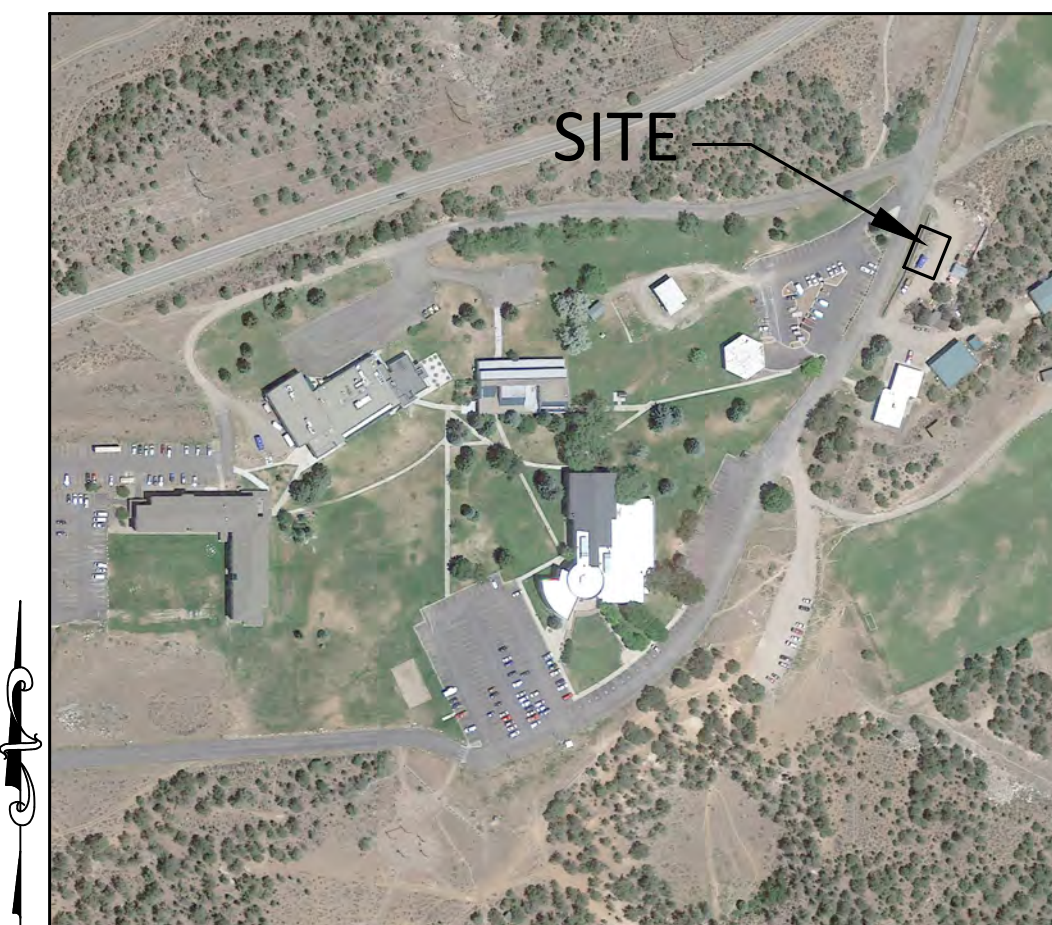
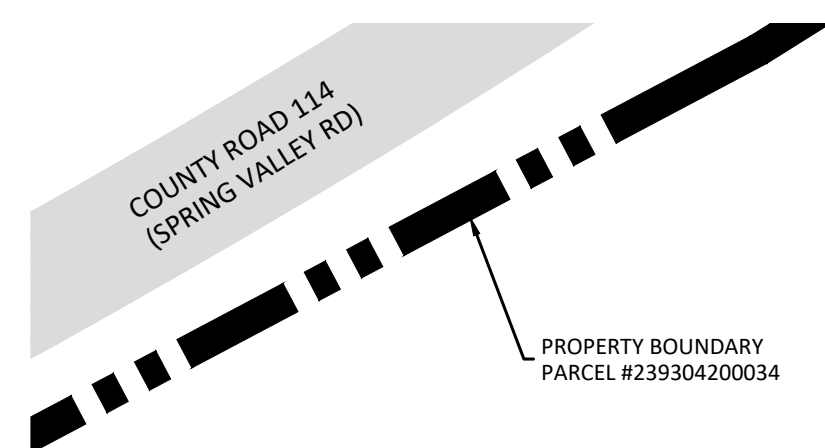




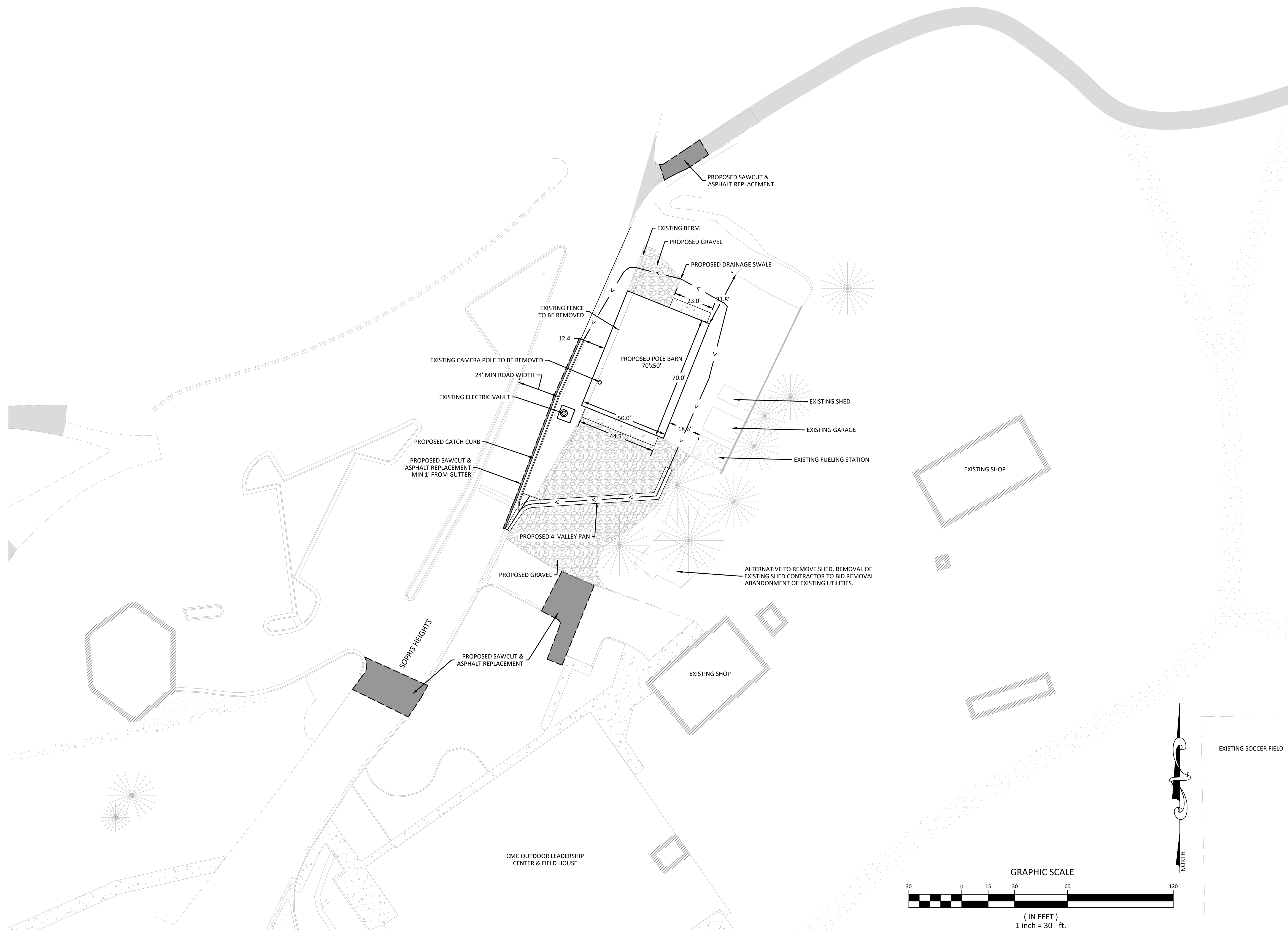
A PARCEL OF LAND SITUATED IN SECTION 4, TOWNSHIP 7 SOUTH, RANGE 88 WEST OF THE 6th P.M.  
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO



## VICINITY MAP

CIVIL PLAN INDEX

- |       |                             |
|-------|-----------------------------|
| C-1.0 | COVER & GENERAL NOTES SHEET |
| C-2.0 | EXISTING CONDITIONS SURVEY  |
| C-3.0 | GRADING & DRAINAGE PLAN     |
| C-4.0 | UTILITY PLAN                |
| C-5.0 | SITE DETAILS                |



DATE:		07-09-25
JOB NO.		33183
DESIGNED BY	AKC	
DRAWN BY	AKC	
CHECKED BY	CHC	

CMC SPRING VALLEY POLE BARN  
GLENWOOD SPRINGS, COLORADO

BUILDING PERMIT

[illegible]

TITLE	COVER SHEET & GENERAL NOTES
-------	--------------------------------

DRAWING NO.
-------------

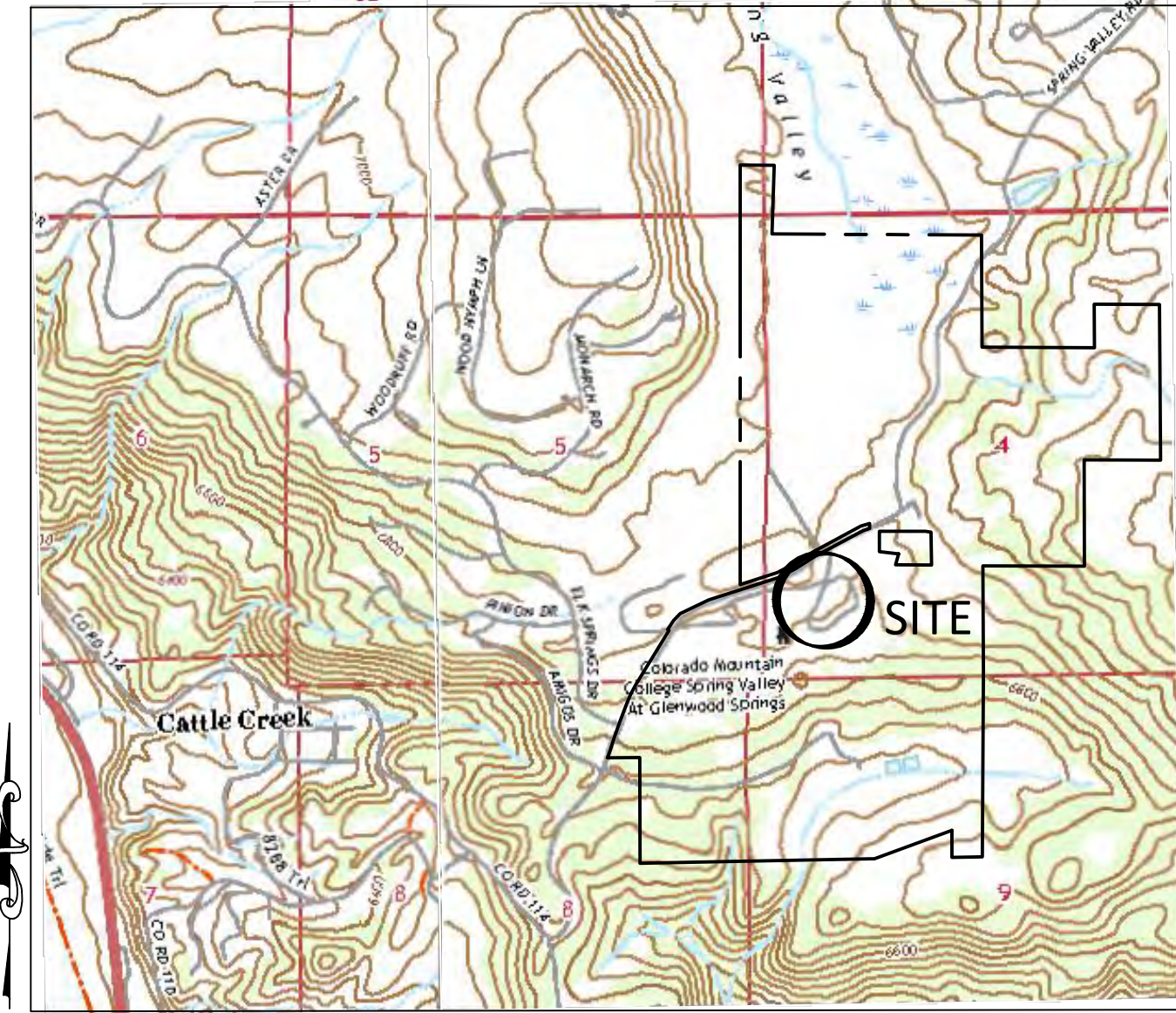
C-1.0



Know what's **below**.  
**Call** before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

A PARCEL OF LAND SITUATED IN SECTION 4, TOWNSHIP 7 SOUTH, RANGE 88 WEST OF THE 6th P.M.  
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO




VICINITY MAP

SCALE: 1"=2000'

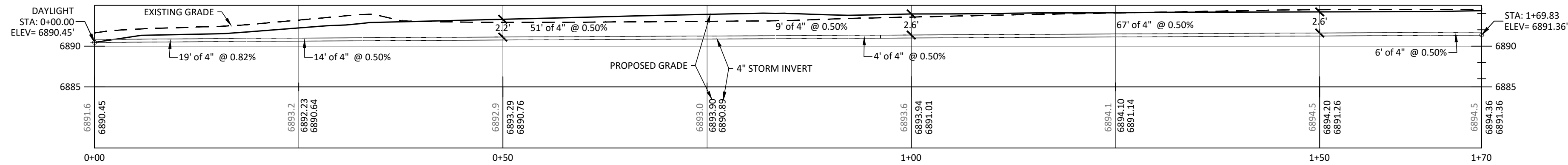
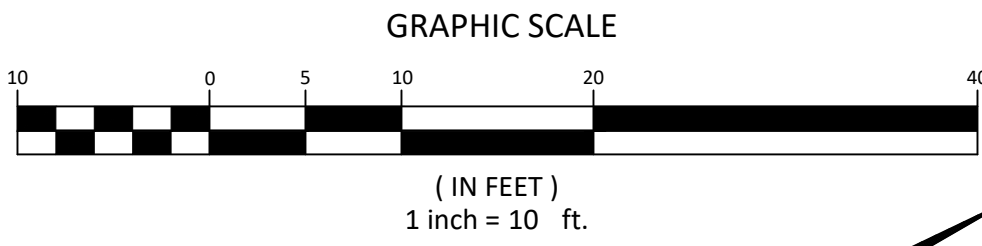
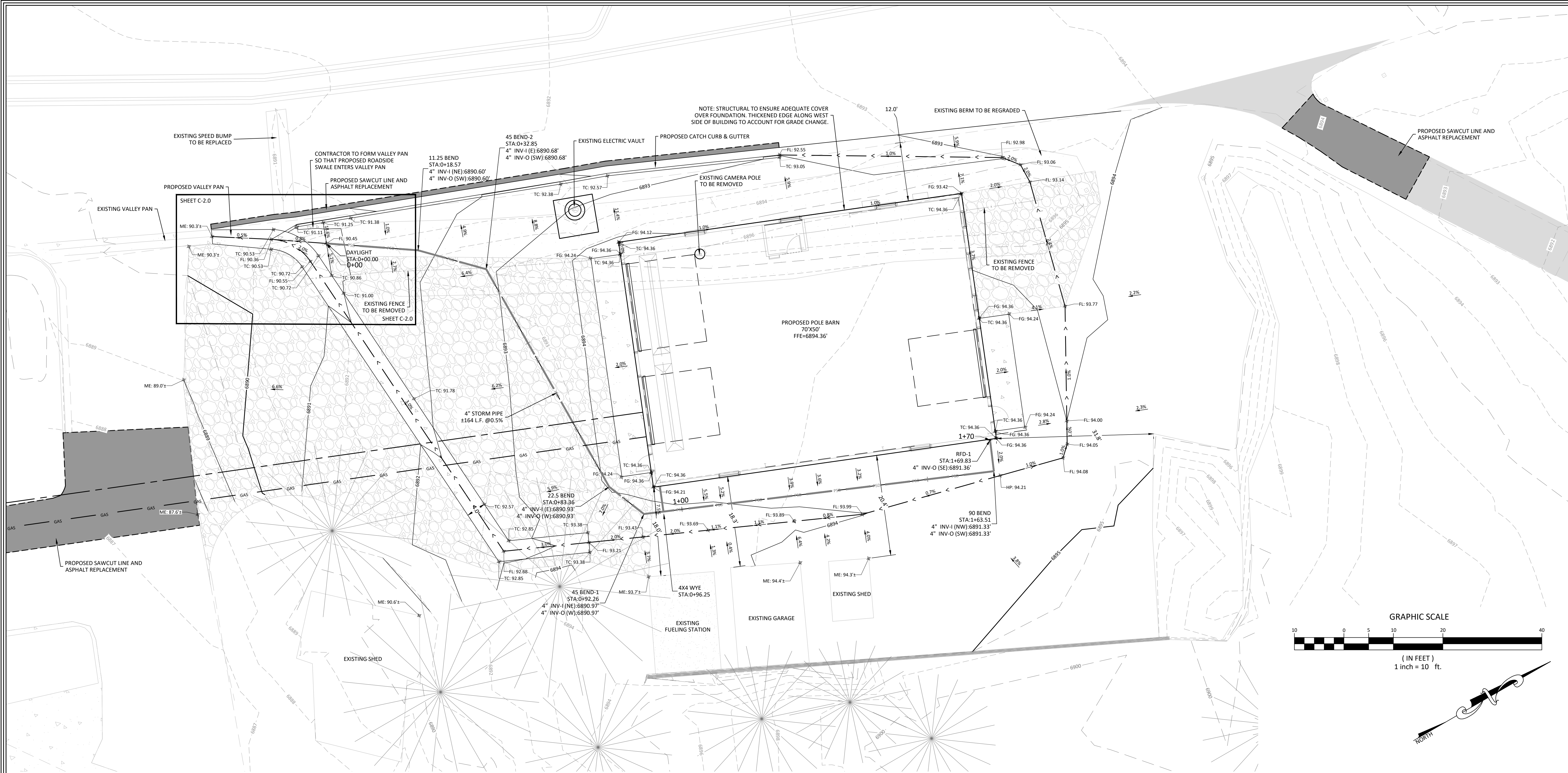
- 1) Date of Field Work: June 2025 (see Note 4).
- 2) Date of Preparation: July 2025.
- 3) Basis of Bearing: see note 4.
- 4) Basis of Survey: The existing conditions shown hereon were supplied to SE by Colorado Mountain College, based upon that Master Utility Plat prepared by High Country Engineering, under Project No 2081608.00, dated June 4, 2008, verified and supplemented with field work per Note 1, as shown hereon.
- 5) This survey does not constitute a title search by Sopris Engineering, LLC (SE) to determine ownership or easements of record. For all information regarding easements, rights of way and/or title of record, SE relied upon the above said plats described in note 4. No title commitment was used in the preparation of this survey.
- 6) Contour Interval: One (1) foot.
- 7) The existing conditions map in no way represents a land survey plat or boundary survey of the shown properties.

	EXISTING CONTOUR
	EXISTING CONTOUR INTERVAL
	EXISTING 8" WATER MAIN
	EXISTING UNDERGROUND ELECTRIC
	EXISTING 6" SANITARY SEWER MAIN
	EXISTING GAS
	EXISTING FIBER OPTIC
	EXISTING TELEPHONE
	EXISTING 6" WATER LINE
	EXISTING SEWER MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING CURB STOP
	EXISTING LIGHT POLE
	EXISTING TELEPHONE MANHOLE
	EXISTING SIGN
	EXISTING GRAVEL
	EXISTING PINE TREE
	EXISTING DECIDUOUS TREE



 <p><b>SOPRIS ENGINEERING LLC</b> 502 MAIN STREET • SUITE A3 • CARBONDALE CO 81623 (970) 704-0311 • soprisengineering.com</p>	
DATE:	07-29-25
JOB NO.	33183
DESIGNED BY	AKC
DRAWN BY	AKC
CHECKED BY	CHC
<p><b>CMC SPRING VALLEY POLE BARN</b> <b>GLENWOOD SPRINGS, COLORADO</b></p> <p><b>BUILDING PERMIT</b></p>	
DATE	REVISION
<p>TITLE</p> <p><b>EXISTING CONDITIONS SURVEY</b></p>	
<p>DRAWING NO.</p> <p><b>C-2.0</b></p>	

G:\2023\13183-CMC SPRING VALLEY\CMV\DWG\13183.DWG - Aug 04, 2025 - 2:09pm



#### EXISTING LEGEND

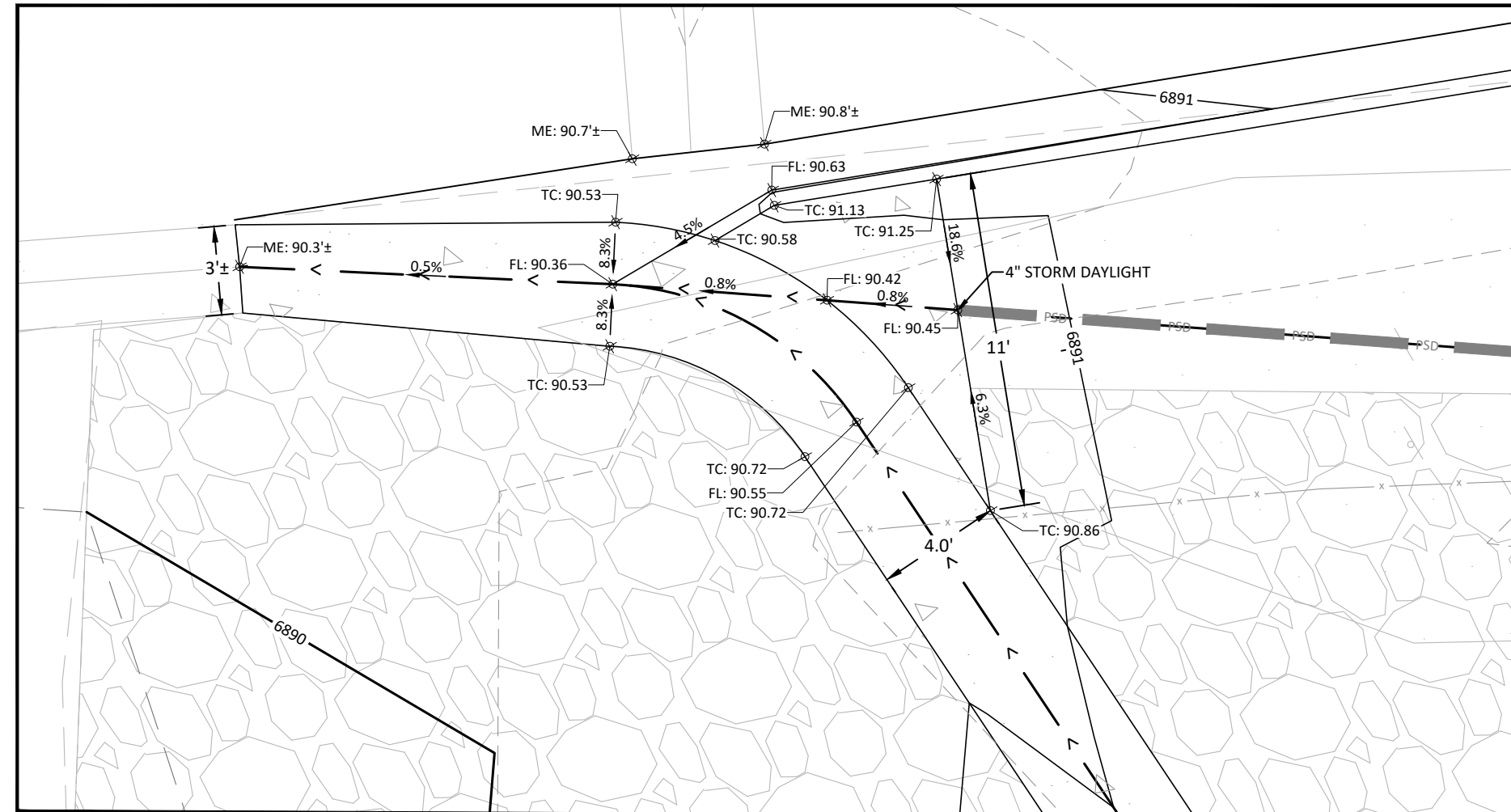
---	EXISTING CONTOUR
---	EXISTING CONTOUR INTERVAL
XXL	EXISTING 8" WATER MAIN
XEL	EXISTING UNDERGROUND ELECTRIC
XSA	EXISTING 8" SANITARY SEWER MAIN
XGAS	EXISTING GAS
XFO	EXISTING FIBER OPTIC
XUT	EXISTING TELEPHONE
⊙	EXISTING ELECTRIC MANHOLE
⊙	EXISTING SEWER MANHOLE
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING WATER VALVE
⊙	EXISTING CURB STOP
⊙	EXISTING ELECTRIC TRANSFORMER
⊙	EXISTING LIGHT POLE
⊙	EXISTING TELEPHONE MANHOLE
⊙	EXISTING SIGN
---	EXISTING BERM

#### PROPOSED LEGEND

---	PROPOSED CONTOUR
---	PROPOSED CONTOUR INTERVAL
---	PROPOSED SWALE OR DITCH
---	PROPOSED STORM SEWER
---	PROPOSED FIBER VAULT
---	PROPOSED CONCRETE
---	PROPOSED STREET CUT
---	PROPOSED GRAVEL

#### SPOT ELEVATION LEGEND

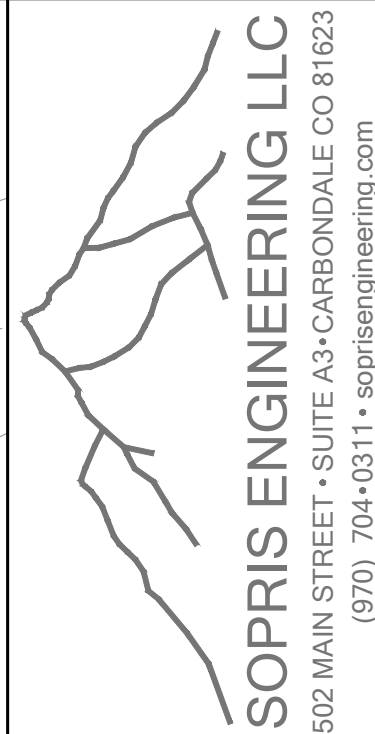
FG	= FINISHED GRADE
FL	= FLOW LINE
HP	= HIGH POINT
LP	= LOW POINT
ME	= MATCH EXISTING
TC	= TOP OF CONCRETE
---	DRAINAGE DIRECTION/SLOPE
---	SPOT ELEVATION
---	EXAMPLE: TOP OF CONCRETE @ 7900.00' =



DETAILED GRADING  
VALLEY PAN/CURB/DAYLIGHT INTERSECTION  
SCALE: 1" = 5'

## CMC SPRING VALLEY GARFIELD COUNTY, COLORADO

### BUILDING PERMIT



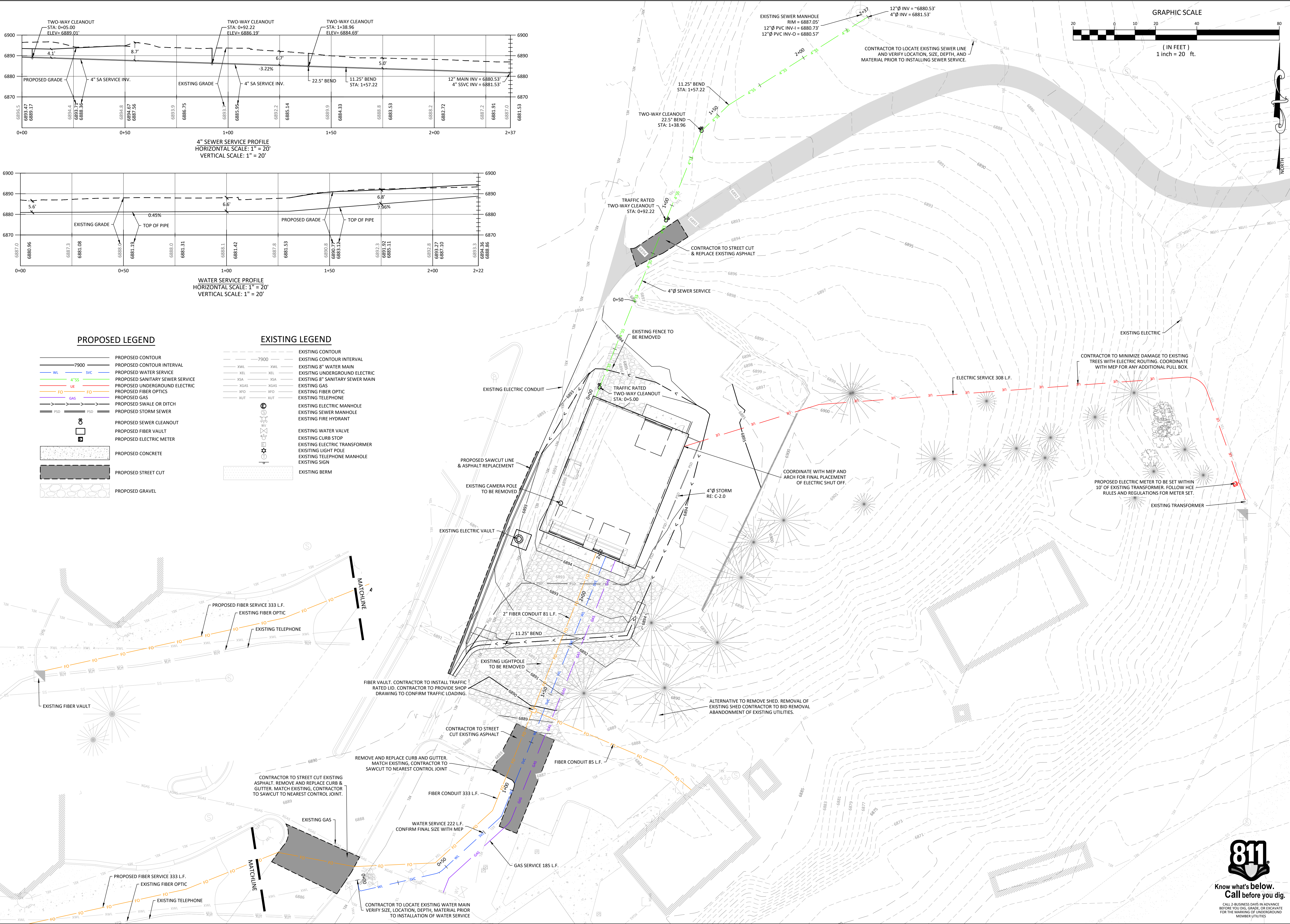
DATE:	07-09-25
JOB NO.	33183
DESIGNED BY	AKC
DRAWN BY	AKC
CHECKED BY	CHC



DATE	REVISION

TITLE  
**GRADING AND  
DRAINAGE PLAN**

DRAWING NO.  
**C-3.0**



**SOPRIS ENGINEERING LLC**  
502 MAIN STREET • SUITE A3 • CARBONDALE CO 81623  
(970) 704-0311 • soprisengineering.com

DATE: 07-09-25

JOB NO. 33183

DESIGNED BY AKC

DRAWN BY AKC

CHECKED BY CHC

**CMC SPRING VALLEY POLE BARN**  
**GLENWOOD SPRINGS, COLORADO**

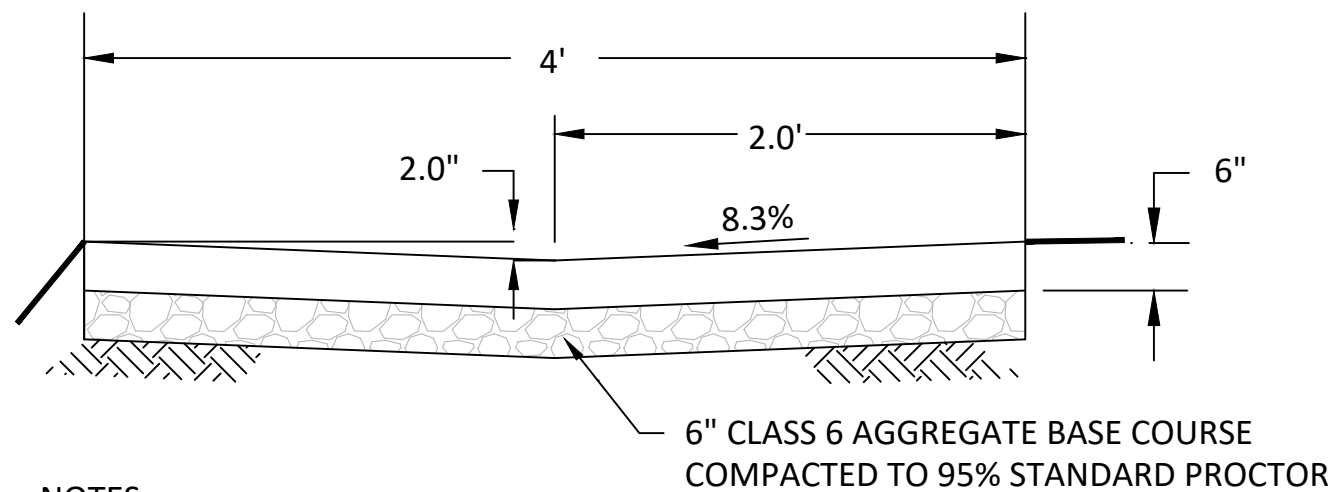
**BUILDING PERMIT**

DATE	REVISION

TITLE: **UTILITY PLAN**

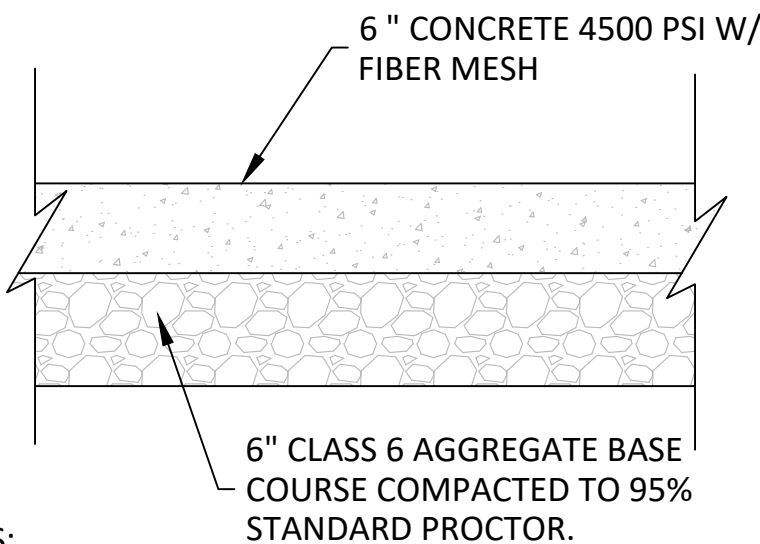
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6/2023/33183-CMC SPRING VALLEY/CIVIL DWG/33183-B.DWG - Aug 04, 2023 - 2:10pm



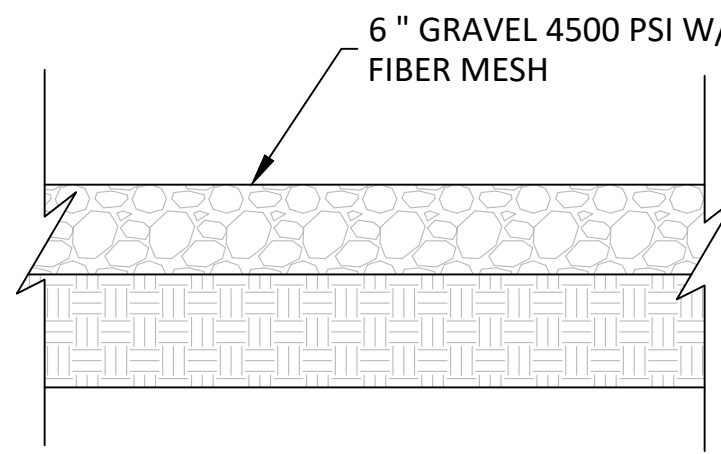
NOTES:  
1) STRIP ALL TOPSOIL AND ORGANICS, SCARIFY AND RECOMPACT SUBGRADE A MINIMUM OF 8" DEPTH TO 95% STANDARD PROCTOR.  
2) CONCRETE: CDOT APPROVED CLASS P CONCRETE (MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS)

① 4' VALLEY PAN  
N.T.S.



