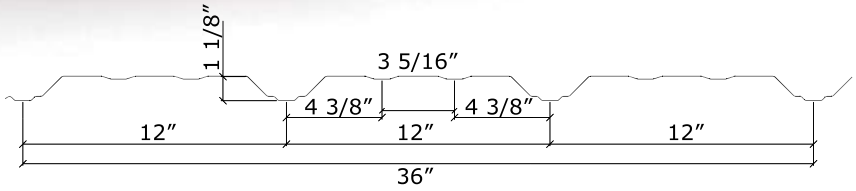
Since all color applications are affected by age, lighting conditions, heat, digital screen settings, and mechanical coating or printing processes, the color represented on this page may vary in color or finish from the actual product. DO NOT MAKE YOUR FINAL COLOR DECISION BASED ON PRINTED MATERIALS ALONE. SELECTIONS ARE BEST MADE FROM ACTUAL PANEL SAMPLES.

CHIEF®
BUILDINGS

AP PANELS

Chief® **Architectural Panels (AP)** combine premium finishes with versatile design, making them an excellent choice for steel wall applications. Their durability and strength suit a wide range of uses, including interior liners, fascias, canopies, and soffits.

At 36 inches wide, **AP panels** allow for quick and efficient installation, helping to streamline your project timeline. Available in a variety of standard colors, they offer flexibility to match your aesthetic preferences while maintaining quality and cost-efficiency.



Note: Dimensions are nominal.

800-845-1767 | chiefbuildings.com

AP PANELS

Specifications and Color Options

CHIEF® BUILDINGS

1821 S. North Road | PO Box 2078
Grand Island, NE 68802-2078

Galvalume (GM)
SRI: 62

White Polyester (WP)
29 ga. interior liner
panel ONLY

Emerald Green (EG)
PVDF SRI: 30

Polar White (PW)
PVDF SRI: 81

Royale Blue (RB)
PVDF SRI: 29

Parchment (PA)
PVDF SRI: 73

Cherokee (CK)
FEVE SRI: 41

Ash Gray (AG)
PVDF SRI: 53

Carbon (CB)
FEVE SRI: 28

Fieldstone (FS)
PVDF SRI: 48

Charcoal Gray (CG)
PVDF SRI: 35

Sierra Madre (SM)
PVDF SRI: 63

Antique Bronze (AQ)
PVDF SRI: 33

35 YEAR LIMITED FINISH WARRANTY

PVDF - POLYVINYLIDINE FLUORIDE

Chief's PVDF finish is made with polyvinylidene fluoride resin, where a minimum of 70% of the resin is PVDF. The result is a proven ability to resist ultraviolet radiation in sunlight for maximum protection against general weathering effects, chalking, and fading.

35 YEAR LIMITED FINISH WARRANTY

FEVE - FLUOROETHYLENE VINYL ETHER

Chief's FEVE finish is a fluoropolymer resin-based coating similar to PVDF but formulated for bright, fade-prone colors.

25 YEAR LIMITED FINISH WARRANTY

GM - ACRYLIC COATED GALVALUME®

Chief's exterior roof, wall and trim material is available in an industry standard ASTM A792 Acrylic Coated Galvalume® finish. Galvalume® is a unique coating of 55% aluminum and 45% zinc that resists corrosion. The Galvalume® sheet is coated with a thin, clear acrylic coating applied to both sides.

WP - WHITE POLYESTER

Chief's White Polyester is an economical finish intended for interior applications only and is a non-warranty product. Available in 29 ga. only.

Since all color applications are affected by age, lighting conditions, heat, digital screen settings, and mechanical coating or printing processes, the color represented on this page may vary in color or finish from the actual product. DO NOT MAKE YOUR FINAL COLOR DECISION BASED ON PRINTED MATERIALS ALONE. SELECTIONS ARE BEST MADE FROM ACTUAL PANEL SAMPLES.

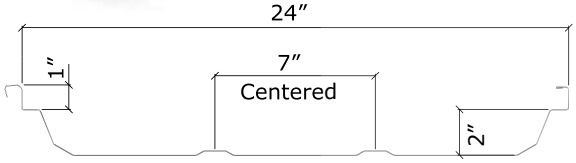
CHIEF®
BUILDINGS

MSC PANELS

The Chief® **Mechanically Seamed Construction (MSC)** roof panel is engineered for exceptional performance and reliability. It offers 24-inch panel coverage.

MSC panels deliver maximum durability with higher uplift values, a UL90 wind resistance rating, and Factory Mutual compliant assemblies. These field-seamed panels provide superior weather protection, offering outstanding long-term value and resilience.

Chief roof panels combine ease of installation with the performance standards Builders trust.



800-845-1767 | chiefbuildings.com

Note: Dimensions are nominal.

MSC PANELS

Specifications and Color Options

CHIEF® BUILDINGS

1821 S. North Road | PO Box 2078
Grand Island, NE 68802-2078

Emerald Green (EG)
PVDF SRI: 30

Galvalume (GM)
SRI: 62

Royale Blue (RB)
PVDF SRI: 29

Polar White (PW)
PVDF SRI: 81

Cherokee (CK)
FEVE SRI: 41

Parchment (PA)
PVDF SRI: 73

Carbon (CB)
FEVE SRI: 28

Ash Gray (AG)
PVDF SRI: 53

Charcoal Gray (CG)
PVDF SRI: 35

Fieldstone (FS)
PVDF SRI: 48

Antique Bronze (AQ)
PVDF SRI: 33

Sierra Madre (SM)
PVDF SRI: 63

35 YEAR LIMITED FINISH WARRANTY

PVDF - POLYVINYLIDINE FLUORIDE

Chief's PVDF finish is made with polyvinylidene fluoride resin, where a minimum of 70% of the resin is PVDF. The result is a proven ability to resist ultraviolet radiation in sunlight for maximum protection against general weathering effects, chalking, and fading.

35 YEAR LIMITED FINISH WARRANTY

FEVE - FLUOROETHYLENE VINYL ETHER

Chief's FEVE finish is a fluoropolymer resin-based coating similar to PVDF but formulated for bright, fade-prone colors.

25 YEAR LIMITED FINISH WARRANTY

GM - ACRYLIC COATED GALVALUME®

Chief's exterior roof, wall and trim material is available in an industry standard ASTM A792 Acrylic Coated Galvalume® finish. Galvalume® is a unique coating of 55% aluminum and 45% zinc that resists corrosion. The Galvalume® sheet is coated with a thin, clear acrylic coating applied to both sides.

Since all color applications are affected by age, lighting conditions, heat, digital screen settings, and mechanical coating or printing processes, the color represented on this page may vary in color or finish from the actual product. DO NOT MAKE YOUR FINAL COLOR DECISION BASED ON PRINTED MATERIALS ALONE. SELECTIONS ARE BEST MADE FROM ACTUAL PANEL SAMPLES.

CHIEF BUILDINGS

STANDARD LIMITED WARRANTY

Form C-223/Dec-09

1. WHAT IS COVERED BY THIS WARRANTY

Chief Industries, Inc., ("Chief") expressly warrants to you, the original purchaser of components manufactured by Chief, that on the date of delivery to you the components were free from defects in the composition of material and workmanship and were in accordance with industry standards for such components.

2. DURATION OF THIS WARRANTY AND NOTICE REQUIREMENTS

This standard limited warranty is applicable to defects in components manufactured by Chief under normal use and service conditions which are not excluded in paragraph 6 of this standard limited warranty, and which defects are discovered within a period of five (5) years from the invoice date indicated at the bottom of this limited warranty, provided that the components were properly erected and defects have been reported in writing to Chief within thirty (30) days of discovery. In any event, Chief's obligations under this limited warranty shall expire sixty-one (61) months from the invoice date. For warranty service, contact Chief Industries, Inc., Buildings Division, Customer Service Department, P.O. Box 2078, Grand Island, NE 68802.

3. CHIEF'S OBLIGATIONS UNDER THIS WARRANTY

By purchasing the Chief components, you and Chief Industries, Inc., expressly agree to an allocation of the risks of component failure between you and Chief. This allocation is recognized by both you and Chief and is reflected in the price of the components you purchased.

4. REMEDIES AVAILABLE FROM CHIEF

If a defect in any component covered by this limited warranty is discovered within the time period and reported in the manner provided in this limited warranty, Chief will supply replacement parts F.O.B. Chief Industries, Inc., Grand Island, Nebraska.

5. REMEDIES NOT AVAILABLE FROM CHIEF

The obligations stated in the preceding paragraph are the SOLE AND EXCLUSIVE REMEDIES available from Chief in the event of issues with the components manufactured by Chief. Chief will not be liable for the costs of dismantling defective components or installing replacement components, and Chief will not be liable for any special, incidental or consequential damages based upon breach of contract, negligence, strict liability in tort, or any other legal theory.

6. WHAT IS NOT COVERED BY THIS WARRANTY

This standard limited warranty does not cover:

1. Corrosion caused by exposure to marine (salt water) atmosphere, constant spray of either salt or fresh water, or corrosive chemicals, ash or fumes generated or released inside the building or from nearby chemical plants, foundries, plating works, kilns, fertilizer factories, paper plants and the like.
2. The design, materials and workmanship of products, components, accessories, or parts furnished by someone other than Chief and the interface or connection of such components with the components manufactured by Chief. Non-Chief manufactured items that are supplied by Chief are covered by the terms of those manufacturer's warranty provisions. Information on such warranty coverage is available upon request.
3. Defects, deterioration or other issues with the substrate or finish of the roof panel and wall panel and other components covered by other warranties.
4. Damage or loss which occurs during shipment, storage, or erection of any components.
5. Damage or loss caused, in whole or in part, by the acts or omissions of any kind by any party other than Chief.
6. Damage or loss caused, in whole or in part, by inadequate or improper site selection or preparation.
7. Damage or loss caused, in whole or in part, by inadequate or improper foundation design, materials or workmanship.
8. Damage or loss caused, in whole or in part, by any other failure to provide a suitable condition for erection, installation or connection of the components manufactured by Chief.
9. Damage or loss caused, in whole or in part, due to inadequate or improper erection of the Chief components.
10. Damage or loss caused, in whole or in part, by inadequate or improper heating, ventilation, air conditioning, or any other mechanical system.
11. Damage or loss caused, in whole or in part, by inadequate or improper design, materials or workmanship of any construction supporting Chief components.
12. Damage or loss caused, in whole or in part, by inadequate or improper design, materials and installation of the insulation systems.

CHIEF BUILDINGS

STANDARD LIMITED WARRANTY

Form C-223/Dec-09

13. Damage or loss caused, in whole or in part, by the influence of components furnished by Chief upon surrounding structures, or other objects, including but not limited to damage or loss caused by drifting snow.
14. Damage or loss caused, in whole or in part, by inadequate or improper maintenance, misuse or abuse of the components.
15. Damage or loss caused, in whole or in part, by unauthorized attachments, modifications or alterations to the components furnished by Chief.
16. Damage or loss caused, in whole or in part, by use of Chief components for purposes other than those for which they were intended.
17. Damage or loss caused, in whole or in part, by an act of God.
18. Components which have been erected outside of the continental United States or Canada.
19. Damage or loss caused, in whole or in part, by contact with animals and/or animal waste or its decomposition products.

7. NO OTHER WARRANTIES

1. Complete and Exclusive Limited Warranty: THIS LIMITED WARRANTY IS THE COMPLETE AND EXCLUSIVE AGREEMENT BETWEEN YOU AND CHIEF INDUSTRIES, INC., CONCERNING THE ALLOCATION OF THE RISKS OF DAMAGE OR LOSS ARISING FROM COMPONENT FAILURE. It supersedes all prior agreements, whether written or oral, and all other communications between you and Chief concerning the allocation of those risks. No employee of Chief or any other person including Chief Independent Authorized Builders or dealers and any other person authorized to sell Chief components, has any authority to make any representations, promises, or warranties in addition to those contained herein.
2. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

8. ALLOCATION OF RISKS

THIS LIMITED WARRANTY ALLOCATES THE RISK OF DAMAGE OR LOSS ARISING FROM PRODUCT FAILURE BETWEEN CHIEF INDUSTRIES, INC., AND THE PURCHASER. THIS ALLOCATION IS RECOGNIZED BY BOTH PARTIES AND WAS REFLECTED IN THE PURCHASE PRICE OF THE GOODS.

Chief Industries, Inc.
P.O. Box 2078
Grand Island, NE 68802-2078

Invoice Date: _____
Invoice No: _____
Chief Job No: _____
Jobsite Address: _____

Builder: _____

As a purchaser of Chief components and this limited warranty, I ACKNOWLEDGE THAT I HAVE READ THE FOREGOING STANDARD LIMITED WARRANTY, UNDERSTAND ITS PROVISIONS AND AGREE TO BE BOUND BY ITS TERMS.

Purchaser's Signature

Date Signed

Purchaser's Name

Purchaser's Address

GALVALUME® PANEL LIMITED WARRANTY

Form C-224/June 25

1. WHAT IS COVERED BY THIS WARRANTY

Chief Industries, Inc., ("Chief") expressly warrants to you, the original purchaser of roof or wall panels made of hot dipped aluminum-zinc alloy-coated Galvalume® sheet steel sold by Chief to be used in construction of a building or buildings, that the Galvalume® Panels will not rupture, fail structurally, or perforate within the duration of this warranty as a result of corrosion caused by exposure to normal atmospheric conditions.

2. DURATION OF THIS WARRANTY AND NOTICE REQUIREMENTS

This limited warranty is applicable to defects in components manufactured by Chief under normal use and service conditions which are not excluded in paragraph 6 of this limited warranty, and which defects are discovered within a period of twenty-five (25) years from the invoice date indicated at the bottom of this limited warranty, provided that the components were properly erected and defects have been reported in writing to Chief within thirty (30) days of discovery. In any event, Chief's obligations under this limited warranty shall expire 301 months after the invoice date. For warranty service, contact Chief Industries, Inc., Buildings Division, Customer Service Department, P.O. Box 2078, Grand Island, NE 68802.

3. CHIEF'S OBLIGATIONS UNDER THIS WARRANTY

By purchasing the Galvalume® Panel Limited Warranty, you and Chief Industries, Inc., expressly agree to an allocation of the risks of Galvalume® Panel failure between you and Chief.

4. REMEDIES AVAILABLE FROM CHIEF

If damage or deterioration to the Galvalume® Panels covered by this limited warranty is discovered within the time period and reported in the manner provided in this limited warranty, Chief will pay the costs of materials required, in the judgement of Chief after examination of the damage or deterioration, to repair the affected area on site or to provide replacement materials.