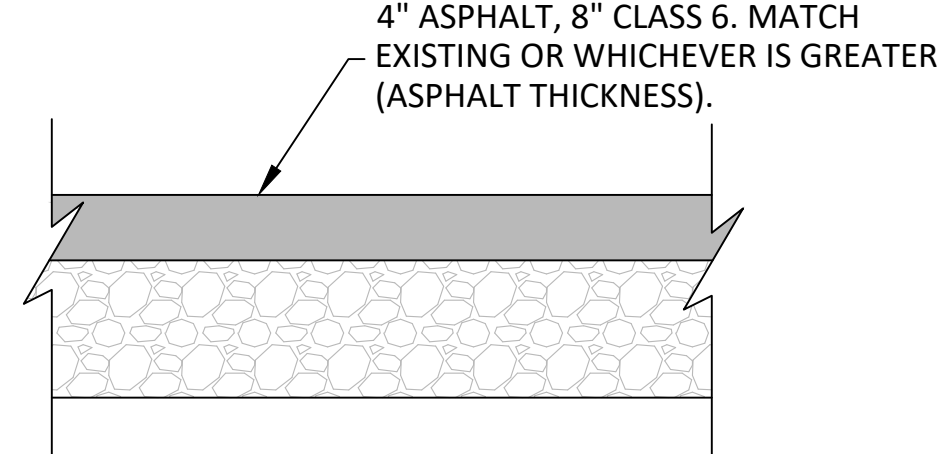
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2) CONCRETE: CDOT APPROVED CLASS P CONCRETE (MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS)

② CONCRETE PAD  
N.T.S.



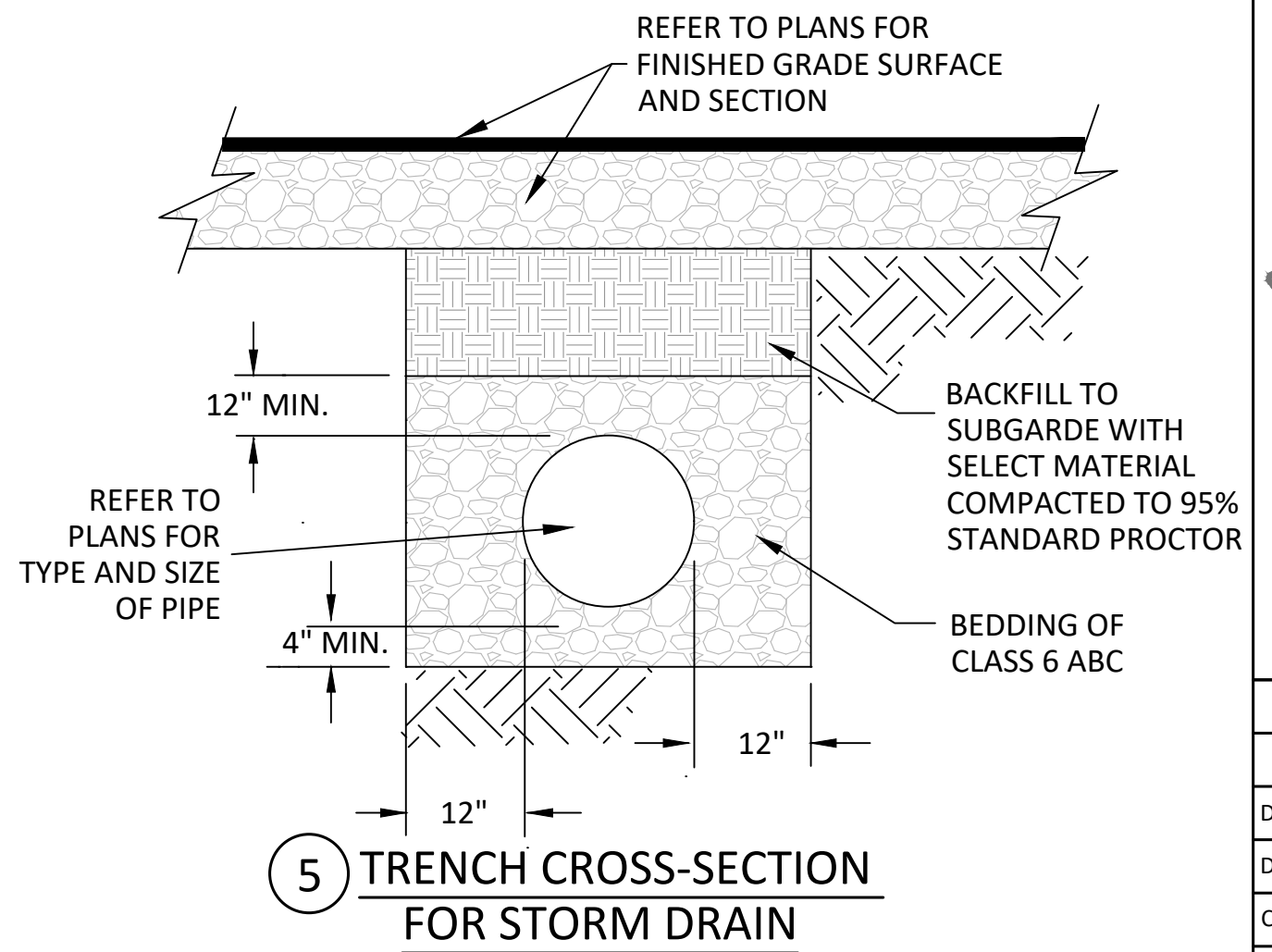
NOTES:  
1) STRIP ALL TOPSOIL AND ORGANICS, SCARIFY AND RECOMPACT SUBGRADE A MINIMUM OF 8" DEPTH TO 95% STANDARD PROCTOR.

③ GRAVEL PLACEMENT  
N.T.S.

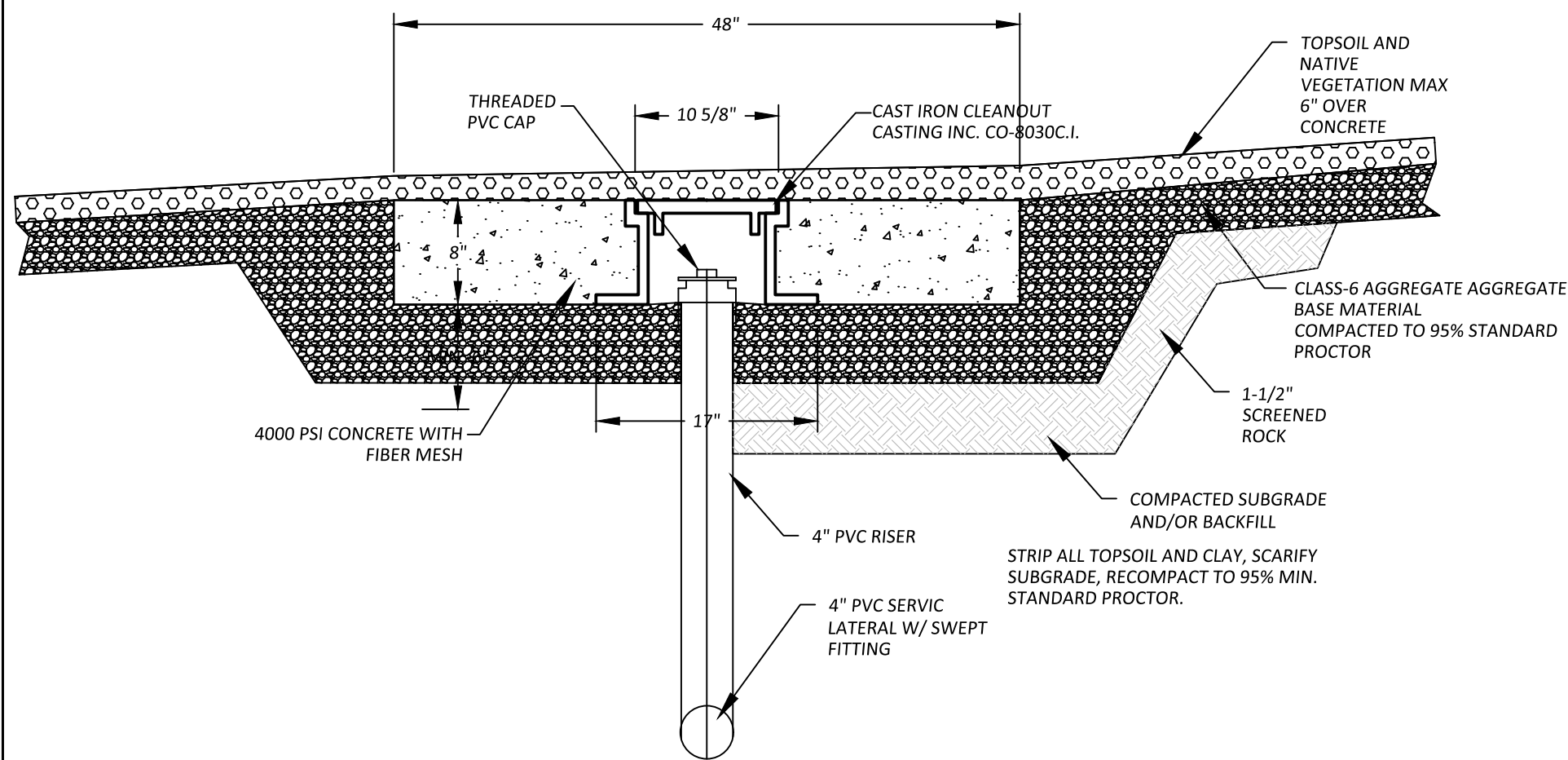


NOTES:  
1) STRIP ALL TOPSOIL AND ORGANICS, SCARIFY AND RECOMPACT SUBGRADE A MINIMUM OF 8" DEPTH TO 95% STANDARD PROCTOR.  
2) FOR THE ASPHALT TRAIL PATCH, 3" OF ASPHALT ON 6" OF CLASS 6. MATCH EXISTING OR WHICHEVER IS GREATER (ASPHALT THICKNESS).

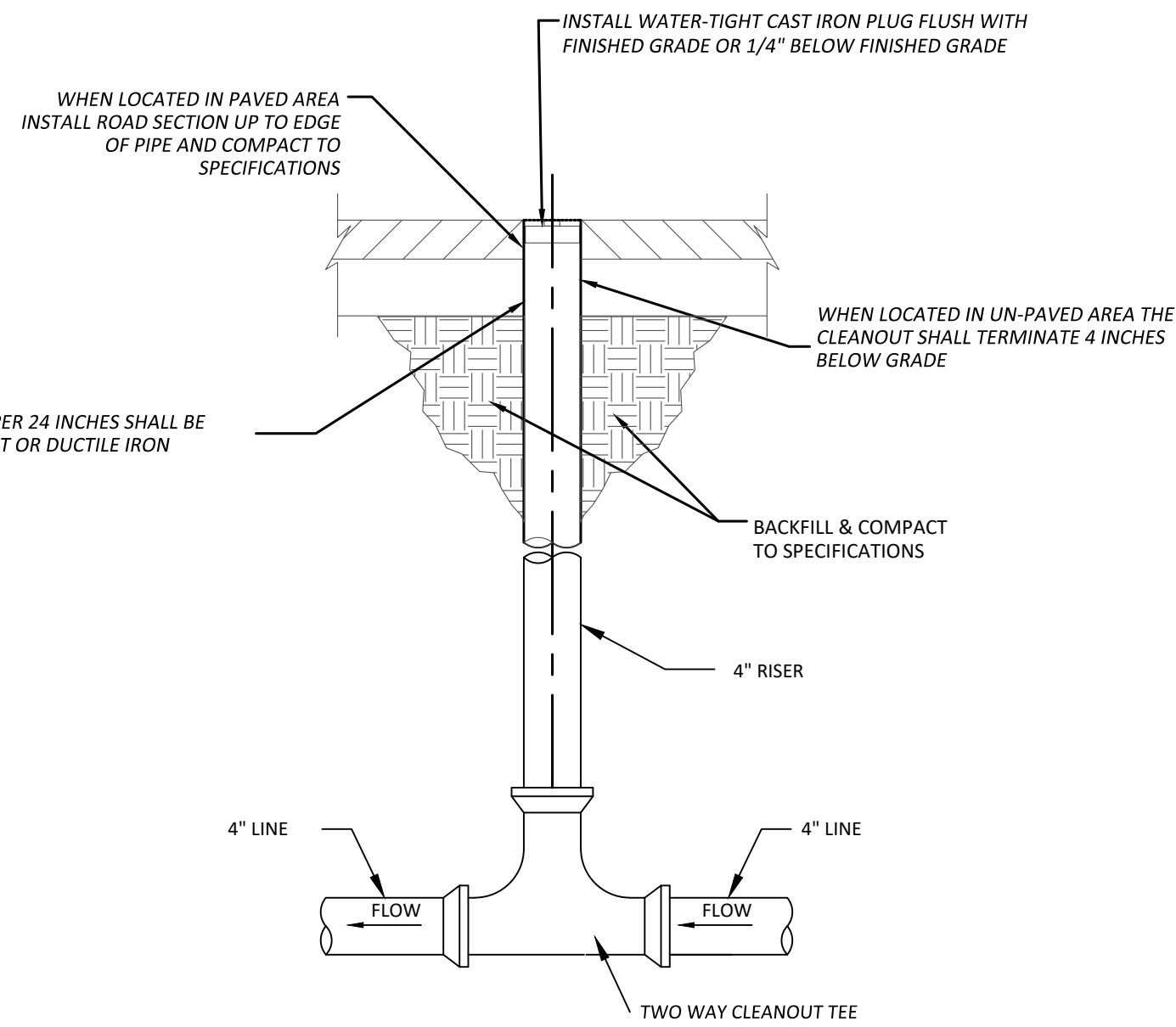
④ ASPHALT PATCH  
N.T.S.



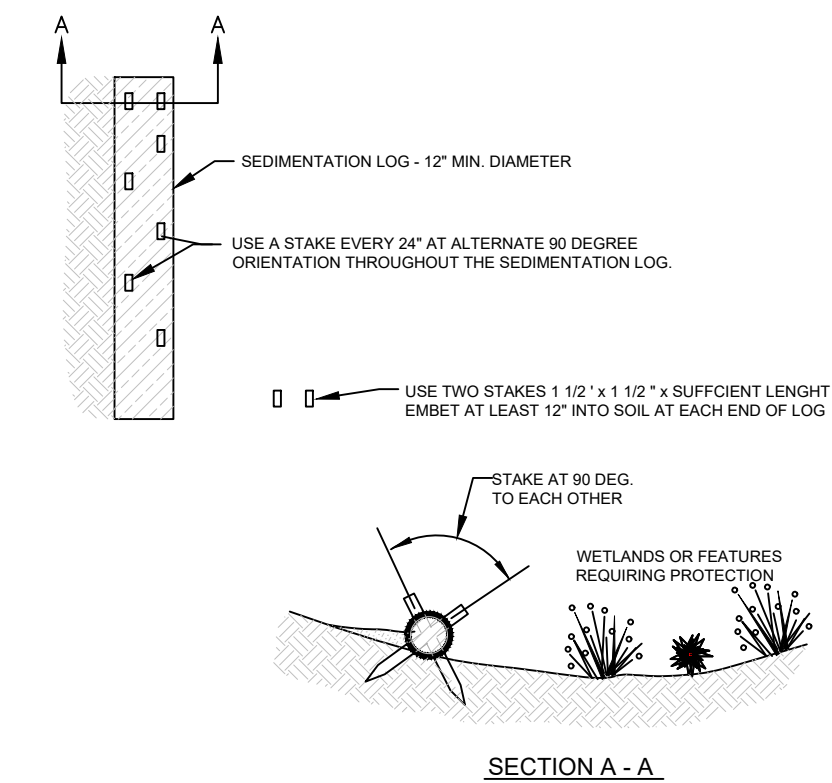
⑤ TRENCH CROSS-SECTION FOR STORM DRAIN



⑥ TRAFFIC RATED CLEANOUT BOX  
N.T.S.



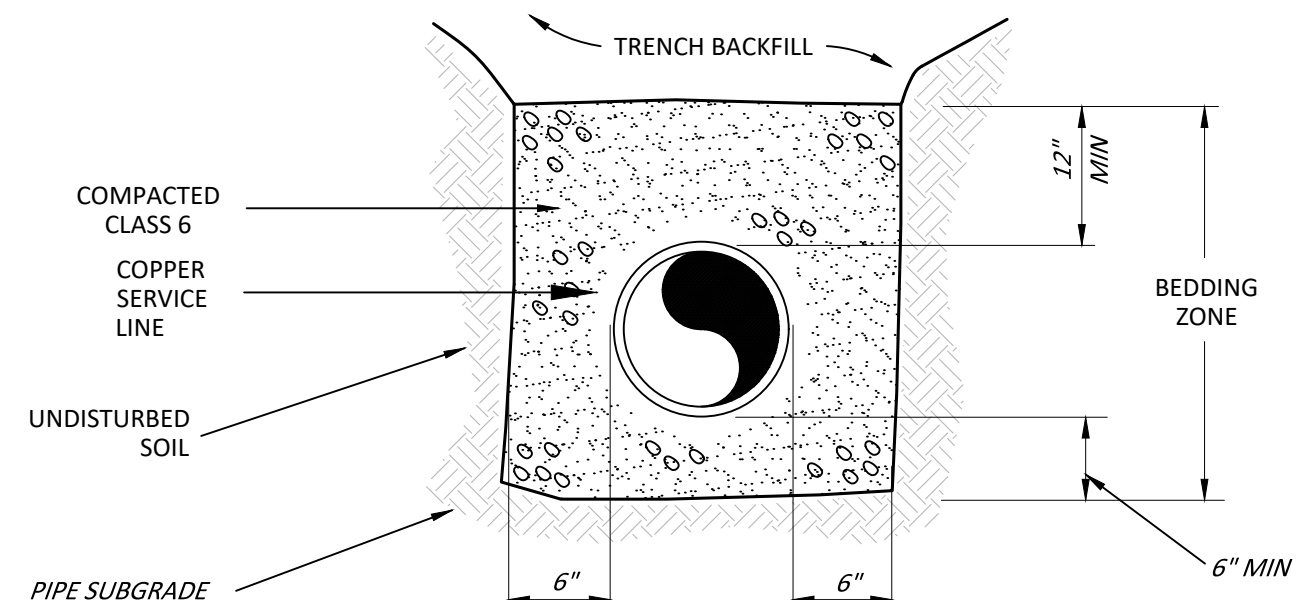
⑦ TWO-WAY CLEAN OUT DETAIL  
N.T.S.



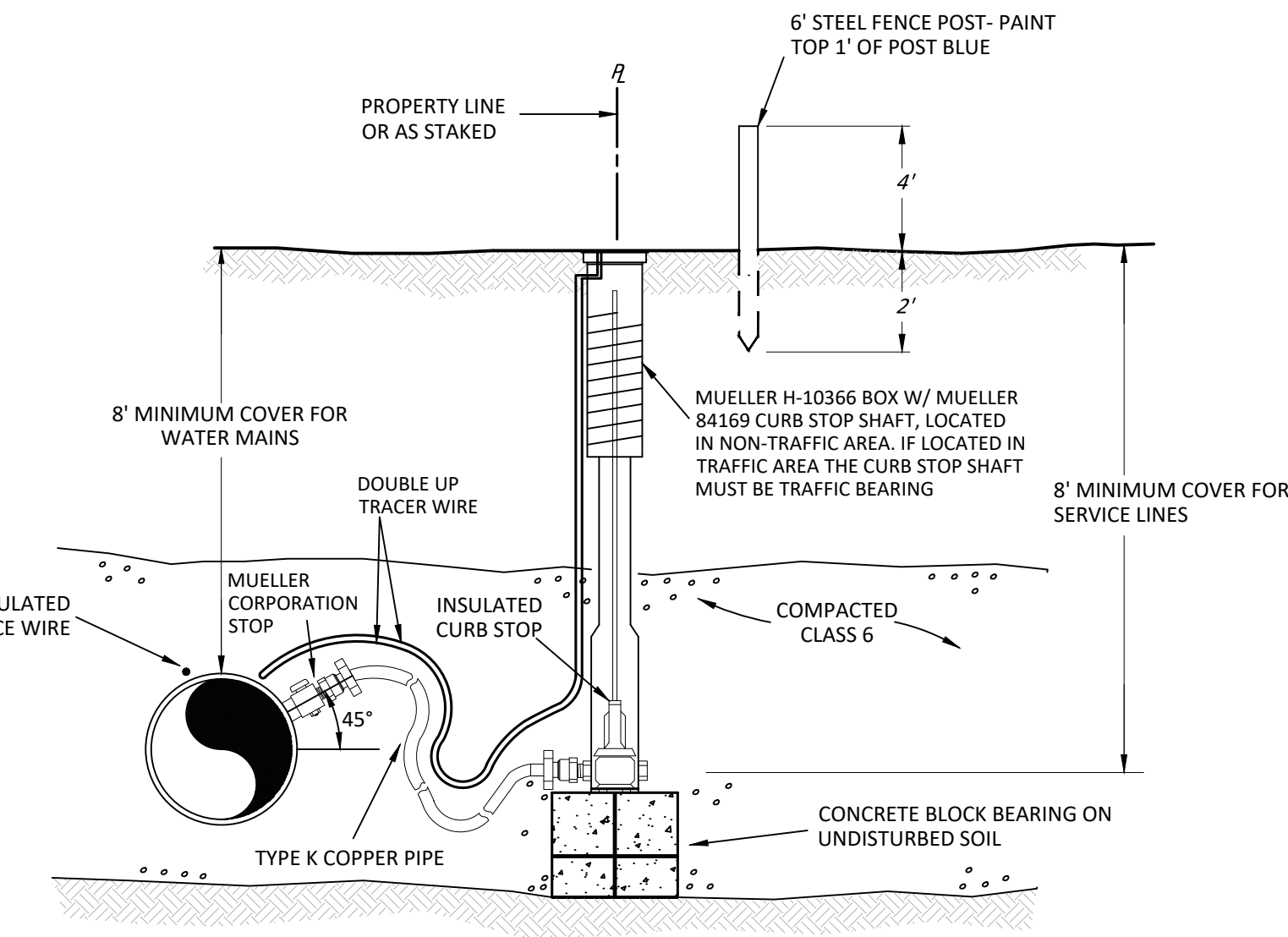
SEDIMENT CONTROL LOG INSTALLATION NOTES  
1. SEE SHEET C7.3 FOR LOCATION OF SEDIMENT CONTROL LOG.  
2. SEDIMENT CONTROL LOGS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.  
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER.  
4. NOT FOR USE IN CONCENTRATED FLOW AREAS.  
5. THE SEDIMENT CONTROL LOGS SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2-INCHES.

SEDIMENT CONTROL LOG MAINTENANCE NOTES  
1. THE SWMP MANAGER SHALL INSPECT SEDIMENT CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT & MAKE REPAIRS OR CLEANOUT UPSTREAM SEDIMENT AS NECESSARY.  
2. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM DEPTH IS WITHIN THE HEIGHT OF THE CREST OF LOG.  
3. SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION, ONCE PROPER VEGETATION HAS BEEN ESTABLISHED. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE COVERED WITH TOPSOIL AND REVEGETATED/STABILIZED IN A MANNER APPROVED BY THE TOWN OF SNOWMASS VILLAGE.

⑧ SEDIMENT CONTROL LOG  
N.T.S.

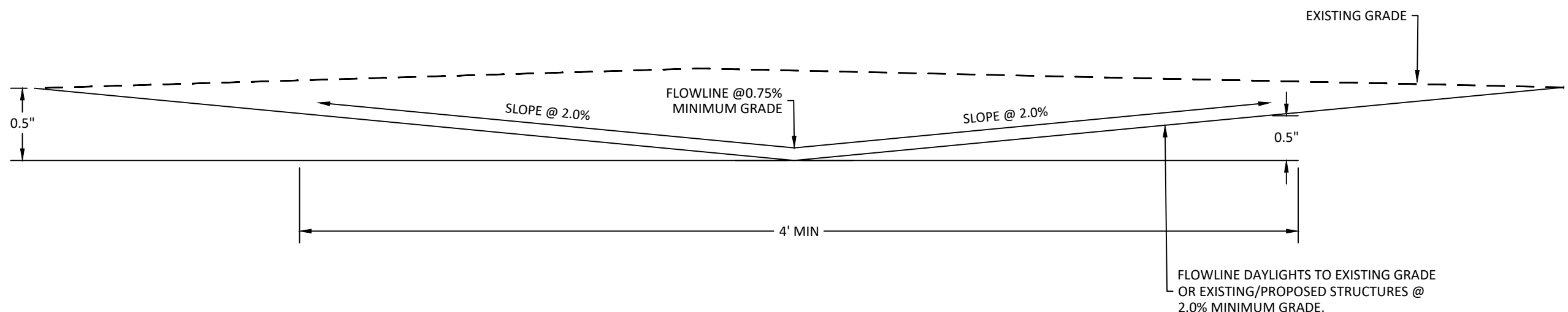


⑪ SERVICE STUB-OUT BEDDING

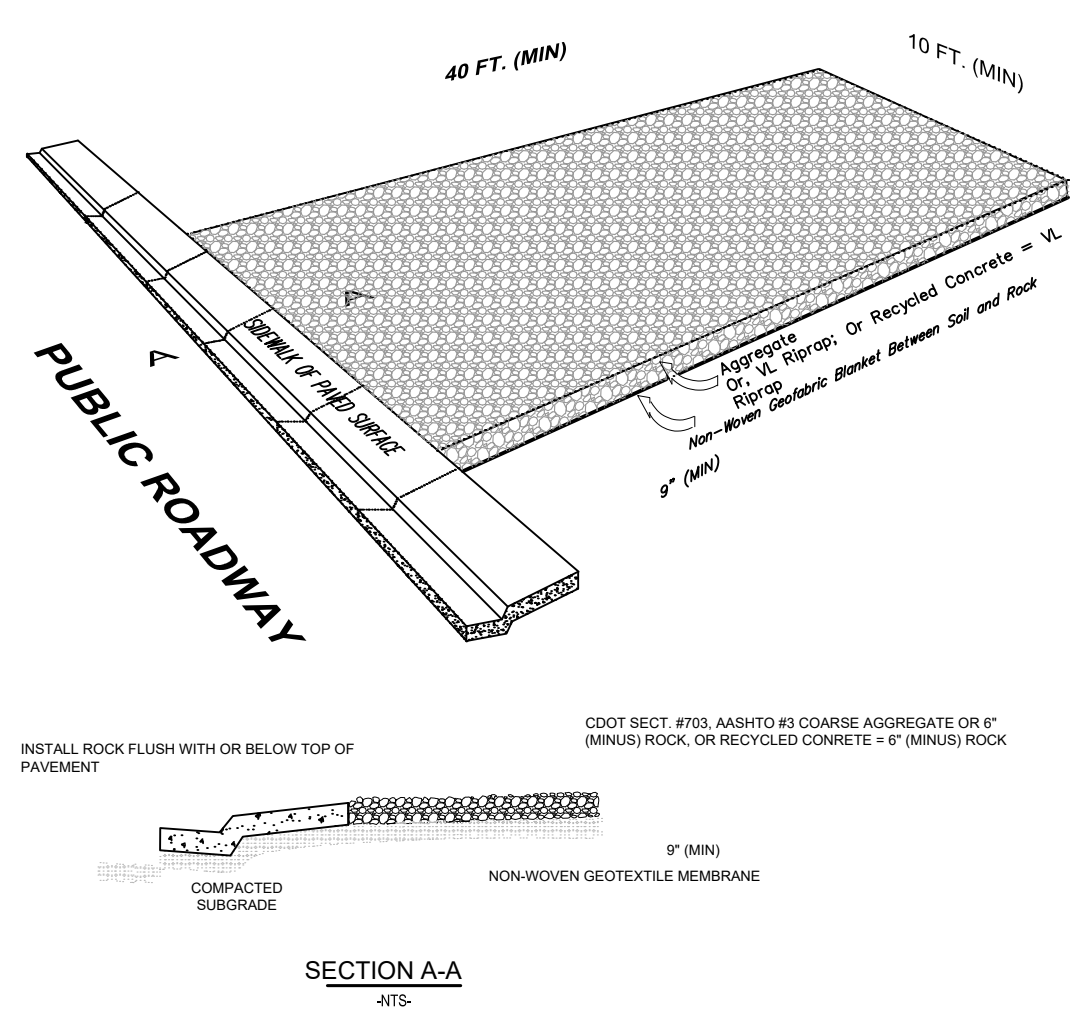


⑫ WATER SERVICE STUB OUT

GENERAL NOTES  
1. CURB STOP TO BE LOCATED WITHIN THE PROPERTY LINE OR AT THE EDGE OF EASEMENT-WHICHEVER IS CLOSER TO THE MAIN.  
2. CURBSTOP - ALL FITTINGS SHALL BE COMPRESSION FITTINGS.  
3. CURBSTOP - MANUFACTURER REFERENCE MUELLER 825204 OR APPROVED EQUAL.  
4. CURB BOX AND LID MUST BE TRAFFIC RATED NOT THE CURBSTOP SHAFT. SHAFT MUST NOT BE IN CONTACT WITH CURB BOX.



⑨ PERIMETER SWALES SECTION  
N.T.S.



⑩ VTC VEHICLE TRACKING PAD  
(NOT TO SCALE)



DATE:	07-09-25
JOB NO.	33183
DESIGNED BY	AKC
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CMC SPRING VALLEY POLE BARN  
GLENWOOD SPRINGS, COLORADO

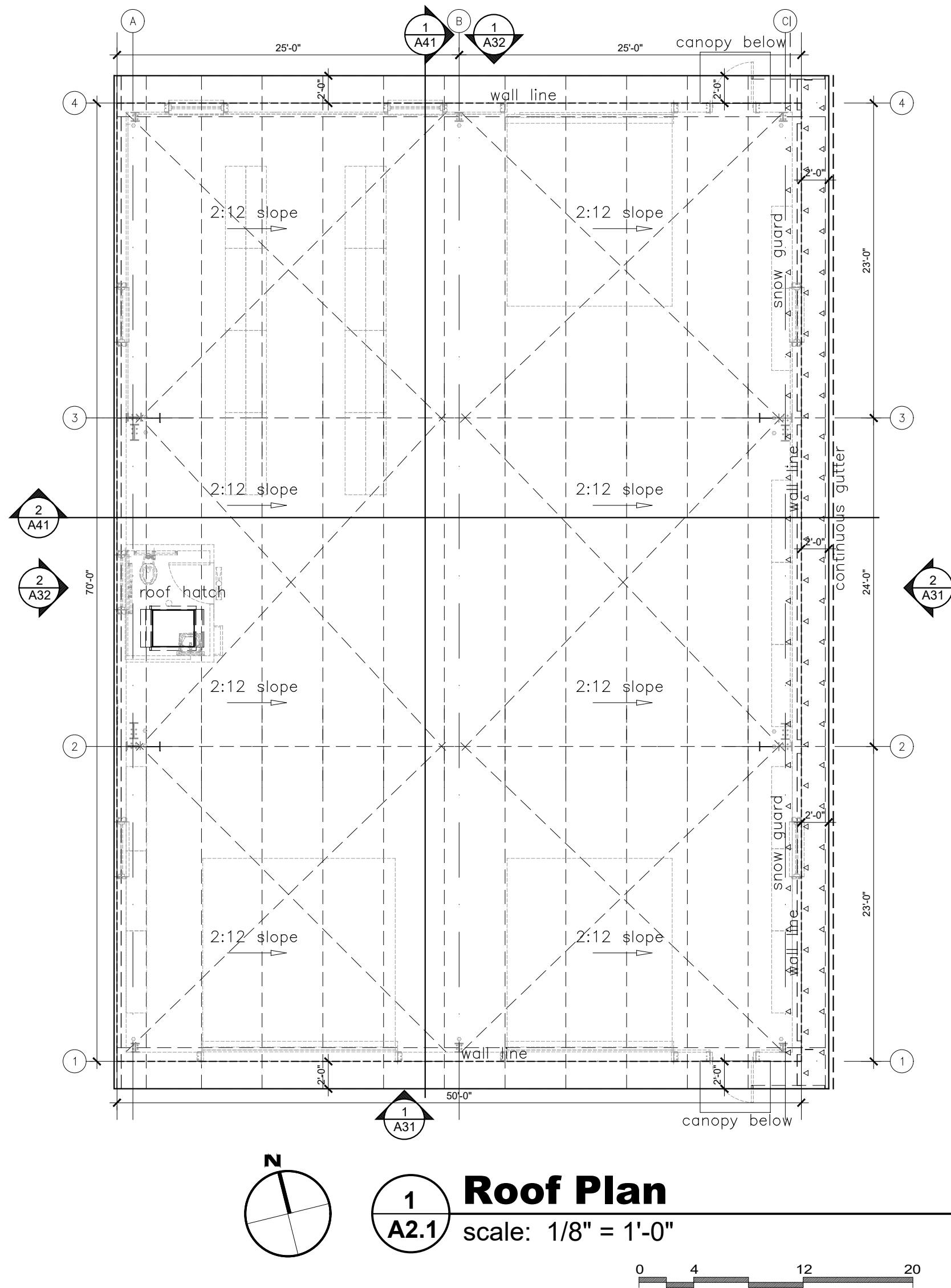
BUILDING PERMIT



DATE	REVISION

TITLE	DETAILS
DRAWING NO.	C-5.0

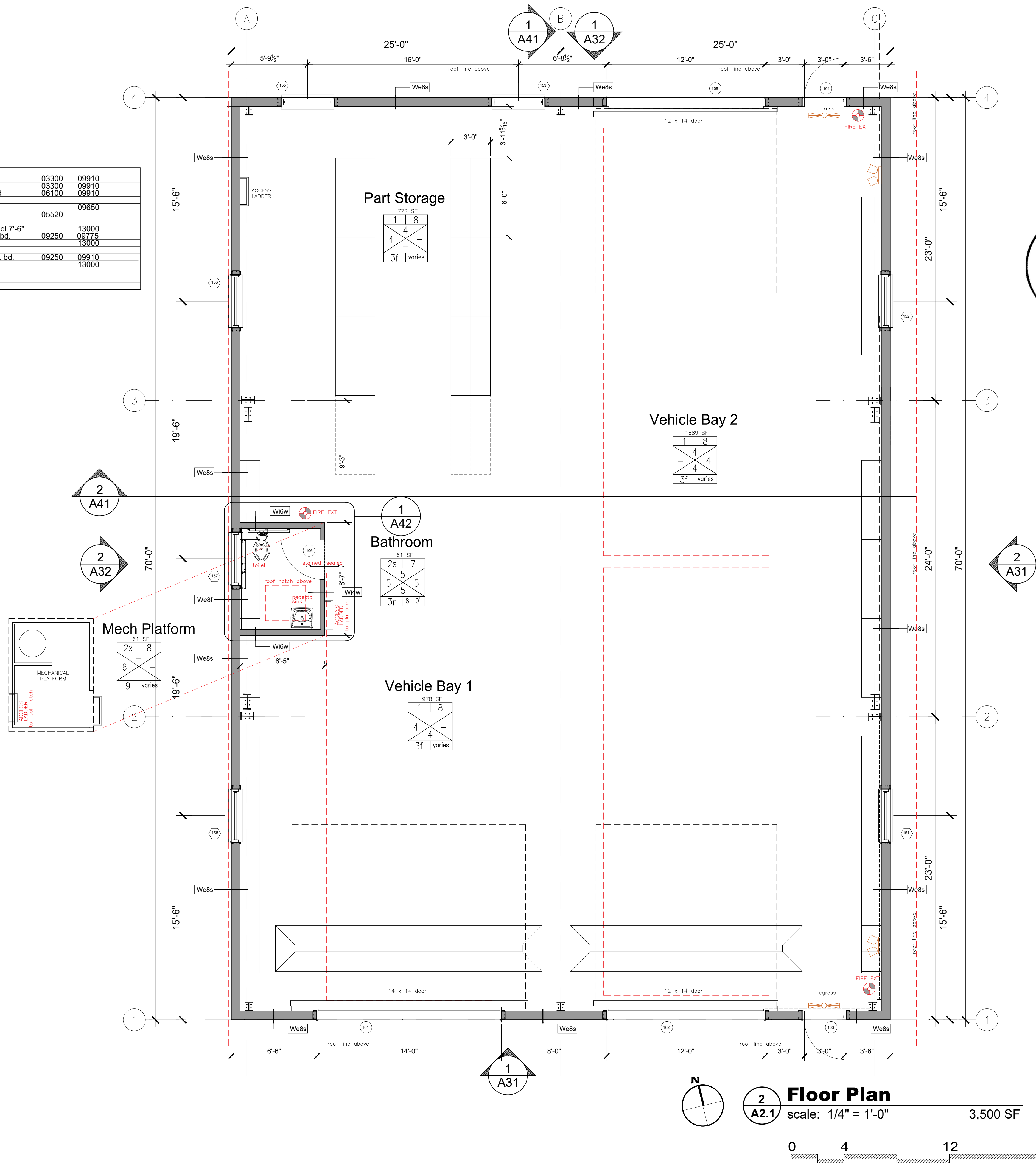




1  
A2.1  
Roof Plan  
scale: 1/8" = 1'-0"

Finish Legend			
floor	1	sealed concrete	03300 09910
	2s	stained concrete	03300 09910
	2w	plywood floor board	06100 09910
base	3r	resilient wall base	05520 09650
	3f	base flashing	
walls	4	metal wall liner panel 7'-6"	13000
	5	FRP over MR gyp. bd.	09250 09775
	6	wvf membrane	13000
clg	7	moisture resist gyp. bd.	09250 09910
	8	wvf membrane	13000
	9	none	

floor	clg
walls	
base	clg ht

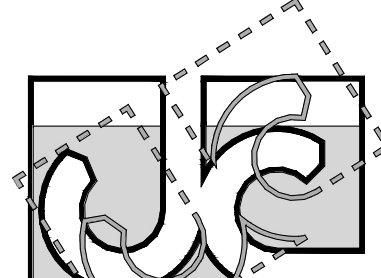


2  
A2.1  
Floor Plan  
scale: 1/4" = 1'-0"

3,500 SF

Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
1050 North Watery Lane  
Brigham City, UT 84302  
Phone: (435) 919-3100  
Job No. U25L0487A

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Jeff Johnson  
Architectural PC  
138 East Third Street  
Rifle, CO 81650  
970-625-0580  
jeff@jjarchitectural.com  
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Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado

Construction

Roof &  
Floor Plan

Date: 07-29-25  
2311A-07-29-25

A2.1

ROOF SHEETING

TYPE: R-PANEL 24,GAGE

ROOF PANEL COLOR: PEARL GRAY  
ROOF LINE TRIM COLOR: CHARCOAL  
GUTTERS COLOR: CHARCOAL  
DOWNSPOUTS COLOR: CHARCOAL

WALL SHEETING

TYPE: R-PANEL 26,GAGE

WALL PANEL <14'-2" COLOR: CHARCOAL  
WALL PANEL >14'-2" COLOR: PEARL GRAY  
WALL CORNER TRIM COLOR: CHARCOAL  
WALL BASE TRIM COLOR: CHARCOAL  
FRAMED OPENING TRIM COLOR: CHARCOAL

SOFFIT PANEL

TYPE: R-PANEL 26,GAGE

PEARL GRAY

WALL LINER PANEL

TYPE: R-PANEL 26,GAGE

PEARL GRAY

EAVE EXTENSION

PROJECTION: 2'-0"

TYPE: R-PANEL 26,GAGE

PEARL GRAY

RAKE EXTENSION

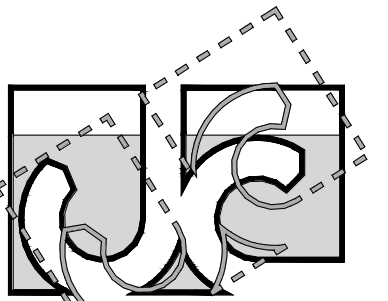
PROJECTION: 2'-0"

TYPE: R-PANEL 26,GAGE

PEARL GRAY

Exterior Finish Legend

1	metal roof panel	130000
2	prefinished parapet flashing	130000
3	metal eave trim	130000
4	gutter/ downspout	130000
5	metal wall panel	130000
6	transition flashing	130000
7	NOT USED	
8	window/ door assembly	083113
9	portable frame	051200
10	outdoor lighting	265100
11	metal canopy assembly	055000
12	sleeved bollard	107500
13	concrete apron	031000
B	CHARCOAL	
C	PEARL GRAY	

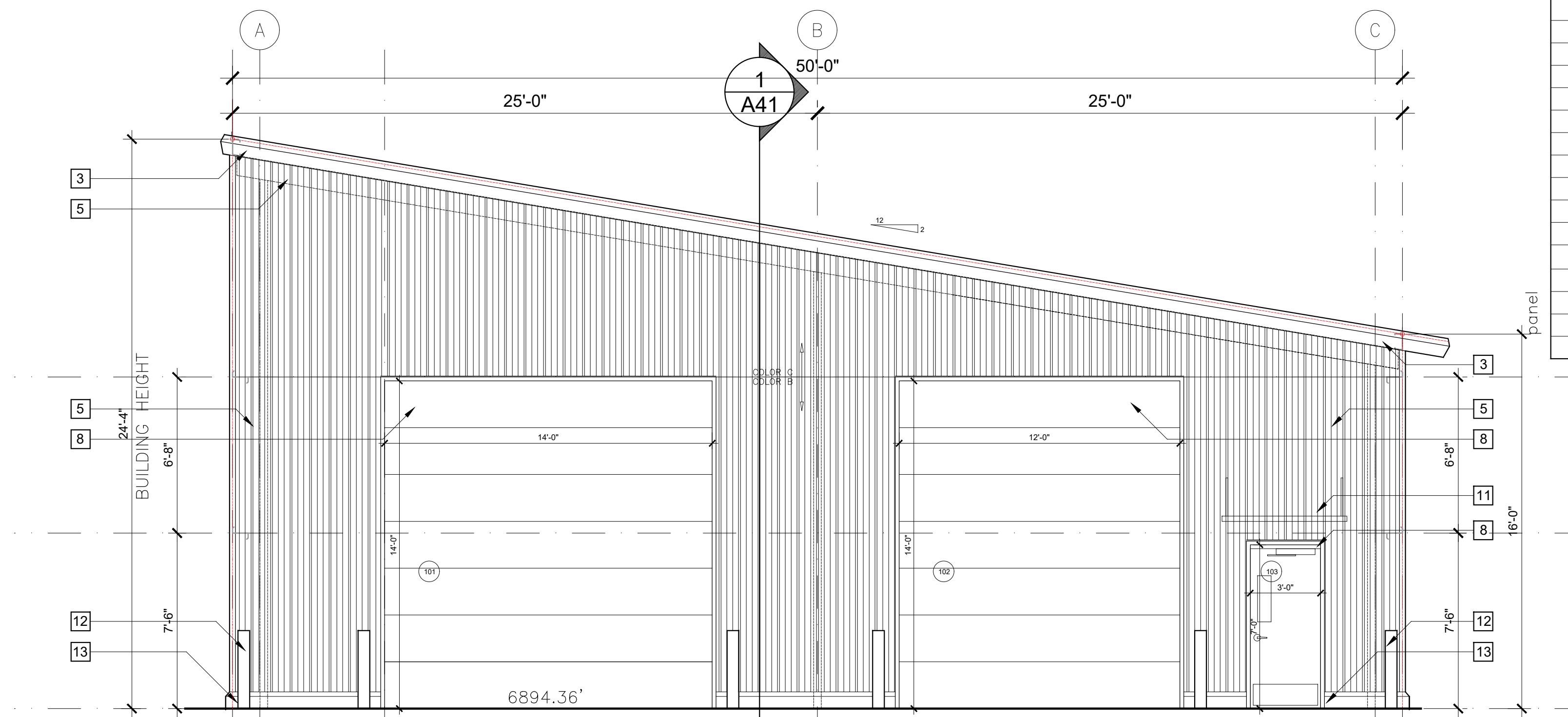


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Architectural PC

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970-625-0580  
jeff@jjarchitectural.com  
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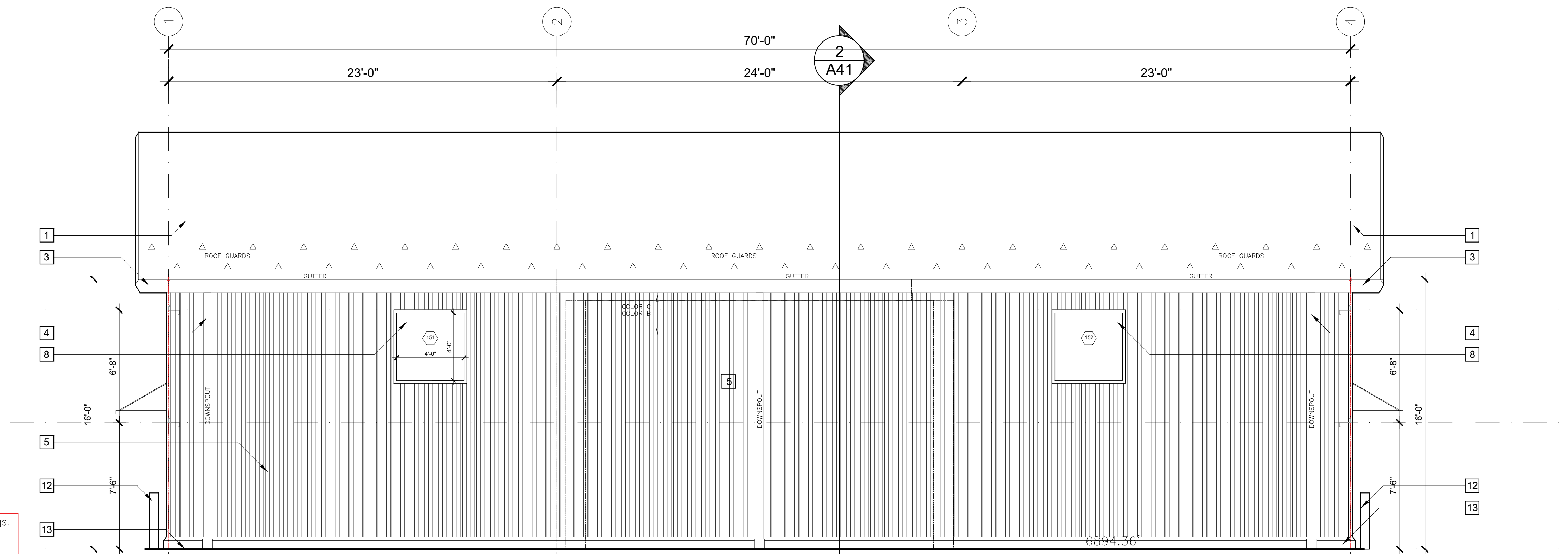


Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado



1 South Elevation

A31 scale: 1/4" = 1'-0"



2 East Elevation

A31 scale: 1/4" = 1'-0"



Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
1050 North Watery Lane  
Brigham City, UT 84302  
Phone: (435) 919-3100  
Job No. U25L0487A

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EAST SIDE WALL AREA = 1,064 SF  
EAST SIDE OPENINGS = 32 SF (3%)

Construction
Building Elevations
Date: 07-29-25 2311A-07-29-25
A3.1

ROOF SHEETING

TYPE: R-PANEL 24,GAGE

ROOF PANEL COLOR: PEARL GRAY  
ROOF LINE TRIM COLOR: CHARCOAL  
GUTTERS COLOR: CHARCOAL  
DOWNSPOUTS COLOR: CHARCOAL

WALL SHEETING

TYPE: R-PANEL 26,GAGE

WALL PANEL <14'-2" COLOR: CHARCOAL  
WALL PANEL >14'-2" COLOR: PEARL GRAY  
WALL CORNER TRIM COLOR: CHARCOAL  
WALL BASE TRIM COLOR: CHARCOAL  
FRAMED OPENING TRIM COLOR: CHARCOAL

SOFFIT PANEL

TYPE: R-PANEL 26,GAGE

PEARL GRAY

WALL LINER PANEL

TYPE: R-PANEL 26,GAGE

PEARL GRAY

EAVE EXTENSION

PROJECTION: 2'-0"

TYPE: R-PANEL 26,GAGE

PEARL GRAY

RAKE EXTENSION

PROJECTION: 2'-0"

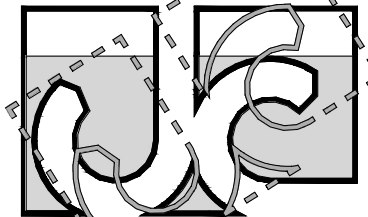
TYPE: R-PANEL 26,GAGE

PEARL GRAY

Exterior Finish Legend

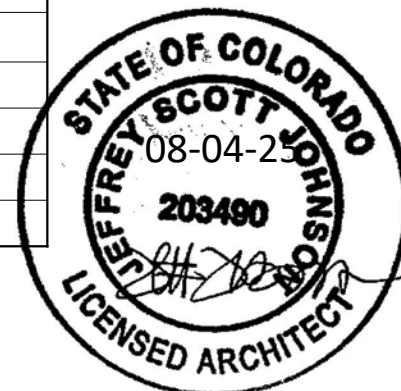
1	metal roof panel	130000
2	prefinished parapet flashing	130000
3	metal eave trim	130000
4	gutter/ downspout	130000
5	metal wall panel	130000
6	transition flashing	130000
7	NOT USED	
8	window/ door assembly	083113
9	portable frame	051200
10	outdoor lighting	265100
11	metal canopy assembly	055000
12	sleeved bollard	107500
13	concrete apron	031000

B	CHARCOAL
C	PEARL GRAY

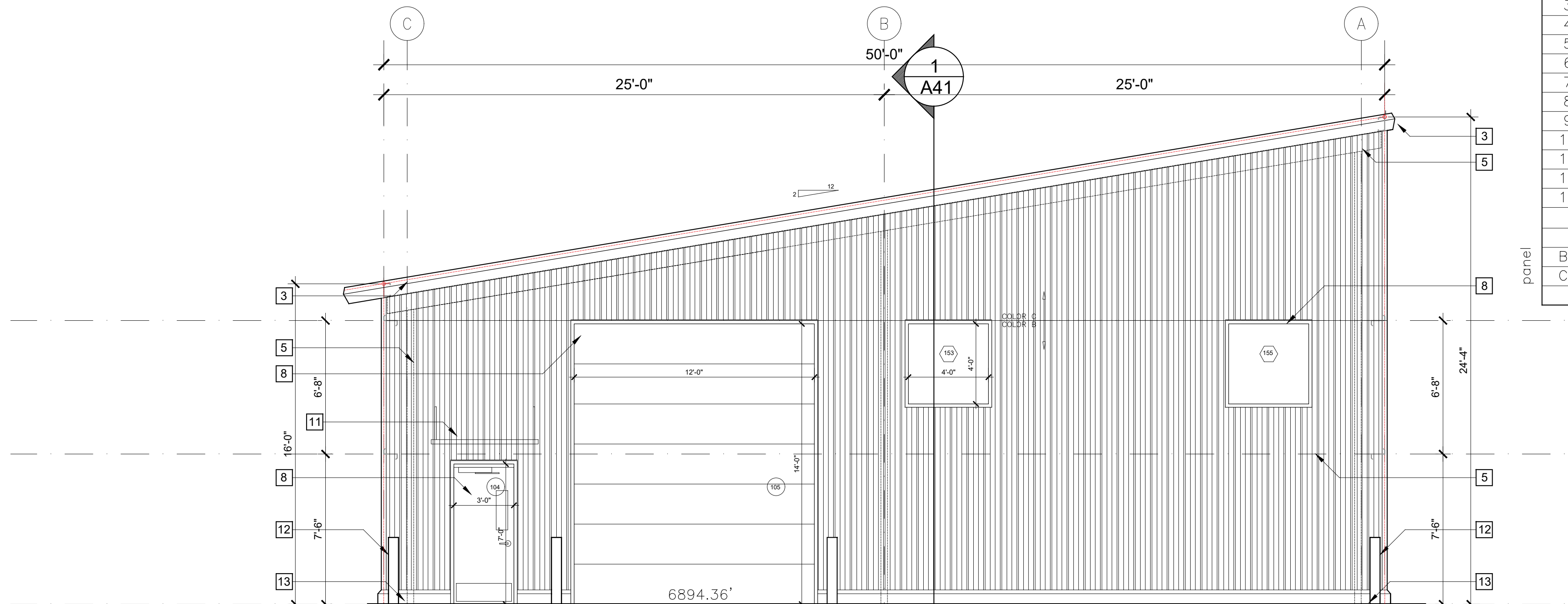


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Architectural PC

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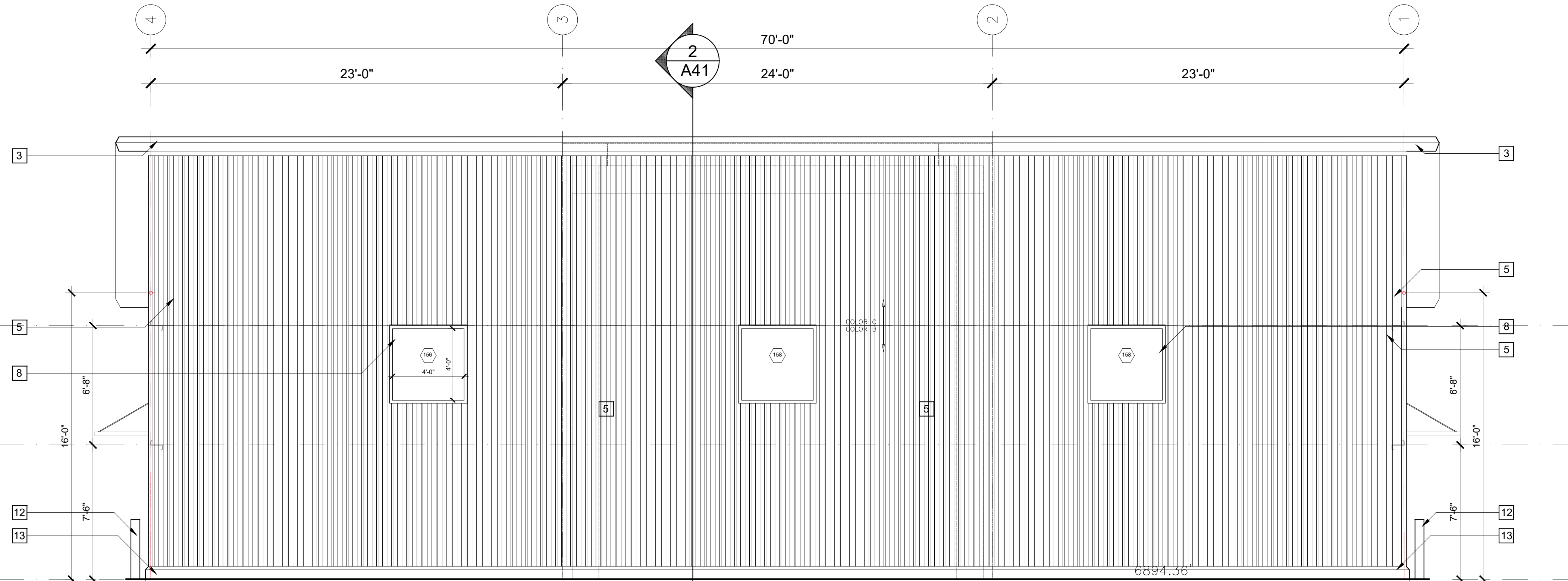


Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado



1 North Elevation

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



2 West Elevation

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

Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
1050 North Watery Lane  
Brigham City, UT 84302  
Phone: (435) 919-3100  
Job No. U25L0487A

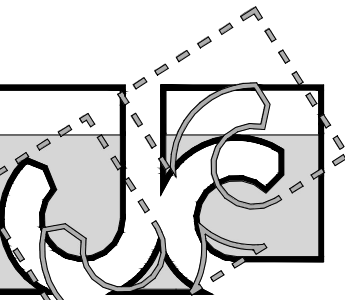
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Construction

Building  
Elevations

Date: 07-29-25  
2311A-07-29-25

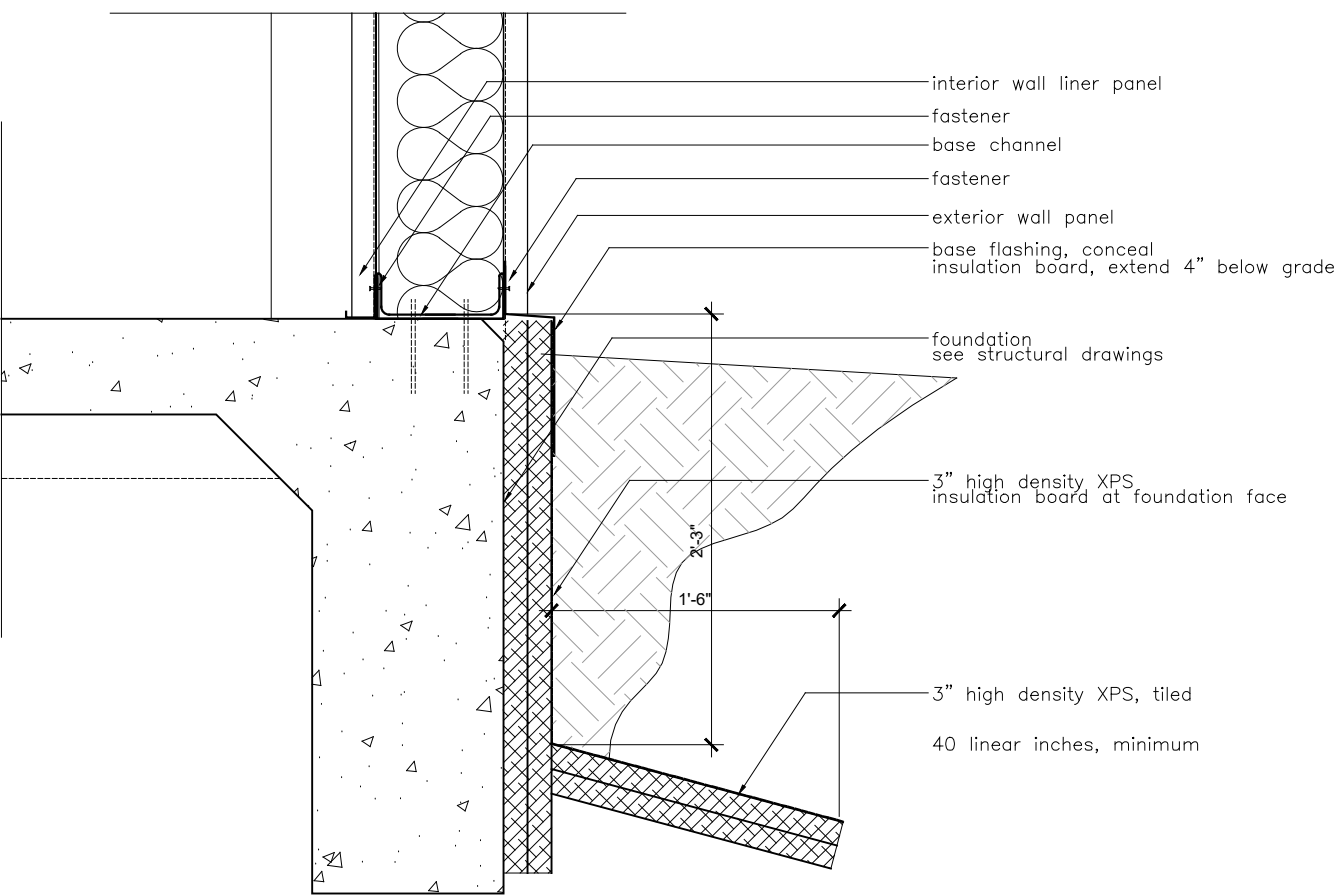
A3.2



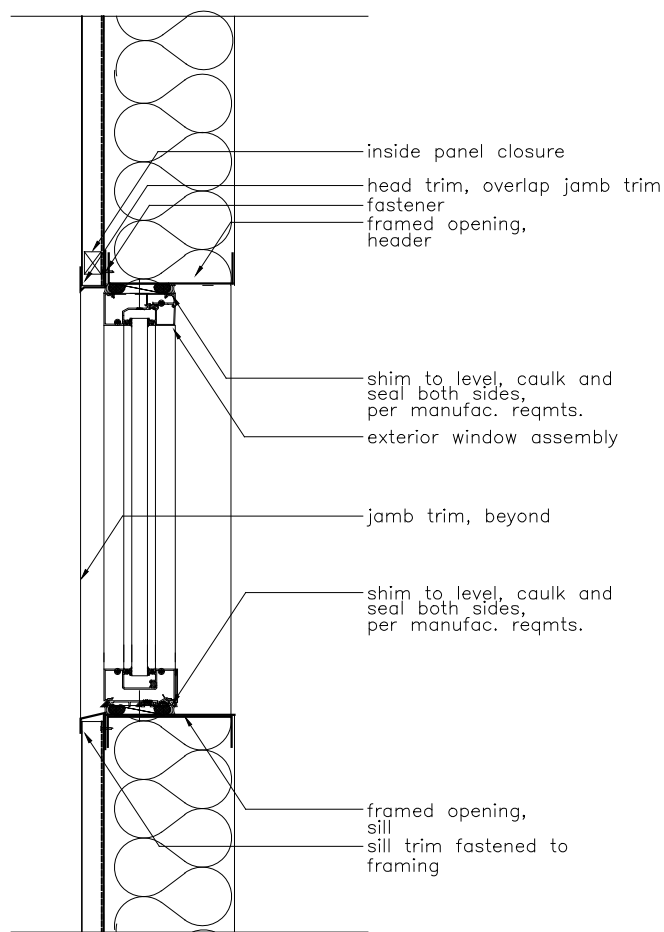
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Architectural PC  
136 East Third Street  
Rifle, CO 81650  
970-625-0580  
jeff@jjarchitectural.com  
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Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado



**A**  
**A41** **Wall @ Foundation**  
scale: 1" = 1'-0"

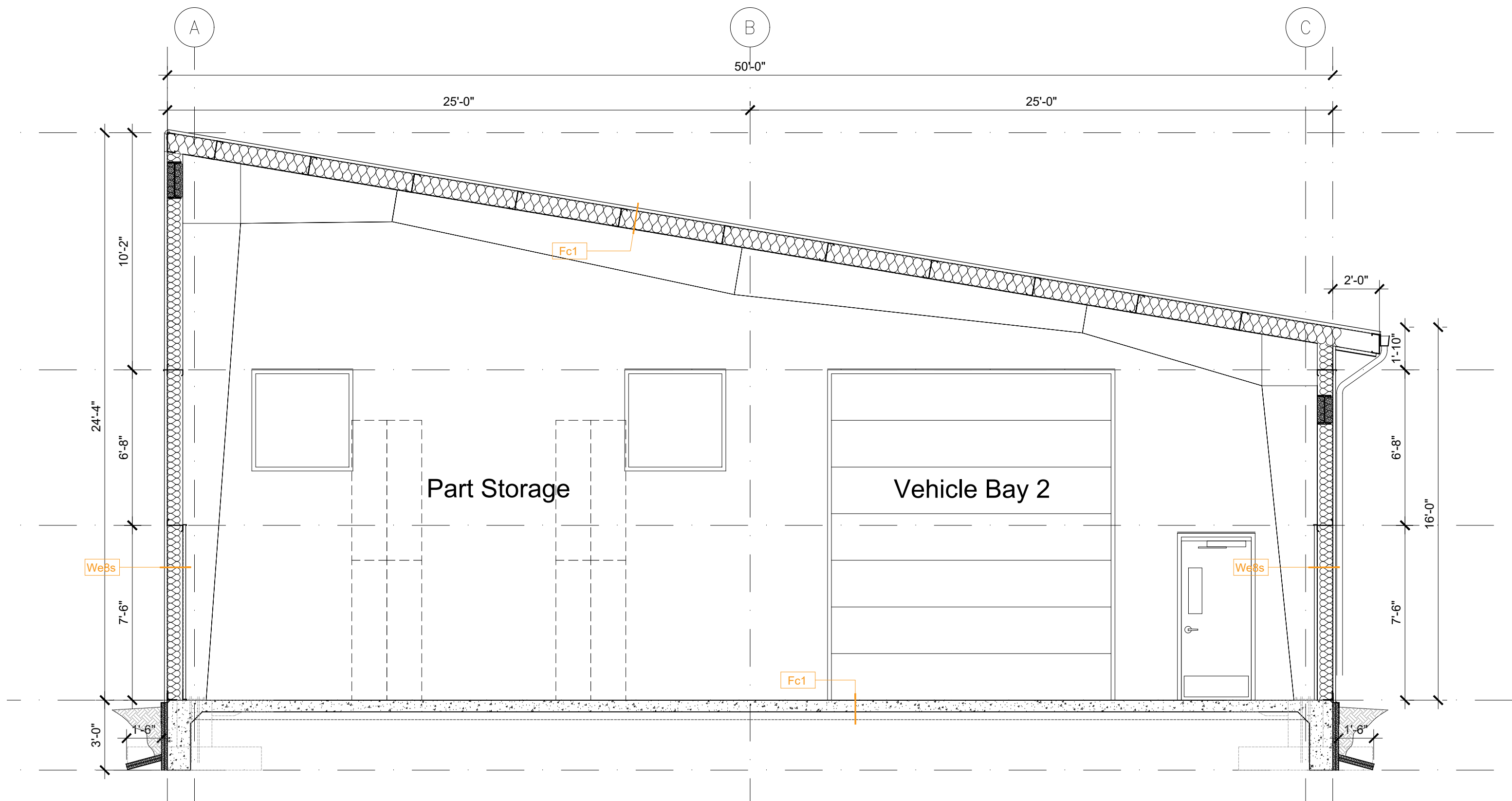


Reference: NUCOR Building Systems  
Job No. U25L0487A  
Sheet SD10

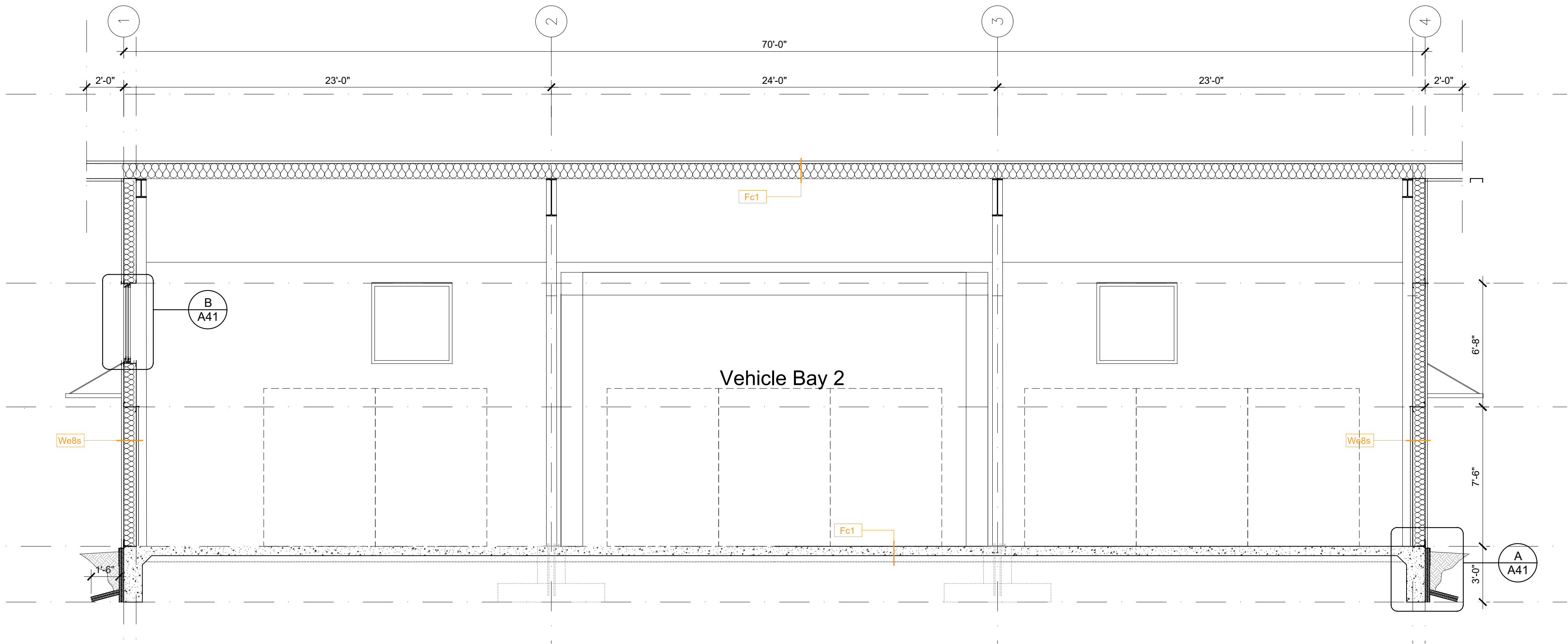
**B**  
**A41** **Wall @ Window**  
scale: 1" = 1'-0"

Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
1050 North Watery Lane  
Brigham City, UT 84302  
Phone: (435) 919-3100  
Job No. U25L0487A

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**1**  
**A41** **Building Section**  
scale: 1/4" = 1'-0"



**2**  
**A41** **Building Section**  
scale: 1/4" = 1'-0"

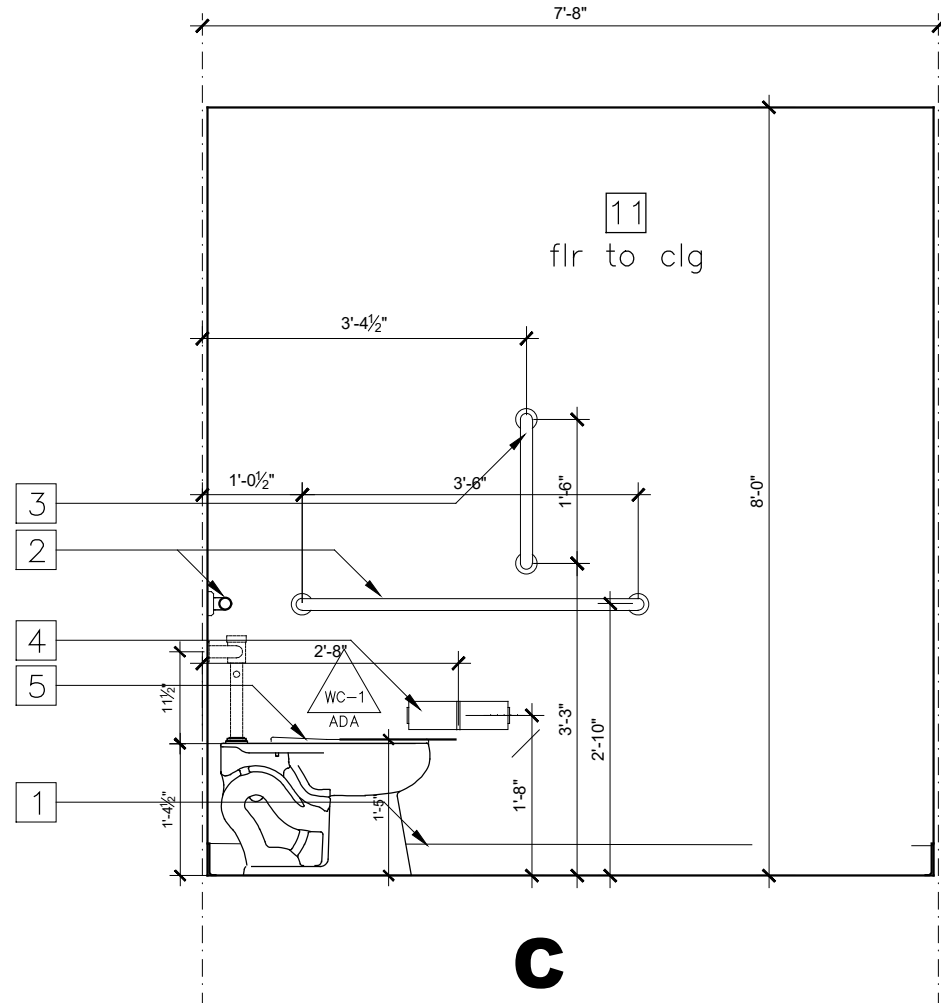
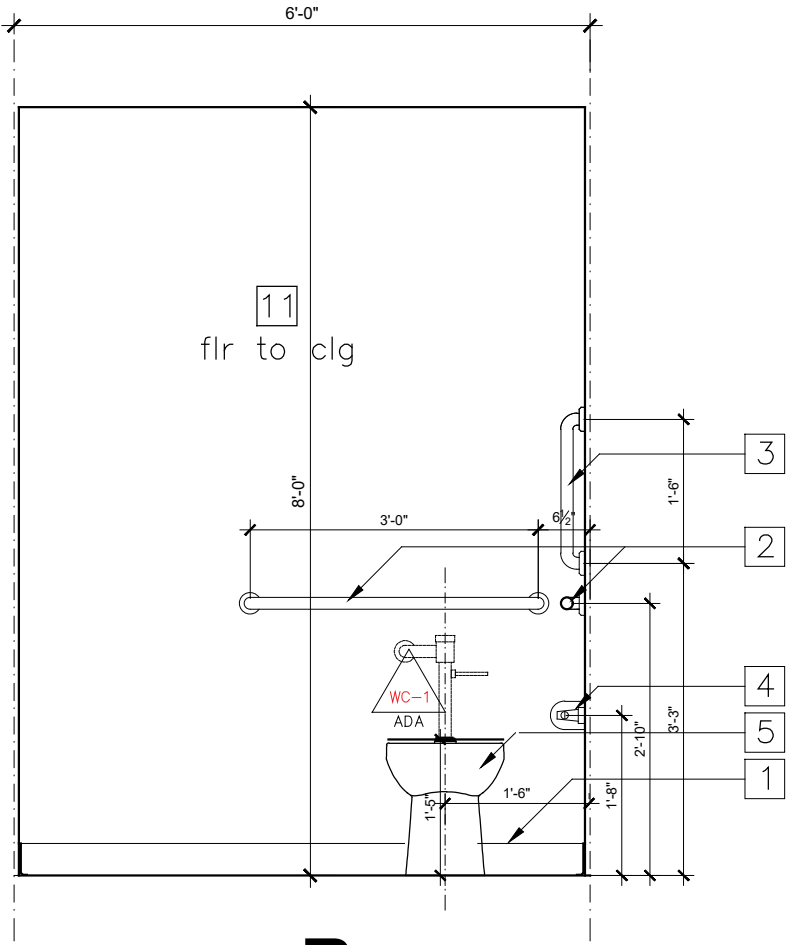
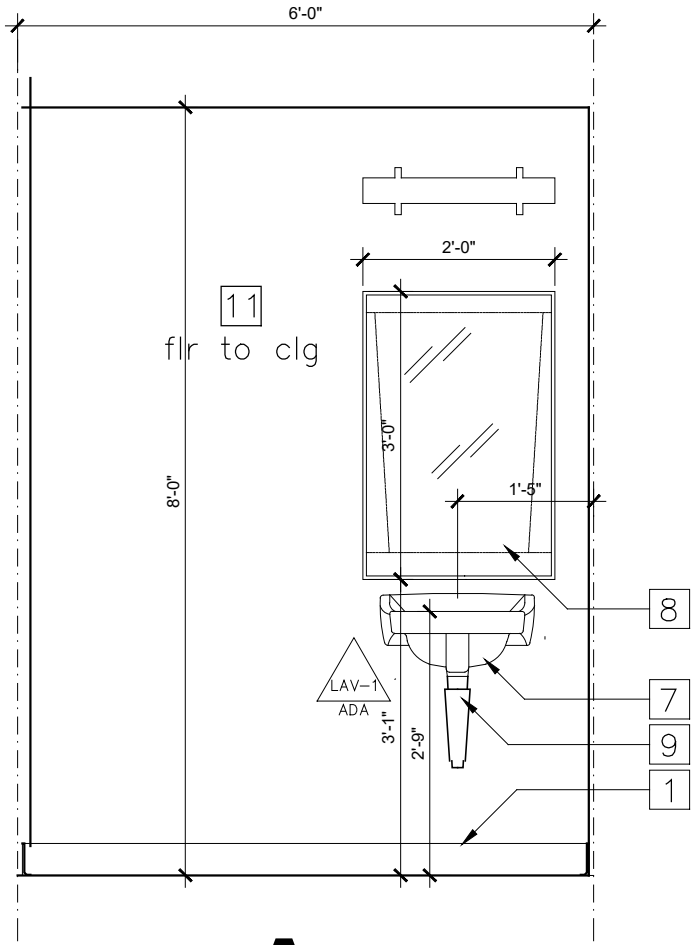
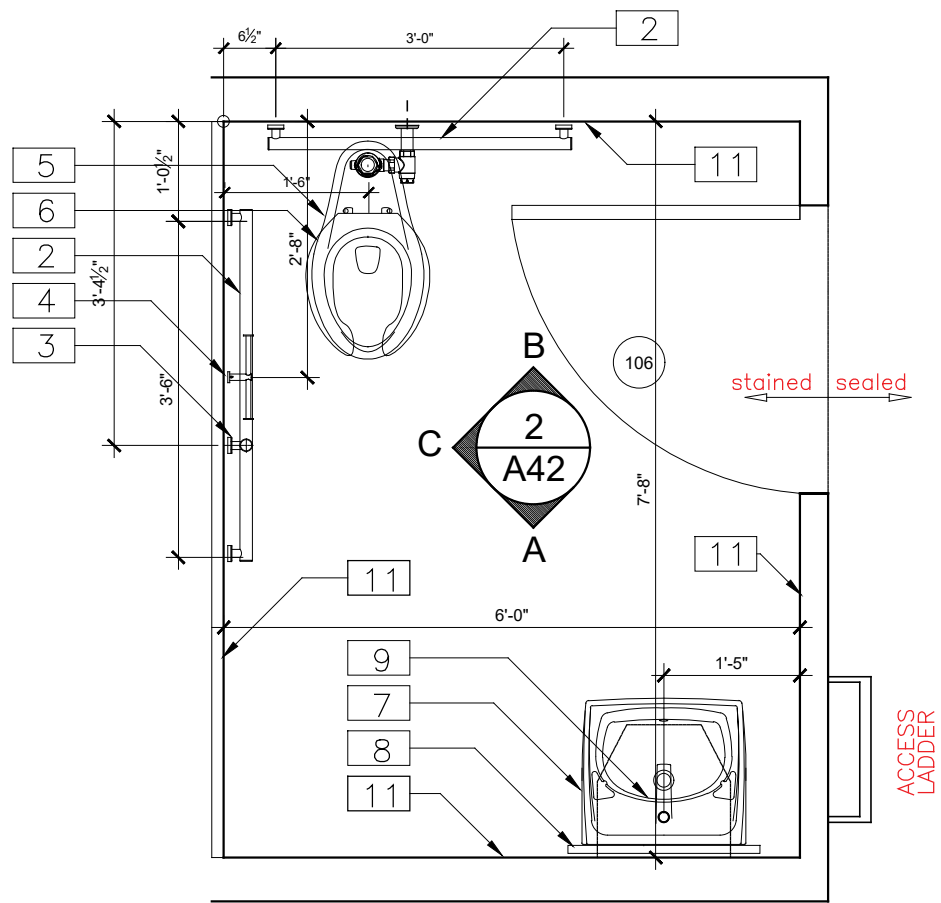
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Construction