NOTE: CHIEF WILL NOT BE LIABLE FOR ANY PORTION OF THE COST OF MATERIALS USED TO REPAIR, REPAINT, REPLACE, OR TO OTHERWISE TREAT THE AFFECTED AREA UNLESS CHIEF HAS FIRST INSPECTED THE AFFECTED AREA AND SPECIFICALLY APPROVED THE METHOD OF TREATMENT TO BE USED.

Panels repaired, replaced, or otherwise treated in a manner approved by Chief will thereafter be covered by this limited warranty to the same extent and to the same expiration date as the original panels.

5. REMEDIES NOT AVAILABLE FROM CHIEF

The obligations stated in the preceding paragraph are the SOLE AND EXCLUSIVE REMEDIES available from Chief in the event of damage to or deterioration of your Chief Galvalume® Panels. Chief will not be liable for the costs of dismantling, repairing, repainting, replacing or otherwise treating affected areas, and Chief will not be liable for any special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

6. WHAT IS NOT COVERED BY THIS WARRANTY

The Galvalume® Panel Limited Warranty does not cover:

1. Panels installed with fasteners other than Chief's standard warranted fasteners (or fasteners of equal quality approved by Chief prior to installation).
2. Panels not erected in strict accordance with all applicable Chief erection instructions and drawings.
3. Panels which have been removed from the site of original construction.
4. Panels which have been erected outside the the Continental United States.
5. Panels which have been exposed at any time to corrosive, aggressive, harmful, or other abnormal atmospheric conditions, including but not limited to:
   a. Areas subject to salt water marine atmospheres or to constant spraying by either salt water or fresh water.
   b. Areas subject to fallout or exposure to corrosive chemicals, fumes, ash, dust (including cement dust), or vapors.
   c. Areas subject to water runoff from lead or copper flashings or areas in metallic contact with lead or copper.
   d. Circumstances where corrosive fumes or condensates are generated or released inside the building.
   e. Areas which allow contact with animals and/or animal waste or its decomposition products.
6. Panels on slopes of the roof or sections of the roof flatter than 1/4:12.
7. Mechanical, chemical or other damage sustained during shipment, storage, erection, or after erection.
8. Forming which incorporates stretching or severe reverse bending, or which subjects the coating to alternate compression and tension.
9. Panels which have not been provided with free drainage of water, including internal condensation, from overlaps and all other surfaces.

CHIEF BUILDINGS

GALVALUME® PANEL LIMITED WARRANTY

Form C-224/June 25

10. Panels which have not had all debris removed from overlaps and all other surfaces.
11. Damage caused to the metallic coating by improper forming, scouring or cleaning procedures.
12. Failures to the metal substrate resulting from exposure or corrosion at the cut/bare edges from insufficient air gap or by contact with the concrete, asphalt, gravel, dirt, or mulch.
13. Deterioration of the panels caused by contact with green or wet lumber or wet storage stain caused by water damage or condensation.
14. Panels in contact with or in close proximity to damp insulation or other corrosive materials.
15. Panels in areas subject to foreign substances, such as sand or dift particles or other abrasive particles or substances.
16. Circumstances where, due to roof or sidewall pitch, there is improper drainage or holding of water.
17. Damage caused by falling objects, Acts of God, fire, riots, explosions, acts of war or other external forces.

7. NO OTHER WARRANTIES

1. Complete and Exclusive Limited Warranty: THIS GALVALUME® PANEL LIMITED WARRANTY IS THE COMPLETE AND EXCLUSIVE AGREEMENT BETWEEN YOU AND CHIEF INDUSTRIES, INC., CONCERNING THE ALLOCATION OF THE RISKS OF PRODUCT FAILURE WITH RESPECT TO CHIEF GALVALUME® PANELS. It supersedes all prior agreements, whether written or oral, and all other communications between you and Chief concerning the allocation of those risks. No employee of Chief or any other person including Chief Independent Authorized Builders or dealers and any other person authorized to sell Chief Components, has any authority to make any representations, promises, or warranties in addition to those contained herein.
2. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

8. ALLOCATION OF RISKS

THIS GALVALUME® PANEL LIMITED WARRANTY ALLOCATES THE RISK OF DAMAGE OR LOSS ARISING FROM PRODUCT FAILURE BETWEEN CHIEF INDUSTRIES, INC., AND THE PURCHASER. THIS ALLOCATION IS RECOGNIZED BY BOTH PARTIES AND IS REFLECTED IN THE PURCHASE PRICE OF THE COMPONENTS.

Chief Industries, Inc.
P.O. Box 2078
Grand Island, NE 68802-2078

Invoice Date:	
Invoice No:	
Chief Job No:	
Jobsite Address:	
Builder:	

As purchaser of the Standard Limited Warranty for Chief Galvalume® Panels, I ACKNOWLEDGE THAT I HAVE READ THE FOREGOING LIMITED WARRANTY, UNDERSTAND ITS PROVISIONS AND AGREE TO BE BOUND BY ITS TERMS.

_____
Purchaser's Signature

_____
Date Signed

_____
Purchaser's Name

_____
Purchaser's Address

CHIEF BUILDINGS

PVDF/FEVE ROOF PANEL FINISH LIMITED WARRANTY

Form C-229/March-23

1. WHAT IS COVERED BY THIS WARRANTY

Although it is recognized by Chief Industries, Inc., ("Chief") and you, the original purchaser, that most coatings, including Polyvinylidene Fluoride (PVDF) or Fluoroethylene Vinyl Ether (FEVE), will fade and change in appearance to some degree over a period of time in outdoor installations, and that such changes may not be uniform between surfaces not equally exposed, Chief expressly warrants to you, the original purchaser of PVDF/FEVE roof panels or trim in the color or colors listed at the bottom of this limited warranty sold by Chief to be used in construction of a building or buildings, that, within the duration of this limited warranty:

A. The panel finish will not peel, crack, or flake to an extent that is apparent on ordinary outdoor visual observation.
B. The panel finish will not change color more than five (5.0) Hunter delta-E units. Color measurements are to be made per ASTM D2244 and only on clean surfaces after removing surface deposits and chalk per ASTM D3964.
C. The panel finish will not chalk more that a number eight (8) rating when measured per ASTM D4214, Method A.

2. DURATION OF THIS WARRANTY AND NOTICE REQUIREMENTS

This limited warranty is applicable to defects in components manufactured by Chief under normal use and service conditions which are not excluded in paragraph 6 of this limited warranty, and which defects are discovered within a period of thirty-five (35) years from the invoice date indicated at the bottom of this limited warranty, provided that the components were properly erected and defects have been reported in writing to Chief within thirty (30) days of discovery. In any event, Chief's obligations under this limited warranty shall expire 421 months after the invoice date. For warranty service, contact Chief Industries, Inc., Buildings Division, Customer Service Department, P.O. Box 2078, Grand Island, NE 68802.

3. CHIEF'S OBLIGATIONS UNDER THIS WARRANTY

By purchasing the PVDF/FEVE Roof Panel Finish Limited Warranty, you and Chief Industries, Inc., expressly agree to an allocation of the risks of PVDF/FEVE Roof Panel Finish failure between you and Chief.

4. REMEDIES AVAILABLE FROM CHIEF

If damage or deterioration to the PVDF/FEVE Roof Panels covered by this limited warranty is discovered within the time period and reported in the manner provided in this limited warranty, Chief will pay the costs of materials required, in the judgement of Chief after examination of the damage or deterioration, to repair, repaint, replace, or otherwise treat the affected area on site.

NOTE: CHIEF WILL NOT BE LIABLE FOR ANY PORTION OF THE COST OF MATERIALS USED TO REPAIR, REPAINT, REPLACE, OR TO OTHERWISE TREAT THE AFFECTED AREA UNLESS CHIEF HAS FIRST INSPECTED THE AFFECTED AREA AND SPECIFICALLY APPROVED THE METHOD OF TREATMENT TO BE USED.

Panels repaired, repainted, replaced, or otherwise treated in a manner approved by Chief will thereafter be covered by this limited warranty to the same extent and to the same expiration date as the original panels.

5. REMEDIES NOT AVAILABLE FROM CHIEF

The obligations stated in the preceding paragraph are the SOLE AND EXCLUSIVE REMEDIES available from Chief in the event of damage to or deterioration of your Chief PVDF/FEVE Roof Panels. Chief will not be liable for the costs of dismantling, repairing, repainting, replacing or otherwise treating affected areas, and Chief will not be liable for any special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

6. WHAT IS NOT COVERED BY THIS WARRANTY

This PVDF/FEVE Roof Panel Finish Limited Warranty does not cover:

1. Panel which has suffered scratching or abrasion or impact by a hard object.
2. Damage or deterioration caused, in whole or in part, by improper transportation, handling, alteration, modification, improper use, storage contrary to instructions issued by Chief, or other circumstances beyond Chief's control.
3. Panels not erected in strict accordance with all applicable Chief erection instructions and drawings.
4. Panel which is damaged due to moisture entrapment in bundles during transit or storage.
5. Panel which is stored/installed in a way which allows standing water on the coating.
6. Panel which is stored/installed in any chemically aggressive environment containing fumes, ash, cement dust, carbon black, salts or other chemicals, whether naturally occurring or caused by man.
7. Panel which is stored/installed in an environment that includes a high degree of humidity, sand, dirt or grease, whether naturally occurring or caused by man.
8. Panel which is stored/installed in a way which allows contact with animals, animal waste or its decomposition products.
9. Panel which is stored/installed in an area, or in such a way, that damage can occur due to poor air circulation or exposure of excess humidity, condensation, salty spray, frost, mold, mildew, or fungus on product surfaces.
10. Panel which is stored/installed in areas which are subject to fallout from copper, lead, nickel or silver mining or refining operations.
11. Panel which has suffered any damage caused by acts of God, radiation, falling objects, explosion, fire, riots, civil commotions, acts of war or other external forces.

CHIEF BUILDINGS

PVDF/FEVE ROOF PANEL FINISH LIMITED WARRANTY

Form C-229/March-23

12. Failures to the metal substrate resulting from exposure or corrosion at the cut/bare edges from insufficient air gap or by contact with the concrete, asphalt, gravel, dirt, or mulch.
13. Panels which have been removed from the site of original construction.
14. Panels which have been erected outside the Continental United States or Canada.
15. Panel which has been installed on property located within 1500 feet of a salt water or other marine environment.
16. Damage or deterioration caused, in whole or in part, by abrasive cleaning procedures or use of bleach-based cleaners.
17. Any substrate corrosion of loss of adhesion as a result of contact with or run off from dissimilar metals (copper, lead, stainless steel, etc.), green/pressure treated lumber, incompatible fasteners and/or wet insulation.
18. Paint adhesion loss and/or staining as a result of excessive sealant or failure to remove steel debris/iron particles that come in contact with the painted surface.
19. Attachment or adhesion of materials or items such as snow guards and solar panels to the coating.
20. Significant differences in insulation below metal panels leading to dissimilar color fading.
21. This warranty covers the finish on PVDF/FEVE panels only in the colors which are listed at the bottom of this limited warranty.

7. NO OTHER WARRANTIES

1. Complete and Exclusive Limited Warranty: THIS PVDF/FEVE ROOF PANEL FINISH LIMITED WARRANTY IS THE COMPLETE AND EXCLUSIVE AGREEMENT BETWEEN YOU AND CHIEF INDUSTRIES CONCERNING THE ALLOCATION OF THE RISKS OF PRODUCT FAILURE WITH RESPECT TO THE FINISH OF YOUR CHIEF PVDF/FEVE ROOF PANELS, NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE. It supersedes all prior agreements, whether written or oral, and all other communications between you and Chief concerning the allocation of those risks. No employee of Chief or any other person including Chief Independent Authorized Builders or dealers and any other person authorized to sell Chief Components, has any authority to make any representations, promises, or warranties in addition to those contained herein.
2. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR FREEDOM FROM PATENT INFRINGEMENT.

8. ALLOCATION OF RISKS

THIS PVDF/FEVE ROOF PANEL FINISH LIMITED WARRANTY ALLOCATES THE RISK OF DAMAGE OR LOSS ARISING FROM PRODUCT FAILURE BETWEEN CHIEF INDUSTRIES, INC., AND THE PURCHASER. THIS ALLOCATION IS RECOGNIZED BY BOTH PARTIES AND WAS REFLECTED IN A PRICE QUOTED SEPARATELY FROM THE PRICE OF THE COMPONENTS.

Chief Industries, Inc.
P.O. Box 2078
Grand Island, NE 68802-2078

Invoice Date:	
Invoice No:	
Chief Job No:	
Jobsite Address:	
Builder:	
Panel colors subject to warranty:	

As purchaser of the Standard Limited Warranty for Chief PVDF/FEVE Roof Panels, I ACKNOWLEDGE THAT I HAVE READ THE FOREGOING LIMITED WARRANTY, UNDERSTAND ITS PROVISIONS AND AGREE TO BE BOUND BY ITS TERMS.

_____
Purchaser's Signature

_____
Date Signed

_____
Purchaser's Name

_____
Purchaser's Address

PVDF/FEVE WALL PANEL FINISH LIMITED WARRANTY

Form C-228/March-23

1. WHAT IS COVERED BY THIS WARRANTY

Although it is recognized by Chief Industries, Inc., ("Chief") and you, the original purchaser, that most coatings, including Polyvinylidene Fluoride (PVDF) or Fluoroethylene Vinyl Ether (FEVE), will fade and change in appearance to some degree over a period of time in outdoor installations, and that such changes may not be uniform between surfaces not equally exposed, Chief expressly warrants to you, the original purchaser of PVDF/FEVE wall panels or trim in the color or colors listed at the bottom of this limited warranty sold by Chief to be used in construction of a building or buildings, that, within the duration of this limited warranty:

A. The panel finish will not peel, crack, or flake to an extent that is apparent on ordinary outdoor visual observation.
B. The panel finish will not change color more than five (5.0) Hunter delta-E units. Color measurements are to be made per ASTM D2244 and only on clean surfaces after removing surface deposits and chalk per ASTM D3964.
C. The panel finish will not chalk more that a number eight (8) rating when measured per ASTM D4214, Method A.

2. DURATION OF THIS WARRANTY AND NOTICE REQUIREMENTS

This limited warranty is applicable to defects in components manufactured by Chief under normal use and service conditions which are not excluded in paragraph 6 of this limited warranty, and which defects are discovered within a period of thirty-five (35) years from the invoice date indicated at the bottom of this limited warranty, provided that the components were properly erected and defects have been reported in writing to Chief within thirty (30) days of discovery. In any event, Chief's obligations under this limited warranty shall expire 421 months after the invoice date. For warranty service, contact Chief Industries, Inc., Buildings Division, Customer Service Department, P.O. Box 2078, Grand Island, NE 68802.