Building  
Sections

Date: 07-29-25  
2311A-07-29-25

**A4.1**



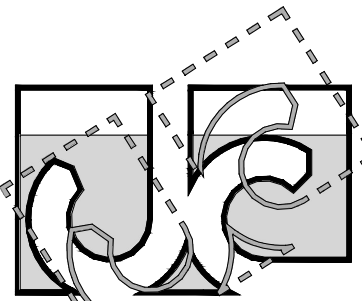
Bath Items:

- 1 4" resilient base
- 2 grab bars, horizontal
- 3 18" grab bar, vertical
- 4 toilet paper dispenser
- 5 ADA toilet
- 6 ADA toilet seat
- 7 ADA wall hung sink
- 8 ADA mirror
- 9 waste pipe protector
- 10 NOT USED
- 11 FRP wall panels

provide continuous silicon sealant at perimeter edges of all plumbing fixtures.

provide appropriate blocking support for all wall mounted items.

drain lines and water supply lines shall be fully insulated or concealed to protect against contact (LAVGUARD2 pipe protection from TRUEBRO IPS Corporation,



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Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado

1 Bath Plan  
A42 scale: 1/2" = 1'-0"

2 Bath Elevations  
A42 scale: 1/2" = 1'-0"

CMC SV Garage Door Schedule

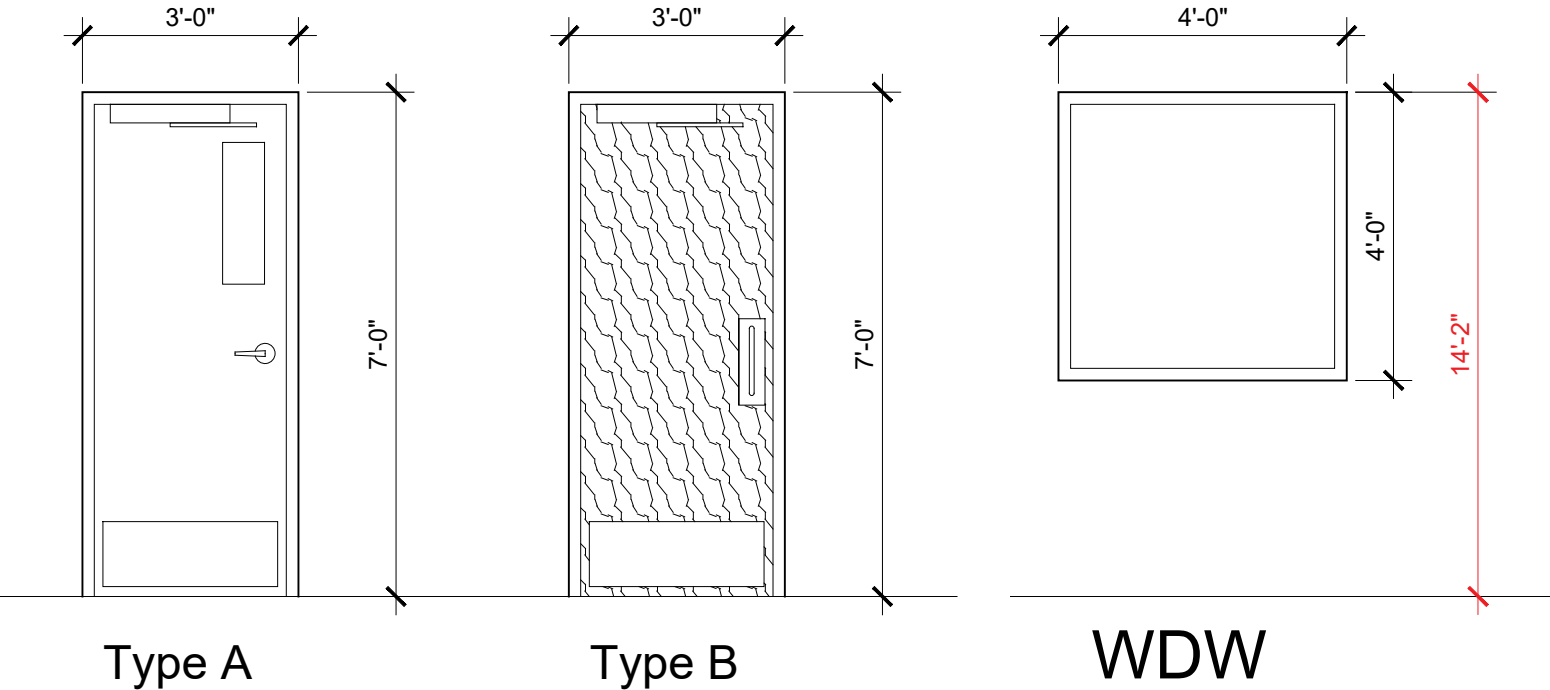
No.	Location		Tag	Door Size			Door Finish			Fire Rating	Hard ware	Remarks
	From	To		Width	Height	Thk						
101	Exterior	Vehicle Bay 1	GARAGE	14'-0"	14'-0"		Sectional Overhead	Metal	Insulated	By Manuf	custom, trim out	By Manuf weatherstrip, operator
102	Exterior	Vehicle Bay 2	GARAGE	12'-0"	14'-0"		Sectional Overhead	Metal	Insulated	By Manuf	custom, trim out	By Manuf weatherstrip, operator
103	Exterior	Vehicle Bay 2	A	3'-0"	7'-0"		Hinged Single	Metal	Insulated	Prefinished	Prefinished	EGRESS weatherstrip, safety glass
104	Exterior	Vehicle Bay 2	A	3'-0"	7'-0"		Hinged Single	Metal	Insulated	Prefinished	Prefinished	EGRESS weatherstrip, safety glass
105	Exterior	Vehicle Bay 2	GARAGE	12'-0"	14'-0"		Sectional Overhead	Metal	Insulated	By Manuf	custom, trim out	By Manuf weatherstrip, operator
106	Exterior	Vehicle Bay 2	B	3'-0"	7'-0"		Hinged Single	Wood	Solid	Painted	Painted	PRIVACY

CMC SV Garage Window Schedule

No.	Room	Oper.		Width	Height	Head	Remarks
151	Vehicle Bay 2	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
152	Vehicle Bay 2	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
153	Part Storage	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
154	NOT USED						
155	Part Storage	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
156	Part Storage	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
157	Vehicle Bay 2	Fixed		4'-0"	4'-0"	14'-2"	08 80 00
158	Vehicle Bay 2	Fixed		4'-0"	4'-0"	14'-2"	08 80 00

EGRESS  
Panic Bar  
ADA pull (exterior)  
Closer  
3 Hinges  
Weatherstripping  
ADA threshold  
Kickplate

PRIVACY  
Privacy Lockset  
ADA Lever  
Closer  
3 Hinges  
Kickplate



Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
1050 North Watery Lane  
Brigham City, UT 84302  
Phone: (435) 919-3100  
Job No. U25L0487A

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3 Schedules  
A42

Construction

Bath Drawings  
& Schedules

Date: 07-29-25  
2311A-07-29-25

A4.2

COMMERCIAL

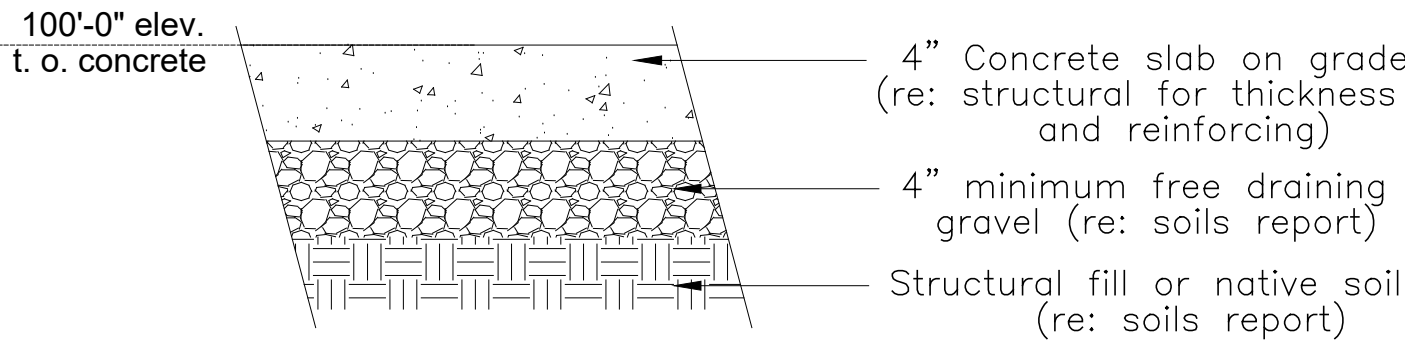
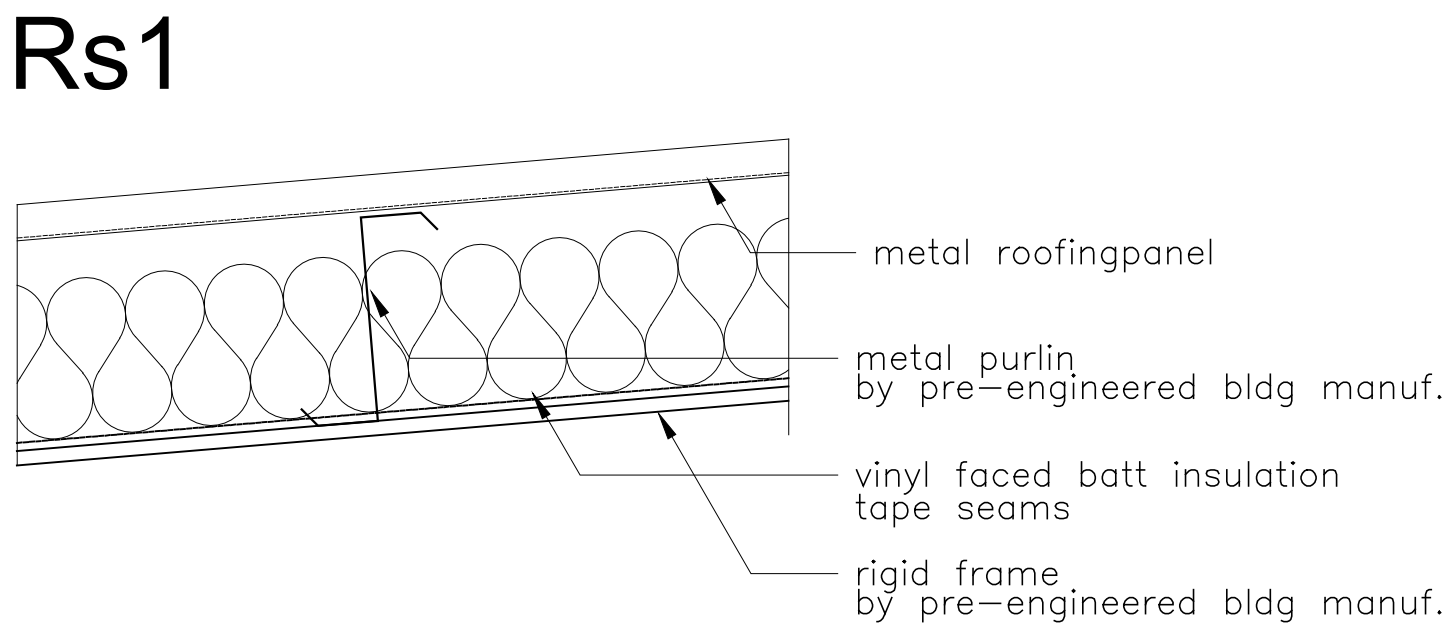
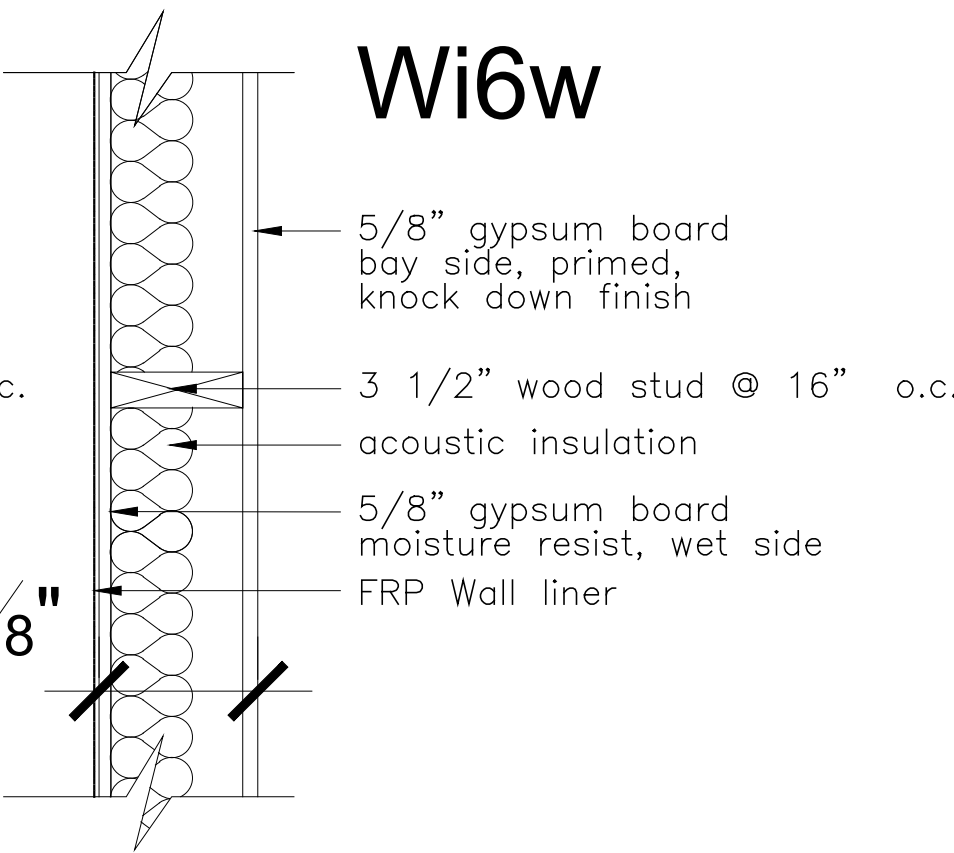
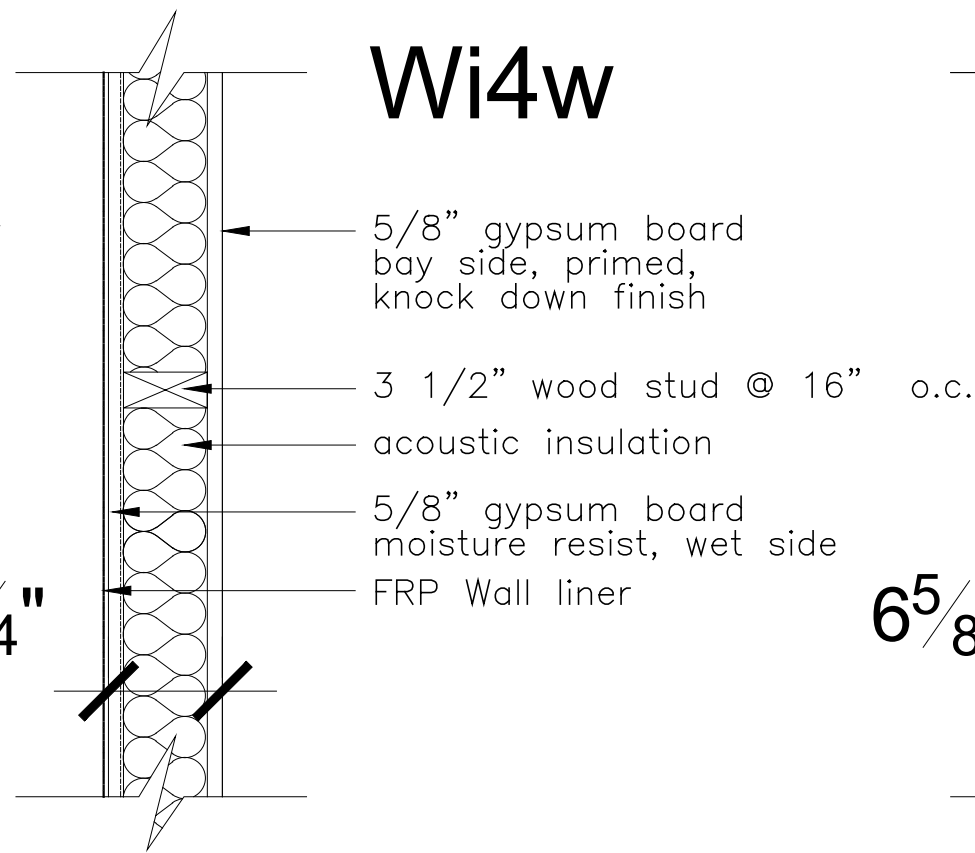
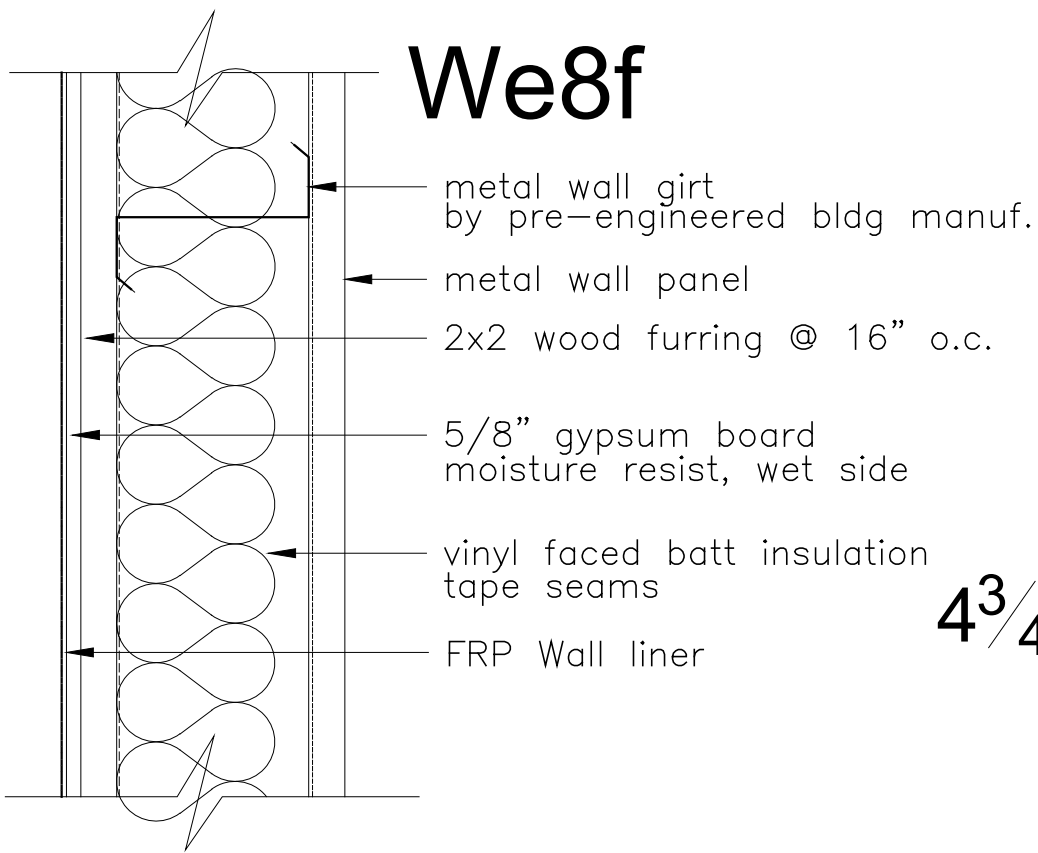
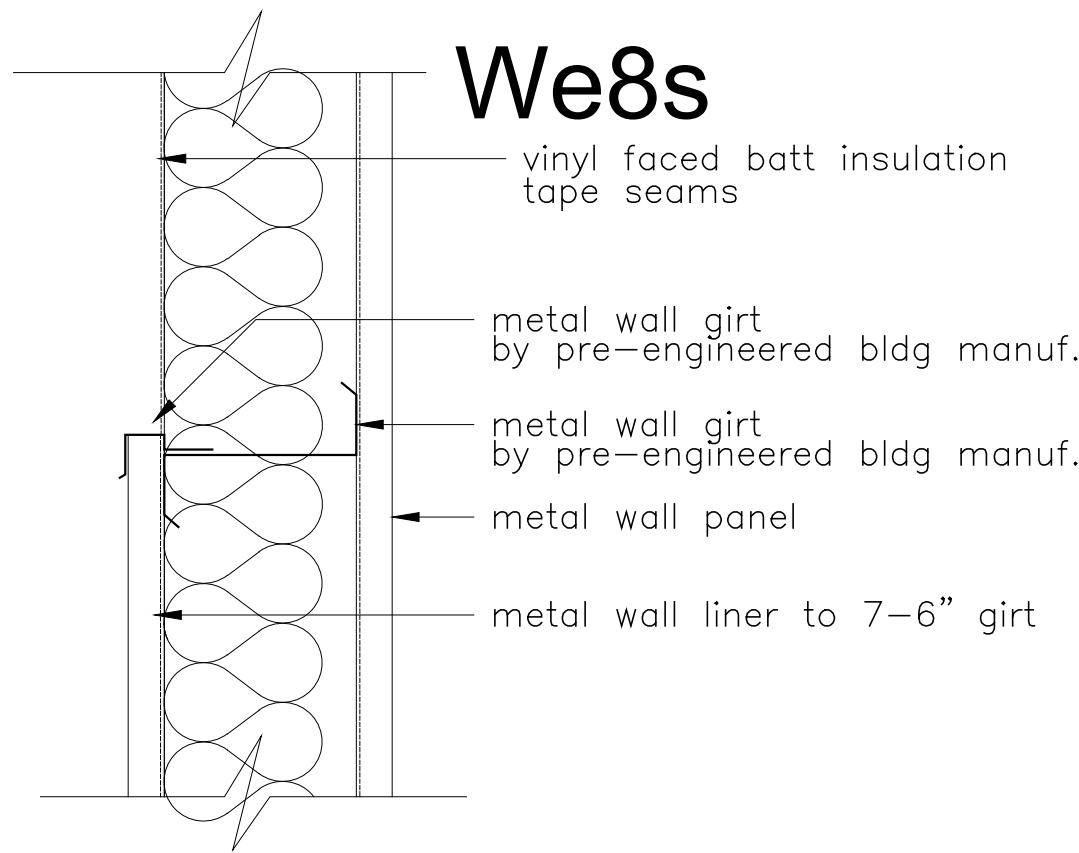
IECC 2021 BUILDING THERMAL ENVELOPE COMPLIANCE			CLIMATE ZONE: 5B
OPAQUE ELEMENTS	U-VALUE/ R-VALUE REQUIRED	U-VALUE/ R-VALUE PROVIDED	DESCRIPTION
ROOF / INSULATION	R-19 + R-11 LS	R-19 + R-11 LS	R-19 LAYER + R-11 LINER SYSTEM
EXTERIOR WALLS ABOVE GRADE	R-13 + R-14ci	R-13 + R-14ci	R-13 OVER GIRTS – R-13 IN WALL CAVITY
SLAB ON GRADE / UNHEATED	R-15; 24" below	R-15; 40" below	3" HIGH DENSITY XPS STEM WALL PERIMETER
OPAQUE DOORS / SWINGING	U-0.63	<=U-0.63	A60 GALV. HM DOORS WITH POLYSTYRENE CORE
GARAGE DOORS / OVERHEAD	U-0.63	<=U-0.63	STEEL SECTIONAL OVERHEAD DOOR WITH POLYSTYRENE CORE
WINDOWS / FIXED & SLIDERS	U-0.36 SHGC-0.38	<=U-0.36 >=SHGC-0.38	VERIFY COMPLIANCE IN FIELD

Project to comply with IECC 2021 requirements including but not limited to, HVAC (heating and AC) system compliance with with Manual J, building thermal envelope air leakage sealing to limit infiltration, duct insulation R values, duct leakage and testing for conditioned and unconditioned spaces, programmable thermostats, low efficacy light bulbs, sealed crawl space and attic access openings, mechanical ventilation gravity dampers, energy efficiency certificate in the electrical panel, hot water pipe insulation, etc.

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling or soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance, <i>R</i> -value, of not less than R-3 per inch. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.
Windows, skylights and doors	The space between framing and skylights, and the jambs of windows and doors, shall be sealed.	—
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors, including cantilevered floors and floors above garages	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking. Alternatively, floor framing cavity insulation shall be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing, and shall extend from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Crawl space insulation, where provided instead of floor insulation, shall be permanently attached to the walls.
Shafts, penetrations	Flue shafts, utility penetrations, and fire shafts opening to exterior or unconditioned space shall be sealed.	—
Narrow cavities	—	Batts to be installed in narrow cavities shall be cut to fit or narrow cavities shall be filled with insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	—
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring	—	In exterior walls, batt insulation shall be cut neatly to fit around wiring and plumbing, or insulation, that on installation readily conforms to available space, shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the shower or tub.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed.	—
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.	—
Concealed sprinklers	Where required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	—

a. Inspection of log walls shall be in accordance with the provisions of ECC 400.

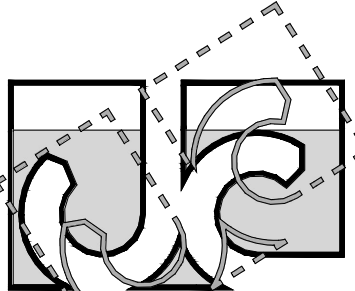
1 Air Barrier Requirements



2 Assemblies

Plans based on pre-engineered structural building shop drawings.  
Provided by: NUCOR Building Systems  
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Colorado Mountain College  
Spring Valley Maintenance Garage  
Garfield County, Colorado

Construction
Assemblies & Energy Notes
Date: 07-29-25 2311A-07-29-25
<b>A9.1</b>

STRUCTURAL GENERAL NOTES

**BUILDING CODE:**  
2015 EDITION OF THE INTERNATIONAL BUILDING CODE AND STANDARDS REFERENCED THEREIN, WITH GARFIELD COUNTY AMENDMENTS.

**LOADS:**  
FRAME LOADS PROVIDED BY NUCORE BUILDING SYSTEMS, JOB NUMBER U25L0497A, DATED 7/18/2025

**LATERAL:**  
**WIND:**  
ULTIMATE DESIGN WIND SPEED (3-SECOND GUST), V(40) = 110 MPH.  
WIND IMPORTANCE FACTOR, I = 1.0,  
RISK CATEGORY, II,  
EXPOSURE B.

**SEISMIC:**  
RISK CATEGORY, II,  
SEISMIC IMPORTANCE FACTOR, I = 1.0,  
SOIL SITE CLASS, D,  
SEISMIC DESIGN CATEGORY, C.

**FOUNDATIONS:**  
ISOLATED AND CONTINUOUS FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL. 30" MINIMUM BELOW ADJACENT FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS AND LOWEST ADJACENT GRADE WITHIN 5 FEET FOR PERIMETER FOOTINGS. DESIGN SOIL BEARING VALUE = 2500 PSF PER GEOTECHNICAL REPORT BY HP KUMAR, PROJECT NUMBER 18-7184 DATED MARCH 30, 2018. THE GEOTECHNICAL ENGINEER SHALL INSPECT FOUNDATION EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.

**CONCRETE:**  
  
SPECIFIED 28 DAY COMPRESSIVE STRENGTH Fc:  
  
FOUNDATIONS (DESIGN BASED ON 2,500 PSI)----- 3,000 PSI  
SLAB ON GRADE ----- 3,000 PSI

**GENERAL:**  
  
ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE REFERENCED EDITION OF THE ACI STANDARDS. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED UNLESS NOTED OTHERWISE. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. NO OTHER ADMIXTURES PERMITTED WITHOUT APPROVAL. FOR CONCRETE WITHOUT PLASTICIZER, MAXIMUM SLUMP 4 1/2" AT POINT OF PLACEMENT UNO. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL.

FOR REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, THE EMBEDMENT OF CONDUITS, PIPES, SLEEVES, ETC. OF ANY MATERIAL SHALL NOT BE PERMITTED WITHIN ANY CONCRETE STRUCTURAL ELEMENT (IE: COLUMNS, BEAMS, ELEVATED SLABS, ETC) OR STRUCTURAL CONCRETE TOPPINGS WITHOUT THE EXPRESSED APPROVAL OF THE STRUCTURAL ENGINEER.

FLY ASH - IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS, SHALL BE LIMITED TO 25% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT. FLY ASH SHALL BE INCLUDED IN THE CALCULATION OF W/C RATIOS SPECIFIED ABOVE. FLY ASH ADDITIVES SHALL NOT BE USED ON SLABS WITH A BURNISHED OR ACID FINISH.

TEST DATA FOR EACH CONCRETE MIX SHALL BE SUBMITTED FOR REVIEW PER CHAPTER 5 OF ACI 318. REFERENCE FIGURE R5.3 FOR SUBMITTAL REQUIREMENTS AND OPTIONS. CONCRETE MIX DESIGNS THAT ARE SUBMITTED WITHOUT THE APPROPRIATE TEST DATA CANNOT BE REVIEWED.

**SLABS ON GRADE:**  
  
MAXIMUM SLUMP WITHOUT PLASTICIZER AT POINT OF PLACEMENT SHALL BE 5 INCHES. MIX DESIGNS SHALL TAKE CARE TO PROVIDE THE LARGEST POSSIBLE SIZE OF COARSE AGGREGATE WHILE MAINTAINING CONCRETE WORKABILITY. NOMINAL MAXIMUM AGGREGATE SIZE SHALL NOT BE LESS THAN 3/4 INCH NOR MORE THAN 1/3 THE DEPTH OF THE SLAB.

FOR INTERIOR SLABS ON GRADE, PROVIDE CONCRETE WITH AN ULTIMATE SHRINKAGE LESS THAN 0.05% AT 28 DAYS. LABORATORY TEST RESULTS SHALL BE SUBMITTED INDICATING THAT THE CONCRETE SLAB ON GRADE MIX DESIGN (OR COMPARABLE) MEETS THE ULTIMATE SHRINKAGE REQUIREMENTS. SHRINKAGE VALUES FOR CONCRETE SPECIMENS SHALL BE TESTED PER ASTM C157 AND THE PROCEDURES IN ACI 209R TO PREDICT THE ULTIMATE DRYING SHRINKAGE.

CONCRETE SHALL BE MIXED, PLACED, FINISHED AND CURED PER REFERENCED EDITION OF ACI 302.1 FOR THE APPROPRIATE FLOOR CLASS TYPE PER TABLE 2.1 AND CHAPTER 7 AND 8. CURING COMPOUND SHALL BE COMPATIBLE WITH ARCHITECTURAL FLOOR FINISH. SLABS SHALL BE PLACED ON A FLAT, SMOOTH, FIRM, COMPACTED SUBGRADE.

SLABS ON GRADE SHALL BE VIBRATED ONLY AT TRENCHES, FLOOR DUCTS, TURNDOWNS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONTROL JOINTS (CONSTRUCTION OR SAW CUT) PER TYPICAL DETAILS, AS SHOWN ON THE FOUNDATION PLAN, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 150 SQUARE FEET. CONSTRUCTION CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT. SLAB REINFORCING, WHERE SHOWN, SHALL NOT EXTEND MORE THAN 125 FEET WITHOUT STOPPING THE REINFORCEMENT AT A CONTROL JOINT.

JOINTS SHALL BE FILLED OR SEALED AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS. AT A MINIMUM, JOINTS IN SLABS SUBJECT TO SOLID RUBBER, HARD URETHANE, OR NYLON CASTERS OR STEEL WHEEL TRAFFIC SHALL BE FILLED WITH A SEMI-RIGID EPOXY OR POLYUREA CONSISTING OF 100 PERCENT SOLIDS AND A MINIMUM SHORE HARDNESS OF A-80 PER ASTM D2240. FILLER MATERIAL SHOULD BE INSTALLED THE FULL JOINT DEPTH, WITHOUT A BACKER ROD, AND FLUSH WITH THE FLOOR SURFACE VIA OVERFILLING THEN SHAVED FLAT. JOINT FILLING SHOULD BE DELAYED AS LONG AS POSSIBLE TO ACCOMMODATE THE MAXIMUM POSSIBLE SLAB SHRINKAGE.

1. VAPOR BARRIER IF REQUIRED BY ARCHITECTURAL SPECIFICATION OR SOILS REPORT SHALL CONSIST OF A MINIMUM 10 MIL MATERIAL LAPPED A MINIMUM OF 6 INCHES AND TAPED PER MANUFACTURER RECOMMENDATIONS. THE BARRIER SHALL BE PLACED ON TOP OF A SMOOTH AND COMPACTED SUBGRADE SURFACE. THE FLOOR SLAB SHALL BE PLACED OVER A FOUR INCH LAYER OF COMPACTED AGGREGATE BASE COURSE ON TOP OF THE VAPOR BARRIER. ANY DAMAGE TO VAPOR BARRIER SHALL BE REPAIRED PRIOR TO AGGREGATE COURSE PLACEMENT. CARE SHALL BE TAKEN TO KEEP MOISTURE AWAY FROM THE COMPACTED SUBBASE. SUBGRADE MUST BE ALLOWED TO DRY AFTER RAINS PRIOR TO SLAB PLACEMENT. FLOOD CURING IS NOT ALLOWED. SAND IS NOT AN ALTERNATIVE FOR THE SUB-BASE COURSE.