3. CHIEF'S OBLIGATIONS UNDER THIS WARRANTY

By purchasing the PVDF/FEVE Wall Panel Finish Limited Warranty, you and Chief Industries, Inc., expressly agree to an allocation of the risks of PVDF/FEVE Wall Panel Finish failure between you and Chief.

4. REMEDIES AVAILABLE FROM CHIEF

If damage or deterioration to the PVDF/FEVE Wall Panels covered by this limited warranty is discovered within the time period and reported in the manner provided in this limited warranty, Chief will pay the costs of materials required, in the judgement of Chief after examination of the damage or deterioration, to repair, repaint, replace, or otherwise treat the affected area on site.

NOTE: CHIEF WILL NOT BE LIABLE FOR ANY PORTION OF THE COST OF MATERIALS USED TO REPAIR, REPAINT, REPLACE, OR TO OTHERWISE TREAT THE AFFECTED AREA UNLESS CHIEF HAS FIRST INSPECTED THE AFFECTED AREA AND SPECIFICALLY APPROVED THE METHOD OF TREATMENT TO BE USED.

Panels repaired, repainted, replaced, or otherwise treated in a manner approved by Chief will thereafter be covered by this limited warranty to the same extent and to the same expiration date as the original panels.

5. REMEDIES NOT AVAILABLE FROM CHIEF

The obligations stated in the preceding paragraph are the SOLE AND EXCLUSIVE REMEDIES available from Chief in the event of damage to or deterioration of your Chief PVDF/FEVE Wall Panels. Chief will not be liable for the costs of dismantling, repairing, repainting, replacing or otherwise treating affected areas, and Chief will not be liable for any special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

6. WHAT IS NOT COVERED BY THIS WARRANTY

This PVDF/FEVE Wall Panel Finish Limited Warranty does not cover:

1. Panel which has suffered scratching or abrasion or impact by a hard object.
2. Damage or deterioration caused, in whole or in part, by improper transportation, handling, alteration, modification, improper use, storage contrary to instructions issued by Chief, or other circumstances beyond Chief's control.
3. Panels not erected in strict accordance with all applicable Chief erection instructions and drawings.
4. Panel which is damaged due to moisture entrapment in bundles during transit or storage.
5. Panel which is stored/installed in a way which allows standing water on the coating.
6. Panel which is stored/installed in any chemically aggressive environment containing fumes, ash, cement dust, carbon black, salts or other chemicals, whether naturally occurring or caused by man.
7. Panel which is stored/installed in an environment that includes a high degree of humidity, sand, dirt or grease, whether naturally occurring or caused by man.
8. Panel which is stored/installed in a way which allows contact with animals, animal waste or its decomposition products.
9. Panel which is stored/installed in an area, or in such a way, that damage can occur due to poor air circulation or exposure of excess humidity, condensation, salty spray frost, mold, mildew, or fungus on product surfaces.
10. Panel which is stored/installed in areas which are subject to fallout from copper, lead, nickel or silver mining or refining operations.
11. Panel which has suffered any damage caused by acts of God, radiation, falling objects, explosion, fire, riots, civil commotions, acts of war or other external forces.

CHIEF BUILDINGS

PVDF/FEVE WALL PANEL FINISH LIMITED WARRANTY

Form C-228/March-23

12. Failures to the metal substrate resulting from exposure or corrosion at the cut/bare edges from insufficient air gap or by contact with the concrete, asphalt, gravel, dirt, or mulch.
13. Panels which have been removed from the site of original construction.
14. Panels which have been erected outside the Continental United States or Canada.
15. Panel which has been installed on property located within 1500 feet of a salt water or other marine environment.
16. Damage or deterioration caused, in whole or in part, by abrasive cleaning procedures or use of bleach-based cleaners.
17. Any substrate corrosion of loss of adhesion as a result of contact with or run off from dissimilar metals (copper, lead, stainless steel, etc.), green/pressure treated lumber, incompatible fasteners and/or wet insulation.
18. Paint adhesion loss and/or staining as a result of excessive sealant or failure to remove steel debris/iron particles that come in contact with the painted surface.
19. Attachment or adhesion of materials or items such as snow guards and solar panels to the coating.
20. Significant differences in insulation below metal panels leading to dissimilar color fading.
21. This warranty covers the finish on PVDF/FEVE panels only in the colors which are listed at the bottom of this limited warranty.

7. NO OTHER WARRANTIES

1. Complete and Exclusive Limited Warranty: THIS PVDF/FEVE WALL PANEL FINISH LIMITED WARRANTY IS THE COMPLETE AND EXCLUSIVE AGREEMENT BETWEEN YOU AND CHIEF INDUSTRIES CONCERNING THE ALLOCATION OF THE RISKS OF PRODUCT FAILURE WITH RESPECT TO THE FINISH OF YOUR CHIEF PVDF/FEVE WALL PANELS, NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE. It supersedes all prior agreements, whether written or oral, and all other communications between you and Chief concerning the allocation of those risks. No employee of Chief or any other person including Chief Independent Authorized Builders or dealers and any other person authorized to sell Chief Components, has any authority to make any representations, promises, or warranties in addition to those contained herein.
2. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR FREEDOM FROM PATENT INFRINGEMENT.

8. ALLOCATION OF RISKS

THIS PVDF/FEVE WALL PANEL FINISH LIMITED WARRANTY ALLOCATES THE RISK OF DAMAGE OR LOSS ARISING FROM PRODUCT FAILURE BETWEEN CHIEF INDUSTRIES, INC., AND THE PURCHASER. THIS ALLOCATION IS RECOGNIZED BY BOTH PARTIES AND WAS REFLECTED IN A PRICE QUOTED SEPARATELY FROM THE PRICE OF THE COMPONENTS.

Chief Industries, Inc.
P.O. Box 2078
Grand Island, NE 68802-2078

Invoice Date:	
Invoice No:	
Chief Job No:	
Jobsite Address:	
Builder:	
Panel colors subject to warranty:	

As purchaser of the Standard Limited Warranty for Chief PVDF/FEVE Wall Panels, I ACKNOWLEDGE THAT I HAVE READ THE FOREGOING LIMITED WARRANTY, UNDERSTAND ITS PROVISIONS AND AGREE TO BE BOUND BY ITS TERMS.

_____
Purchaser's Signature

_____
Date Signed

_____
Purchaser's Name

_____
Purchaser's Address

STANDING SEAM ROOF SYSTEM
20 YEAR WEATHERTIGHTNESS
LIMITED ULTRA WARRANTY

Form C-230u/Aug-22

1. WHAT IS COVERED BY THIS LIMITED WARRANTY

Chief Industries, Inc., ("Chief") expressly warrants to you, the original purchaser of Standing Seam roof components manufactured by Chief, that it will repair or stop any roof leaks in the building described below within the duration of this limited warranty unless the leak was caused or contributed to by factors identified in section 6 of this limited warranty.

2. DURATION OF THIS LIMITED WARRANTY AND NOTICE REQUIREMENTS

This limited warranty is applicable to roof leaks which become evident within a period of twenty years from the effective date indicated at the bottom of this limited warranty, which have been reported in writing to Chief within thirty (30) days of discovery. The Builder is to provide warranty coverage for the first two years of leak-free service. Once this two-year leak free service is obtained, Chief becomes the single source provider of this limited warranty. In any event, Chief's obligations under this limited warranty shall expire 241 months from the effective date. For warranty service, contact the undersigned Independent Builder at the address shown on this limited warranty and Chief Industries, Inc., Buildings Division, Customer Service Department, P.O. Box 2078, Grand Island, NE 68802.

3. OBLIGATIONS UNDER THIS LIMITED WARRANTY

1. By purchasing the Standing Seam Roof System 20 Year Weathertightness Limited Ultra Warranty ("Weathertightness Limited Ultra Warranty") issued by Chief, you and Chief expressly agree to an allocation of the risks of component leakage between these two parties. This allocation is recognized by you and Chief and is reflected in the price of the limited warranty you purchased.
2. Chief will not be liable for any portion of the cost of corrective action unless Chief has first approved the method of corrective action to be taken by Purchaser or anyone on its behalf.
3. For each separate claim under this limited warranty you are required to report in writing to Chief, at the address noted above, any defect or deficiency within (30) days of its discovery, providing a detailed explanation of the defect or deficiency.

4. REMEDIES AVAILABLE FROM CHIEF

If a roof leak covered by this limited warranty is discovered within the time period and reported in the manner provided in this limited warranty, PURCHASER'S SOLE REMEDY HEREUNDER IS FOR THE REPAIR OR REPLACEMENT, AT CHIEF'S SOLE DISCRETION, OF COVERED ROOF LEAKS. CHIEF SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS TO THE BUILDING, ITS CONTENTS OR OTHER MATERIALS. Chief agrees to specify the repair work for stopping the leak and reserves the right to undertake, supervise or approve any and all repair work.

5. REMEDIES NOT AVAILABLE FROM CHIEF

The obligations stated in the preceding paragraph are the SOLE AND EXCLUSIVE REMEDIES available from Chief in the event of leakage arising from the components manufactured by Chief. Chief shall not be liable for any special, incidental or consequential damages based upon breach of contract, breach of warranty, negligence, strict liability in tort, or any other legal theory.

6. WHAT IS NOT COVERED BY THIS LIMITED WARRANTY

This Weathertightness Limited Warranty does not cover leakage or damage to the roof caused by or arising from:

1. Corrosion caused by exposure to marine (salt water) atmosphere, constant spray of either salt or fresh water, or corrosive chemicals, ash or fumes generated or released inside the building or from nearby chemical plants, foundries, plating works, kilns, fertilizer factories, paper plants and the like.
2. Ventilators, skylights, roof curbs, roof jacks, or other penetrations not supplied by Chief.
3. Suspension or support by the building of any weight in excess of loading criteria.
4. Defects in the foundation, settling or other defects / failures in support of the Standing Seam Roof System.
5. Jumping, scraping or excessive walking on the roof.
6. The connection between components supplied by Chief and those not supplied by Chief.
7. Accumulations of snow, ice, water or other natural substances which exceed the design load specifications called for by your order documents.
8. Hail, strong winds, flood, fire or other natural disasters or acts of God.
9. Defects due to improper or inadequate erection of the roof components.
10. Defects caused by inadequate or improper heating, ventilation, air conditioning or any other mechanical system.
11. Defects caused by misuse or abuse of the roof components.
12. Components which have been erected outside the continental United States or Canada.

STANDING SEAM ROOF SYSTEM
20 YEAR WEATHERTIGHTNESS
LIMITED ULTRA WARRANTY

Form C-230u/Aug-22

13. Failure of the Owner to properly perform normal and customary maintenance of the roof as outlined in Chief's Roof Maintenance Manual.
14. Replacement or repair work undertaken on or to the roof without Chief's prior approval and authorization.

7. NO OTHER WARRANTIES

1. Complete and Exclusive Limited Warranty: This Weathertightness Limited Ultra Warranty is the complete and exclusive agreement between you and Chief, concerning the allocation of the risks of damage or loss arising from roof leakage. It supersedes all prior agreements, whether written or oral, and all other communications between you and Chief concerning the allocation of those risks. No employee of Chief or any other person including Chief Independent Builders or dealers and any other person authorized to sell Chief components, has any authority to make any representations, promises, or warranties other or greater than those contained herein.
2. THIS LIMITED ULTRA WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
3. This Weathertightness Limited Ultra Warranty is tendered for the sole benefit of the Purchaser named below, and is not transferable or assignable. IT BECOMES VALID ONLY WHEN SIGNED BY THE PURCHASER AND THE BUILDER.

8. ALLOCATION OF RISKS

THIS WEATHERTIGHTNESS LIMITED ULTRA WARRANTY ALLOCATES THE RISK OF DAMAGE OR LOSS ARISING FROM PRODUCT FAILURE BETWEEN CHIEF AND THE PURCHASER. THIS ALLOCATION IS RECOGNIZED BY ALL PARTIES AND WAS REFLECTED IN A PRICE QUOTED SEPARATELY FROM THE PRICE OF THE COMPONENTS.

As a purchaser of the 20 Year Weathertightness Limited Ultra Warranty, I ACKNOWLEDGE THAT I HAVE READ THE FOREGOING LIMITED WARRANTY, UNDERSTAND ITS PROVISIONS AND AGREE TO BE BOUND BY ITS TERMS.

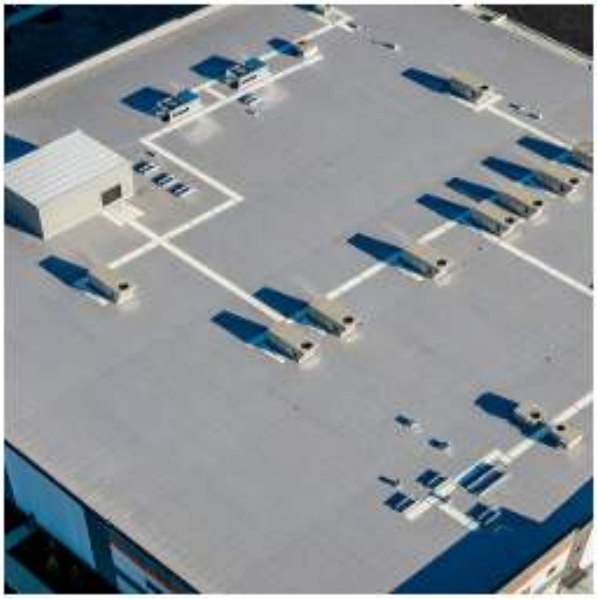
Builder's Signature and Title	*Purchaser's Signature*
Date Signed	*Date Signed*
Independent Builder Name	*Purchaser's Name*
Builder's Address	*Purchaser's Address*

Effective Date: _____
Invoice No: _____
Chief Job No: _____
Jobsite Address: _____
_____
Builder: _____

Chief Industries, Inc.
P.O. Box 2078
Grand Island, NE 68802-2078

All Weather Insulated Panels

PRODUCTS



DM40 Mesa Wall Panel

AWIP PRODUCT DATA SHEET

Features & Benefits

- Highly efficient and flexible insulated metal panel design is ideal for commercial, industrial and controlled environment applications
- Provides long-term thermal, moisture and vapor transmission performance
- Panel joinery is designed to permit installation of the panel vertically or horizontally
- Composite panel simplifies design, reduces complexity, improves efficiency and reduces installation costs
- Single component wall design includes exterior aesthetic, weather barrier, insulation and vapor barrier

Product Specifications

Profile	Exterior	Embossed, Lightly Planked, Mesa Rib					
	Interior	Embossed, Lightly Planked, Mesa Rib					
Exterior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel*						
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel						
Panel Module**	40"[1016mm]						
Lengths**	Minimum: 8'[2.44m], Maximum: 50'[15.24m]						
Side Lap	Double Tongue and Groove						
Thermal Performance†							
Thickness	2"[51mm]	2.5"[64mm]	3"[76mm]	4"[102mm]	5"[127mm]	6"[152mm]	8"[203mm]
R-Value @ 75°F mean (°F·ft2·h/BTU)	14	18	21	28	36	43	57
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.069	0.056	0.046	0.035	0.028	0.023	0.017
R-Value @ 35°F mean (°F·ft2·h/BTU)	16	20	24	32	41	49	65
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.061	0.049	0.041	0.031	0.024	0.020	0.015

* For interior applications only
** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

1 (888) 970-AWIP (2947)
awipanels.com
sales@awipanels.com

AWIP All Weather Insulated Panels

Testing & Approvals

Category	Test	Test Title	Results
Fire	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Passed
	NFPA 286	Room Fire Growth for Wall and Ceiling Interior	Passed Maximum 6"[152mm] thickness
	NFPA 268	Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source	Assembly tested meets the requirements of the standard
	CAN/ULC S101 - 15 min	Fire Endurance	Maximum 6"[152mm] thick. Vertical and horizontal orientations
	CAN/ULC S102	Flame Spread/Smoke Developed	FSI ≤ 20, SDI ≤ 195
	CAN/ULC S134	Exterior Wall Assembly	Maximum 6"[152mm] thick. Vertical orientations
	CAN/ULC S138	Room Corner Test	Maximum 6"[152mm] thick. Vertical and horizontal orientations
Water Penetration	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	No uncontrolled water penetration at 20 PSF differential pressure for a duration of 2-hours
Air Infiltration	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors	<0.01 CFM/ft2 of Panel Area at 20 PSF
Structural	FM 4881	Class 1 Exterior Wall Systems	See FM Approval Guide or contact Technical Services Minimum 2.5"[64mm] thickness
	ASTM E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction	See Span Tables
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See Span Tables
Thermal	ASTM C518	Steady-State Thermal Transmission	Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	FBC	Florida Building Code	FL15060
	Miami-Dade NOA	Florida Building Code	NOA No. 19-0124.03
	LARR	Los Angeles Building Code	LARR No. 25697 / IAPMO ER-301
	IAPMO	Various Building Codes	ER-301

Scan for the most current product information

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awipanels.com
sales@awipanels.com

All Weather Insulated Panels

FL40 Flat Wall Panels

AWIP PRODUCT DATA SHEET

Features & Benefits

- Panel joinery is designed to permit installation of the panel vertically or horizontally
- Highly efficient and flexible insulated metal panel design is ideal for commercial, industrial and controlled environment applications
- Smooth monolithic aesthetic economically enhancing exterior facades
- Composite design requires one-step installation reducing construction time and costs
- Single component wall design includes exterior aesthetic, weather barrier, insulation and vapor barrier

Product Specifications

Profile	Exterior		Embossed, Flat
	Interior		Embossed, Lightly Planked, Mesa Rib
Exterior Face Skin	22 Gauge G90/AZ50		
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel		
Panel Module**	40"[1016mm]		
Lengths**	Minimum: 8'[2.43m], Maximum: 40'[12.19m]		
Side Lap	Double Tongue and Groove		
Thermal Performance†			
Thickness	2"[51mm]	2.5"[64mm]	3"[76mm]
R-Value @ 75°F mean (°F·ft2·h/BTU)	14	18	21
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.069	0.056	0.046
R-Value @ 35°F mean (°F·ft2·h/BTU)	16	20	24
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.061	0.049	0.041

** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

1 (888) 970-AWIP (2947)
awipanels.com
sales@awipanels.com

All Weather Insulated Panels

Testing & Approvals

Category	Test	Test Title	Results
Fire	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Passed
	NFPA 286	Room Fire Growth for Wall and Ceiling Interior	Passed Maximum 6"[152mm] thickness
	NFPA 268	Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source	Assembly tested meets the requirements of the standard
	CAN/ULC S101 - 15 min	Fire Endurance	Maximum 6"[152mm] thick. Vertical and horizontal orientations
	CAN/ULC S102	Flame Spread/Smoke Developed	FSI ≤ 20, SDI ≤ 195
	CAN/ULC S134	Exterior Wall Assembly	Maximum 6"[152mm] thick. Vertical orientations
	CAN/ULC S138	Room Corner Test	Maximum 6"[152mm] thick. Vertical and horizontal orientations
Water Penetration	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	No uncontrolled water penetration at 20 PSF differential pressure for a duration of 2-hours
Air Infiltration	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors	<0.01 CFM/ft2 of Panel Area at 20 PSF
Structural	FM 4881	Class 1 Exterior Wall Systems	See FM Approval Guide or contact Technical Services Minimum 2.5"[64mm] thickness
	ASTM E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction	See Span Tables
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See Span Tables
Thermal	ASTM C518	Steady-State Thermal Transmission	Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	FBC	Florida Building Code	FL15060
	Miami-Dade NOA	Florida Building Code	NOA No. 19-0124.03
	LARR	Los Angeles Building Code	LARR No. 25697 / IAPMO ER-301
	IAPMO	Various Building Codes	ER-301

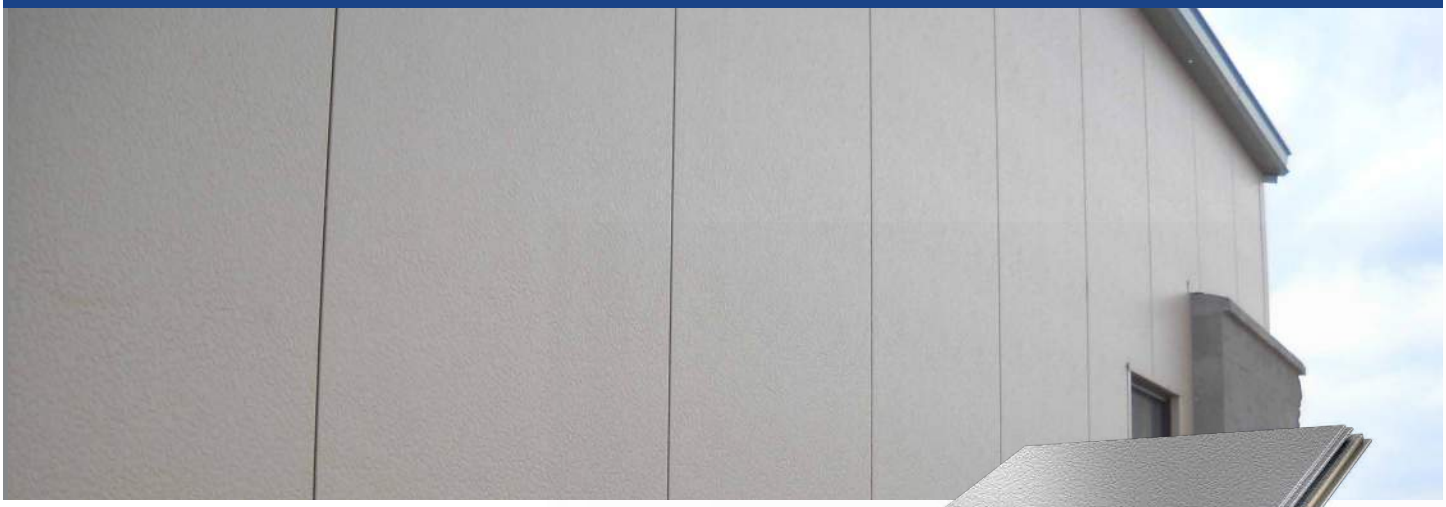
Scan for the most current product information

1 (888) 970-AWIP (2947)
awipanels.com
sales@awipanels.com

All Weather Insulated Panels

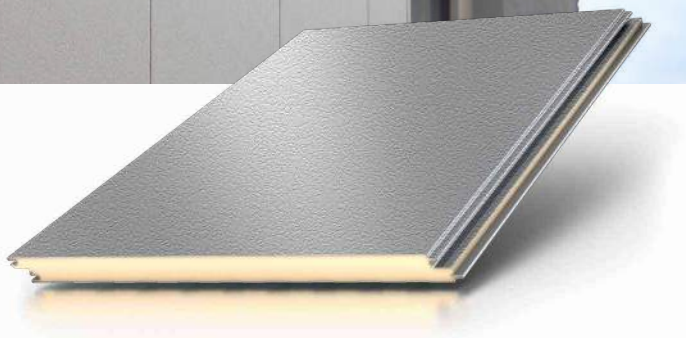
HE40 Heavy Embossed Wall Panels

AWIP PRODUCT DATA SHEET



Features & Benefits

- Heavy embossment adds texture to the surface and offers a patterned flat appearance.
- The panel's overlapping joint is self-aligning and available with factory or field sealant application within the panel joinery
- Irregular surface pattern minimizes surface blemishes and imperfections
- Single component wall design includes exterior aesthetic, weather barrier, insulation and vapor barrier



Product Specifications

Profile	Exterior		Heavy Embossed	
	Interior		Embossed, Lightly Planked, Mesa Rib	
Exterior Face Skin	24 Gauge G90/AZ50, Optional Gauge 22 G90/AZ50			
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel			
Panel Module**	40"			
Lengths**	Minimum: 8', Maximum: 40'			
Side Lap	Double Tongue and Groove			
Thermal Performance†				
Thickness	2"	2.5"	3"	4"
R-Value @ 75°F mean (°F·ft2·h/BTU)	14	18	21	28
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.069	0.056	0.046	0.035
R-Value @ 35°F mean (°F·ft2·h/BTU)	16	20	24	32
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.061	0.049	0.041	0.031

** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

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AWIP All Weather Insulated Panels

Testing & Approvals

Category	Test	Test Title	Results
Fire	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Passed
	NFPA 286	Room Fire Growth for Wall and Ceiling Interior	Passed Maximum 6"[152mm] thickness
	NFPA 268	Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source	Assembly tested meets the requirements of the standard
	CAN/ULC S101 - 15 min	Fire Endurance	Maximum 6"[152mm] thick. Vertical and horizontal orientations
	CAN/ULC S102	Flame Spread/Smoke Developed	FSI ≤ 20, SDI ≤ 195
	CAN/ULC S134	Exterior Wall Assembly	Maximum 6"[152mm] thick. Vertical orientations
	CAN/ULC S138	Room Corner Test	Maximum 6"[152mm] thick. Vertical and horizontal orientations
Water Penetration	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	No uncontrolled water penetration at 20 PSF differential pressure for a duration of 2-hours
Air Infiltration	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors	<0.01 CFM/ft2 of Panel Area at 20 PSF
Structural	FM 4881	Class 1 Exterior Wall Systems	See FM Approval Guide or contact Technical Services Minimum 2.5"[64mm] thickness
	ASTM E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction	See Span Tables
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See Span Tables
Thermal	ASTM C518	Steady-State Thermal Transmission	Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	FBC	Florida Building Code	FL15060
	Miami-Dade NOA	Florida Building Code	NOA No. 19-0124.03
	LARR	Los Angeles Building Code	LARR No. 25697 / IAPMO ER-301
	IAPMO	Various Building Codes	ER-301

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All Weather Insulated Panels

HE40A AdobeTexture® Wall Panels

AWIP PRODUCT DATA SHEET

Features And Benefits

- AdobeTexture integrates a stucco look and texture into insulated metal wall panels
- Eliminates the need for sprayed elastomeric coating applications or multi-step field-applied or additional factory-applied stucco coating
- Matching AdobeTexture trim & finishing system for a clean, continuous look and feel
- Same easy, economical installation as standard IMP wall panels - Arrives on site in one piece for a simple one-step installation.
- 25 yr limited paint warranty against chalking, fading and loss of adhesion

Product Specifications

Profile	Exterior	AdobeTexture-Flat Troweled Stucco Appearance		
	Interior	Embossed, Lightly Planked, Mesa Rib		
Exterior Face Skin	24 Gauge G90/AZ50, Optional Gauge: 22 G90/AZ50			
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50			
Panel Module**	40"			
Lengths**	Minimum: 8', Maximum: 40'			
Side Lap	Double Tongue and Groove			
Thermal Performance†				
Thickness	2"	2.5"	3"	4"
R-Value @ 75°F mean (°F·ft2·h/BTU)	14	18	21	28
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.069	0.056	0.046	0.035
R-Value @ 35°F mean (°F·ft2·h/BTU)	16	20	24	32
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.061	0.049	0.041	0.031

** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518
Note: Exterior side option only

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Testing & Approvals

Category	Test	Test Title	Results
Fire	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Passed
	NFPA 286	Room Fire Growth for Wall and Ceiling Interior	Passed Maximum 6"[152mm] thickness
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	CAN/ULC S101 - 15 min	Fire Endurance	Maximum 6"[152mm] thick. Vertical and horizontal orientations
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	CAN/ULC S134	Exterior Wall Assembly	Maximum 6"[152mm] thick. Vertical orientations
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Water Penetration	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	No uncontrolled water penetration at 20 PSF differential pressure for a duration of 2-hours
Air Infiltration	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors	<0.01 CFM/ft2 of Panel Area at 20 PSF
Structural	FM 4881	Class 1 Exterior Wall Systems	See FM Approval Guide or contact Technical Services Minimum 2.5"[64mm] thickness
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	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See Span Tables
Thermal	ASTM C518	Steady-State Thermal Transmission	Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	FBC	Florida Building Code	FL15060
	Miami-Dade NOA	Florida Building Code	NOA No. 19-0124.03
	LARR	Los Angeles Building Code	LARR No. 25697 / IAPMO ER-301
	IAPMO	Various Building Codes	ER-301

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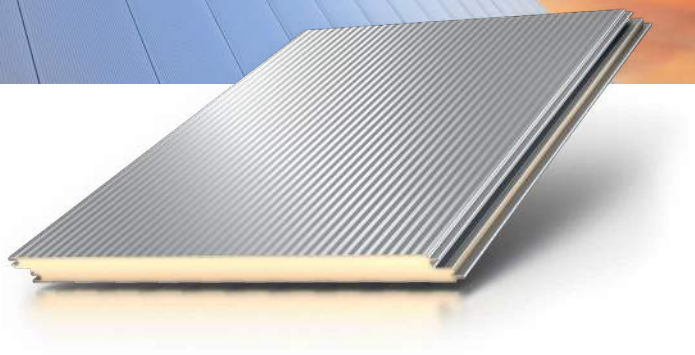
All Weather Insulated Panels