**REINFORCING:**  
  
ALL REINFORCING PER CRSI SPECIFICATIONS AND HANDBOOK. ASTM A615 (Fy = 60 KSI / GRADE 60) DEFORMED BARS FOR ALL BARS #5 AND LARGER (AND FOR ALL CONCRETE WALLS, BEAMS, SLABS AND COLUMN REINFORCING). ALL REINFORCING PER CRSI SPECIFICATIONS AND HANDBOOK. ASTM A615 (Fy = 60 KSI / GRADE 60) DEFORMED BARS FOR ALL BARS, U.N.O. ASTM A615 (Fy = 40 KSI / GRADE 40) DEFORMED BARS FOR ALL BARS #4 AND SMALLER. WHERE SHOWN ON DRAWINGS ALL GRADE 60 REINFORCING TO BE WELDED SHALL BE ASTM A706. WELDED WIRE REINFORCING PER ASTM A1054, WIRE PER ASTM A1064. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. REFERENCED ACI STANDARDS AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES AS FOLLOWS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ----- 3"  
EXPOSED TO EARTH OR WEATHER  
#6 OR LARGER ----- 2"  
#5 AND SMALLER ----- 1 1/2"  
FLAT SLAB ----- 3/4"  
WALLS -----SEE SCHEDULE AND/OR DETAILS  
ALL OTHER PER REFERENCED EDITION OF ACI 318

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.

ALL DIMENSIONS REFERENCED IN DRAWINGS AS "CLEAR" SHALL BE FROM FACE OF STRUCTURE TO EDGE OF REINFORCING, AND SHALL NOT BE LESS THAN STATED, NOR GREATER THAN "CLEAR" DIMENSION PLUS 3/8". ALL OTHERS SHALL BE PLUS OR MINUS 1/4" TYPICAL UNLESS NOTED OTHERWISE.

FIELD BENDING OR STRAIGHTENING OF DEFORMED BARS SHALL BE LIMITED TO #5 BARS AND SMALLER AND SHALL BE FIELD BENT OR STRAIGHTENED ONLY ONCE. ANY BEND SHALL BE LIMITED TO 90 DEGREES. IF FIELD BENDING OR STRAIGHTENING OF #6 BARS OR LARGER IS REQUIRED, OR IF A SECOND BEND IS REQUIRED FOR #5 BARS AND SMALLER, HEAT SHALL BE APPLIED FOR BENDING OR STRAIGHTENING. CONTRACTOR SHALL SUBMIT PROCEDURE FOR APPLYING HEAT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BENDING OR STRAIGHTENING BARS.

**LAP SPICES IN CONCRETE:**  
  
ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90-DEGREE HOOKS UNLESS NOTED OTHERWISE. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. ONLY WHEN SPECIFICALLY NOTED ON DRAWINGS MAY CONCRETE COLUMN DOWEL EMBEDMENT BE A STANDARD COMPRESSION DOWEL WITH EMBEDMENT LENGTH ACCORDING TO THE REFERENCED EDITION OF THE ACI 318.

LAP SPLICES, UNLESS NOTED OTHERWISE, SHALL BE CLASS "B" TENSION LAP SPLICES PER REFERENCED EDITION OF ACI 318. ONLY WHEN SPECIFICALLY NOTED ON DRAWINGS MAY LAP SPLICES IN CONCRETE COLUMNS BE STANDARD COMPRESSION LAP SPLICES.

**STRUCTURAL STEEL:**  
  
**GENERAL:**  
ALL STEEL CONSTRUCTION PER REFERENCED AISC STEEL CONSTRUCTION MANUAL. ALL WIDE FLANGE STEEL SHALL BE ASTM A992 (Fy = 50 KSI). ALL PIPE STEEL SHALL BE ASTM A500 (Fy = 42 KSI) OR ASTM A53, TYPE E OR S, GRADE B (Fy = 35 KSI). ALL TUBE STEEL SHALL BE ASTM A500 (Fy = 46 KSI). ALL MISCELLANEOUS STEEL UNLESS NOTED OTHERWISE SHALL BE ASTM A36 (Fy = 36 KSI). THE TERMS PIPE AND ROUND HOLLOW STRUCTURAL SECTIONS (HSS) ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS ALONG WITH THE TERMS TUBE STEEL AND RECTANGULAR OR SQUARE HSS.

ALL STRUCTURAL ROLLED STEEL MEMBERS WITH Fy GREATER THAN 36 KSI ARE TO BE IDENTIFIED WITH AN ASTM SPECIFICATION MARK OR TAG PER IRC SEC. 2202

UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE ASTM A307. A325 BOLTS MAY BE SUBSTITUTED FOR A307 BOLTS AT THE CONTRACTOR'S OPTION. REVERSE SUBSTITUTION IS NOT PERMITTED. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS AT SHORT SLOTTED HOLES USING SNUG TIGHT INSTALLATION, UNLESS NOTED OTHERWISE. ALL SHEAR STUD CONNECTORS USED IN THE INTERCONNECTION OF STEEL AND CONCRETE FOR COMPOSITE CONSTRUCTION SHALL BE PER ASTM A108, WITH A MINIMUM TENSILE STRENGTH OF 60 KSI, A MINIMUM YIELD STRENGTH OF 50 KSI, AND A 20% ELONGATION IN 2 INCHES.

**STEEL ERECTION NOTE:**  
  
PER OSHA, STEEL MEMBERS AND DIAGONAL BRACING CANNOT BE RELEASED FROM HOISTING CABLES UNTIL ALL BOLTS OR WELDS AT MEMBER ENDS ARE COMPLETE.

**WELDING:**  
  
UNLESS NOTED OTHERWISE, ALL SHOP AND FIELD WELDS PER REFERENCED EDITION OF THE AWS STANDARDS. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING DOCUMENTED CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E60 SERIES. THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

HIGH STRENGTH HEADED STUDS SHALL BE AUTOMATIC WELDED CONFORMING TO ALL REQUIREMENTS OF THE REFERENCED EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING". CONFORMANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL QUALITY CONTROL TESTING PROVISIONS OF THE AFOREMENTIONED PUBLICATIONS

1. ALL FULL (COMPLETE) PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY A QUALIFIED INDEPENDENT TESTING AGENCY.  
S THAN 8 INCHES FROM FINISHED GRADE SHALL BE PRESERVATIVE-TREATED WOOD.

**SHOP DRAWINGS:**  
  
THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTOR'S REVIEW.  
  
VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS.

MANUFACTURER OR FABRICATOR SHALL CLOUD ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS, AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY.

THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.

THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. GENERALITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

**GENERAL NOTES:**  
  
THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC.. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS).

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE REFERENCED EDITION AND/OR AGENCIA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS AND SUBSTITUTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION OR SUBSTITUTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

**SPECIAL INSPECTION - STRUCTURAL ONLY:**  
  
SPECIAL INSPECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SUPERVISING STRUCTURAL ENGINEER SHALL SEAL THE SPECIAL INSPECTION CERTIFICATE.

SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED BY SECTION 110 (09/12/15/18 IBC) (109 06 IBC) OF THE INTERNATIONAL BUILDING CODE. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 FOR THE FOLLOWING:

**CONCRETE CONSTRUCTION:**  
1. CONCRETE:  
A. DURING THE TAKING OF TEST SPECIMENS.  
B. CONTINUOUS INSPECTION DURING THE PLACEMENT OF ALL REINFORCED CONCRETE, UNLESS NOTED OTHERWISE.  
C. CONTINUOUS INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS.  
(EXCEPTION: NO INSPECTION IS REQUIRED FOR PLACEMENT OF CONCRETE AROUND FOUNDATION ANCHOR BOLTS).  
D. NO INSPECTION IS REQUIRED FOR PLACEMENT OF SLAB ON GRADE CONCRETE. INSPECTION OF SLAB ON GRADE REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.  
E. NO INSPECTION IS REQUIRED FOR THE PLACEMENT OF FOUNDATION CONCRETE (FOR BUILDINGS THREE STORIES OR LESS WHEN DESIGNED WITH 2,500PSI). INSPECTION OF FOUNDATION REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.

2. REINFORCING STEEL: INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE FOR THE FOLLOWING:  
A. REINFORCING FOR ALL CONCRETE REQUIRED TO HAVE INSPECTION NOTED ABOVE.  
B. REINFORCING FOR CONCRETE FOUNDATIONS.  
C. REINFORCING FOR SLABS ON GRADE.  
E. CONTINUOUS INSPECTION DURING THE PLACEMENT OF ALL REINFORCED CONCRETE, UNLESS NOTED OTHERWISE.

**STEEL CONSTRUCTION:**  
3. WELDING:  
F. VERIFICATION OF VALID WELDER'S CERTIFICATES.  
G. PERIODIC VISUAL INSPECTION OF ALL SHOP AND FIELD WELDS.  
H. ALL STRUCTURAL STEEL FABRICATORS SHALL EMPLOY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY TO PROVIDE SHOP WELD INSPECTIONS PER CODE. INSPECTION REPORTS AND REQUIRED DOCUMENTATION SHALL BE SUBMITTED TO ENGINEER OF RECORD PRIOR TO STEEL INSTALLATION.  
I. CONTINUOUS INSPECTION OF ALL MULTIPASS FILLET WELDS, SINGLE PASS FILLET WELDS LARGER THAN 5/16", COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS, PLUG AND SLOT WELDS.  
J. NON-DESTRUCTIVE TESTING OF ALL COMPLETE PENETRATION WELDS BY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY AT THE CONTRACTORS EXPENSE.

**SPECIAL CASES:**  
1. EXPANSION, EPOXY, ADHESIVE, AND SCREW ANCHORS; DURING THE PLACEMENT OF ALL ANCHORS SHOWN ON STRUCTURAL DRAWINGS. ADDITIONAL INSPECTIONS REQUIRED FOR REPAIR DETAILS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.  
K. INSPECTION OF HOLE DIAMETER, HOLE DEPTH AND DRILL BIT CONFORMANCE.  
L. INSPECTION OF HOLE CLEANING WITH WIRE BRUSH AND COMPRESSED AIR.  
M. INSPECTION OF ANCHOR INSTALLATION USING SPECIFIED PRODUCT AND MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.  
N. INSPECTION OF EXPANSION ANCHORS SHALL INCLUDE THE VERIFICATION OF THE TIGHTENING TORQUE THAT IS SPECIFIED BY THE ANCHOR MANUFACTURER.

**SPECIAL INSPECTIONS - NON STRUCTURAL (PERFORMED BY OTHERS):**

**GEOTECHNICAL INSPECTIONS - SOILS:**  
1. PERIODIC VERIFICATION THAT MATERIALS BELOW GRADE ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.  
2. PERIODIC VERIFICATION THAT EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.  
3. PERFORM PERIODIC CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.  
4. CONTINUOUS VERIFICATION THAT USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.  
5. PERIODIC VERIFICATION PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.

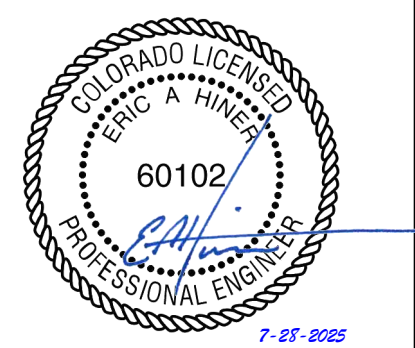
**DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:**  
A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATION.  
B. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE DEVIATIONS FROM THE DESIGN DRAWINGS OR SPECIFICATIONS, AND ALL DEVIATIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PROCEEDING WITH THE WORK. ALL REQUESTS FOR DEVIATIONS SHALL BE INITIATED BY THE CONTRACTOR VIA WRITTEN REQUEST FOR INFORMATION (RFI).  
C. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE ENGINEER OR ARCHITECT OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.  
D. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO ALL ITEMS REQUIRING SPECIAL INSPECTION. ACCESS SHALL BE PROVIDED BY IN-PLACE LADDERS, SCAFFOLDS, LIFTS AND/OR OTHER EQUIPMENT OPERATED BY THE CONTRACTOR'S PERSONNEL AS REQUIRED FOR SAFE OBSERVATION. THE SPECIAL INSPECTOR IS NOT RESPONSIBLE OR AUTHORIZED TO OPERATE CONTRACTOR'S EQUIPMENT.  
E. UPON COMPLETION OF THE ASSIGNED WORK THE ENGINEER OR ARCHITECT SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

ABBREVIATIONS

AB	ANCHOR BOLT	JST	JOIST																																																																																																												
ABV	ABOVE	JT	JOINT																																																																																																												
ACI	AMERICAN CONCRETE INSTITUTE	K	KING																																																																																																												
ADPL	ADDITIONAL	KSI	KIPS PER SQUARE INCH																																																																																																												
ADJ	ADJUSTABLE	LL	LIVE LOAD																																																																																																												
AF	ABOVE FINISHED FLOOR	LLH	LONG LEG HORIZONTAL																																																																																																												
ALT	ALTERNATE	LLV	LONG LEG VERTICAL																																																																																																												
APA	AMERICAN PLYWOOD ASSOCIATION	LOC	LOCATION																																																																																																												
ARCH	ARCHITECT OR ARCHITECTURAL	LT	LIGHT																																																																																																												
B.O.	BOTTOM OF	LVL	LAMINATED VENEER																																																																																																												
BLDG	BUILDING	MATL	MATERIAL																																																																																																												
BLKG	BLCKING	MAX	MAXIMUM																																																																																																												
BLX	BELOW	MECH	MECHANICAL																																																																																																												
BM	BEAM	MFR	MANUFACTURER																																																																																																												
BOT	BOTTOM	MIN	MINIMUM																																																																																																												
BOV	BOTTOM OF WALL	MISC	MISCELLANEOUS																																																																																																												
BWP	BETWEEN	MTL	METAL																																																																																																												
CANTD	CANTILEVERED	N.B.	NOT SHOWN																																																																																																												
CCW	COUNTER-CLOCKWISE	NTS	NOT TO SCALE																																																																																																												
CIP	CAST-IN-PLACE	O.C.	ON-CENTER																																																																																																												
CJ	CONTROL JOINT	O.F.	OUTSIDE FACE																																																																																																												
CJP	COMPLETE JOINT	OPNG	OPENING																																																																																																												
CL	CLOCKWISE	OPP	OPPOSITE																																																																																																												
CMU	CONCRETE MASONRY UNIT	OSB	ORIENTED STRAND BOARD																																																																																																												
CNTRD	CENTERED	P.E.	PRESSURE TREATED																																																																																																												
COL	COLUMN	P.F.	POWER-ACTUATED																																																																																																												
CONC	CONCRETE	PC	PRECAST																																																																																																												
CONN	CONNECTION	PEN	PENETRATION																																																																																																												
CONST	CONSTRUCTION	PERP	PERPENDICULAR																																																																																																												
CONT	CONTINUOUS	PLG	PLATE																																																																																																												
CONTR	CONTRACTOR	PLF	POUNDS PER LINEAR FOOT																																																																																																												
CN	CLOCKWISE	PLL	PARALLEL																																																																																																												
DBA	DEFORMED BAR ANCHOR	PLY	PLYWOOD																																																																																																												
DEFL	DEFLECTION	PST	POUNDS PER SQUARE FOOT																																																																																																												
DIAG	DIAGONAL	PSL	PARALLEL STRAND LUMBER																																																																																																												
DL	DEAD LOAD	R	RADIUS																																																																																																												
EF	EACH FACE	RD	ROOF DRAIN																																																																																																												
EN	EDGE NATLING	REF	REFER TO																																																																																																												
E.N.	EACH WAY	REINF	REINFORCING/MENT																																																																																																												
EL	ELEVATION	REQD	REQUIRED																																																																																																												
ELEV	ELEVATOR	RS	ROUGH SAWN																																																																																																												
EMBED	EMBEDMENT	RTU	ROOF TOP UNIT																																																																																																												
EQ	EQUAL	S.O.G.	SLAB ON GRADE																																																																																																												
EQUIV	EQUIVALENT	SCHED	SCHEDULE </tr <tr><td>EXISTG/</td><td>EXISTING</td><td>SEOR</td><td>STRUCTURAL ENGR OF</td></tr> <tr><td>E)</td><td>EXPANSION</td><td>SHT</td><td>SHEET</td></tr> <tr><td>EXP</td><td>EXTERIOR</td><td>SHTG</td><td>SHEATHING</td></tr> <tr><td>EXT</td><td>FLOOR DRAIN</td><td>SIM</td><td>SIMILAR</td></tr> <tr><td>FDN</td><td>FOUNDATION</td><td>SP</td><td>SPACE OR SPACING</td></tr> <tr><td>FLG</td><td>FLANGE</td><td>SPCS</td><td>SPECIFICATIONS</td></tr> <tr><td>FS</td><td>FULL SAWN</td><td>SS</td><td>STAINLESS STEEL</td></tr> <tr><td>FTG</td><td>FOOTING</td><td>STD</td><td>STANDARD</td></tr> <tr><td>G.C.</td><td>GENERAL CONTRACTOR</td><td>STG</td><td>STAGGERED</td></tr> <tr><td>GA</td><td>GAUGE/GAGE</td><td>STL</td><td>STEEL</td></tr> <tr><td>GALV</td><td>GALVANIZED</td><td>STRUCT</td><td>STRUCTURAL</td></tr> <tr><td>GB</td><td>GRADE BEAM</td><td>SYM</td><td>SYMMETRICAL</td></tr> <tr><td>GL</td><td>GLUE-LAMINATED MEMBER</td><td>T</td><td>TRIMMER</td></tr> <tr><td>H.A.S.</td><td>HEADED ANCHOR STUD</td><td>T&amp;B</td><td>TOP AND BOTTOM</td></tr> <tr><td>HDR</td><td>HEADER</td><td>TIG</td><td>TONGUE AND GROOVE</td></tr> <tr><td>HGR</td><td>HANGER</td><td>T.O.</td><td>TOP OF</td></tr> <tr><td>HORIZ</td><td>HORIZONTAL</td><td>TOF</td><td>TOP OF FOOTING</td></tr> <tr><td>HSS</td><td>HOLLOW STRUCTURAL</td><td>TOL</td><td>TOP OF LEDGE</td></tr> <tr><td>HT</td><td>HEIGHT</td><td>TOS</td><td>TOP OF SLAB</td></tr> <tr><td>I.F.</td><td>INSIDE FACE</td><td>TOT</td><td>TOP OF WALL</td></tr> <tr><td>IBC</td><td>INTNL BUILDING CODE</td><td>TYP</td><td>TYPICAL</td></tr> <tr><td>INT</td><td>INTERIOR</td><td>UNO</td><td>UNLESS NOTED OTHERWISE</td></tr> <tr><td>IRC</td><td>INTNL RESIDENTIAL CODE</td><td>VERT</td><td>VERTICAL</td></tr> <tr><td>ISO</td><td>ISOLATION</td><td>VIF</td><td>VERIFY IN FIELD</td></tr> <tr><td></td><td></td><td>W</td><td>WITH</td></tr> <tr><td></td><td></td><td>WP</td><td>WORK POINT</td></tr> <tr><td></td><td></td><td>WWF</td><td>WELDED WIRE FABRIC</td></tr>	EXISTG/	EXISTING	SEOR	STRUCTURAL ENGR OF	E)	EXPANSION	SHT	SHEET	EXP	EXTERIOR	SHTG	SHEATHING	EXT	FLOOR DRAIN	SIM	SIMILAR	FDN	FOUNDATION	SP	SPACE OR SPACING	FLG	FLANGE	SPCS	SPECIFICATIONS	FS	FULL SAWN	SS	STAINLESS STEEL	FTG	FOOTING	STD	STANDARD	G.C.	GENERAL CONTRACTOR	STG	STAGGERED	GA	GAUGE/GAGE	STL	STEEL	GALV	GALVANIZED	STRUCT	STRUCTURAL	GB	GRADE BEAM	SYM	SYMMETRICAL	GL	GLUE-LAMINATED MEMBER	T	TRIMMER	H.A.S.	HEADED ANCHOR STUD	T&B	TOP AND BOTTOM	HDR	HEADER	TIG	TONGUE AND GROOVE	HGR	HANGER	T.O.	TOP OF	HORIZ	HORIZONTAL	TOF	TOP OF FOOTING	HSS	HOLLOW STRUCTURAL	TOL	TOP OF LEDGE	HT	HEIGHT	TOS	TOP OF SLAB	I.F.	INSIDE FACE	TOT	TOP OF WALL	IBC	INTNL BUILDING CODE	TYP	TYPICAL	INT	INTERIOR	UNO	UNLESS NOTED OTHERWISE	IRC	INTNL RESIDENTIAL CODE	VERT	VERTICAL	ISO	ISOLATION	VIF	VERIFY IN FIELD			W	WITH			WP	WORK POINT			WWF	WELDED WIRE FABRIC
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Streamline Structures



CMC Maintenance Building Foundation  
Spring Valley Campus  
County Road 114  
Garfield County, Colorado

DATE: 7/27/2025  
7/28/2025  
ISSUE: PERMIT  
PERMIT  
REVS

GENERAL NOTES & TYP DETAILS

PLOT DATE: 7/28/2025

PROJECT # : 25.008

DRAWN BY: EH

CHECKED BY: EH

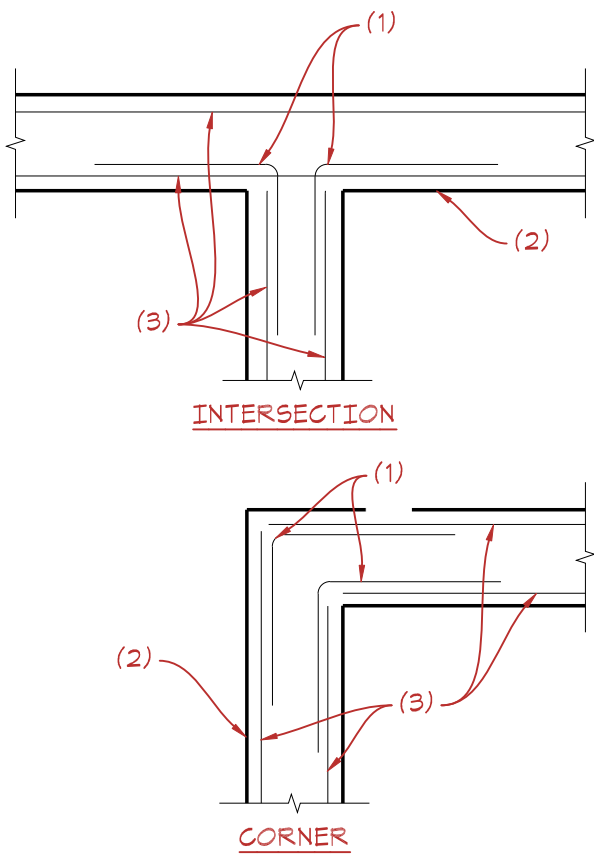
S1

CLASS B TENSION SPLICE LENGTHS														COMP. BARS
CONC. FEE														
BAR LOCATION (VERTICAL)	RESULAR	TOP	RESULAR	TOP	RESULAR	TOP	RESULAR	TOP	RESULAR	TOP	RESULAR	TOP	RESULAR	TOP
#3 (10)	24"	31"	14"	24"	17"	22"	16"	20"	16"	18"	12"	12"		
#4 (15)	32"	41"	25"	32"	22"	24"	20"	26"	19"	25"	15"	12"		
#5 (16)	34"	51"	31"	40"	20"	36"	25"	30"	24"	31"	14"	14"		
#6 (14)	41"	61"	37"	46"	33"	43"	31"	40"	28"	37"	23"	17"		
#7 (22)	64"	84"	54"	70"	44"	63"	44"	58"	41"	53"	26"	20"		
#8 (25)	75"	102"	62"	80"	55"	72"	51"	66"	47"	61"	30"	23"		
#9 (24)	88"	115"	70"	91"	63"	81"	57"	74"	55"	64"	34"	25"		
#10 (32)	94"	124"	74"	102"	70"	91"	64"	83"	54"	77"	38"	28"		
#11 (36)	110"	145"	87"	113"	78"	101"	71"	93"	66"	86"	42"	31"		

- NOTES:
- TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
  - LAP SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318 UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS OR SCHEDULES.
  - CONTACT STRUCTURAL ENGINEER IF CLEAR SPACING OF REINFORCEMENT IS LESS THAN OR EQUAL TO 2 BAR DIAMETERS (2d), OR IF CLEAR COVER IS LESS THAN THE BAR DIAMETER (db).
  - THIS TABLE IS BASED ON NORMAL WEIGHT CONCRETE.
  - FOR ADDITIONAL INFORMATION, SEE G.S.N., PLANS, SCHEDULES AND DETAILS.

# 1 TYP LAP SCHEDULE

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

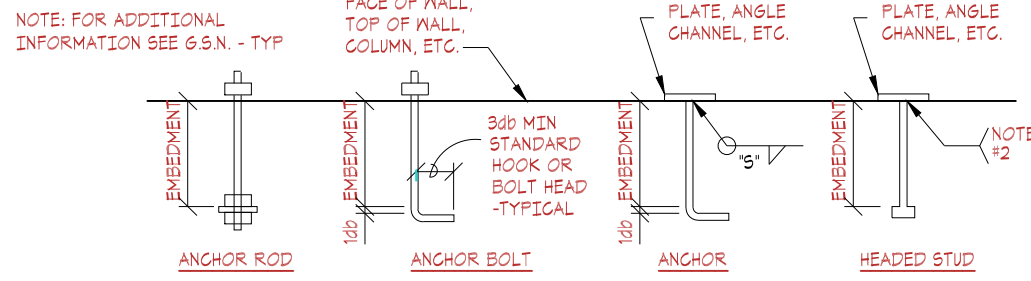


- NOTES:
- CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. LAP PER TYPICAL DETAIL (24" MINIMUM).
  - CONCRETE STEM WALL OR FOOTINGS.
  - REINFORCING PER PLANS AND/OR DETAILS.

# 6 PLAN - CORNER REINF. IN CONC. WALL

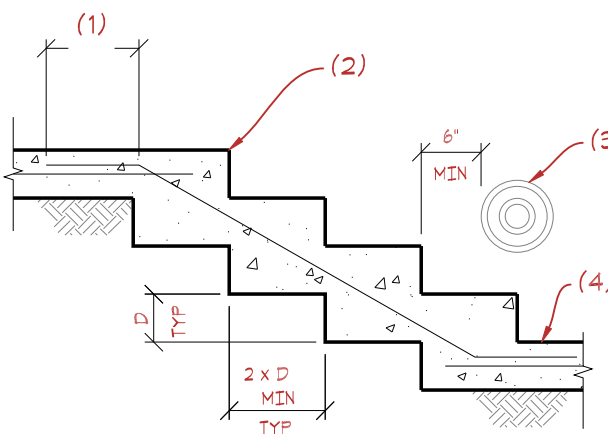
SCALE: 3/4" = 1'-0"

BOLT DIAMETER (db)	VERT BOLT EMBEDMENT LENGTH	HORIZ BOLT EMBEDMENT LENGTH	ANCHOR FILLET WELD SIZE, "S"
1/2"	6"	4"	1/4"
5/8"	6"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	8"	7"	3/8"
1 1/8"	10"	8"	-----
1 1/4"	11"	9"	-----



# 2 TYP ANCHOR ROD, BOLT SCHEDULE

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

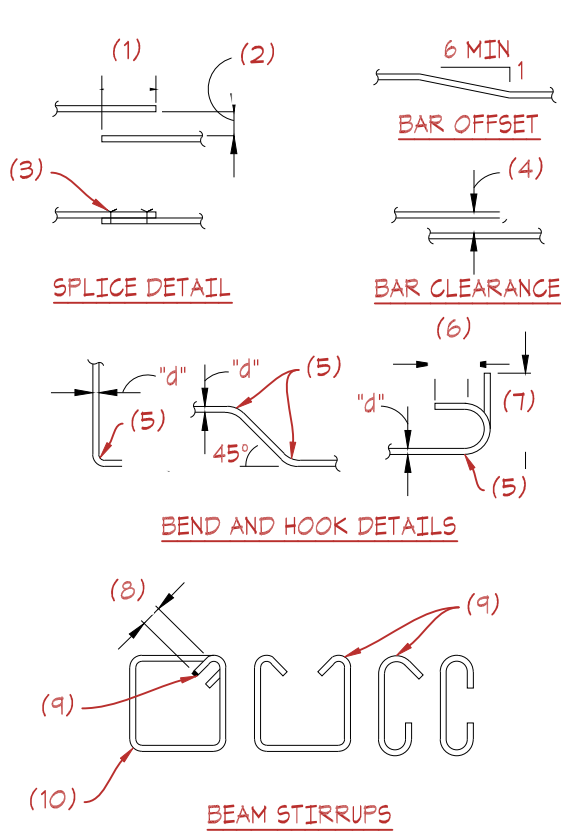


# 7 TYP -STEP IN CONC. FTG.

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

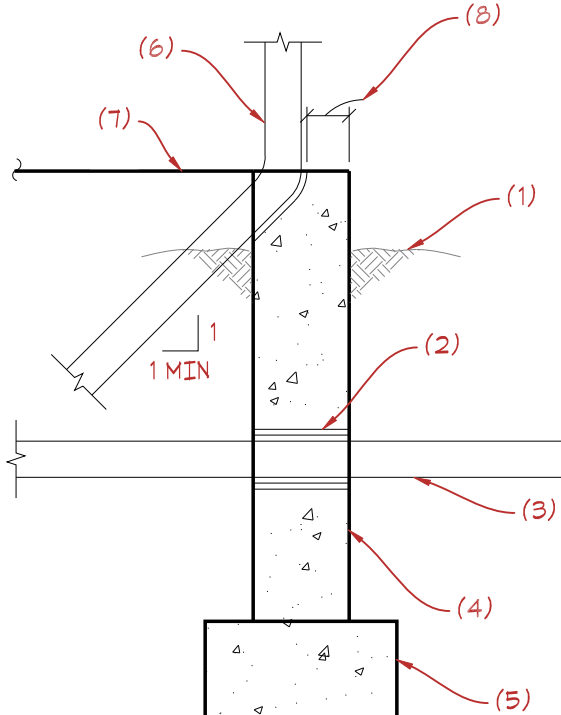
- NOTES:
- LAP PER G.S.N. (24" MIN) - TYP.
  - TOP OF WALL FOOTING.
  - PIPE THRU STEM WALL AS OCCURS - SEE TYPICAL DETAIL.
  - RETURN TO FOOTING THICKNESS AS SHOWN ON PLAN.

NOTE:  
D = 2'-0" MAXIMUM.  
FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.



# 3 TYP CONC. REINF. DETAILS

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

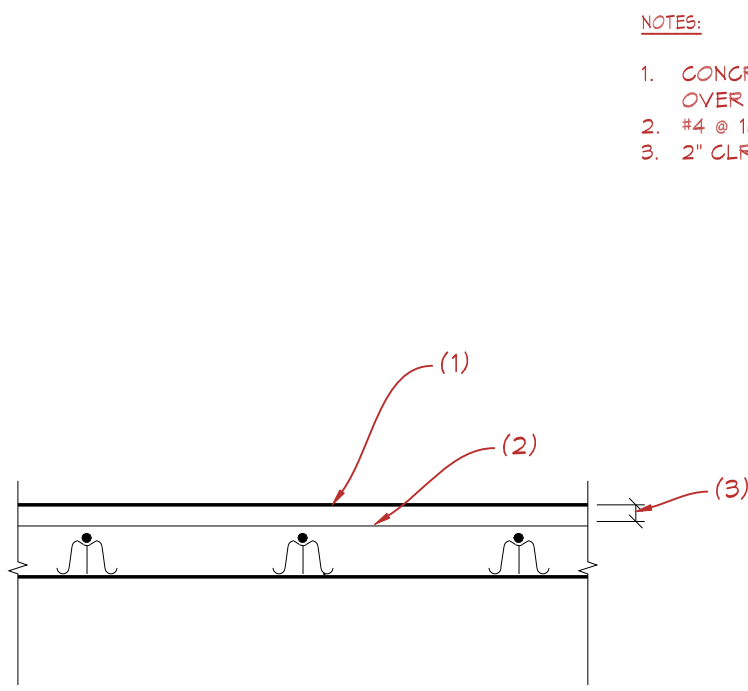


# 8 PIPE AT FND. STEM

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

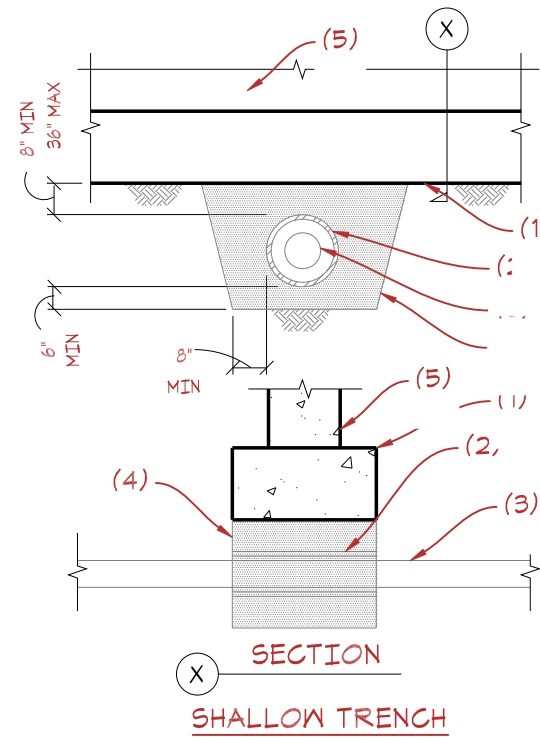
- NOTES:
- FINISHED GRADE WHERE OCCURS.
  - SLEEVE - PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE/CONDUIT.
  - HORIZONTAL PIPE OR CONDUIT.
  - STEM WALL.
  - CONCRETE FOOTING.
  - VERTICAL PIPE OR CONDUIT WHEN LOCATED AT STEM WALL - TRANSITION AT FLOOR LINE.
  - FINISHED FLOOR LINE.
  - 1 1/2" MIN CLEAR EXTERIOR FACE OF WALL AND NOTCH. NO REINFORCING MAY BE CUT. DAMAGE TO STEM WALL SHALL BE REPAIRED AND PATCHED TO MATCH ADJACENT WALL.

NOTE:  
A. NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.  
B. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.



# 4 TYPICAL SLAB REINF.

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



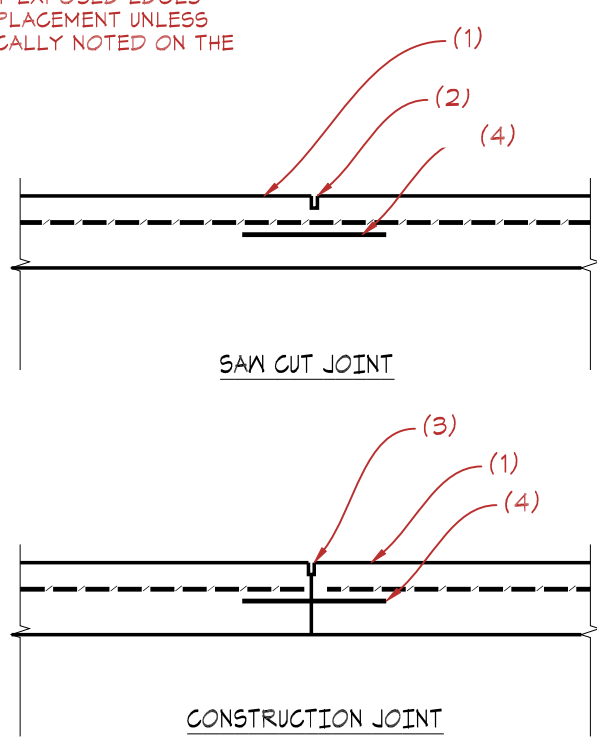
# 9 PIPE PASSING UNDER WALL FTG.

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

- NOTES:
- CONCRETE FOOTING.
  - SLEEVE - PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE OR CONDUIT.
  - PIPE OR CONDUIT.
  - CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED - FORM SAME AS FOOTING AND POUR FULL WIDTH OF PIPE TRENCH.
  - STEM WALL.

NOTE:  
NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.

NOTE:  
BUTT JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS.



# 5 TYP CONTROL JOINTS IN S.O.G.

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

- NOTES:
- CONCRETE SLAB ON GRADE. FOR HEIGHT OF REINFORCING, SEE TYPICAL DETAIL.
  - SANGUT - 1/8" WIDE X 1/4" SLAB THICKNESS IN DEPTH - CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE ACCOMPLISHED WITHIN 4 TO 12 HOURS OF CONCRETE FINISH.
  - BUTT JOINT WITH 1" SANGUT.
  - #5 SMOOTH SLAB DOWELS. MATCH REINFORCEMENT SPACING.