ST40 Striated Wall Panels

AWIP PRODUCT DATA SHEET



Features & Benefits

- The panel's overlapping joint is self-aligning and allows for easy sealant application at the panel joinery
- The standard exterior metal surface is embossed 24ga G-90/AZ50 steel with standard PVDF and SMP exterior coatings. (Other coatings may be available.)
- Slight undulations in the exterior surface ripple light and limit appearance of surface imperfections
- Composite panel simplifies design, reduces complexity, improves efficiency and reduces installation costs

Profile	Exterior		Embossed,Striated	
	Interior		Embossed, Lightly Planked, Mesa Rib	
Exterior Face Skin	24 Gauge G90/AZ50, Optional Gauges: 22 G90/AZ50			
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel			
Panel Module**	40"			
Lengths**	Minimum: 8', Maximum: 40'			
Side Lap	Double Tongue and Groove			
Thermal Performance†				
Thickness	2"	2.5"	3"	4"
R-Value @ 75°F mean (°F·ft2·h/BTU)	14	18	21	28
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.069	0.056	0.046	0.035
R-Value @ 35°F mean (°F·ft2·h/BTU)	16	20	24	32
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.061	0.049	0.041	0.031

** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

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Testing & Approvals

Category	Test	Test Title	Results
Fire	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Passed
	NFPA 286	Room Fire Growth for Wall and Ceiling Interior	Passed Maximum 6"[152mm] thickness
	NFPA 268	Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source	Assembly tested meets the requirements of the standard
	CAN/ULC S101 - 15 min	Fire Endurance	Maximum 6"[152mm] thick. Vertical and horizontal orientations
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	CAN/ULC S134	Exterior Wall Assembly	Maximum 6"[152mm] thick. Vertical orientations
	CAN/ULC S138	Room Corner Test	Maximum 6"[152mm] thick. Vertical and horizontal orientations
Water Penetration	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	No uncontrolled water penetration at 20 PSF differential pressure for a duration of 2-hours
Air Infiltration	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors	<0.01 CFM/ft2 of Panel Area at 20 PSF
Structural	FM 4881	Class 1 Exterior Wall Systems	See FM Approval Guide or contact Technical Services Minimum 2.5"[64mm] thickness
	ASTM E72	Standard Test Methods of Conducting Strength Tests of Panels for Building Construction	See Span Tables
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See Span Tables
Thermal	ASTM C518	Steady-State Thermal Transmission	Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	FBC	Florida Building Code	FL15060
	Miami-Dade NOA	Florida Building Code	NOA No. 19-0124.03
	LARR	Los Angeles Building Code	LARR No. 25697 / IAPMO ER-301
	IAPMO	Various Building Codes	ER-301

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All Weather Insulated Panels

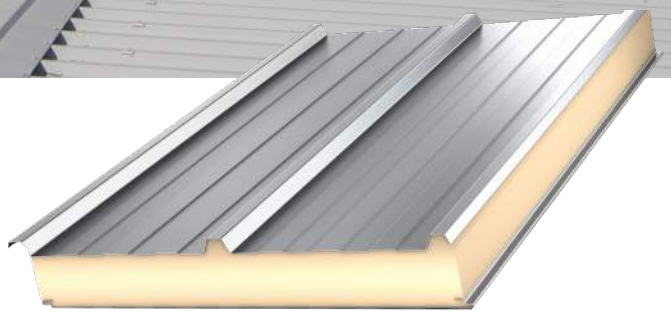
HR3

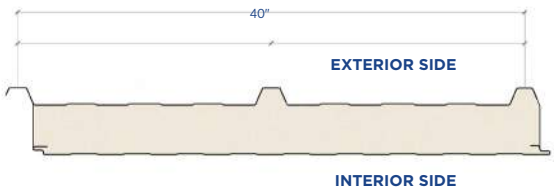
High Rib Roof Panel

AWIP PRODUCT DATA SHEET

Features & Benefits

- Rugged industrial aesthetic and faster installation achieved with exposed through fasteners
- Weathertight design for use in both retrofit or new construction applications
- Composite panel simplifies design, reduces complexity, improves efficiency and reduces installation costs
- Single component roof design includes exterior aesthetic, weather barrier, insulation and vapor barrier





Product Specifications

Profile	Exterior	Trapezoid			
	Interior	Embossed, Lightly Planked, Mesa Rib			
Exterior Face Skin	26 Gauge G90 Galvanized or AZ50 Galvalume. 24 and 22 Gauge optional				
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel				
Slope Requirements*	Minimum 1:12				
Panel Module**	40″				
Lengths**	Minimum: 8′, Maximum: 50′				
Side Lap	Exterior: Trapezoidal Overlap Interior: Shiplap				
Thermal Performance†					
Thickness	1.5″	2.5″	4″	5″	6″
R-Value @ 75°F mean (°F·ft2·h/BTU)	10	18	28	36	43
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.093	0.056	0.035	0.028	0.024
R-Value @ 35°F mean (°F·ft2·h/BTU)	12	20	32	41	49
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.082	0.049	0.031	0.025	0.021

*Contact AWIP for Custom Slope
** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

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Testing & Approvals

Category	Test	Test Title	Results
Fire	FM4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	NFPA 286	Room Corner Test	Pass Maximum of 6"
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	ASTM E108	Roof Coverings Fire Test	Pass**
	CAN/ULC S126	Fire Spread Under Roof	Pass
	CAN/ULC S138	Room Corner Test	Pass
Air Infiltration	ASTM E1680	Air Infiltration	<0.036 cfm/ft2 @ 20 PSF***
Water Penetration	ASTM E1646	Water Penetration	No leakage at 12 PSF***
Structural	FM 4471	FM Class 1 Panel Roof	Pass. See RoofNav for rated assemblies
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See load tables
Thermal	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	"Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	IAPMO	Various Building Codes	ER-301
	TDI	Texas Department of Insurance	RC-683

**Installation into steel supports only
***Tested at Flat/no roof slope

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All Weather Insulated Panels

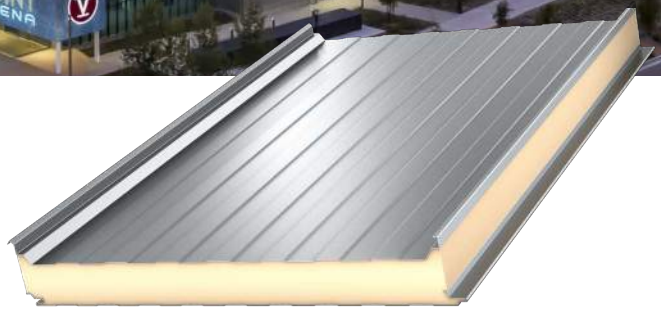
SR2

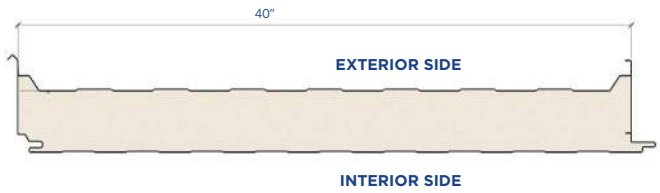
Standing Seam Roof Panel

AWIP PRODUCT DATA SHEET

Features & Benefits

- Field seamed, hidden fastener joinery provides clean appearance and protection against the elements
- Weathertight design for use in both retrofit or new construction applications
- Composite panel simplifies design, reduces complexity, improves efficiency and reduces installation costs
- Single component roof design includes exterior aesthetic, weather barrier, insulation and vapor barrier





Product Specifications

Profile	Exterior		Smooth	
	Interior		Embossed, Lightly Planked, Mesa Rib	
Exterior Face Skin	26 Gauge G90 Galvanized or AZ50 Galvalume. 24 and 22 Gauge optional			
Interior Face Skin	26 Gauge G90/AZ50, Optional Gauges: 24 and 22 G90/AZ50, 26 304 2B Stainless Steel			
Slope Requirements*	Minimum 1/2: 12			
Panel Module**	40"			
Lengths**	Minimum: 8', Maximum: 50'			
Side Lap	Exterior: Standing Seam Interior: Tongue and Groove			
Thermal Performance†				
Thickness	3.25"	4"	5"	6"
R-Value @ 75°F mean (°F·ft2·h/BTU)	23	28	36	43
U-Value @ 75°F mean (BTU/°F·ft2·h)	0.043	0.035	0.028	0.024
R-Value @ 35°F mean (°F·ft2·h/BTU)	26	32	41	49
U-Value @ 35°F mean (BTU/°F·ft2·h)	0.038	0.031	0.025	0.021

* Contact AWIP for Custom Slope
** Contact AWIP for Custom Sizes
† Thermal values as tested per ASTM C518

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Testing & Approvals

Category	Test	Test Title	Results
Fire	FM4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Passed: Class 1 Fire Rating of Building Panels or Interior Finish Material
	NFPA 286	Room Corner Test	Pass Maximum of 6"
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread Index: 25 or less Smoke Developed Index: 450 or less
	ASTM E108	Roof Coverings Fire Test	Pass**
	CAN/ULC S126	Fire Spread Under Roof	Pass
	CAN/ULC S138	Room Corner Test	Pass*
Air Infiltration	ASTM E1680	Air Infiltration	<0.01 cfm/ft2 @ 12 PSF***
Water Penetration	ASTM E1646	Water Penetration	No leakage at 20 PSF***
Structural	FM 4471	FM Class 1 Panel Roof	Pass. See RoofNav for rated assemblies.
	ASTM E1592	Structural Performance for Sheet Metal and Sidings Systems by Uniform Static Air Pressure Difference	See load tables
Thermal	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	"Nominal R-value of 7.2 [hr·ft2·°F/Btu] per inch at 75°F mean temperature and 8.2 [hr·ft2·°F/Btu] per inch at 35°F mean temperature
Code Approvals	IAPMO	Various Building Codes	ER-301
	FBC	Florida Building Code	FL14700
	TDI	Texas Department of Insurance	RC-684

*Not available for 3-1/4"
**Installation into steel supports only
***Tested at Flat/no roof slope

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OneDek®

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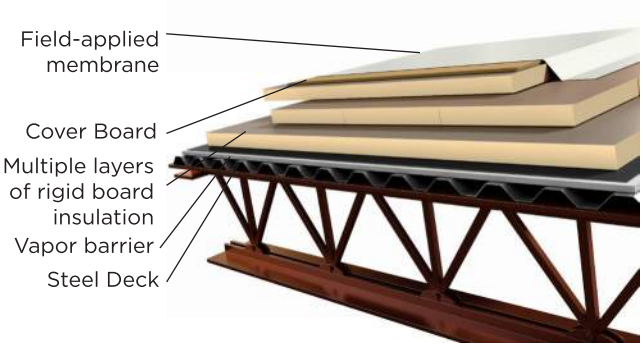
Your vision. Our purpose.

OneDek® by All Weather Insulated Panels is a superior alternative to traditional multi-layer low slope roof systems. Replacing steel b-deck and multiple layers of ISO board insulation, a OneDek® system requires fewer components and less steps to install, saving construction time, and labor, while providing exceptional energy efficiency for your roof system. An industry exclusive 20-year, no dollar limit, top-to-bottom "System Warranty" is available.

Traditional Multi-Layer Low Slope Roof Assembly



Multiple trades, many through penetrations, elevated risk.

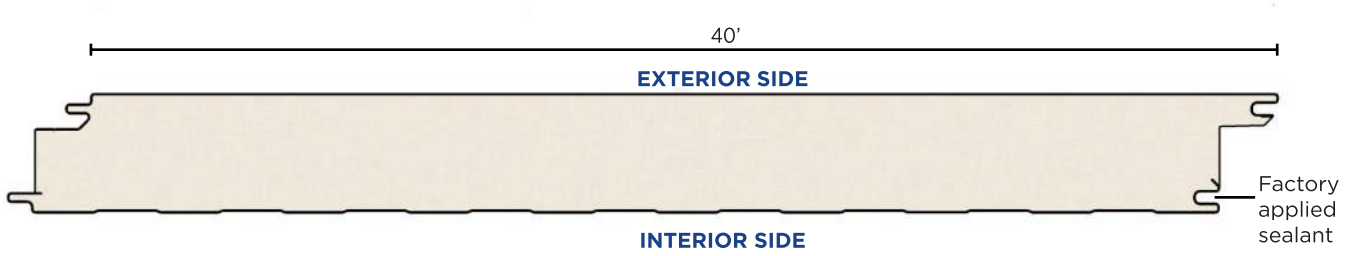
OneDek® Roof Assembly

Fewer components, fewer steps, single source.

All Weather Insulated Panels | OneDek®

Great for use in Commercial | Industrial | Controlled Environments

Insulated Roof Deck Dimensions



Feature	Function	Benefit
Fewer Components to skin the roof	Simplifies design, sourcing and installation time reduced significantly	Reduced lead-time, entire roof system, purlins out, delivered to site in 16-20wks.*
		Material costs are similar; lower installation costs; building dried in faster
		Materials, complexity, and costs are reduced
		Trucks to jobsite reduced up to 30%**
		Assembly steps reduced by up to 75%
Composite design of insulated roof deck	Foam core sandwiched between interior and exterior steel facing	Single component acting as decking, air and vapor barrier, insulation, and coverboard
	Insulated roof deck is weather resistant	Phased construction-Interior trades can work in parallel with membrane installation
	Provides a durable uniform surface	Walkable surface ideal for membrane installation without coverboard
	Closed cell foam	Water-resistant polyiso foam chemically bonded to steel facings
Fewer penetrations	Deck attachment fasteners into framing are the only through fasteners required	Significantly reduces number of through fasteners, reducing risk of failure
	Insulation fastener eliminated	Reduced installation time, risk of failure, and enhances interior appearance
	Membrane fasteners installed into exterior facing only	1-1/4" fasteners simplifies installation process and enhances interior appearance
20-year system WTW±	Provided by single manufacturer	Enhances roof value to owner
	Covers decking, insulation, membrane, and edge metal	Less risk if issues arise
Factory Painted Facings	Clean finished interior aesthetic	Eliminates the need for an aesthetic ceiling system
		Standard white finish can reduce interior lighting required†
		No field painting required eliminates cost
Various thicknesses available	Customizable thermal and structural performance specific to project requirements	No extra insulation layers or steps required to achieve R values 14-57 °F•ft2•h/BTU‡

* Lead-times based on date of publication. Please contact your local AWIP representative for current lead-times
** Reference OneDek® System Comparison Leveraging Product and Single Source Advantages Versus Traditional Systems
± Warranties subject to review, and may require components purchased from single manufacturer
† See color chart for alternative finish options
‡ As tested per ASTM C518 at 75° F mean temperature

FM APPROVED

Additional Note: Consult your AWIP Technical Services Representative or RoofNav for FM Approved Assemblies

AWIP | 001 | 7/1/2022

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Colors

All Weather Insulated Panels (AWIP) offers factory coating solutions for a multitude of building designs and performance requirements. Equipped with the latest cool color pigment technologies and a variety of specific formulations to protect your building envelope from the outside or the inside, AWIP has the paint system to match your task.

- Embossed metal surfaces are offered as a standard on wall panels and non-embossed (smooth) for roof panels. Non-embossed finishes may be available on wall panels upon request depending on color, gauge and end use.
- Premium colors, paint systems and special orders are subject to higher pricing and extended lead times.
- Complete paint system specifications and standard finish warranties are available upon request.

Standard SMP

IMPERIAL WHITE
SR .70 | E .86 | SRI 85

POLAR WHITE
SR .60 | E .87 | SRI 71

LIGHT STONE
SR .56 | E .87 | SRI 66

SANDSTONE
SR .60 | E .86 | SRI 71

BURNISHED SLATE
SR .32 | E .87 | SRI 33

SURREY BEIGE
SR .53 | E .86 | SRI 61

AdobeTexture®

REGAL WHITE
SR .68 | E .87 | SRI 82

PEARL GRAY
SR .45 | E .88 | SRI 51

SANDSTONE
SR .58 | E .87 | SRI 68

SURREY BEIGE
SR .48 | E .87 | SRI 51

Premium SMP

ASH GRAY
SR .46 | E .87 | SRI 52

GRIZZLE GRAY
SR .33 | E .87 | SRI 35

ALMOND
SR .63 | E .86 | SRI 75

TUNDRA
SR .44 | E .87 | SRI 49

Standard Interior Polyester

IMPERIAL WHITE
SR .66 | E .85 | SRI 79

The colors shown here are representative only and not necessarily true reproductions of actual coating colors. All performance data (SR, E and SRI) listed for SMP and PVDF, unless otherwise noted, are for AW500 and AW1000 finish systems, respectively.

For further information regarding color availability in nonstandard finish systems, please contact your local sales representative. Color chips are available upon request.

Standard PVDF*

REGAL WHITE
SR .72 | E .87 | SRI 88

LIGHT FRENCH GRAY
SR .60 | E .87 | SRI 71

PEARL GRAY
SR .49 | E .86 | SRI 56

TUNDRA
SR .45 | E .87 | SRI 51

ALMOND
SR .63 | E .87 | SRI 75

SURREY BEIGE
SR .48 | E .85 | SRI 54

MEDIUM BRONZE
SR .33 | E .86 | SRI 34

REDDENED EARTH
SR .44 | E .86 | SRI 49

SLATE GRAY
SR .40 | E .87 | SRI 44

SANDSTONE
SR .61 | E .85 | SRI 72

WARM WHITE
SR .64 | E .87 | SRI 77

ROYAL BLUE
SR .29 | E .86 | SRI 29

Premium PVDF*

SNOW WHITE
SR .67 | E .87 | SRI 81

PEPPERCORN
SR .33 | E .87 | SRI 35

VIRTUAL TAUPE
SR .40 | E .87 | SRI 44

WEATHERED COPPER
SR .28 | E .87 | SRI 28

COLONIAL RED**
SR .33 | E .87 | SRI 35

EVERGREEN
SR .28 | E .86 | SRI 27

SLATE BLUE
SR .30 | E .87 | SRI 31

NAVAL
SR .29 | E .87 | SRI 29

PVDF - MICA (2 COAT)*

PEWTER
SR .44 | E .84 | SRI 48

CHAMPAGNE METALLIC BRONZE
SR .34 | E .84 | SRI 35

CORTEN STEEL
SR .35 | E .88 | SRI 38

TEXTURED BRONZE
SR .34 | E .88 | SRI 48

*AWIP reserves the right to supply FEVE resin as a substitute for PVDF based on availability with or without notice. This substitution will not impact warranty or performance of the paint system.

**AW1250 Finish System

SECTION 13 34 19 - METAL BUILDING SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal building systems.
2. Structural-steel framing.
3. Metal wall panels.
4. Foamed-insulation-core metal wall panels.
5. Metal soffit panels.
6. Personnel doors and frames.
7. Horizontal sliding doors.
8. Windows.
9. Translucent panels.
10. Accessories.

B. Related Requirements:

1. Division 03 concrete Sections for anchor rod installation, concrete, reinforcement, and formwork requirements.
2. Section 074113 "Insulated Metal Roof Panel" for roof system.
3. Section 074213 "Insulated Metal Wall Panel" for wall system.
4. Section 077253 "Snow Guards" for devices designed to hold snow on the roof surface.
5. Section 083323 "Overhead Coiling Doors" for coiling vehicular doors in metal building systems.
6. Section 083613 "Sectional Doors" for sectional vehicular doors in metal building systems.

1.2 DEFINITIONS

A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in standards referenced by this Section.

B. Bay: Dimension between main frames measured normal to frame (at centerline of frame) for interior bays, and dimension from centerline of first interior main frame measured normal to end wall (outside face of end-wall girt) for end bays.

C. Building Length: Dimension of the building measured perpendicular to main framing from end wall to end wall (outside face of girt to outside face of girt).

D. Building Width: Dimension of the building measured parallel to main framing from sidewall to sidewall (outside face of girt to outside face of girt).

E. Clear Span: Distance between supports of beams, girders, or trusses (measured from lowest level of connecting area of a column and a rafter frame or knee).

F. Eave Height: Vertical dimension from finished floor to eave (the line along the sidewall formed by intersection of the planes of the roof and wall).

G. Clear Height under Structure: Vertical dimension from finished floor to lowest point of any part of primary or secondary structure, not including crane supports, located within clear span.

1.3 References

A. AISI S100 – North American Specification for the Design of Cold-Formed Steel Structural Members - Latest Edition.

B. AISC 360 - Specification for Structural Steel Buildings, Chicago, IL

C. AISC Steel Design Guide Series 3 - Serviceability Design Considerations for Low- Rise Building latest edition, Chicago, IL.

D. ASTM A36 - Specification for Carbon Structural Steel.

E. ASTM A325 - Specification for Structural Bolts, Steel, Heat Treated.

F. ASTM A475 - Specification for Zinc-Coated Steel Wire Strand.

G. ASTM A529 - Specification for High-Strength Carbon-Manganese Steel of Structural Quality.

H. ASTM A572 - Specification for High Strength Low-Alloy Columbium-Vanadium Steel.

I. ASTM A1011 SS or ASTM A1011HSLAS - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low- Alloy with Improved Formability.

J. ASTM A792 - Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot Dip Process.

K. ASTM A992 - Specification for Structural Steel Shapes.

L. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.

M. ASTM C1311 – Standard Specification for Solvent Release Sealants.

N. ASTM D1494 - Test Method for Diffuse Light Transmission Factor of Reinforced Plastic Panels.

O. ASTM D2244 - Practice for Calculation of Color Differences from Instrumentally Measured Color Coordinates.

P. ASTM D4214 - Test Method for Evaluating the Degree of Chalking of Exterior Paint

Films.

Q. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.

R. ASTM E283 - Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

S. ASTM E331 - Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference.

T. ASTM E1514 – Standard Specification for Structural Standing Seam Steel Roof Panel Systems.

U. ASTM E1592 - Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.

V. ASTM E1646 - Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.

W. ASTM E1680 - Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems.

X. ASTM E 2140 – Standard Test Method for Water penetration of Metal Roof Panel Systems by Static Water Pressure Head.

Y. AWS A2.4 - Standard Welding Symbols.

Z. AWS D1.1 - Structural Welding Code – Steel.

AA. AA. AWS D1.3 - Structural Welding Code - Sheet Steel.

BB. BB. FM4471 – Factory Mutual Research Corporation Standard 4471 Class 1.

CC. IAS - International Accreditation Service, Inc.

DD. MBMA Metal Building Systems Manual - Latest Edition.

EE. NAIMA 202 - Standard for Flexible Fiberglass Insulation Systems in Metal Buildings.

FF. UL 580 - Underwriters Laboratory -Tests for Uplift Resistance of Roof Assemblies .

GG. UL 790 – Underwriters Laboratory – Test Methods for Fire Tests of Roof Coverings.

HH. UL 2218 Underwriters Laboratory – Impact Resistance of Prepared Roof Covering Material.

II. SSPC-SP2 - Steel Structures Painting Council, Surface Preparation Specification No. 2, Hand Tool Cleaning.

JJ. ANS/SDI A250.8 Specifications for Standard Steel Doors and Frames (SDI-100).

KK. ASTM E119 – Standard Methods of Fire Tests of Building Construction and Materials.

1.4 COORDINATION

A. Coordinate sizes and locations of concrete foundations and casting of anchor-rod inserts into foundation walls and footings. Anchor rod installation, concrete, reinforcement, and formwork requirements are specified in Division 03 concrete Sections.

B. Coordinate imposed load of cranes , HVAC , electrical equipment, and piping loads specified in other Sections with structural performance requirements specified in this Section.

C. Exterior walls are covered with factory-finished insulated foam core wall panels attached to framing members and furring over masonry walls where shown. Provide all louvers.

D. Roof system consists of insulated foam core standing-seam metal roof panels. Provide all roof penetration seals. Coordinate installation of roof curbs, equipment supports, and roof penetrations, which are specified elsewhere.

E. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leak-proof, secure, and noncorrosive installation.

F. Manufacturer’s standard building structural components and accessories may be used, provided components, accessories, and complete structure conform to design indicated and specified requirements, including concrete masonry on the elevation.

G. The intent of this specification section is to provide the manufacturer’s standard insulated foam core metal panels that meet or exceed the specifications. In the event a manufacturer’s standard panel specification does not comply, the manufacturer is to supply panel products that exceed specified performance in all aspects.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conferences: Conduct conferences at Project site. Contractor, Manufacturer, Owner, and Architect of Record shall attend this conference.

1. Metal Building Systems Conference: Review methods and procedures related to metal building systems including, but not limited to, the following:

    a. Condition of foundations and other preparatory work performed by other trades.
    b. Structural load limitations.
    c. Construction schedule. Verify availability of materials and erector's personnel, equipment, and facilities needed to make progress and avoid delays.
    d. Required tests, inspections, and certifications.

e. Unfavorable weather and forecasted weather conditions and impact on construction schedule.

2. Metal Building Roof Panel Conference: Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:

a. Compliance with requirements for purlin and rafter conditions, including flatness and attachment to structural members.
b. Structural limitations of purlins and rafters during and after roofing.
c. Flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
d. Temporary protection requirements for metal roof panel assembly during and after installation.
e. Roof observation and repair after metal roof panel installation.

3. Metal Building Wall Panel Conference: Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:

a. Compliance with requirements for support conditions, including alignment between and attachment to structural members.
b. Structural limitations of girts and columns during and after wall panel installation.
c. Flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
d. Temporary protection requirements for metal wall panel assembly during and after installation.
e. Wall observation and repair after metal wall panel installation.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following.

a. Structural-steel-framing system.
b. Insulated foam core metal roof panels.
c. Insulated foam core metal wall panels.
d. Flashing and trim.
e. Accessories.

B. Shop Drawings: By manufacturer of metal building systems. Indicate components by others. Include full building plan, elevations, sections, details, and the following:

1. Anchor-Rod Plans: Submit anchor-rod plans and templates before foundation work begins. Include location, diameter, and minimum required projection of anchor rods required to attach metal building to foundation. Indicate column reactions at each location.
2. Structural-Framing Drawings: Indicate complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted

connections, distinguishing between shop and field applications. Include transverse cross-sections.

a. Indicate provisions for attaching cranes, roof curbs , and pipe racks.

3. Metal Panel Layout Drawings: Indicate roof and wall. layouts of panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, clip spacing, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; indicate locations of exposed fasteners.

a. Indicate roof-mounted items including roof hatches, equipment supports, pipe supports and penetrations, lighting fixtures, and items mounted on roof curbs.
b. Indicate wall-mounted items including personnel doors, vehicular doors, windows, louvers, and lighting fixtures.

4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches:

a. Flashing and trim.
b. Gutters.
c. Downspouts.
d. Louvers.
e. Roof Curbs.

C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.

D. Samples for Verification: Actual sample of finished products for each type of exposed finish.

1. Panels: 12 inches long by actual panel width. Include fasteners, closures, and other exposed panel accessories.
2. Flashing and Trim: Nominal 12 inches long. Include fasteners and other exposed accessories.
3. Vapor-Retarder Facings: Minimum **6-inch-** square Samples.
4. Accessories: Samples for each type of accessory.

E. Door Schedule: For doors and frames. Use same designations indicated on Drawings. Include details of reinforcement.

F. Delegated Design Submittals: For metal building systems, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.7 INFORMATIONAL SUBMITTALS

A. Letter of Design Certification: Signed and sealed by a qualified professional engineer. Include the following:

1. Name and location of Project.
2. Order number.
3. Name of manufacturer.
4. Name of Contractor.
5. Building dimensions including width, length, height, and roof slope.
6. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
7. Governing building code and year of edition.
8. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
9. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, in accordance with governing building code.
10. Torque requirements for bolted connections.
11. Building-Use Category: Indicate category of building use and its effect on load importance factors.
12. AISC Certification for Category MB: Include statement that metal building system and components were designed and produced in an AISC-Certified Facility by an AISC-Certified Manufacturer.
13. Design calculations.

B. Welding certificates.

C. Erector Certificates: For each product, from manufacturer, and signed by manufacturer certifying that the erector complies with requirements.

D. Manufacturer Certificates: For each product, from manufacturer, and signed by manufacturer certifying that products comply with requirements.

E. Material Test Reports: For each of the following products, by a qualified testing agency:

1. Structural steel including chemical and physical properties.
2. Bolts, nuts, and washers including mechanical properties and chemical analysis.
3. Tension-control, high-strength, and bolt-nut-washer assemblies.
4. Shop primers.
5. Nonshrink grout.

F. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for insulation and vapor-retarder facings. Include reports for thermal resistance, fire-test-response characteristics, water-vapor transmission, and water absorption.