Streamline  
Structures



CMC Maintenance Building  
Foundation  
Spring Valley Campus  
County Road 114  
Garfield County, Colorado

DATE:  
7/27/2025  
7/28/2025

ISSUE:  
PERMIT  
PERMIT  
REVS

TYPICAL  
DETAILS

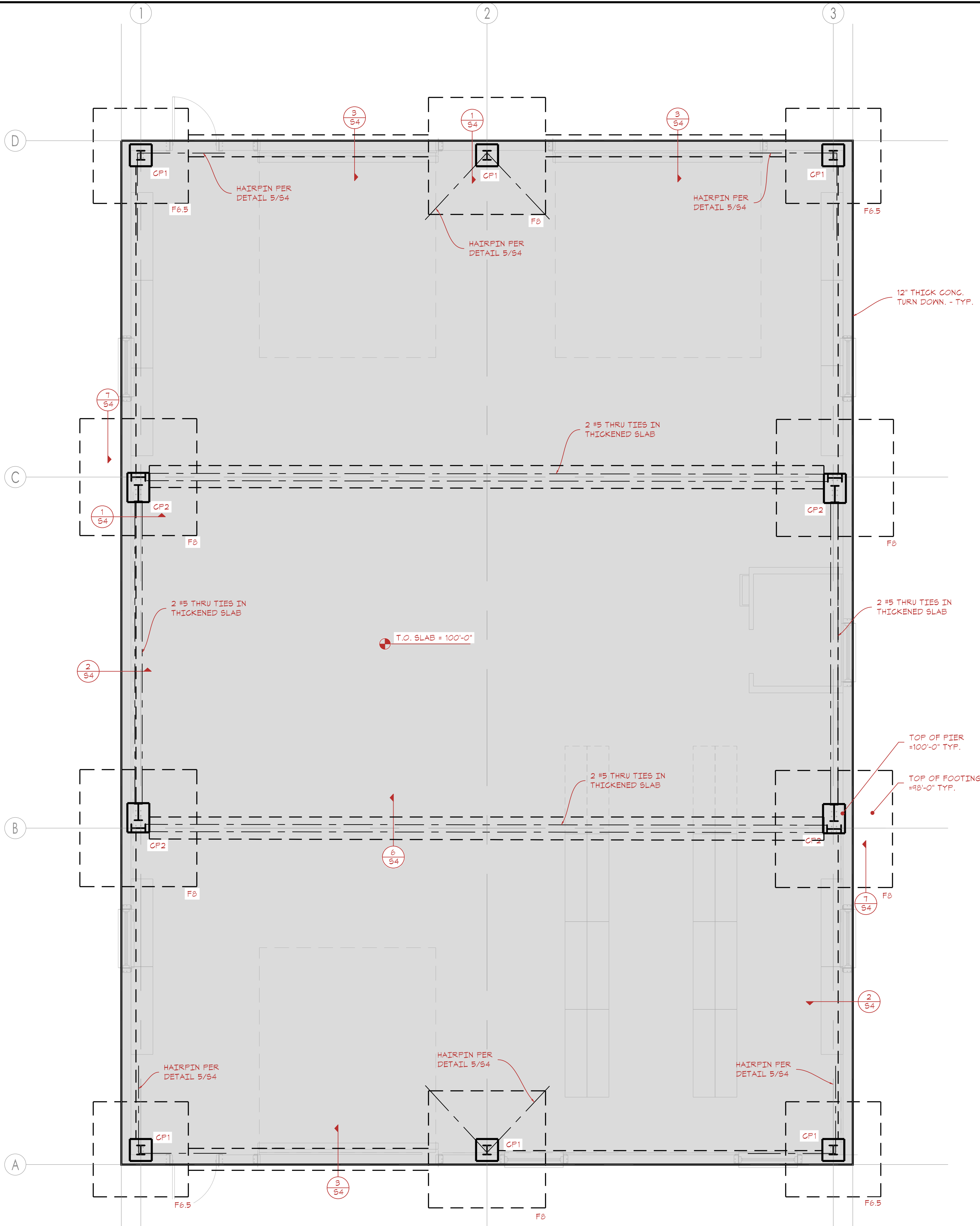
PLOT DATE: 7/28/2025

PROJECT #: 25.008

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CHECKED BY: EH

S2



- FOUNDATION NOTES:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD VERIFY CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT.
  2. PROPER SURFACE AND BELOW GRADE PERIMETER DRAINAGE SHALL BE INSTALLED PER CIVIL AND GEOTECHNICAL ENGINEERS TO RELIEVE FOUNDATION WALLS FROM HYDROSTATIC PRESSURE.
  3. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
  4. ①, ②, ETC. - AS SHOWN INDICATES KEYNOTES, SEE FOUNDATION KEYNOTES ON THIS SHEET.
  5. WF1, WF2, ETC - AS SHOWN ON PLAN INDICATES CONTINUOUS WALL FOOTING, SEE SCHEDULE THIS SHEET UNLESS OTHERWISE NOTED.
  6. F1, F2, ETC - AS SHOWN ON PLAN INDICATES ISOLATED FOOTING, SEE SCHEDULE THIS SHEET.
  7. CP1, CP2, ETC - AS SHOWN ON PLAN INDICATED CONCRETE PEDESTAL, SEE SCHEDULE THIS SHEET. PEDESTALS SHALL BE CENTERED ON FOUNDATION BELOW UNLESS NOTED OTHERWISE.
  8. THESE PLANS ARE FOR FOUNDATION ELEMENTS ONLY. REFER TO BUILDING MANUFACTURER OR ARCHITECTURAL DRAWINGS FOR BALANCE OF INFORMATION.

ISOLATED FOOTING (F) SCHEDULE					
<div><div><div>FOR CONSTRUCTION ABOVE SEE DETAILS</div><div>HEIGHT</div><div>3' TYP.</div><div>WIDTH</div><div>TOP REINFORCING WHERE NOTED</div><div>FOOTING REINFORCING EQUALLY SPACED</div></div><div>NOTES: 1. FOR DEPTH OF FOOTING SEE PLAN 2. CENTER FOOTING ON CONSTRUCTION ABOVE U.N.O</div></div>					
MARK	DIMENSIONS			FOOTING REINFORCING	REMARKS
	HEIGHT	WIDTH	LENGTH		
F6.5	12"	6'-6"	6'-6"	8-#5 EACH WAY	TOP AND BOTTOM
F8	12"	8'-0"	8'-0"	10-#5 EACH WAY	TOP AND BOTTOM

CONCRETE PEDESTAL (CP) SCHEDULE					
<div><div><div>WIDTH</div><div>HEIGHT</div><div>CONCRETE PEDESTAL SEE PLAN FOR ORIENTATION</div><div>HOOP TIES</div><div>VERTICAL REINFORCING EQUALLY SPACED</div><div>PROVIDE CROSS TIES AT MIDDLE VERT. BARS, ALTERNATE</div></div><div>NOTES: 1. TIES SHALL BE FULLY CLOSED AND SHALL ENCOMPASS ALL VERTICAL BARS AND ANCHOR BOLTS 2. SEE TYPICAL REINFORCING DETAILS FOR MORE INFO.</div></div>					
MARK	DIMENSIONS		VERTICAL REINFORCING (No. AND SIZE)	TIES	
	HEIGHT	WIDTH		SIZE	SPACING
CP1	18"	18"	8-#5	#3	8" O.C.
CP2	18"	24"	10-#5	#3	8" O.C.

TYPICAL SLAB ON GRADE  
6" CONCRETE SLAB ON INSULATION IF REQUIRED PER ARCH ON APPROVED NATIVE OR PREPARED SUBGRADE PER GEOTECH REPORT. REINFORCE SLAB WITH #4 @ 16" O.C. EA WAY. PROVIDE 1 1/2" DEEP SAW-CUT CONTROL JOINTS @ 12'-0" O.C. MAX EACH WAY - TYP

CMC Maintenance Building  
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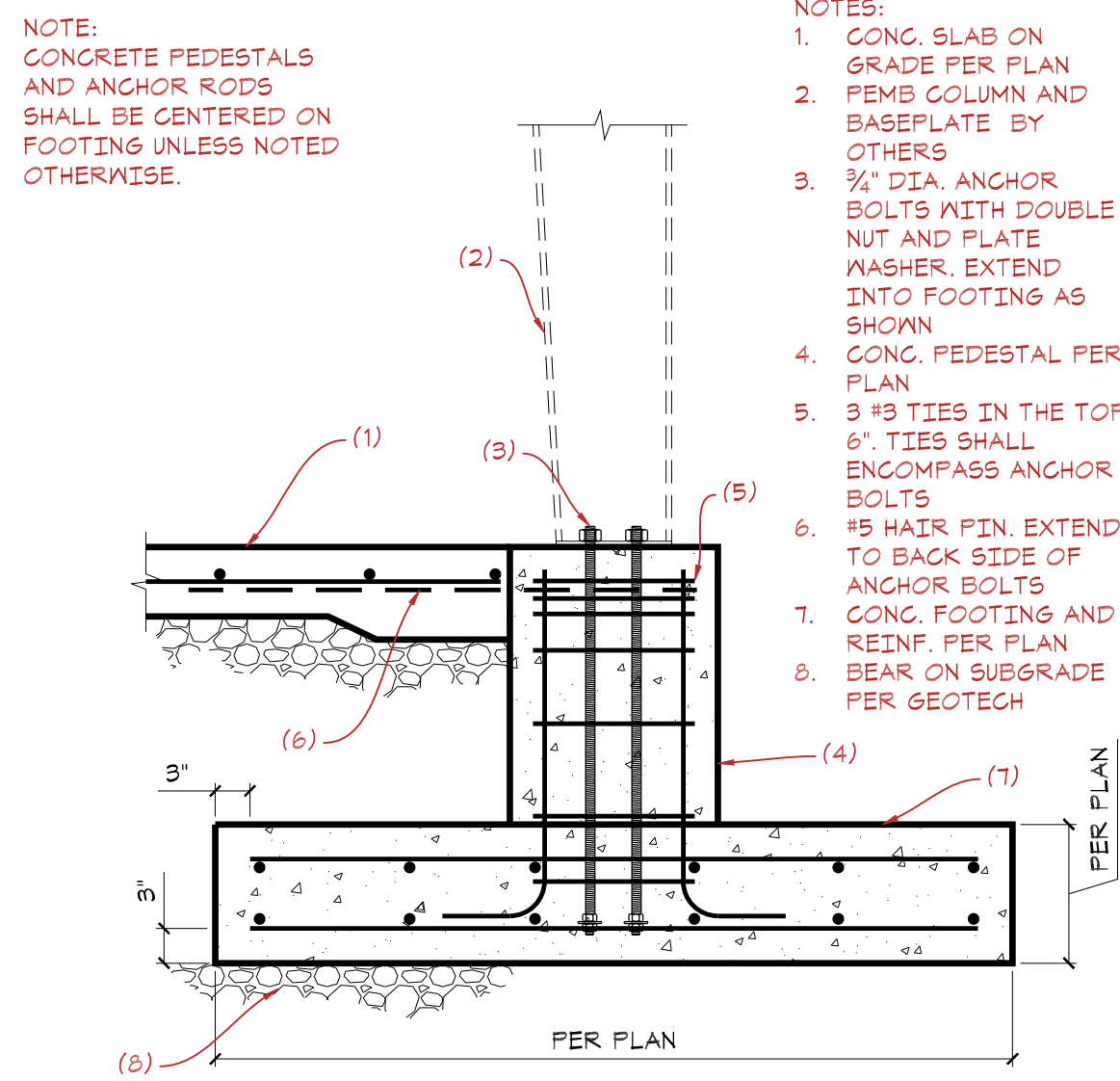
PLOT DATE: 7/28/2025

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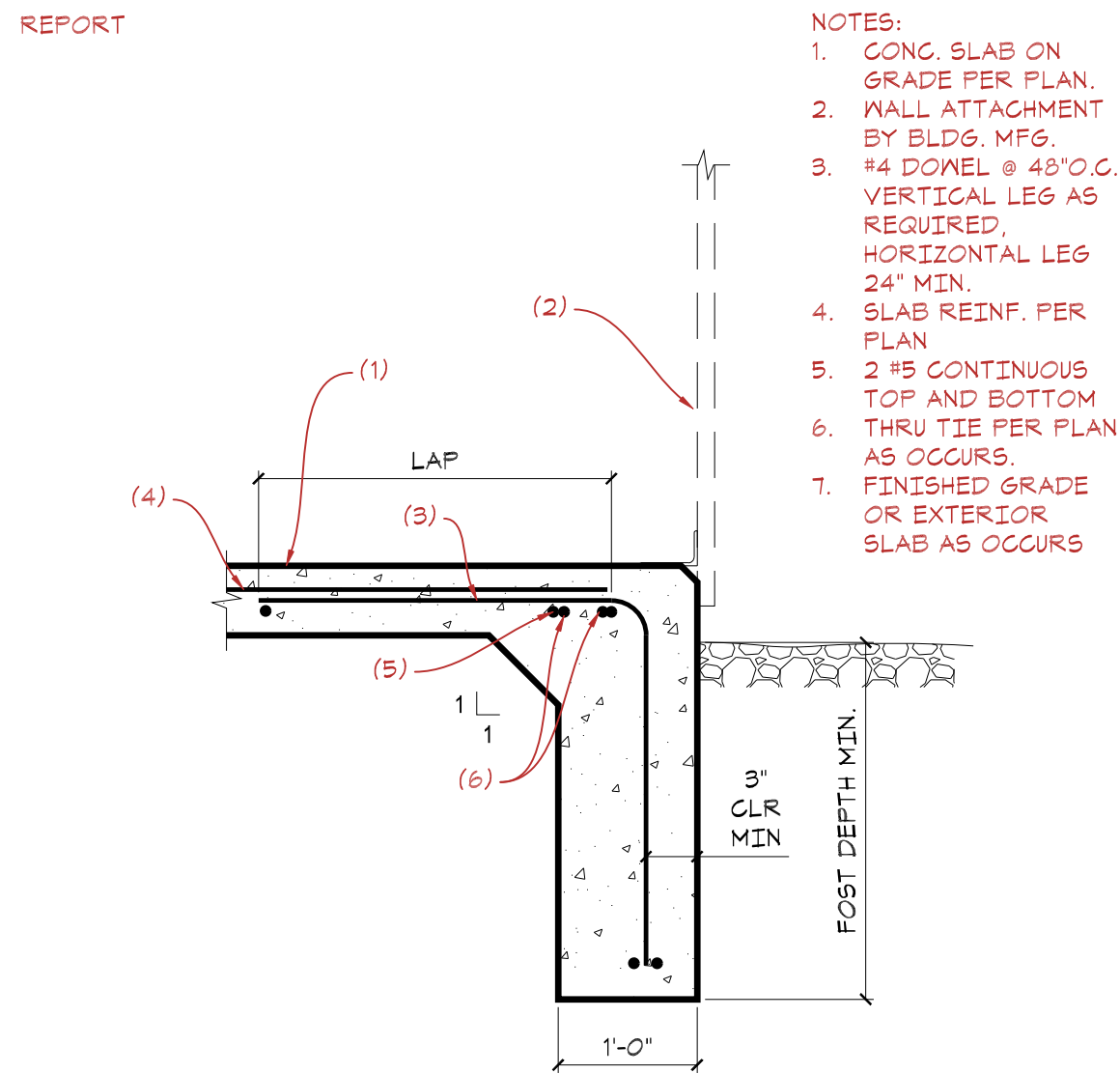
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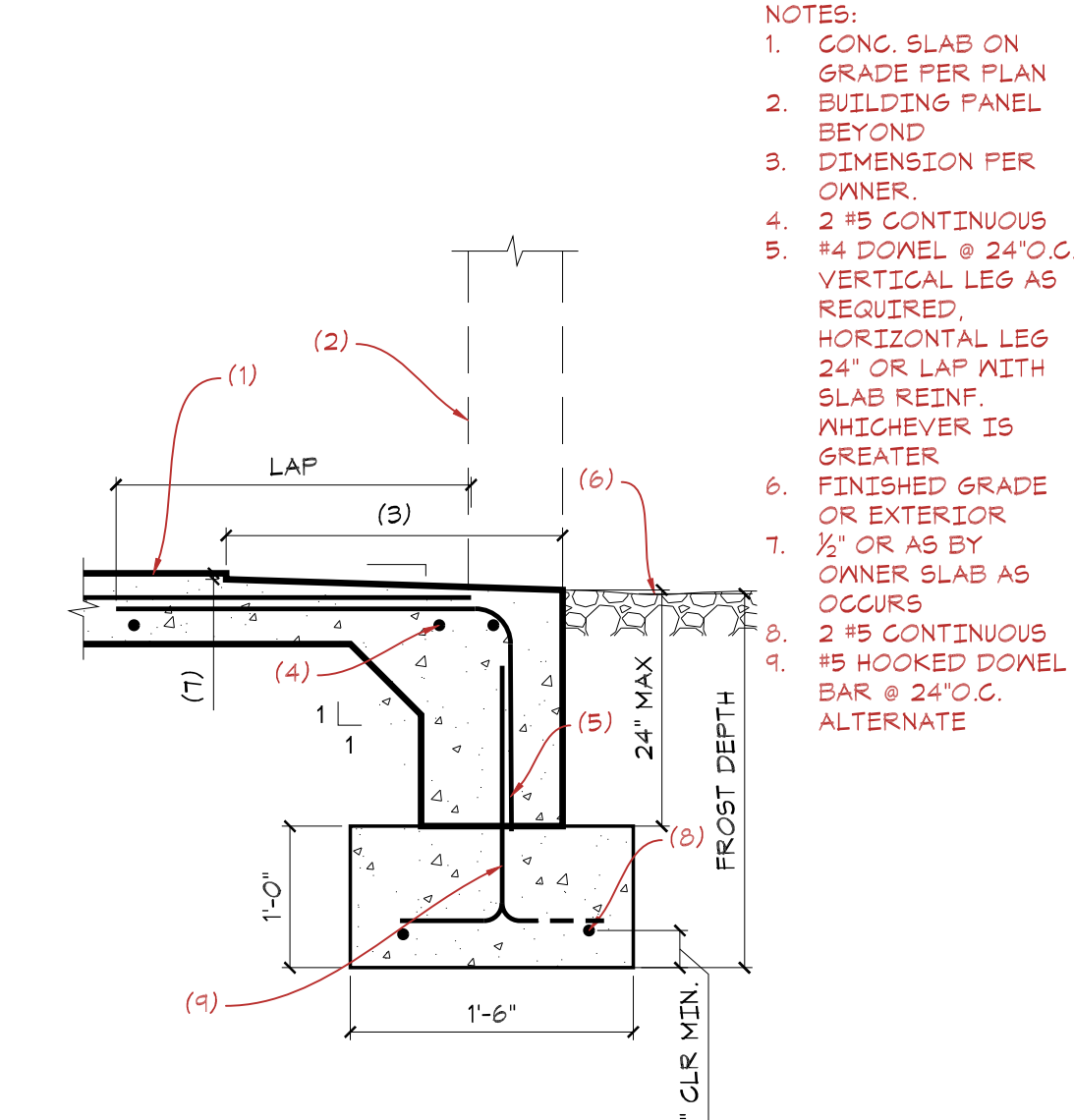
**ISOLATED FOOTING AT PEMB COLUMN**

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



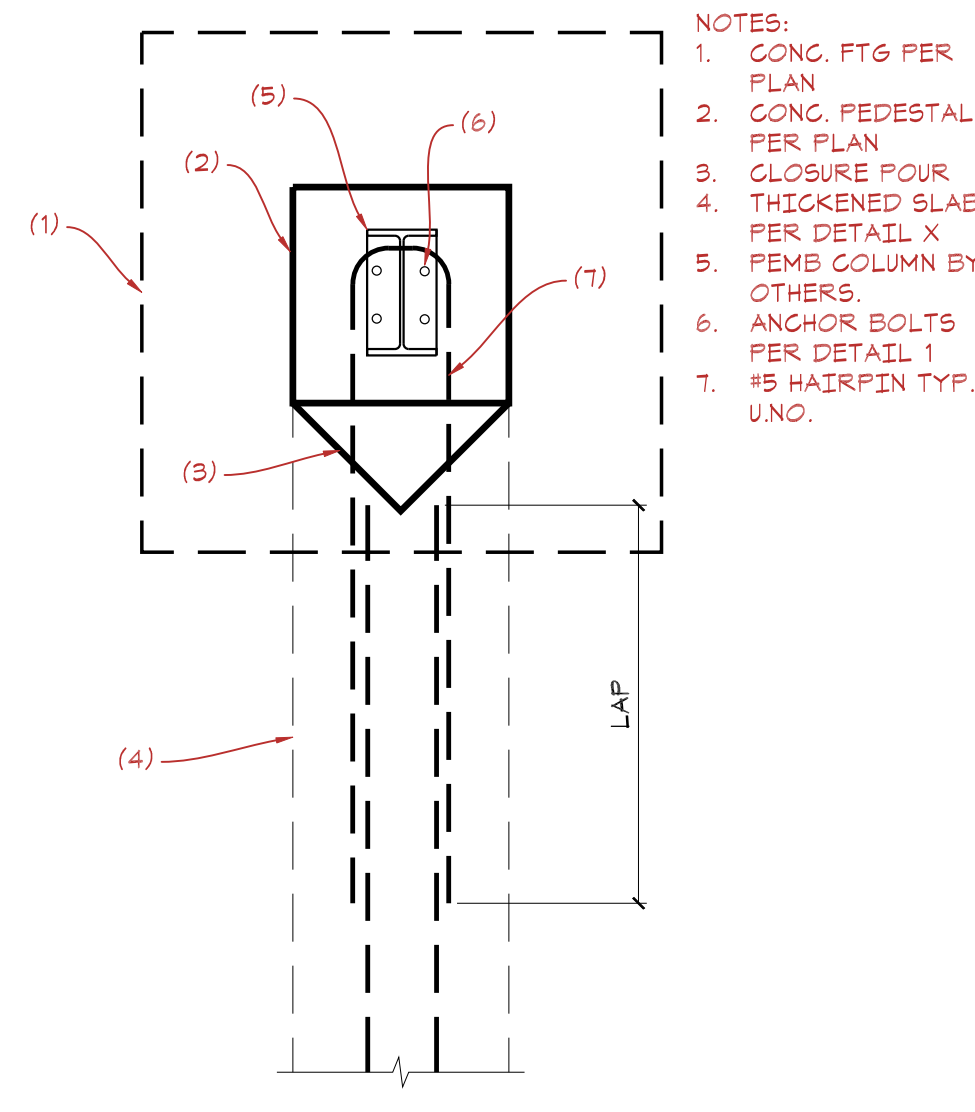
**SLAB EDGE TURN DOWN**

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



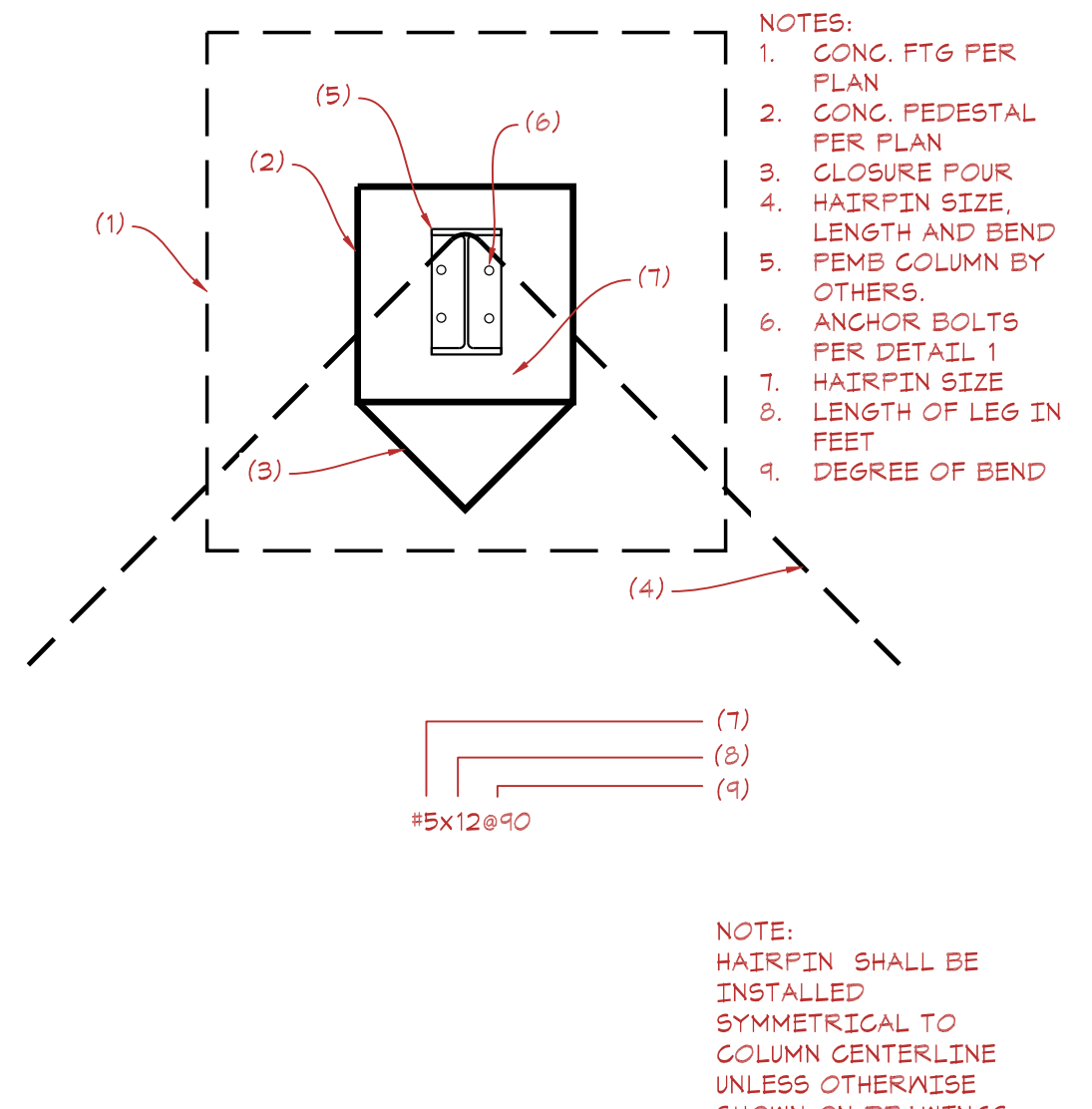
**SLAB EDGE AT DOOR**

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



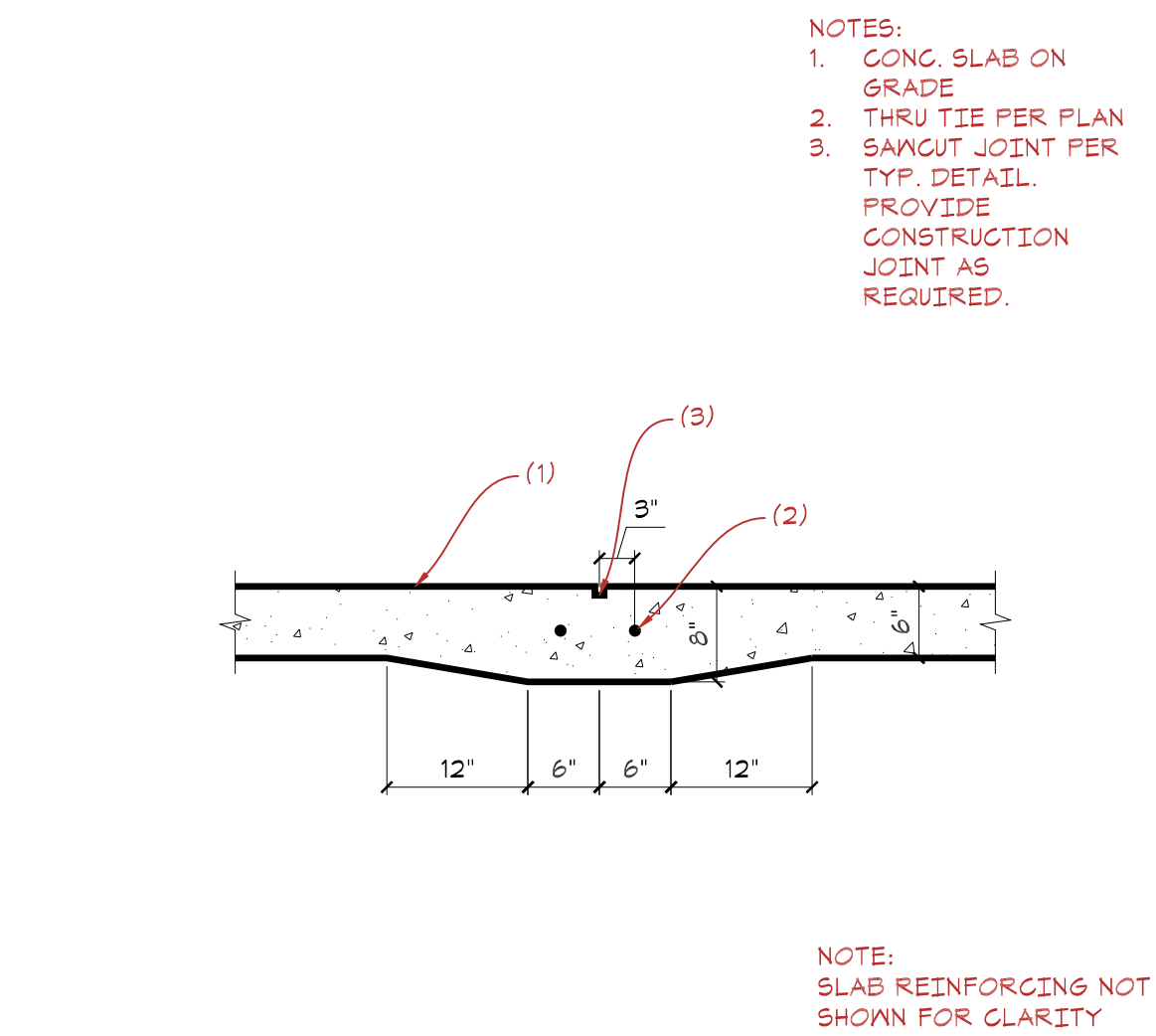
**PLAN - THRU TIE AT STEEL COLUMN**

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



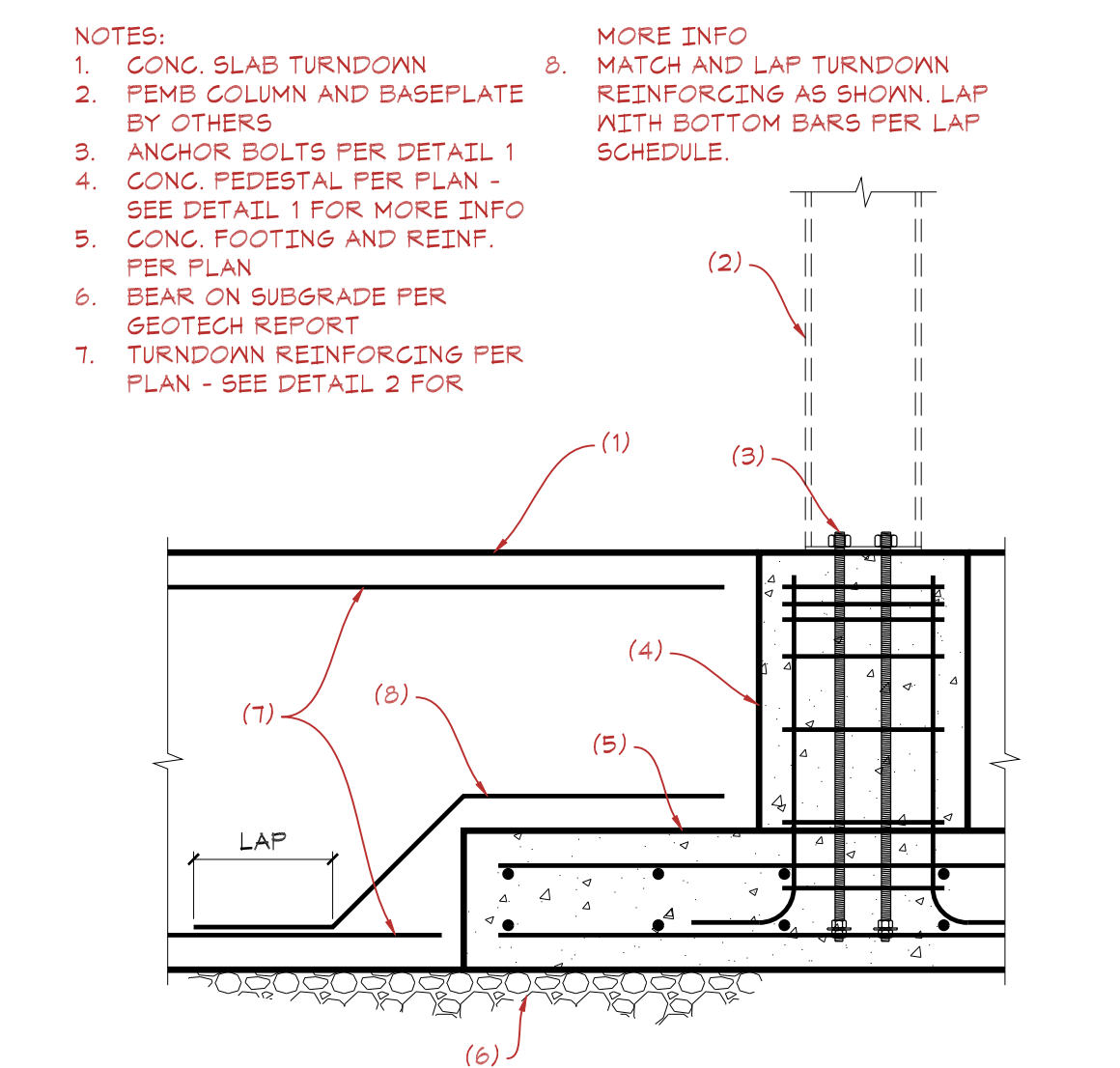
**PLAN - HARIPIN AT STEEL COLUMN**

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



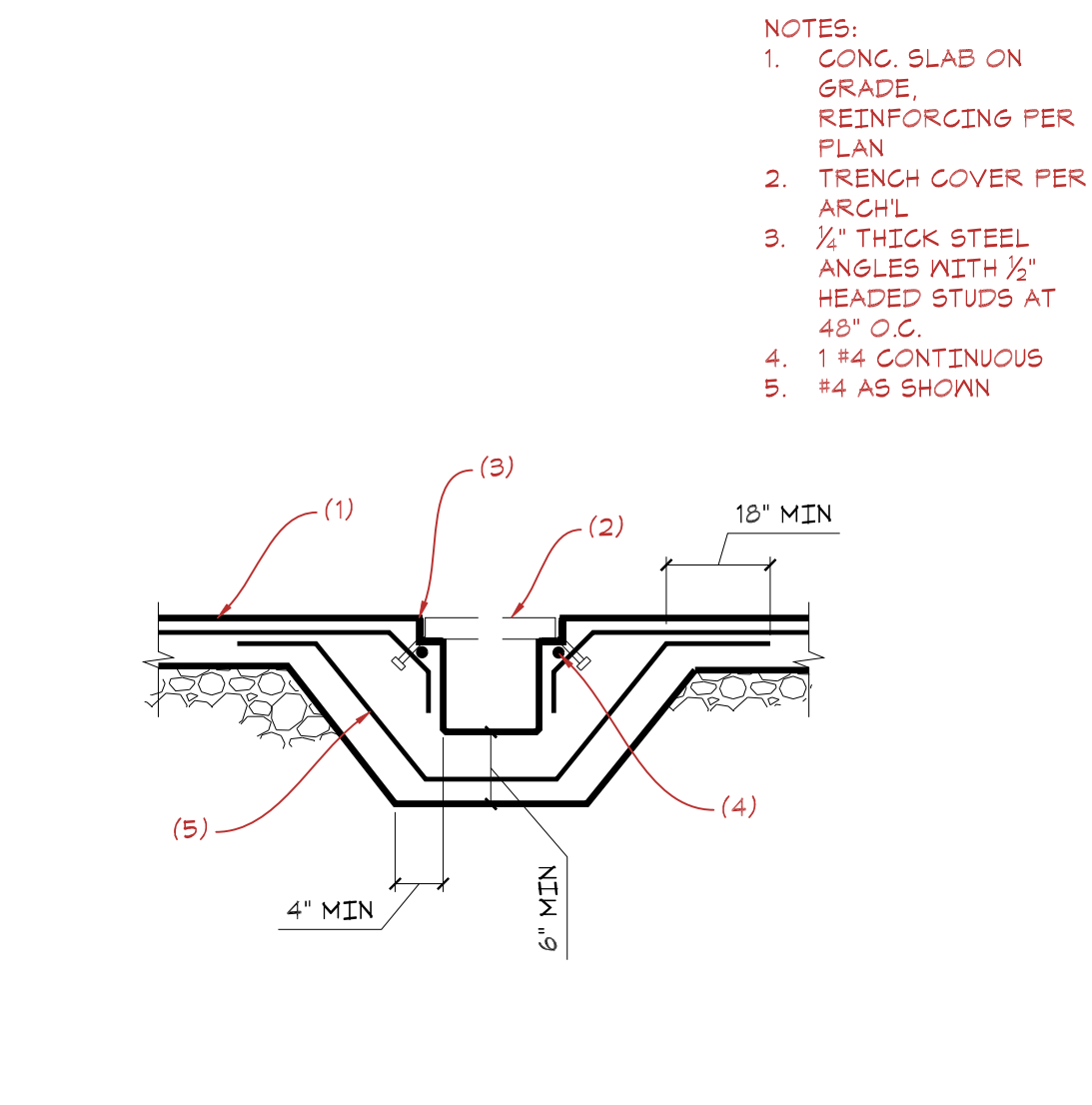
**THRU TIE IN CONG. SLAB ON GRADE**

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



**ISOLATED FOOTING AT PEMB COLUMN**

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



**CONCRETE SLAB ON GRADE TRENCH**

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



Streamline Structures



CMC Maintenance Building Foundation  
Spring Valley Campus  
County Road 114  
Garfield County, Colorado

DATE: 7/27/2025  
7/28/2025  
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FOUNDATION DETAILS

PLOT DATE: 7/28/2025

PROJECT #: 25.008

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S4

MECHANICAL ELEMENTS / VALVING			
	EXISTING EQUIPMENT OR PIPE TO BE REMOVED.		RELIEF/SAFETY VALVE
	GATE VALVE		GAS COCK
	GLOBE VALVE		AUTOMATIC FILL VALVE
	PLUG VALVE		MANUAL AIR VENT
	BUTTERFLY VALVE		AUTOMATIC AIR VENT (EXTEND DISCHARGE TO DRAIN)
	BALL VALVE		FLOW METER-VENTURI
	SWING CHECK VALVE		FLOW METER-ORIFICE
	LIFT CHECK VALVE		DIRECTION OF FLOW
	GATE VALVE, ANGLE		DIRECTION OF PITCH-RISE OR DROP
	GLOBE VALVE, ANGLE		STRAINER
	DIAPHRAGM VALVE		STRAINER WITH BLOW OFF VALVE
	BALANCING VALVE		PIPE RISING UP
	CIRCUIT SETTING BALANCING VALVE		PIPE DROPPING DOWN
	THREE WAY CONTROL VALVE		CONCENTRIC REDUCER
	TWO WAY CONTROL VALVE		ECCENTRIC REDUCER
	SOLENOID VALVE		UNION - SCREWED OR FLANGED
	PRESSURE REDUCING VALVE (PRV)		STEAM LEAK DETECTOR
	TEMPERATURE/PRESSURE RELIEF VALVE		FIRE SMOKE DAMPER
	HYDRAULIC SEPARATOR		CARBON MONOXIDE
	AIR SEPARATOR		CARBON DIOXIDE

HVAC & DUCTWORK SYMBOLS	
	SECTION THROUGH RETURN DUCT
	SECTION THROUGH EXHAUST AIR DUCT
	SECTION THROUGH SUPPLY OR OUTSIDE AIR DUCT
	FIRE / SMOKE DAMPER
	SMOKE DAMPER
	SUPPLY OR OUTSIDE AIR DUCT
	ACCESS DOOR (BOTTOM OR SIDE)
	ACOUSTICALLY LINED DUCT
	FIRE DAMPER, SMOKE DAMPER, FIRE/SMOKE DAMPER
	MANUAL VOLUME DAMPER
	INCLINED DROP IN DIRECTION OF ARROW
	INCLINED RISE IN DIRECTION OF ARROW
	TRANSITION, RECTANGULAR TO ROUND
	FLEXIBLE DUCT
	IN-LINE FAN
	TRANSITION, RECTANGULAR
	SPIN-IN COLLAR INTO ADAPTER ON TOP OF DUCT
	CEILING SUPPLY AIR REGISTER/GRILLE
	SIDEWALL SUPPLY AIR REGISTER (SR)
	ELBOW TURNED DOWN
	ELBOW TURNED UP
	ELBOW, RADIUS TYPE
	ELBOW, SQUARE OR RECTANGULAR TYPE WITH AIRFOIL TURNING VANES
	CEILING RETURN AIR REGISTER (RR)
	SIDEWALL RETURN AIR REGISTER (RR)
	OPEN END DUCT
	FLEXIBLE CONNECTION

LINE DESIGNATION SYMBOLS	
	CHWR CHILLED WATER RETURN
	CHWS CHILLED WATER SUPPLY
	CA COMPRESSED AIR
	CR CONDENSER WATER RETURN
	CS CONDENSER WATER SUPPLY
	D DRAIN
	HPR HEAT PUMP RETURN
	HPS HEAT PUMP SUPPLY
	HWR HOT WATER RETURN
	HWS HOT WATER SUPPLY
	G NATURAL GAS
	RH REFRIGERANT HIGH PRESSURE VAPOR
	R REFRIGERANT LIQUID AND VAPOR LINE
	RS REFRIGERANT SUCTION / VAPOR
	SMR SNOWMELT RETURN
	SMS SNOWMELT SUPPLY
	V VENT PIPING
	• POINT OF CONNECTION OF NEW TO EXISTING

#### RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT	23	23	26	--
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

#### SUBSCRIPT FOOTNOTES:

- MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
- IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23. CONNECT UNDER DIVISION 26.