G. Source quality control reports.

H. Field quality control reports.

I. Surveys: Show final elevations and locations of major members. Indicate discrepancies between actual installation and the Contract Documents. Have surveyor that performed surveys certify their accuracy.

J. Qualification Statements: For manufacturer erector land surveyor and professional engineer .

K. Delegated Design Engineer Qualifications: For metal building system.

L. Sample Warranties: For special warranties.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panel finishes .

B. Manufacturers inspection report.

1.9 MAINTENANCE MATERIAL SUBMITTALS

A. Extra Stock Material: Furnish extra materials , from the same production run, to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Component: 3% full length of wall panels. Review with district facilities administrator.
2. Provide 3% excess Nuts, Bolts, Screws, Washers and other required fasteners for each metal building.

1.10 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. AISC Certification for Category MB: An AISC-Certified Manufacturer that designs and produces metal building systems and components in an AISC-Certified Facility.
2. Engineering Responsibility: Metal building system design and preparation of comprehensive engineering analysis and Shop Drawings by a professional engineer who is legally qualified to practice in state where Project is located and who is experienced in providing engineering services of the type indicated.
3. Member of MBMA (Metal Building Manufacturing Association)

B. Delegated Design Engineer Qualifications: A professional engineer who is legally qualified to practice in state where Project is located and who is experienced in providing engineering services of the type indicated.

C. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

1. Minimum of 5 years’ experience in this or similar trade
2. Five similar installation references in past 3 years

D. Land Surveyor Qualifications: A professional land surveyor who practices in jurisdiction

where Project is located and who is experienced in providing surveying services of the kind indicated.

E. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

F. Welding Qualifications: Qualify procedures and personnel in accordance with the following welding codes:

1. AWS D1.1/D1.1M.
2. AWS D1.3/D1.3M.

G. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings," for design requirements and allowable stresses.

1. Domestic Steel Certificate: Certify compliance with Section 153.011 of the Ohio Revised Code.

H. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold- Formed Steel Structural Members" for design requirements and allowable stresses.

I. Fire-Resistance Ratings: Where indicated, provide metal panel assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.
2. Combustion Characteristics: ASTM E 136.

J. Egress Door Inspector Qualifications: Inspector for field quality-control inspections of egress door assemblies is to comply with qualifications set forth in NFPA 101, Section 7.2.1.15.4 and with the following:

1. DHI Fire and Egress Door Assembly Inspector (FDAI) certification.

1.11 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect foam-plastic insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic insulation materials to Project site before installation time.
3. Complete installation and concealment of foam-plastic materials as rapidly as possible in each area of construction.

1.12 FIELD CONDITIONS

A. Weather Limitations: Proceed with panel installation only when weather conditions permit metal panels to be installed in accordance with manufacturers' written installation instructions and warranty requirements.

B. Field Measurements:

1. Established Dimensions for Foundations: Comply with established dimensions on approved anchor-bolt plans, establishing foundation dimensions and proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.
2. Established Dimensions for Metal Panels: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements or allow for field trimming metal panels. Coordinate construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.13 WARRANTY

A. Special Warranty on Metal Panel Finishes: Manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period due to any cause.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

B. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight due to material or installation failure within specified warranty period with a NO dollar limit.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design metal building system.

B. Structural Performance: Metal building systems to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated in accordance with procedures in MBMA's "Metal Building Systems Manual":

1. Design Loads: As indicated on Drawings and as required by Ohio Building Code.

a. See also structural drawings for design loads
b. Live Loads: Include vertical loads induced by the building occupancy indicated on Drawings. Include loads induced by maintenance workers, materials, and equipment for roof live loads.
c. Building Occupancy: As indicated on Drawings.
d. Roof Snow Loads: Include vertical loads induced by the weight of snow, as determined by Ohio Building Code. Allow for unbalanced and drift loads.
e. Wind Loads: Include horizontal loads induced by a basic wind speed as required by Ohio Building Code
f. Collateral Loads: Collateral loads include additional dead loads over and above the weight of the metal building system such as liner system, rigid roof insulation, lighting, garage equipment, sprinkler systems and roof-mounted mechanical systems, make-up air units, door opening motors, canopies. Include individual mechanical units and not less than 5 LBF/SQ.FT loading.

1) Structural Framing and Roof and Siding Panels: Design primary and secondary structural members and exterior covering materials for applicable loads and combinations of loads in accordance with the Metal Building Manufacturers Association's (MBMA) "Design Practices Manual" and the Ohio Building Code. Provide framing to support make-up air units, exhaust fans, vehicle service reels and vehicle exhaust reels. Confirm loads with contractors for that work. Design connections to the pre- engineered structure for the masonry exterior walls. For smaller mechanical equipment items, respective mechanical trades Contractor to provide steel supports and connectors, but metal building supplier must provide connection details of hangers to the structure.

2) Contractors shall confirm weight and dimensions with manufacturer and coordinate final locations.

g. Auxiliary Loads: Include dynamic live loads, such as those generated by cranes and materials-handling equipment indicated on Drawings.

h. Load Combinations: Design metal building systems to withstand the most critical effects of load factors and load combinations as required by the Ohio Building Code

2. Deflection and Drift Limits:

a. Deflection to be no greater than the following:

1) Purlins and Rafters: Vertical deflection of 1/360 of the span under Live Load, Snow Load, or Wind Load and 1/240 of the span under Dead Load plus Live Load.
2) Girts: Horizontal deflection of 1/240 of the span.
3) Metal Roof Panels: Vertical deflection of 1/240 of the span.
4) Metal Wall Panels: Horizontal deflection of 1/180 of the span.
5) Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.
6) Lateral Drift: Maximum of 1/500 of the building height.
7) Metal panel assemblies shall withstand the effects of gravity loads and loads and stresses within limits and under conditions indicated according to ASTM E 1592.

C. Seismic Performance: Metal building system to withstand the effects of earthquake motions determined in accordance with Ohio Building Code.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

E. Structural Performance for Metal Panels: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing in accordance with ASTM E1592:

1. Wind Loads: As indicated on Drawings.

F. Air Infiltration for Metal Roof Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested in accordance with ASTM E1680 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft..

G. Air Infiltration for Metal Wall Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested in accordance with ASTM E283/E283M at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft..

H. Water Penetration for Metal Roof Panels: No water penetration when tested in accordance with ASTM E1646 at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft..

I. Water Penetration for Metal Wall Panels: No water penetration when tested in accordance with ASTM E331 at the following test-pressure difference:

1. Test-Pressure Difference: A minimum differential pressure of 20 percent of inward acting, wind load design pressure of not less than 6.24lbf/sqft (330 Pa) and not more than 12lbf/sq.ft (575 Pa).

J. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

K. FM Global Listing: Provide metal roof panels and component materials that comply with requirements in FM Global 4471 as part of a panel roofing system and that are listed in FM Approvals' "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.

1. Fire/Windstorm Classification: Class 1A- 105.
2. Hail Resistance: SH.

L. Thermal Performance for Opaque Elements: Provide the following maximum U-factors and minimum R-values when tested in accordance with ASTM C1363 or ASTM C518:

1. Roof:

a. R-Value: 30.

2. Walls:

a. R-Value: 27.

2.3 METAL BUILDING SYSTEMS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Metal building by Nucor Building Systems; a Nucor Company or comparable product by one of the following:

1. ACI Building Systems, Inc.
2. American Buildings Company; a Nucor company
3. Chief Buildings

B. System Description: Provide a complete, integrated set of mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather

without failure or infiltration of water into building interior.

1. Provide metal building system of size and with bay spacing, roof slopes, and spans as indicated in the construction document.
2. Primary-Frame Type:

    a. Rigid Clear Span: Solid-member, structural-framing system without interior columns.

3. End-Wall Framing:

    a. Manufacturer's standard, for buildings not required to be expandable, consisting of load-bearing end-wall and corner columns and rafters.

4. Secondary-Frame Type: Manufacturer's standard purlins and joists and exterior-framed (bypass) girts.
5. Eave Height: As indicated on Drawings.
6. Bay Spacing: As indicated on Drawings.
7. Roof Slope: 2 inches per 12 inches.
8. Roof System: Manufacturer's standard standing-seam, vertical-rib, insulated metal roof panels. Refer to section 074113 "Insulated Metal Roof Panels".
9. Exterior Wall System: Manufacturer's standard foamed-insulation-core metal wall panels.

2.4 STRUCTURAL-STEEL FRAMING

A. Structural Steel: Comply with AISC 360.

B. Bolted Connections: Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts."

C. Cold-Formed Steel: Comply with AISI S100 for design requirements and allowable stresses.

D. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafters, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.

    a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.

2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
3. Rigid Modular Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns

fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.

4. Truss-Frame, Clear-Span Frames: Rafter frames fabricated from joist girders, and I-shaped column sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
5. Truss-Frame Modular Frames: Rafter frames fabricated from joist girders, and I-shaped column sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.
6. Long-Bay Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.
7. Frame Configuration: Single gable.
8. Exterior Column: Tapered unless noted otherwise.
9. Rafter: Tapered.

E. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:

1. End-Wall and Corner Columns: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet.
2. End-Wall Rafters: C-shaped, cold-formed, structural-steel sheet; or I-shaped sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.

F. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:

1. Purlins:

   a. C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum **2-1/2-inch-** wide flanges.
   b. Steel joists of depths indicated on Drawings.

      1) Depth: Minimum depth as indicated. Greater depth as needed to comply with system performance requirements..

2. Girts: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form ends of Z-sections with stiffening lips angled 40 to 50 degrees from flange, with minimum **2-1/2-inch-** wide flanges.

   a. Depth: Minimum depth as indicated. Greater depth as needed to comply with system performance requirements..

3. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
4. Flange Bracing: Minimum **2-by-2-by-1/8-inch** structural-steel angles or **1-inch-**

diameter, cold-formed structural tubing to stiffen primary-frame flanges.

5. Sag Bracing: Minimum **1-by-1-by-1/8-inch** structural-steel angles.
6. Base or Sill Angles: Manufacturer's standard base angle, minimum **3-by-2-inch**, fabricated from zinc-coated (galvanized) steel sheet.
7. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
8. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.
9. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.

G. Bracing: Provide adjustable wind bracing using any method as follows:

1. Rods: ASTM A36/A36M; ASTM A572/A572M, Grade **50**; or ASTM A529/A529M, Grade **50**; minimum **1/2-inch-** diameter steel; threaded full length or threaded a minimum of **6 inches** at each end.
2. Cable: ASTM A475, minimum **1/4-inch-** diameter, extra-high-strength grade, Class B, zinc-coated, seven-strand steel; with threaded end anchors.
3. Angles: Fabricated from structural-steel shapes to match primary framing, of size required to withstand design loads.
4. Rigid Portal Frames: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
5. Fixed-Base Columns: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
6. Diaphragm Action of Metal Panels: Design metal building to resist wind forces through diaphragm action of metal panels.

H. Anchor Rods: Headed anchor rods as indicated in Anchor Rod Plan for attachment of metal building to foundation.

I. Materials:

1. W-Shapes: ASTM A992/A992M; ASTM A572/A572M, Grade **50 or 55**; or ASTM A529/A529M, Grade **50 or 55**.
2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A36/A36M; ASTM A572/A572M, Grade **50 or 55**; or ASTM A529/A529M, Grade **50 or 55**.
3. Plate and Bar: ASTM A36/A36M; ASTM A572/A572M, Grade **50 or 55**; or ASTM A529/A529M, Grade **50 or 55**.
4. Steel Pipe: ASTM A53/A53M, Type E or S, Grade B.
5. Cold-Formed Hollow Structural Sections: ASTM A500/A500M, Grade B or C, structural tubing.
6. Structural-Steel Sheet: Hot-rolled, ASTM A1011/A1011M, Structural Steel (SS), Grades **30 through 55**, or High-Strength Low-Alloy Steel (HSLAS) or High-Strength Low-Alloy Steel with Improved Formability (HSLAS-F), Grades **45 through 70**; or cold-rolled, ASTM A1008/A1008M, Structural Steel (SS), Grades **25 through 80**, or HSLAS, Grades **45 through 70**.

7. Metallic-Coated Steel Sheet: ASTM A653/A653M, SS, Grades **33 through 80**, or HSLAS or HSLAS-F, Grades **50 through 80**; with **G60** coating designation; mill phosphatized.
8. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A755/A755M.

    a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, SS, Grades **33 through 80**, or HSLAS or HSLAS-F, Grades **50 through 80**; with **G90** coating designation.
    b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792/A792M, SS, Grade **50 or 80**; with Class **AZ50** coating.

9. Joist Girders: Manufactured in accordance with "Standard Specifications for Joist Girders," in SJI's "Standard Specifications, Load Tables, and Weight Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for primary framing.
10. Steel Joists: Manufactured in accordance with "Standard Specifications for Open Web Steel Joists, K-Series," in SJI's "Standard Specifications, Load Tables, and Weight Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for secondary framing.
11. Non-High-Strength Bolts, Nuts, and Washers: ASTM A307, Grade A, carbon-steel, hex-head bolts; ASTM A563/A563M carbon-steel hex nuts; and ASTM F844 plain (flat) steel washers.

    a. Finish: Mechanically deposited zinc coating, ASTM B695, Class 50.

12. High-Strength Bolts, Nuts, and Washers, Grade A325 (Grade A325M): ASTM F3125/F3125M, Type 1, heavy-hex steel structural bolts; ASTM A563/A563M, **Grade DH**, heavy-hex carbon-steel nuts; and ASTM F436/F436M, Type 1, hardened carbon-steel washers.

    a. Finish: Mechanically deposited zinc coating, ASTM B695, Class 50.

J. Finish: Factory primed. Apply specified primer immediately after cleaning and pretreating.

1. Clean and prepare in accordance with SSPC-SP2.
2. Coat with manufacturer's standard primer. Apply primer to primary and secondary framing to a minimum dry film thickness of **1 mil**.

    a. SSPC-Paint 15, Type I, red oxide.
    b. Prime secondary framing formed from uncoated steel sheet to a minimum dry film thickness of **0.5 mil** on each side.

2.5 METAL ROOF PANELS

A. Refer to Section 074116 "Insulated Metal Roof Panel" for roof system.

2.6 METAL WALL PANELS

A. Refer to Section 074213.19 "Insulated Metal Wall Panel" for exterior wall system.

B. Flush-Profile, Metal Liner Panels : Solid panels formed with vertical panel edges and intermediate stiffening ribs symmetrically spaced between panel edges; with flush joint between panels; designed for interior side of metal wall panel assemblies and installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps.

1. Material: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.024-inch nominal uncoated steel thickness. Prepainted by the coil-coating process to comply with ASTM A755/A755M.

   a. Exterior Finish: Polyester.
   b. Color: Igloo White.

2. Panel Coverage: 12 inches.
3. Panel Height: 1.5 inches.

C. Finishes:

1. Exposed Coil-Coated Finish:

   a. Two-Coat Fluoropolymer: Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of **0.5 mil**.

2.7 PERSONNEL DOORS AND FRAMES

A. Swinging Personnel Doors and Frames:

1. As specified in Section 081113 "Hollow Metal Doors and Frames."

2.8 WINDOWS

A. Aluminum Windows:

1. As specified in Section 085113 "Aluminum Windows."

2.9 ACCESSORIES

A. General: Provide accessories as standard with metal building system manufacturer

and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

B. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including copings, fasciae, corner units, ridge closures, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same material as metal roof panels.
2. Clips: Manufacturer's standard, formed from steel sheet, designed to withstand negative-load requirements.
3. Cleats: Manufacturer's standard, mechanically seamed cleats formed from steel sheet.
4. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
5. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum **1-inch-** thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including copings, fasciae, mullions, sills, corner units, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same material as metal wall panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum **1-inch-** thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

D. Flashing and Trim: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.022-inch** nominal uncoated steel thickness, prepainted with coil coating; finished to match adjacent metal panels.

1. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
2. Opening Trim: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, nominal uncoated steel thickness, prepainted with coil coating. Trim head and jamb of door openings, and head, jamb, and sill of other openings.

E. Gutters: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.0022-inch** nominal uncoated steel thickness, prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum **40 foot-** long sections, sized in accordance with manufacturer's written instructions.

1. Gutter Supports: Fabricated from same material and finish as gutters. Spaced 36 inches o.c.
2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.

F. Downspouts: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.018-inch** nominal uncoated steel thickness, prepainted with coil coating; finished to match metal wall panels. Fabricate in minimum **10-ft.-** long sections, complete with formed elbows and offsets.

1. Mounting Straps: Fabricated from same material and finish as gutters. Spaced 5 feet o.c.

G. Louvers: Size and design indicated; self-framing and self-flashing. Fabricate welded frames from zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.052-inch** nominal uncoated steel thickness; finished to match metal wall panels. Form blades from zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.040-inch** nominal uncoated steel thickness; folded or beaded at edges, set at an angle that excludes driving rains, and secured to frames by riveting or welding. Fabricate louvers with equal blade spacing to produce uniform appearance.

1. Blades:

   a. Fixed.

2. Free Area: Not less than 7.0 sq. ft. for **48-inch-** wide by **48-inch-** high louver.
3. Bird Screening: Galvanized steel, **1/2-inch-** square mesh, **0.041-inch** wire; with rewirable frames, removable and secured with clips; fabricated of same kind and form of metal and with same finish as louvers.

   a. Mounting: Interior face of louvers.

4. Vertical Mullions: Provide mullions at spacings recommended by manufacturer, or **72 inches** o.c., whichever is less.

H. Roof Curbs: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.052-inch** nominal uncoated steel thickness prepainted with coil coating; finished to match metal roof panels; with welded top box and bottom skirt, and integral full-length cricket; capable of withstanding loads of size and height indicated.

1. Curb Subframing: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, **0.064-inch** nominal uncoated steel thickness, angle-, C-, or Z-shaped metallic-coated steel sheet.
2. Insulation: **2-inch-** thick, rigid type.

I. Pipe Flashing: Premolded, EPDM pipe collar with flexible aluminum ring bonded to

base.

J. Snow Guards: Refer to Section "077253"

K. Materials:

1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.
2. Fasteners for Metal Roof Panels:

    a. Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws, with a stainless steel cap or zinc-aluminum-alloy head and EPDM sealing washer.

3. Fasteners for Metal Wall Panels:

    a. Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws , with EPDM sealing washers bearing on weather side of metal panels.

4. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
5. Blind Fasteners: High-strength aluminum or stainless steel rivets.
6. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for **15-mil** dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
7. Nonmetallic, Shrinkage-Resistant Grout: ASTM C1107/C1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
8. Metal Panel Sealants:

    a. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
    b. Joint Sealant: ASTM C920; one part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by metal building system manufacturer.

2.10 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members to be free of cracks, tears,

and ruptures.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

1. Make shop connections by welding or by using high-strength bolts.
2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.
4. Weld clips to frames for attaching secondary framing if applicable, or punch for bolts.
5. Shop Priming: Prepare surfaces for shop priming in accordance with SSPC-SP 2. Shop prime primary framing with specified primer after fabrication.

D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll forming or break forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

1. Make shop connections by welding or by using non-high-strength bolts.
2. Shop Priming: Prepare uncoated surfaces for shop priming in accordance with SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.

E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

2.11 SOURCE QUALITY CONTROL

A. Special Inspection: Owner will engage a qualified special inspector to perform source quality control inspections and to submit reports.

B. Testing: Test and inspect shop connections for metal buildings according to the following:

1. Bolted Connections: Shop-bolted connections shall be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
2. Welded Connections: In addition to visual inspection, shop-welded connections

shall be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at inspector's option:

a. Liquid Penetrant Inspection: ASTM E 165.
b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
c. Ultrasonic Inspection: ASTM E 164.
d. Radiographic Inspection: ASTM E 94.

C. Product will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

1. Engage land surveyor to perform surveying.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare surfaces to be painted in accordance with manufacturer's written instructions for each particular substrate condition.

B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

A. Erect metal building system in accordance with manufacturer's written instructions and erection drawings.

B. Do not field cut, drill, or alter structural members without written approval from metal

building system manufacturer's professional engineer.

C. Set structural framing accurately in locations and to elevations indicated, in accordance with AISC specifications referenced in this Section. Maintain structural stability of frame during erection.

D. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.

F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.

1. Make field connections using high-strength bolts installed in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt type and joint type specified.

a. Joint Type: Snug tightened or pretensioned as required by manufacturer.
b. Building manufacturer to provide torque requirements for high strength bolt connections.
c. Contractor to coordinate with Owner’s employed third party testing agency confirming bolted connections are installed per metal building manufacturer’s recommendations.

G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.

1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
2. Locate and space wall girts to suit openings such as doors and windows.
3. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.

H. Steel Joists and Joist Girders: Install joists , girders, and accessories plumb, square, and true to line; securely fasten to supporting construction in accordance with SJI's "Standard Specifications, Load Tables, and Weight Tables for Steel Joists and Joist Girders," joist manufacturer's written instructions, and requirements in this Section.

1. Before installation, splice joists delivered to Project site in more than one piece.
2. Space, adjust, and align joists accurately in location before permanently fastening.
3. Install temporary bracing and erection bridging, connections, and anchors to ensure that joists are stabilized during construction.
4. Joint Installation:

    a. Bolt joists to supporting steel framework using high-strength structural bolts unless otherwise indicated. Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for high-strength structural bolt installation and tightening requirements.

5. Install and connect bridging concurrently with joist erection, before construction loads are applied. Anchor ends of bridging lines at top and bottom chords if terminating at walls or beams.

I. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.

1. Tighten rod and cable bracing to avoid sag.
2. Locate interior end-bay bracing only where indicated.

J. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.

K. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.

3.4 INSTALLATION OF METAL PANELS, GENERAL

A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.

1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.

C. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.

    a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.

2. Install metal panels perpendicular to structural supports unless otherwise indicated.
3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Locate metal panel splices over structural supports with end laps in alignment.
6. Lap metal flashing over metal panels to allow moisture to run over and off the material.

D. Lap-Seam Metal Panels: Install screw fasteners using power tools with controlled torque adjusted to compress EPDM washers tightly without damage to washers, screw threads, or metal panels. Install screws in predrilled holes.

1. Arrange and nest side-lap joints so prevailing winds blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation. Apply metal panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.

E. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.

F. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants indicated; or, if not indicated, provide types used in tested assemblies meeting "Performance Requirements" Article.

1. Seal metal panel end laps with double beads of tape or sealant the full width of panel. Seal side joints where recommended by metal panel manufacturer.
2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

3.5 INSTALLATION OF METAL WALL PANELS

A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts, extending full height of building, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Unless otherwise indicated, begin metal panel installation at corners with center of rib lined up with line of framing.
2. Shim or otherwise plumb substrates receiving metal wall panels.

3. When two rows of metal panels are required, lap panels **4 inches** minimum.
4. When building height requires two rows of metal panels at gable ends, align lap of gable panels over metal wall panels at eave height.
5. Rigidly fasten base end of metal wall panels and allow eave end free movement for thermal expansion and contraction. Predrill panels.
6. Flash and seal metal wall panels with weather closures at eaves and rakes, and at perimeter of all openings. Fasten with self-tapping screws.
7. Install screw fasteners in predrilled holes.
8. Install flashing and trim as metal wall panel work proceeds.
9. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated on Drawings; if not indicated, as necessary for waterproofing.
10. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws.
11. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.

B. Metal Wall Panels: Install metal wall panels on exterior side of girts. Attach metal wall panels to supports with fasteners as recommended by manufacturer using sealants and gaskets as required for a watertight installation.

C. Insulated Metal Wall Panels: Install insulated metal wall panels on exterior side of girts. Attach panels to supports at each panel joint using concealed clip and fasteners at maximum **42 inches** o.c., spaced not more than manufacturer's written instruction. Fully engage tongue and groove of adjacent insulated metal wall panels. Refer to Section 074213.19 "Insulated Metal Wall Panels" for additional installation information.

1. Install clips to supports with self-tapping fasteners.
2. Apply continuous ribbon of sealant to panel joint on concealed side of insulated metal wall panels as vapor seal; apply sealant to panel joint on exposed side of panels as weather seal.

D. Installation Tolerances: Shim and align metal wall panels within installed tolerance of **1/4 inch in 20 ft.**, noncumulative; level, plumb, and on location lines; and within **1/8-inch** offset of adjoining faces and of alignment of matching profiles.

3.6 INSTALLATION OF METAL SOFFIT PANELS

A. Provide metal soffit panels the full width of soffits. Install panels perpendicular to support framing.

B. Flash and seal metal soffit panels with weather closures where panels meet walls and at perimeter of all openings.

3.7 INSTALLATION OF DOORS AND FRAMES

A. See door schedule on drawings and other specification sections for man-door and overhead doors.

B. General: Install doors and frames plumb, rigid, properly aligned, and securely fastened in place in accordance with manufacturers' written instructions. Coordinate installation with wall flashings and other components. Seal perimeter of each door frame with elastomeric sealant used for metal wall panels.

C. Personnel Doors and Frames: Install doors and frames in accordance with NAAMM-HMMA 840. Fit non-fire-rated doors accurately in their respective frames, with the following clearances:

1. Between Doors and Frames at Jambs and Head: **1/8 inch**.
2. Between Edges of Pairs of Doors: **1/8 inch**.
3. At Door Sills with Threshold: **3/8 inch**.
4. At Door Sills without Threshold: **3/4 inch**.

D. Door Hardware:

1. Install surface-mounted items after finishes have been completed at heights indicated in DHI's TDH-009.
2. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
3. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
4. Set thresholds for exterior doors in full bed of sealant complying with requirements for concealed mastics specified in Section 079200 "Joint Sealants."

3.8 INSTALLATION OF WINDOWS

A. General: Install windows plumb, rigid, properly aligned, without warp or rack of frames or sash, and securely fasten in place in accordance with manufacturer's written instructions. Coordinate installation with wall flashings and other components. Seal perimeter of each window frame with elastomeric sealant used for metal wall panels.

1. Separate dissimilar materials from sources of corrosion or electrolytic action at points of contact with other materials by complying with requirements specified in AAMA/WDMA/CSA 101/I.S.2/A440.

B. Set sill members in bed of sealant or with gaskets, for weathertight construction.

C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.

D. Mount screens directly to frames with tapped screw clips.

3.9 INSTALLATION OF ACCESSORIES

A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.

B. Flashing and Trim: Comply with performance requirements and manufacturer's written installation instructions. Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of **10 ft.** with no joints allowed within **24 inches** of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than **1 inch** deep, filled with mastic sealant (concealed within joints).

C. Gutters: Join sections with riveted-and-soldered or lapped-and-sealed joints. Attach gutters to eave with gutter hangers spaced as required for gutter size, but not more than **36 inches** o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

D. Downspouts: Join sections with **1-1/2-inch** telescoping joints. Provide fasteners designed to hold downspouts securely **1 inch** away from walls; locate fasteners at top and bottom and at approximately **60 inches** o.c. in between.

1. Tie downspouts to underground drainage system indicated.

E. Louvers: Locate and place louver units level, plumb, and at indicated alignment with adjacent work.

1. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
2. Provide perimeter reveals and openings of uniform width for sealants and joint fillers.
3. Protect galvanized- and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of corrosion-resistant paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
4. Install concealed gaskets, flashings, joint fillers, and insulation as louver installation progresses, where weathertight louver joints are required. Comply

with Section 079200 "Joint Sealants" for sealants applied during louver installation.

F. Roof Curbs: Install curbs at locations indicated on Drawings. Install flashing around bases where they meet metal roof panels.

G. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to panel as recommended by manufacturer.

3.10 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform field quality control special inspections and to submit reports.

B. Prepare test and inspection reports.

3.11 ADJUSTING

A. Doors: After completing installation, test and adjust doors to operate easily, free of warp, twist, or distortion.

B. Door Hardware: Adjust and check each operating item of door hardware and each door to ensure proper operation and function of every unit. Replace units that cannot be adjusted to operate as intended.

C. Windows: Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and at weather stripping to ensure smooth operation and weathertight closure. Lubricate hardware and moving parts.

3.12 CLEANING AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint in accordance with ASTM A780/A780M and manufacturer's written instructions.

B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

C. Touchup Painting:

1. After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing , bearing plates, and accessories.

    a. Clean and prepare surfaces by SSPC-SP 2 or SSPC-SP 3.
    b. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

D. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished

surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

E. Doors and Frames: Immediately after installation, sand rusted or damaged areas of prime coat until smooth and apply touchup of compatible air-drying primer.

1. Immediately before final inspection, remove protective wrappings from doors and frames.

F. Windows: Clean metal surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances. Clean factory-glazed glass immediately after installing windows.

G. Louvers: Clean exposed surfaces that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.

1. Restore louvers damaged during installation and construction period so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.

a. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

END OF SECTION 13 34 19