#### ABBREVIATIONS:

44" MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA DIAMETER	HP HORSEPOWER	PTAC PACKAGED TERMINAL AIR CONDITIONER
A AMPS	DIAG DIAGRAM	HR HOUR	PV PLUG VALVE
A ACCESS DOOR	DIFF DIFFERENTIAL	HT HEIGHT	PVC POLYVINYL CHLORIDE
AAV AIR ADMITTANCE VALVE	DISCH DISCHARGE	HTR HEATER	QTY QUANTITY
ABV ABOVE	DIV DIVISION	HWR HEATING WATER RETURN	RA RETURN AIR GRILLE / REGISTER
AC AIR CONDITIONING UNIT	DN DOWN	HWS HEATING WATER SUPPLY	RCR REFLECTED CEILING PLAN
AC ABOVE COUNTER	DS DUCT SILENCER	HX HEAT EXCHANGER	RD ROOF DRAIN
AD AREA DRAIN (SEE SYMBOLS)	DWG DRAWING	HZ HERTZ	REL RELIEF
A.F.C. ABOVE FINISHED CEILING	DX DIRECT EXPANSION	ID INSIDE DIAMETER	REQ REQUIRED
A.F.G. ABOVE FINISHED GRADE	(E) EXISTING	IG ISOLATED GROUND	RF RETURN FAN
AIC AMPERE INTERRUPTING CAPACITY	EA EXHAUST AIR GRILLE/REGISTER	IN INCHES	RH RELATIVE HUMIDITY
AFCI ARC FAULT CIRCUIT INTERRUPTERS	EAT ENTERING AIR TEMPERATURE	INV INVERT	RHC REHEAT COIL
A.F.F. ABOVE FINISHED FLOOR	EC ELECTRICAL CONTRACTOR	JBOX JUNCTION BOX	RLA RATED LOAD AMPS
AHU AIR HANDLING UNIT	ECC ECCENTRIC	K KELVIN	RM ROOM
ALUM ALUMINUM	EF EXHAUST FAN	KW KILOWATT	RM REVOLUTIONS PER MINUTE
AP ACCESS PANEL OR DOOR	EFF EFFICIENCY	KVA KILOVOLT - AMPS	SA SUPPLY AIR GRILLE / REGISTER
ATS AUTOMATIC TRANSFER SWITCH	EL ELEVATION	L LENGTH	SC SHORT CIRCUIT
AV AUDIO / VIDEO	ELEC ELECTRIC	LAT LEAVING AIR TEMPERATURE	SCA SHORT CIRCUIT AVAILABLE
AVG AVERAGE	ELEV ELEVATOR	LV LAVATORY	SCCR SHORT CIRCUIT CURRENT RATING
AWG AMERICAN WIRE GAGE	EMT EMERGENCY FUNCTION	LB POUND	SCH SCHEDULE
BAS BUILDING AUTOMATION SYSTEM	ENT ENTERING	LD LINEAR DIFFUSER	SD SMOKE DAMPER
BB BASEBOARD	EMT ELECTRIC METALLIC TUBE	LF LINEAR FEET	SEF SMOKE EXHAUST FAN
BD BACK DRAFT DAMPER	EQ EQUAL	LIN LINEAR	SF SUPPLY FAN
BFP BACK FLOW PREVENTOR	EQUIV EQUIVALENT	LIQ LIQUID	SH SENSIBLE HEAT
BL BOILER	ES END SWITCH	LRA LOCKED ROTOR AMPS	SH SHOWER
BLDG BUILDING	ESP EXTERNAL STATIC PRESSURE	LV LOUVER	SP STATIC PRESSURE
BLW BELOW	ET EXPANSION TANK	LVG LEAVING	SPD SURGE PROTECTION DEVICE
BOB BOTTOM OF BEAM	EWC ELECTRIC WATER COOLER	LWT LEAVING WATER TEMPERATURE	SPEC SPECIFICATION
BOD BOTTOM OF DUCT	EWI ENTERING WATER TEMPERATURE	MBH THOUSANDS OF BTU PER HOUR	SQ SQUARE
BOP BOTTOM OF PIPE	EX EXHAUST	MC MECHANICAL CONTRACTOR	SS STAINLESS STEEL
BSMT BASEMENT	EXN EXPANSION	MCA MINIMUM CIRCUIT AMPACITY	SS SAFETY SHOWER
BTU BRITISH THERMAL UNIT	EXT EXTERNAL	MCB MAIN CIRCUIT BREAKER	STD STANDARD
C CHILLER	F DEGREES FAHRENHEIT	MD MOTORIZED DAMPER	STL STEEL
CAFCI COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	FA FREE AREA	MDP MAIN DISTRIBUTION PANEL	SYS SYSTEM
CAP CAPACITY	FC FAN COIL UNIT	MED MEDIUM	TEMP TEMPERATURE
CB CIRCUIT BREAKER	FC FOOTCANDLE	MFR MANUFACTURER	TR TAMPER RESISTANT
CBV CIRCUIT BALANCING VALVE	FCV FLOW CONTROL VALVE	MIN MINIMUM	TT TEMPERATURE TRANSMITTER
CCT CORRELATED COLOR TEMPERATURE	FD FIRE DAMPER	MISC MISCELLANEOUS	TB TELECOMMUNICATIONS TERMINAL BACKBOARD
CKT CIRCUIT	FD FLOOR DRAIN	MLO MAIN LUG ONLY	TYP TYPICAL
CFH CUBIC FEET PER HOUR	FIN FINISHED	MOCP MAXIMUM OVERCURRENT PROTECTION	TX TRANSFORMER
CFM CUBIC FEET PER MINUTE	FLA FULL LOAD AMPS	MTD MOUNTED	UC UNDERCUT DOOR
CHWR CHILLED WATER RETURN	FLEX FLEXIBLE	MUA MAKE-UP AIR UNIT	UH UNIT HEATER
CHWS CHILLED WATER SUPPLY	FLR FLOOR	N NEUTRAL	UNO UNLESS NOTED OTHERWISE
CI CAST IRON	FOB FLAT ON BOTTOM	NC NORMALLY CLOSED	UNOCC UNOCCUPIED
CL CENTER LINE	FOT FLAT ON TOP	NEG NEGATIVE	UR URINAL
CLG CEILING	FP FIRE PROTECTION	NIC NOT IN CONTRACT	V VOLTS
CMU CONCRETE MASONRY UNIT	FP FIRE PUMP	NL NIGHT / SECURITY LIGHT - DO NOT SWITCH	VA VOLT AMPERE
CO CLEAN OUT	FFM FEET PER MINUTE	NO NORMALLY OPEN	VA VALVE
COL COLUMN	FFS FEET PER SECOND	NOM NOMINAL	VAV VARIABLE AIR VOLUME UNIT
COMP COMPRESSOR	FS FLOW SWITCH	NTS NOT TO SCALE	VFD VARIABLE FREQUENCY DRIVE
CONC CONCRETE	FSD FIRE/SMOKE DAMPER	OA OUTSIDE AIR	VRF VARIABLE REFRIGERANT FLOW
COND CONDENSATE	FT FEET	OBD OPPOSED BLADE DAMPER	VOLT VOLTAGE
CONN CONNECTION	FX FLEXIBLE CONNECTION	OC ON CENTER	VTR VENT THROUGH ROOF
CONT CONTINUATION	GND GROUND	OCC OCCUPIED	W WIDTH
CONTR CONTRACTOR	GA GAUGE	OCF OVER CURRENT PROTECTION	W WATTS
CRI COLOR RENDERING INDEX	GAL GALLON	OD OUTSIDE DIAMETER	W/ WITH
CT COOLING TOWER	GALV GALVANIZED	OL OVERLOAD	W/ WITHOUT
CT CURRENT TRANSFORMER	GEC GROUND ELECTRODE CONDUCTOR	ORD OVERFLOW ROOF DRAIN	WB WET BULB
CU CONDENSING UNIT	GFCI / GFI GROUND FAULT CIRCUIT INTERRUPTER	OZ OUNCE	WC WATER COLUMN
CU COPPER	GC GENERAL CONTRACTOR	PBD PARALLEL BLADE DAMPER	WC WATER CLOSET
CUH CABINET UNIT HEATER	GPH GALLONS PER HOUR	PD PRESSURE DROP	WG WATER GAUGE
CVB CONSTANT VOLUME BOX	GPM GALLONS PER MINUTE	PH PHASE	WP WEATHERPROOF
CWR CONDENSER WATER RETURN	GRS/LB GRAINS PER POUND	POS POSITIVE PRESSURE	WPIU WEATHERPROOF IN-USE
CWS CONDENSER WATER SUPPLY	H 2O WATER	POS POINT OF SALES	WSR WITHSTAND RATING
DB DRY BULB	HD HEAD (SEE SCHEDULES)	PRV PRESSURE REDUCING VALVE	XFMR TRANSFORMER
DEPT DEPARTMENT	HP HEAT PUMP	PS PRESSURE SWITCH	
DF DRINKING FOUNTAIN		PSI POUNDS PER SQUARE INCH	
		PT PRESSURE TRANSMITTER	

#### SUBSTITUTIONS:

A. SUBSTITUTIONS: SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

#### EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

- EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.
- EXAMINE THE DRAWINGS AND SPECIFICATIONS 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.
- DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.
- THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.
- WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

# CMC SV MAINTENANCE BUILDING

## MECHANICAL - COVER SHEET

### TRACT 3, ADAIR RIPPY EXEMPTION

#### GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT
05/28/25	CONTRACT DOCUMENT
07/07/25	OWNER REQUESTED UPDATES
08/04/25	PERMIT DRAWINGS

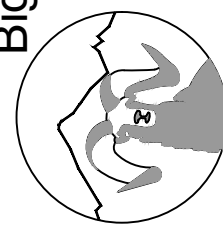


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SCALE:	
SHEET NUMBER:	

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Phone: (970) 241-8709



CMC SV MAINTENANCE BUILDING  
MECHANICAL - FLOOR PLAN  
TRACT 3, ADAIR RIPPY EXEMPTION  
GARFIELD COUNTY, COLORADO

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MECHANICAL PROVISIONS

1. SCOPE OF WORK

- A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- B. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
- C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY EFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
- D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.

2. PERMITS

- A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

3. SHOP DRAWINGS

- A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.

4. FLEXIBLE DUCT WORK

- A. FLEXIBLE TYPE DUCT SHALL BE OF TWO ELEMENT SPIRAL CONSTRUCTION COMPOSED OF A CORROSION RESISTANT METAL SUPPORTING SPIRAL AND COATED FABRIC WITH A MINERAL BASE. FLEXIBLE DUCT CONNECTORS SHALL BE LISTED BY U.L., CLASS 1 DUCTS, AND SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50.
- B. USE OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 6 LINEAR FEET PER RUN.
- C. CONTRACTOR SHALL BE CAREFUL SO AS NOT TO KINK OR COLLAPSE FLEXIBLE DUCT.

5. REFRIGERANT

- A. PIPING CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION.
- B. INSULATE REFRIGERANT LINES WITH ARMOUR-FLEX TYPE INSULATION, SHALL BE TYPE "K" COPPER TUBING, WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER.

6. DUCTWORK

- A. THE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SMACNA" APPLICABLE MANUALS.
- B. ALL DUCTWORK SHALL BE THE LOW VELOCITY TYPE, UNLESS SPECIFIED OTHERWISE.
- C. CONTRACTOR SHALL PROVIDE AND INSTALL APPROVED FIRE DAMPERS AND ACCESS PANELS IN ANY AND ALL DUCTWORK WHICH PENETRATES A HORIZONTAL OR VERTICAL FIRE PARTITION, OR AS OTHERWISE SHOWN ON DRAWINGS.
- D. ALL BRANCH DUCTS TO HAVE VOLUME DAMPERS, SMOOTH TURN RADIUS DUCTWORK OR TURNING VANES SHALL BE USED THROUGHOUT WHERE FLOW EXCEEDS 150 CFM.
- E. ALL DUCT JOINTS TO BE SEALED IN ACCORDANCE WITH "SMACNA" STANDARDS AND ACCEPTED GOOD PRACTICE.
- F. ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
- G. ALL CONCEALED DUCTWORK SHALL BE INSULATED WITH 1-1/2" FIBERGLASS INSULATING BLANKET WITH ALUMINUM FOIL FACING.
- H. ALL SUPPLY AND RETURN DUCTWORK 15 FEET DOWNSTREAM OF THE HVAC UNIT SHALL BE INTERNALLY LINED WITH 1/2" ACOUSTICAL DUCT LINER UNLESS OTHERWISE NOTED ON THE DRAWINGS.

7. DRAINAGE PIPING

- A. (CONDENSATE) SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT JOINTS. PITCH HORIZONTAL LINES 1" IN 10'-0". CONDENSATE DRAINS SHALL BE ROUTED TO FLOOR DRAIN, ROOF DRAIN OR INDIRECT WASTE DRAIN.

8. HVAC CONTROLS

- A. CONTRACTOR TO SUPPLY AND INSTALL ALL CONTROL WIRING AND THERMOSTATS AS REQUIRED.

9. ELECTRICAL

- A. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF WIRING FOR EACH HVAC UNIT.

10. PIPE SUPPORTS

- A. ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE OR METAL STRAP TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL NOT EXCEED 8 FEET FOR ALL PIPING. PLASTIC PIPING TO BE SUPPORTED EVERY 4 FEET.

11. GAS PIPING

- A. PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE IRON FITTINGS. WHERE GAS PIPE CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE RUNOUT. A 100% SHUT-OFF VALVE AND A UNION. GAS PIPING CONTAINING PRESSURE GREATER THAN 9" W.G. SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH WELDED JOINTS.

12. MISCELLANEOUS

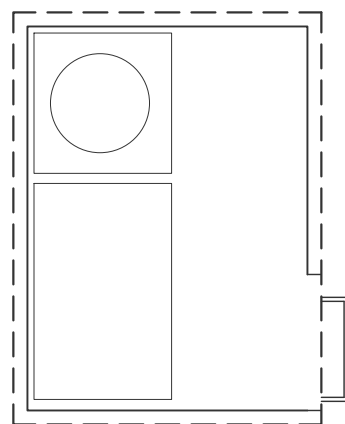
- A. ALL EXTERIOR OPENINGS TO BE PROPERLY CAULKED AND SEALED WITH A SEALANT OF HIGH QUALITY AND LONG LIFE. TO PREVENT INFILTRATION OF OUTSIDE AIR INTO CONDITIONED SPACE.
- B. COORDINATE INSTALLATION OF ALL ROOF FLASHING AT ROOF PENETRATION.
- C. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS.
- D. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
- E. THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT.
- F. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
- G. PEX TUBING, IF PEX TUBING IS USED AS AN APPROVED ALTERNATE FOR APPLICATIONS WHERE METALLIC PIPING IS THE BASIS OF DESIGN, THE PEX MANUFACTURER SHALL SUBMIT SHOP DRAWINGS CLEARLY INDICATING THAT THE DESIGN HAS BEEN ANALYZED AND MODIFIED, AS REQUIRED TO MAINTAIN SCHEDULED HYDRONIC SYSTEM PARAMETERS. ANY DESIGN RESULTING IN INCREASED SYSTEM PRESSURE DROP AS A RESULT OF IMPROPER PEX SIZING OR DESIGN SHALL NOT BE PERMITTED.

13. TESTING AND BALANCING

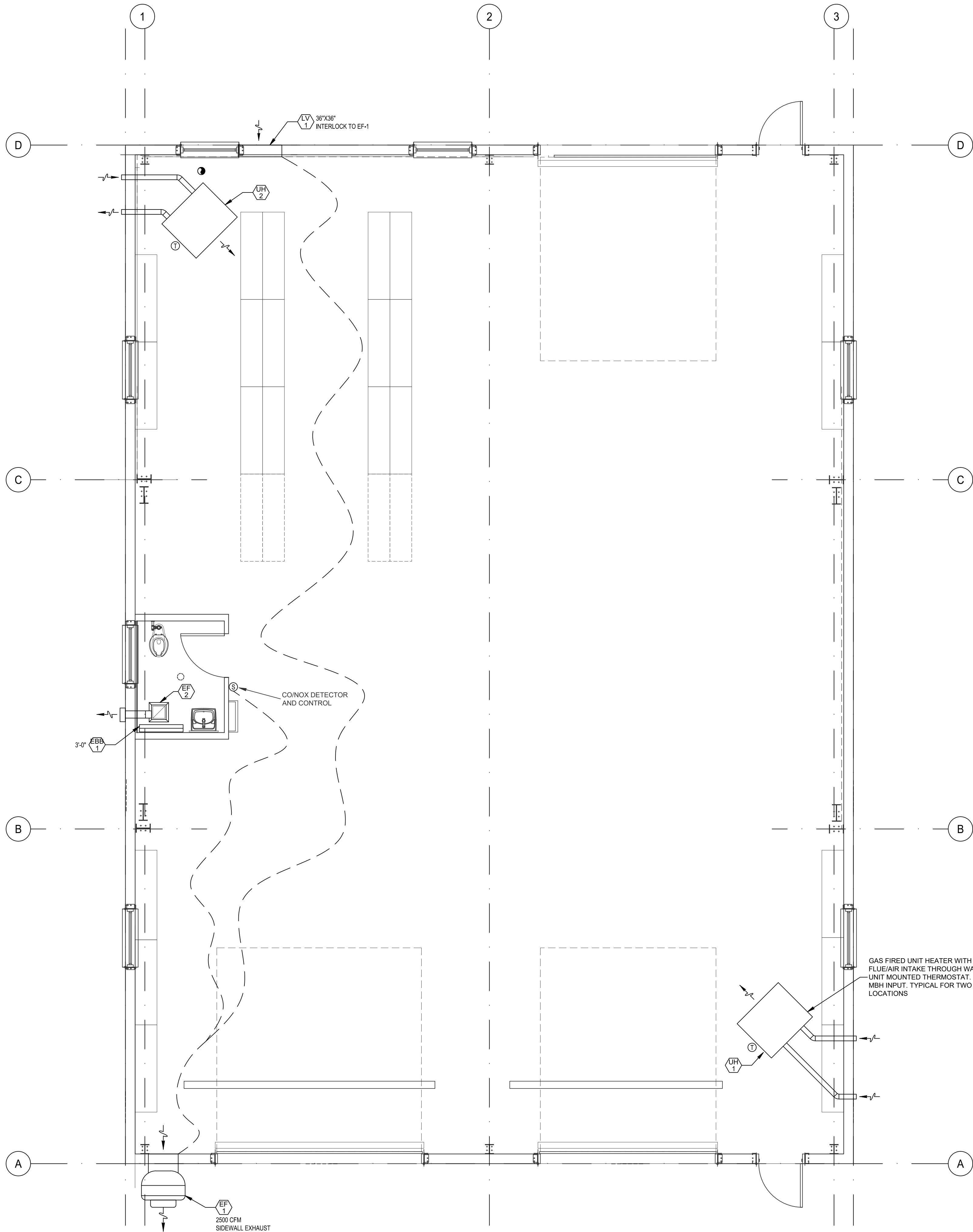
- A. THE HVAC SYSTEM SHALL BE TESTED AND AND BALANCED BY AN INDEPENDENT AGENCY, UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. A SEALED TYPE WRITTEN REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.

14. GUARANTEE

- A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
- B. FOR THE SAME PERIOD, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.

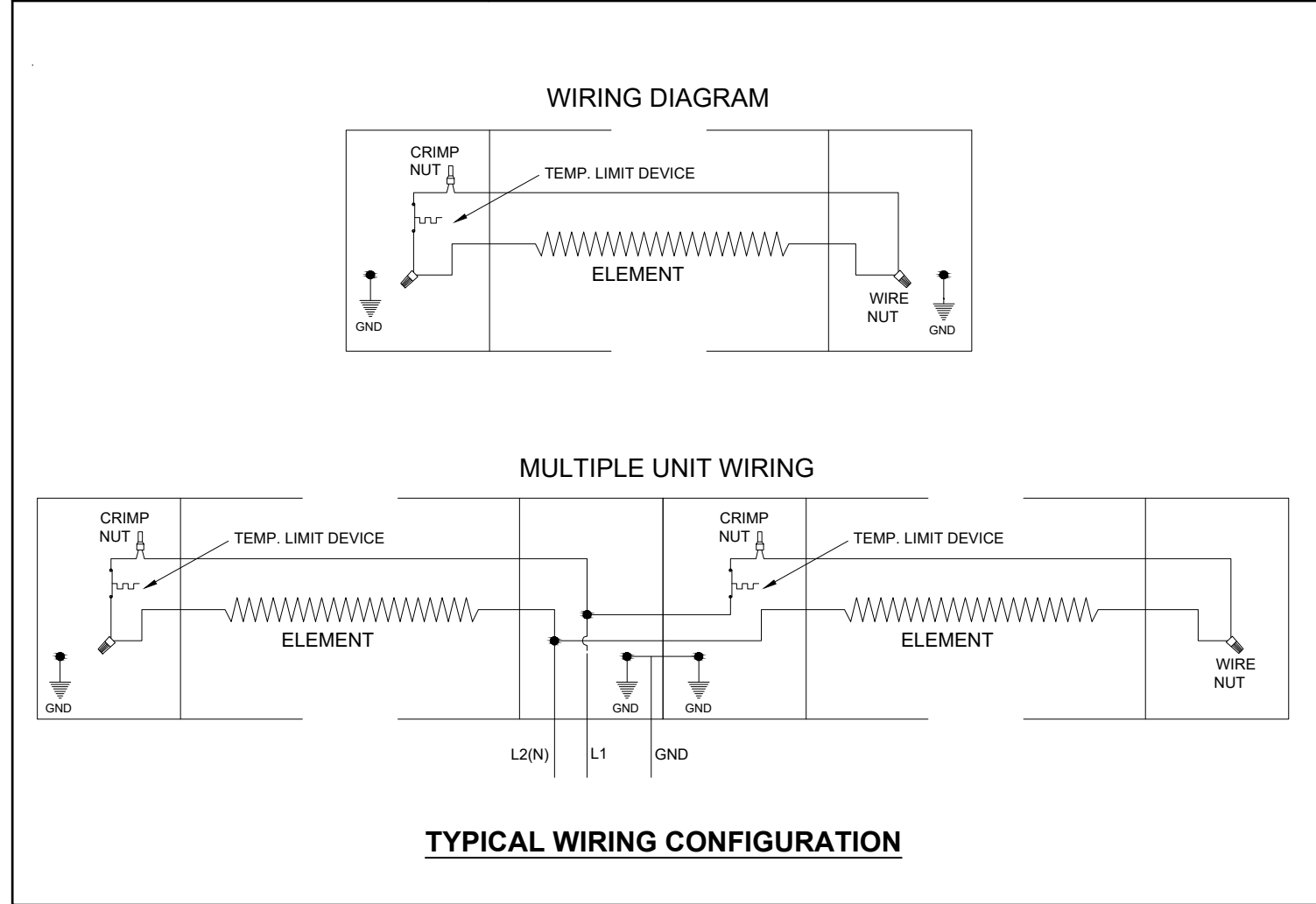
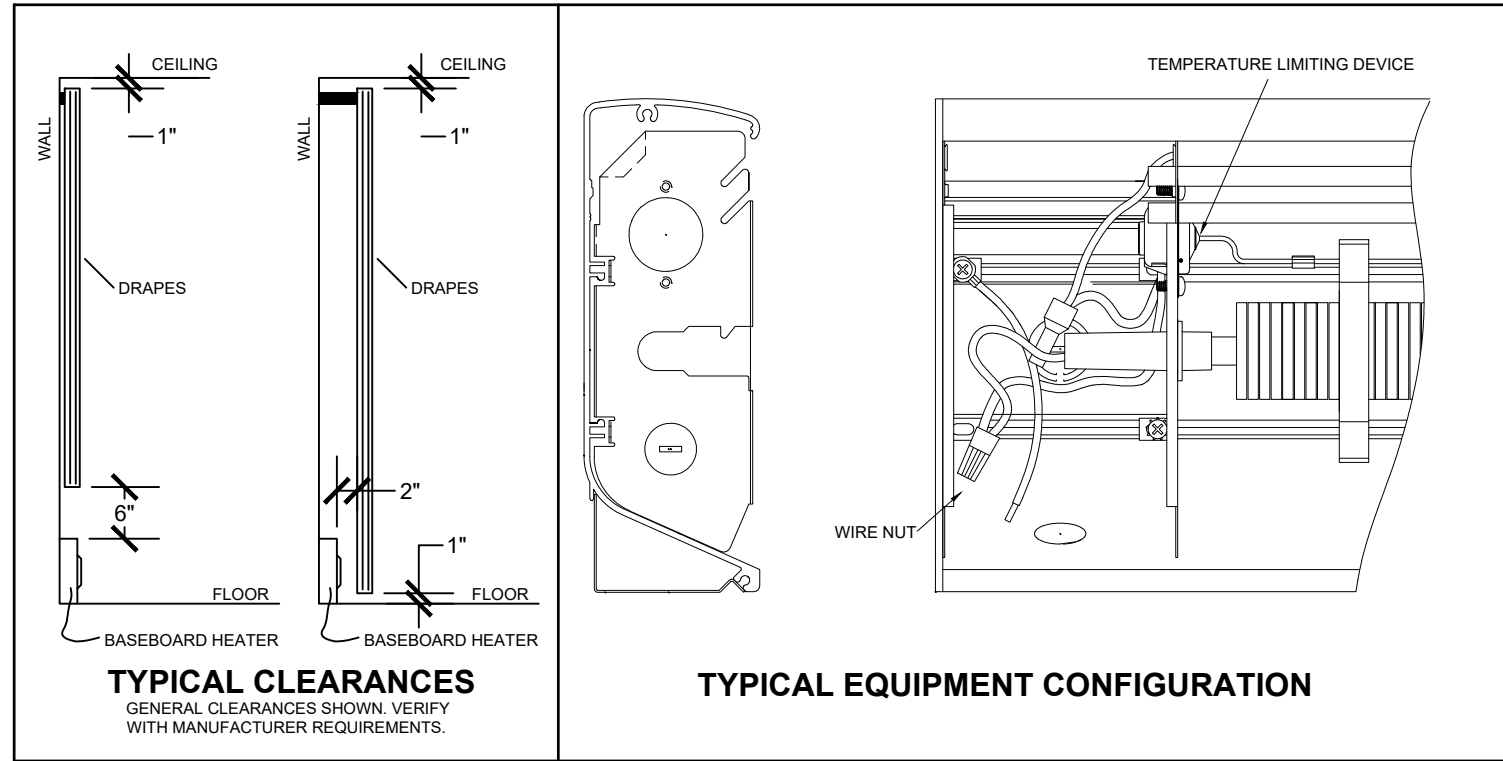


MEZZANINE ABOVE RESTROOM

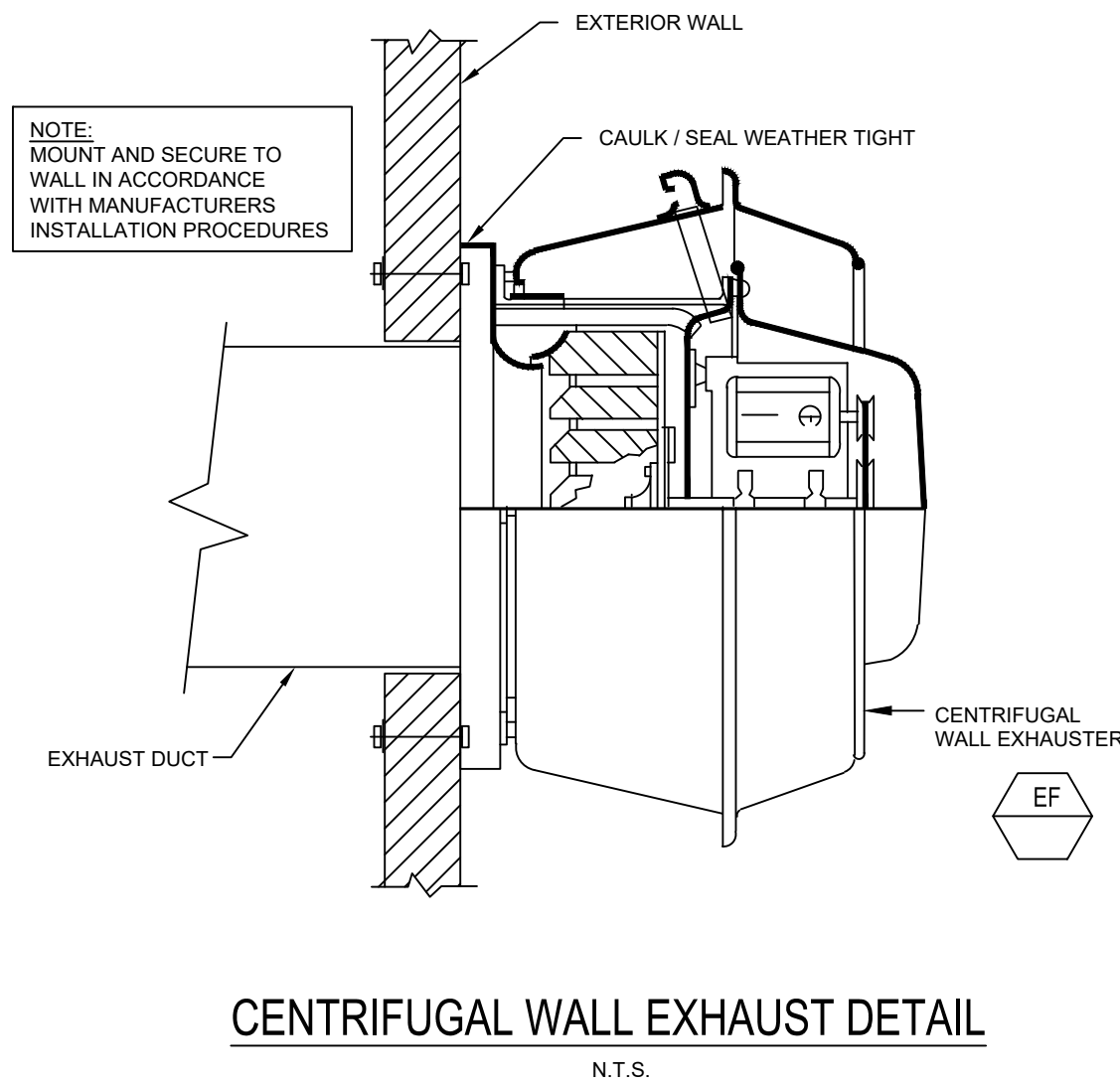
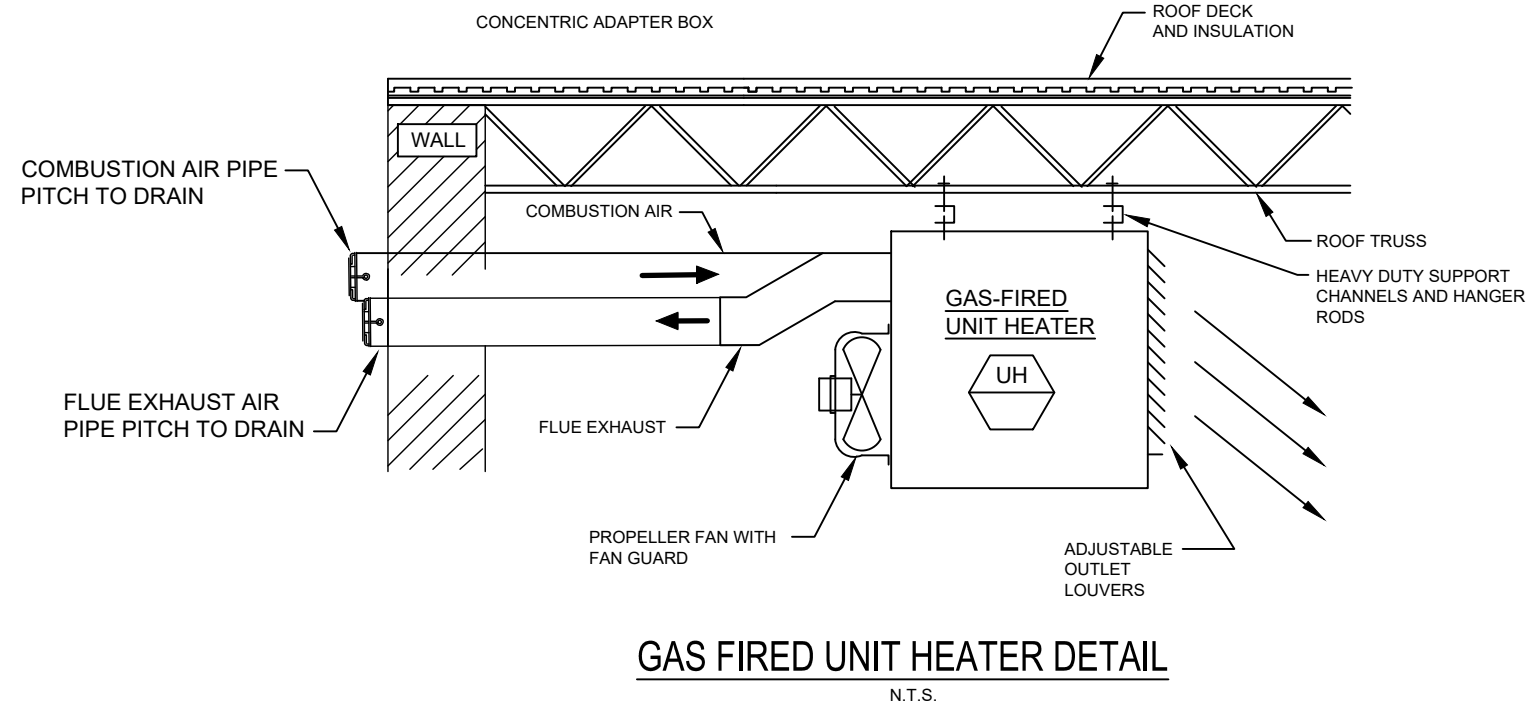
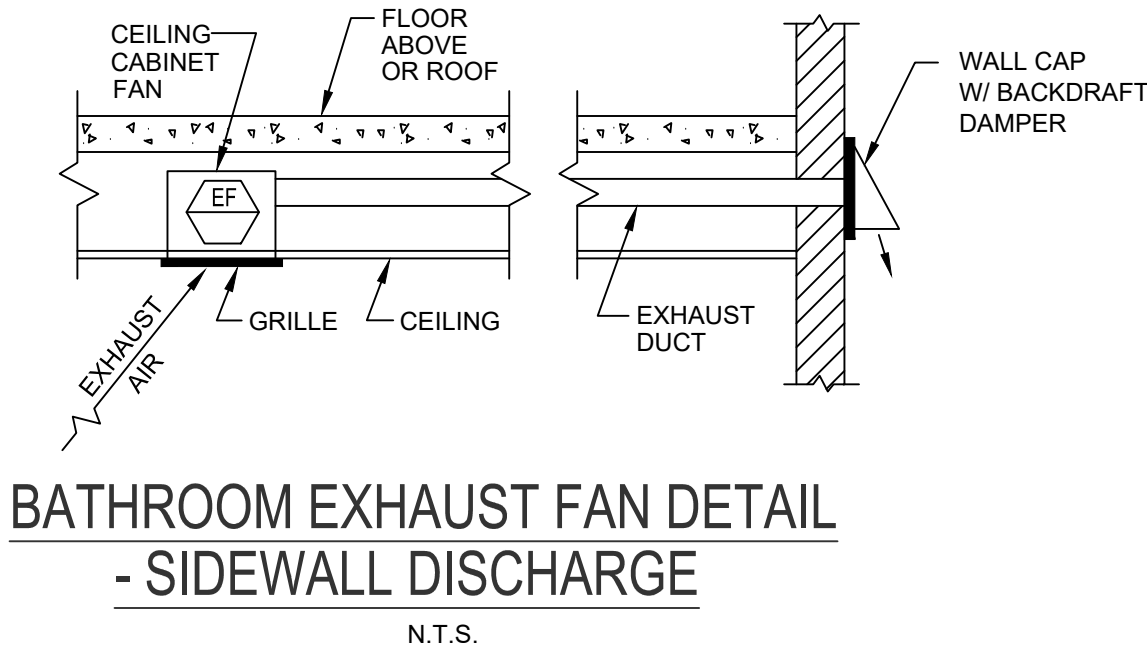


MECHANICAL - FLOOR PLAN

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



TYPICAL ELECTRIC BASEBOARD DETAILS  
N.T.S.



GAS FIRED UNIT HEATER SCHEDULE															
EQUIPMENT NO.	SERVICE	SUPPLY AIR (CFM)	HEATING			GAS CONNECTION SIZE	VENT OUTLET SIZE	AIR INLET SIZE	ELECTRICAL				MANUFACTURER	MODEL	OPTIONS/ACCESSORIES
			GAS CFH	MBH INPUT	MBH OUTPUT				V./PH./HZ	FLA	MOCP (A)	MOTOR HP			
UH-1	VEHICLE BAY	1,921	187	150	124.5	1/2"	5	5	120/1/60	3.8	15	1/6	REZNOR	UDXC-TSL SERIES	SEE NOTES BELOW
UH-2	PART STORAGE	1,921	187	150	124.5	1/2"	5	5	120/1/60	3.8	15	1/6	REZNOR	UDXC-TSL SERIES	SEE NOTES BELOW

NOTES:  
1. PROVIDE WALL MOUNTED THERMOSTAT, HIGH ALTITUDE KIT SIZED PER LOCATION ELEVATION.

EXHAUST FAN SCHEDULE										
EQUIPMENT NO.	SERVICE	LOCATION	CFM	EXTERNAL STATIC PRESS (IN. W.G.)	MOTOR			MANUFACTURER	MODEL	OPTIONS/ACCESSORIES
					FLA	RPM	VOLT/PH/HZ			
EF-1	VEHICLE BAYS	WALL MTD.	2500	0.3	10.00	VARIABLE	120/1/60	GREENHECK	CUE-160-VG	SEE NOTE 1
EF-2	RESTROOM	CEILING MTD.	70	0.25	0.27	VARIABLE	120/1/60	GREENHECK	SP-B110ES	SEE NOTE 2

NOTES:  
1. PROVIDE WITH POWER DISCONNECT, SPEED CONTROLLER, AND BACKDRAFT DAMPER. FAN TO BE ACTIVATED BY CO/NOX SENSOR AS INDICATED AND SHALL BE INTERLOCKED WITH LOUVER LV-1. LOUVER LV-1 SHALL BE OPEN WHILE FAN IS OPERATING.  
2. PROVIDE WITH POWER DISCONNECT, SPEED CONTROLLER, VIBRATION ISOLATION, BACKDRAFT DAMPER, AND CONTROL SWITCH.

ELECTRIC BASEBOARD SCHEDULE									
EQUIPMENT NO.	SERVICE	LENGTH (FT)	HEAT OUTPUT (WATTS)	ELECTRICAL		MANUFACTURER	MODEL	FINISH	OPTIONS/ACCESSORIES
				AMPS	V./PH./CY.				
EBB-1	RESTROOM	3	600	5	120/1/60	RAYWALL	3900 SERIES	PER ARCH	SEE NOTES BELOW

NOTES:  
1. PROVIDE WITH INTEGRAL THERMOSTAT, ALUMINUM CASING, NICHROME WIRE ELEMENT ENCASED IN MAGNESIUM OXIDE IMMERSSED IN HEAT TRANSFERLIQUID, AUTOMATIC THERMAL LIMIT, JUNCTION BOX, AND END CAPS.

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FIRE ALARM EQUIPMENT LEGEND	
	FIRE ALARM CONTROL PANEL
	FIRE ALARM PULL STATION
	FIRE ALARM HORN
	FIRE ALARM STROBE
	FIRE ALARM HORN/STROBE
	CEILING MOUNTED SPEAKER
	DUCT DETECTOR
	REMOTE LAMP
	SMOKE DETECTOR - PHOTOELECTRIC
	135° STANDARD HEAT DETECTOR
	PIR DETECTOR
	DOOR HOLD - MAGNETIC HOLD
	FLOW SWITCH
	TAMPER SWITCH

COMMUNICATION LEGEND	
	CLOCK ONLY
	CLOCK / PA SPEAKER WALL MOUNTED
	ROUND CEILING MOUNTED SPEAKER
	SQUARE SPEAKER
	INTERCOM PUSH TO CALL SWITCH
	WIRELESS ACCESS POINT ABOVE THE CEILING
	ABOVE THE CEILING PROJECTOR CONNECTION
	WALL MOUNTED HDMI
	PLAIN DATA OUTLET
	PLAIN DATA OUTLET WITH MOUNTING HEIGHT
	COMBINATION DATA/TELEPHONE
	FLOOR MOUNTED COMBINATION DATA/TELEPHONE
	CEILING MOUNTED COMBINATION DATA/TELEPHONE
	TELEVISION OUTLET

SECURITY SYSTEM LEGEND	
	SECURITY CAMERA
	ADA DOOR OPERATOR PUSH BUTTON
	ELECTRIC DOOR STRIKE
	CARD READER FOR DOOR OPERATOR

LIGHTING LEGEND	
<u>NOTES:</u>	
SYMBOLS SHOWN ARE STANDARD. VARIATION AND/OR COMBINATIONS MAY BE USED ON THE PLANS. THIS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS OCCUR, THE ITEM SHALL BE PROVIDED AND INSTALLED.	
VARIATION AND/OR COMBINATION MAY BE USED ON THE PLANS.	
A NUMBER NEXT TO A RECEPTACLE OR DEVICE INDICATES A CIRCUIT NUMBER.	
AN UPPER CASE LETTER NEXT TO A SWITCH INDICATES THE FUNCTION OF THE SWITCH. A LOWER CASE LETTER INDICATES THE SWITCH CIRCUIT.	
AN UPPER CASE LETTER NEXT TO A LIGHT FIXTURE INDICATES THE TYPE OF FIXTURE. REFER TO THE LUMINAIRE SCHEDULE FOR FIXTURE SPECIFICATIONS. A LOWER CASE LETTER NEXT TO A LIGHT CORRESPONDS TO THE SWITCH DESIGNATION.	

SWITCHES	
\$	SINGLE POLE SWITCH
\$2	TWO POLE SWITCH
\$3	THREE-WAY SWITCH
\$4	FOUR-WAY SWITCH
\$D	DIMMER SWITCH
\$3D	3 WAY DIMMER SWITCH - (4D INDICATES A 4WAY DIMMER)
\$DR	DOOR ACTIVATED SWITCH
\$MA	WALL MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR SWITCH
\$LV	LOW VOLTAGE LIGHT SWITCH
\$FO	MANUAL MOTOR STARTER
\$P	PILOT LIGHT SWITCH
\$OS	AUTO ON / AUTO OFF LIGHT SWITCH
\$MO	DUAL TECHNOLOGY MOTION / OCCUPANCY SENSOR LIGHT SWITCH
\$MA	MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
\$K	KEY OPERATED LIGHT SWITCH
\$S	MANUAL ON - TIMED OFF LIGHT SWITCH
OS OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
MA MA	CEILING MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR
OS OS	CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
\$SC	SCENE CONTROL STATION
\$MS	UNIT LIGHTING MANAGEMENT CONTROL STATION.

LIGHT FIXTURES	
	1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	OPEN STRIP FIXTURE
	WALL BRACKET LINEAR FIXTURE
	WALL MOUNTED SCONCE LIGHT FIXTURE
	RECESSED DOWNLIGHT CAN FIXTURE
	SURFACE CEILING OR PENDANT MOUNTED FIXTURE
EX2	DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
EX1	SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
EM	WALL MOUNTED EMERGENCY LIGHT
EMR	EMERGENCY EXTERIOR EGRESS FIXTURE

#### GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IECG AND ALL APPLICABLE GOVERNING CODES.
- FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESSEEN CONTINGENCIES.
- ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
- WIRING:
  - ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING. FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
  - ALL CONDUITS AND CONVEYANCES SHALL BE CONCEALED. IN THE EVENT THAT A NEW DEVICE IS BEING INSTALLED IN AN EXISTING DRYWALL PARTITION, PROVIDE A CUT IN TYPE BOX AND FISH FLEXIBLE CONDUIT DOWN INSIDE THE WALL FROM ABOVE THE CEILING AND REPAIR THE DRYWALL AROUND THE CONDUIT. TRANSITION TO EMT ONCE ABOVE THE CEILING.
  - SIZES OF WIRE AND CABLES ARE BASED UPON COPPER CONDUCTORS, UNLESS OTHERWISE INDICATED. ALL CIRCUITS SHALL CONTAIN (2) #12 AWG WITH (1) #12 GND IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
  - ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER.
  - ALL PENETRATIONS IN OR THROUGH FIRE RATED PARTITIONS SHALL BE FIRE STOPPED IN SUCH A WAY THAT THE PENETRATION MATCHES THE FIRE RATING OF THE WALL.
  - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS.
  - COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
  - COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS.
  - BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY.
  - ALL EXPOSED CONDUITS, BOXES, ETC. IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE. EXPOSED CONDUITS, BOXES, ETC. IN ROOMS WHICH ARE NOT PAINTED MAY BE LEFT UN-PAINTED. EXPOSED CONDUIT, BOXES, ETC. ON THE EXTERIOR OF BUILDINGS SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE AS CLOSELY AS POSSIBLE.
  - THE CONTRACTOR IS RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILING OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION AND/OR INSTALLATION OF ELECTRICAL WORK.
  - PROVIDE ELECTRICAL CONNECTION TO ALL FIRE, SMOKE, AND FIRE / SMOKE DAMPERS INCLUDING POWER AND FIRE ALARM. VERIFY EXACT SIZE AND FINAL LOCATION OF ALL DAMPERS WITH THE MECHANICAL CONTRACTOR. ALL ROOFTOP UNITS RATED AT MORE THAN 2000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN THE RETURN DUCT. ALL ROOFTOP UNITS RATED AT MORE THAN 15000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN BOTH THE SUPPLY AND RETURN DUCT AT ROOFTOP LEVEL AND IN THE RETURN DUCT AT EVERY LEVEL THAT IS SERVED. ELECTRICAL CONTRACTOR WILL PROVIDE A REMOTE TEST STATION AND ALL WIRING NECESSARY TO COMPLETE INSTALLATION.
  - REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH PLUMBING AND HVAC EQUIPMENT AND OWNER/GENERAL CONTRACTOR FURNISHED EQUIPMENT.

ELECTRICAL EQUIPMENT LEGEND	
	BRANCH CIRCUIT PANELBOARD
	TELEPHONE TERMINAL BOARD
	ELECTRIC MOTOR
	FUSED SAFETY SWITCH / DISCONNECT COMBINATION
	MOTOR STARTER
	CONTACTOR
	CIRCUITRY HOMERUN: PANEL LA - CIR. #7
	CONDUIT OR WIRE CONCEALED IN WALL/CLG. (SOLID LINE TYPE)
	CONDUIT OR WIRE UNDERFLOOR/UNDERGRD. (CENTER LINE TYPE)

MAIN DISTRIBUTION GEAR	
	CIRCUIT BREAKER IN A PANEL BOARD
	PAD MOUNTED UTILITY TRANSFORMER
	FUSED DISCONNECT 100A = AMP RATING 2P = NUMBER OF POLES
	FUSED DISCONNECT
	ELECTRICAL METER SHOWN ON ONE-LINE DIAGRAMS
	ELECTRICAL POWER PANEL WITH MAIN LUG OR MAIN BREAKER PP1= PANEL NAME 225A MLO = MAIN LUG OR BREAKER SIZE 120/208V = PANEL VOLTAGE 3PH, 4 WIRE = PANEL PHASE, DISTRIBUTION TYPE
	PP1 225A MCB 120/208V 3PH, 4W
	PP1 225A MLO 120/208V 3PH, 4W

ELECTRICAL DEVICE LEGEND	
	CEILING JUNCTION BOX - SURFACE/FLUSH
	WALL JUNCTION BOX - SURFACE/FLUSH
	DUPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	APPLIANCE RECEPTACLE - 3 WIRE
	DUPLEX RECEPTACLE
	FOURPLEX RECEPTACLE
	ABBREVIATIONS PERTAIN TO ALL DUPLEX AND FOURPLEX RECEPTACLES:
AC	ABOVE COUNTER
AC GF	ABOVE COUNTER - GROUND FAULT CIRCUIT INTERRUPTER
AC USB	ABOVE COUNTER WITH USB PORT
AF	ARC FAULT PROTECTED
AF USB	ARC FAULT PROTECTED WITH USB PORT
AF GF	ARC FAULT WITH GROUND FAULT CIRCUIT INTERRUPTER
D	DEDICATED RECEPTACLE
D USB	DEDICATED RECEPTACLE WITH USB PORT
EM	RECEPTACLE CIRCUITED TO THE EMERGENCY PANEL WITH RED COVER PLATE
GF	GROUND FAULT CIRCUIT INTERRUPTER
GF WP	WEATHER PROOF GROUND FAULT CIRCUIT INTERRUPTER
PL	PLUG LOAD
72"	GENERAL PURPOSE WITH MOUNTING HEIGHT.
	ELECTRIC HAND DRYER
	THERMOSTAT
	OPEN/CLOSE/STOP PUSH BUTTON
	DRAWING KEY NOTES
	ROOM DESIGNATION

#### LUMINAIRES:

- COORDINATE THE LOCATION OF ALL LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO THE LUMINAIRES, SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONAL LOCATION OF LIGHT FIXTURES.
  - LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
  - THE ELECTRICAL CONTRACTOR IS TO CONFIRM THE LIGHT FIXTURES ORDERED WILL BE COMPATIBLE WITH THE CEILING TYPES AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING THE FIXTURES.
  - VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
  - ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
  - THE LIGHTING PACKAGE SHALL BE APPROVED BY BOTH THE ARCHITECT AND ENGINEER AS APPROVED EQUAL BEFORE BID. NO LIGHT FIXTURE SHALL BE ORDERED UNTIL THE LIGHT FIXTURE SUBMITTAL PACKAGE HAS BEEN APPROVED IN WRITING BY THE ARCHITECT, GENERAL CONTRACTOR AND ELECTRICAL ENGINEER.
  - COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.
- |       |  |
|-------|--|
| BTU   | BRITISH THERMAL UNIT                       |
| C     | CHILLER                                    |
| CAFCI | COMBINATION ARC FAULT CIRCUIT INTERRUPTERS |
| CAP   | CAPACITY                                   |
| CB    | CIRCUIT BREAKER                            |
| CBV   | CIRCUIT BALANCING VALVE                    |
| CCT   | CORRELATED COLOR TEMPERATURE               |
| CKT   | CIRCUIT                                    |
| CFH   | CUBIC FEET PER HOUR                        |
| CFM   | CUBIC FEET PER MINUTE                      |
| CHWR  | CHILLED WATER RETURN                       |
| CHWS  | CHILLED WATER SUPPLY                       |
| CI    | CAST IRON                                  |
| CL    | CENTER LINE                                |
| CLG   | CEILING                                    |
| CMU   | CONCRETE MASONRY UNIT                      |
| CO    | CLEAN OUT                                  |
| COL   | COLUMN                                     |
| COMP  | COMPRESSOR                                 |
| CONC  | CONCRETE                                   |
| COND  | CONDENSATE                                 |
| CONN  | CONNECTION                                 |
| CONT  | CONTINUATION                               |
| CONTR | CONTRACTOR                                 |
| CR    | COLOR RENDERING INDEX                      |
| CT    | COOLING TOWER                              |
| CT    | CURRENT TRANSFORMER                        |
| CU    | CONDENSING UNIT                            |
| CU    | COPPER                                     |
| CUH   | CABINET UNIT HEATER                        |
| CVB   | CONSTANT VOLUME BOX                        |
| CWR   | CONDENSER WATER RETURN                     |
| CWS   | CONDENSER WATER SUPPLY                     |
| DB    | DRY BULB                                   |
| DEPT  | DEPARTMENT                                 |
| DF    | DRINKING FOUNTAIN                          |

#### RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

EQUIPMENT	FURNISHED	SET	POWER WIRED	CONTROL WIRED
	23	23	26	--

COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS

FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS

	26	26	26	--
--	----	----	----	----

MANUAL-OPERATING AND MULTI-SPEED SWITCHES

	23	23	26	23
--	----	----	----	----

THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES

	23	23	26	26
--	----	----	----	----

TEMPERATURE CONTROL PANELS

	23	23(2)	--	23(2)
--	----	-------	----	-------

MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES

	23	23	26	23
--	----	----	----	----

HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS

	23	26	26	23(2)
--	----	----	----	-------

- SUBSCRIPT FOOTNOTES:
- MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
  - IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23. CONNECT UNDER DIVISION 26.

#### ABBREVIATIONS:

44"	MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA	DIAMETER
A	AMPS	DIAG	DIAGRAM
A.D.	ACCESS DOOR	DIFF	DIFFERENTIAL
AAV	AIR ADMITTANCE VALVE	DISCH	DISCHARGE
ABV	ABOVE	DIV	DIVISION
AC	AIR CONDITIONING UNIT	DN	DOWN
AC	ABOVE COUNTER	DS	DUCT SILENCER
AD	AREA DRAIN (SEE SYMBOLS)	DWG	DRAWING
A.F.C.	ABOVE FINISHED CEILING	DX	DIRECT EXPANSION
A.F.G.	ABOVE FINISHED GRADE	(E)	EXISTING
AIC	AMPERE INTERRUPTING CAPACITY	EA	EXHAUST AIR GRILLE/REGISTER
AFCI	ARC FAULT CIRCUIT INTERRUPTERS	EAT	ENTERING AIR TEMPERATURE
A.F.F.	ABOVE FINISHED FLOOR	EC	ELECTRICAL CONTRACTOR
AHU	AIR HANDLING UNIT	ECC	ECCENTRIC
ALUM	ALUMINUM	EFF	EFFICIENCY
AP	ACCESS PANEL OR DOOR	EL	ELEVATION
ATS	AUTOMATIC TRANSFER SWITCH	ELEC	ELECTRIC
AV	AUDIO / VIDEO	ELEV	ELEVATOR
AVG	AVERAGE	EM	EMERGENCY FUNCTION
AWG	AMERICAN WIRE GAGE	ENT	ENTERING
BAS	BUILDING AUTOMATION SYSTEM	EMT	ELECTRIC METALIC TUBE
BB	BASEBOARD	EQ	EQUAL
BD	BACK DRAFT DAMPER	EQUIP	EQUIPMENT
BFP	BACK FLOW PREVENTOR	EQUIV	EQUIVALENT
BL	BOILER	ES	END SWITCH
BLDG	BUILDING	ESP	EXTERNAL STATIC PRESSURE
BLW	BELOW	ET	EXPANSION TANK
BOB	BOTTOM OF BEAM	EWC	ELECTRIC WATER COOLER
BOD	BOTTOM OF DUCT	EWT	ENTERING WATER TEMPERATURE
BOP	BOTTOM OF PIPE	EX	EXHAUST
BSMT	BASEMENT	EXPN	EXPANSION
BTU	BRITISH THERMAL UNIT	EXT	EXTERNAL
C	CHILLER	F	DEGREES FAHRENHEIT
CAFCI	COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	FA	FREE AREA
CAP	CAPACITY	FC	FAN COIL UNIT
CB	CIRCUIT BREAKER	FCV	FOOTCANDLE
CBV	CIRCUIT BALANCING VALVE	FD	FIRE DAMPER
CCT	CORRELATED COLOR TEMPERATURE	FD	FLOOR DRAIN
CKT	CIRCUIT	FIN	FINISHED
CFH	CUBIC FEET PER HOUR	FLEX	FLEXIBLE
CFM	CUBIC FEET PER MINUTE	FLR	FLOOR
CHWR	CHILLED WATER RETURN	FOB	FLAT ON BOTTOM
CHWS	CHILLED WATER SUPPLY	FP	FLAT ON TOP
CI	CAST IRON	FPI	FIRE PROTECTION
CL	CENTER LINE	FR	FIRE PUMP
CLG	CEILING	FPM	FEET PER MINUTE
CMU	CONCRETE MASONRY UNIT	FPS	FEET PER SECOND
CO	CLEAN OUT	FS	FLOW SWITCH
COL	COLUMN	FSD	FIRE/SMOKE DAMPER
COMP	COMPRESSOR	FT	FEET
CONC	CONCRETE	FXC	FLEXIBLE CONNECTION
COND	CONDENSATE	GND	GROUND
CONN	CONNECTION	GA	GAUGE
CONT	CONTINUATION	GAL	GALLON
CONTR	CONTRACTOR	GALV	GALVANIZED
CR	COLOR RENDERING INDEX	GEC	GROUND ELECTRODE CONDUCTOR
CT	COOLING TOWER	GFCI / GFI	GROUND FAULT CIRCUIT INTERRUPTER
CT	CURRENT TRANSFORMER	GC	GENERAL CONTRACTOR
CU	CONDENSING UNIT	GPH	GALLONS PER HOUR
CU	COPPER	GPM	GALLONS PER MINUTE
CUH	CABINET UNIT HEATER	GRSLB	GRAINS PER POUND
CVB	CONSTANT VOLUME BOX	H 2O	WATER
CWR	CONDENSER WATER RETURN	HB	HOSE BIBB
CWS	CONDENSER WATER SUPPLY	HD	HEAD (SEE SCHEDULES)
DB	DRY BULB	HP	HEAT PUMP

#### SUBSTITUTIONS:

A. SUBSTITUTIONS. SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

#### EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.

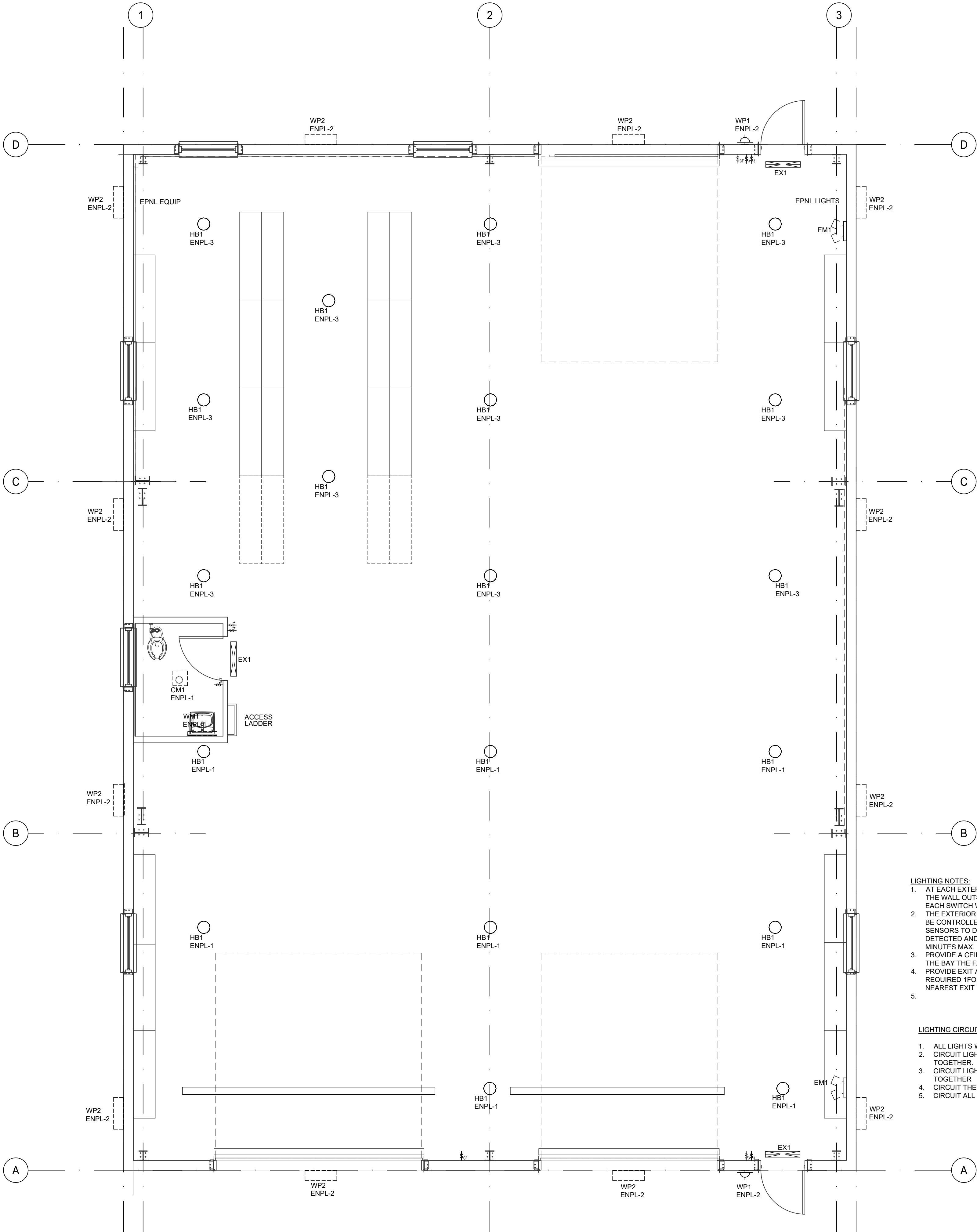
B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.

C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

HP	HORSEPOWER	PTAC	PACKAGED TERMINAL AIR CONDITIONER
HR	HOUR	PV	PLUG VALVE
HT	HEIGHT	PVC	POLYVINYL CHLORIDE
HTR	HEATER	QTY	QUANTITY
HWR	HEATING WATER RETURN	RA	RETURN AIR GRILLE / REGISTER
HWS	HEATING WATER SUPPLY	RCP	REFLECTED CEILING PLAN
HX	HEAT EXCHANGER	RD	ROOF DRAIN
HZ	HERTZ	REL	RELIEF
ID	INSIDE DIAMETER	REQD	REQUIRED
IG	ISOLATED GROUND	RF	RETURN FAN
IN	INCHES	RH	RELATIVE HUMIDITY
INV	INVERT	RHC	REHEAT COIL
JBOX	JUNCTION BOX	RLA	RATED LOAD AMPS
K	KELVIN	RM	ROOM
KW	KILOWATT	RPM	REVOLUTIONS PER MINUTE
KVA	KILO VOLT - AMPS	SA	SUPPLY AIR GRILLE / REGISTER
L	LENGTH	SC	SHORT CIRCUIT
LAT	LEAVING AIR TEMPERATURE	SCA	SHORT CIRCUIT AVAILABLE
LV	LAVATORY	SCCR	SHORT CIRCUIT CURRENT RATING
LB	POUND	SCH	SCHEDULE
LD	LINEAR DIFFUSER	SD	SMOKE DAMPER
LF	LINEAR FEET	SEF	SMOKE EXHAUST FAN
LIN	LINEAR	SF	SUPPLY FAN
LIQ	LIQUID	SH	SENSIBLE HEAT
LM	LUMEN	SH	SHOWER
LRA	LOCKED ROTOR AMPS	SP	STATIC PRESSURE
LV	LOUVER	SPD	SURGE PROTECTION DEVICE
LVG	LEAVING	SPEC	SPECIFICATION
LWT	LEAVING WATER TEMPERATURE	SQ	SQUARE
MBH	THOUSANDS OF BTU PER HOUR	SS	STAINLESS STEEL
MC	MECHANICAL CONTRACTOR	SS	SAFETY SHOWER
MCA	MINIMUM CIRCUIT AMPACITY	STD	STANDARD
MCB	MAIN CIRCUIT BREAKER	STL	STEEL
MD	MOTORIZED DAMPER	SYS	SYSTEM
MDP	MAIN DISTRIBUTION PANEL	TEMP	TEMPERATURE
MEF	MEDIUM	TR	TRANSFER GRILLE / REGISTER
MR	MANUFACTURER	TR	TAMPER RESISTANT
MIN	MINIMUM	TT	TEMPERATURE TRANSMITTER
MISC	MISCELLANEOUS	TTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
MLO	MAIN LUG ONLY	TX	TYPICAL
MOP	MAXIMUM OVERCURRENT PROTECTION	TY	TRANSFORMER
MTD	MOUNTED	UC	UNDERCUT DOOR
MUA	MAKE-UP AIR UNIT	UH	UNIT HEATER
N	NEUTRAL	UNO	UNLESS NOTED OTHERWISE
NC	NORMALLY CLOSED	UNOCC	UNOCCUPIED
NEG	NEGATIVE	UR	URINAL
NI	NOT IN CONTRACT	V	VOLTS
NL	NIGHT / SECURITY LIGHT - DO NOT SWITCH	VA	VOLT AMPERE
NO	NORMALLY OPEN	VA	VALVE
NOM	NOMINAL	VAV	VARIABLE AIR VOLUME UNIT
NTS	NOT TO SCALE	VFD	VARIABLE FREQUENCY DRIVE
OA	OUTSIDE AIR	VRF	VARIABLE REFRIGERANT FLOW
OB	OPPOSED BLADE DAMPER	VOLT	VOLTAGE
OC	ON CENTER	VTR	VENT THROUGH ROOF
OCC	OCCUPIED	W	WIDTH
OCF	OVER CURRENT PROTECTION	W	WATTS
OD	OUTSIDE DIAMETER	WI	WITH
OL	OVERLOAD	W/O	WITHOUT
ORD	OVERFLOW ROOF DRAIN	WB	WET BULB
OZ	OUNCE	WC	WATER COLUMN
PBD	PARALLEL BLADE DAMPER	WC	WATER CLOSET
PD	PRESSURE DROP	WG	WATER GAUGE
PH	PHASE	WP	WEATHERPROOF
POS	POSITIVE PRESSURE	WPU	WEATHERPROOF IN-USE
POS	POINT OF SALES	WSR	WITHSTAND RATING
PRV	PRESSURE REDUCING VALVE	XFMR	TRANSFORMER
PS	PRESSURE SWITCH		
PSI	POUNDS PER SQUARE INCH		
PT	PRESSURE TRANSMITTER		



- LIGHTING NOTES:**
1. AT EACH EXTERIOR MAN DOOR PROVIDE (2) 3WAY SWITCHES, ON THE WALL OUTSIDE THE RESTROOM PROVIDE (2) 4WAY SWITCHES. EACH SWITCH WILL CONTROL HALF OF THE LIGHTS IN THE SPACE.
  2. THE EXTERIOR WALL MOUNTED LIGHTS WP1 AND WP2 ENPL-2 WILL BE CONTROLLED WITH A PHOTOCELL ON/OFF AND MOTION SENSORS TO DIM THE LIGHTS TO 30% WHEN NO MOTION IS DETECTED AND OFF WHEN NO MOTION IS DETECTED FOR 15 MINUTES MAX.
  3. PROVIDE A CEILING FAN MOTOR CONTROL SWITCH ON THE WALL IN THE BAY THE FAN IS SERVING THE SWITCH IS NOTED AS "OF".
  4. PROVIDE EXIT AND EMERGENCY LIGHTS TO PROVIDE THE REQUIRED 1FOOTCANDLE ALONG THE PATH OF TRAVEL TO THE NEAREST EXIT DOOR AS REQUIRED PER LOCAL CODES.
  - 5.

- LIGHTING CIRCUITING NOTES:**
1. ALL LIGHTS WILL BE CIRCUITED TO PANEL "ENPL"
  2. CIRCUIT LIGHTS IN VEHICLE BAY 2 AND PART STORAGE TOGETHER
  3. CIRCUIT LIGHTS IN VEHICLE BAY 1 AND RESTROOM TOGETHER
  4. CIRCUIT THE CEILING FANS TOGETHER
  5. CIRCUIT ALL EXTERIOR LIGHTS TOGETHER.

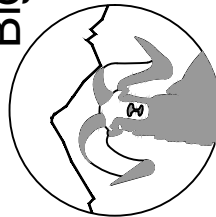
LUMINAIRE SCHEDULE

TYPE	MANUFACTURER CATALOG NO.	MANUFACTURER CATALOG NO.	VOLTAGE MOUNTING	DRIVER LAMP SPECIFICATION	DESCRIPTION
CM1	HALO LIGHTING SMD6R-6-9S-WH	APPROVED EQUIVALENT	120V SURFACE MOUNT ON J-BOX	LED DRIVER 600LM, SELECTABLE CCT, 90CRI, 9W	6" ROUND SURFACE MOUNTED LED LIGHT, MOUNT ON JUNCTION BOX, WHITE FINISH
HB1	METALUX LIGHTING UHBS-12-19-MV-L64050-U	APPROVED EQUIVALENT	120V SUSPENDED	0-10V LED DIMMING, SELECTABLE LUMEN & CCT, 121W MAX	LED ROUND HIGH BAY WITH SET TO LOW 13134LM, 4000K MAKE ADJUSTMENTS PER THE OWNERS REQUEST.
WM1	ASL LIGHTING VBX-FSN-W11-DV-35-W25EMG	APPROVED EQUIVALENT	120V SURFACE WALL VANITY LIGHT	NON-DIM LED DRIVER 1972LM, 3500K, 80CRI, 17W	LED WALL MOUNTED VANITY LIGHT, DIE FORMED STEEL CONSTRUCTION, ACRYLIC LENS, DARK GRAY BRUSHED ALUMINUM FINISH
WP1	MCGRAW-EDISON LIGHTING IST-SA1A-730-U-T3-B2-MS/DIM-L20-CBP	APPROVED EQUIVALENT	120V EXTERIOR WALL MOUNTED	LED DIMMING 2778LM, 3000K, 70CRI, 20W	IMPACT ELITE LED EXTERIOR WALL MOUNTED TRAPEZOID BRONZE FINISH, BATTERY PACK WITH BACK BOX, COLD WEATHER RATED.
WP2	MCGRAW-EDISON LIGHTING IST-SA1A-730-U-T3-B2-MS/DIM-L20	APPROVED EQUIVALENT	120V EXTERIOR WALL MOUNTED	LED DIMMING 2778LM, 3000K, 70CRI, 20W	IMPACT ELITE LED EXTERIOR WALL MOUNTED TRAPEZOID BRONZE FINISH, COLD WEATHER RATED, MOTION SENSOR FOR DIMMING OPERATION
EM	ISOLITE RL2LED-4-WH-MBC-SD	APPROVED EQUIVALENT	120/277 SURFACE BACK/CEILING 2 HEADS	NONE REQUIRED 2W LED WITH UNIT	RELIAANCE SERIES COMPACT LED EMERGENCY LIGHT, 2W LED HEADS W/REMOTE CAPACITY, WHITE FINISH, SELF-DIAGNOSTICS
EMX	ISOLITE RLP-G-U-WH-MTEB-SD	APPROVED EQUIVALENT	120/277 SURFACE 2	NONE REQUIRED LED WITH UNIT	EXIT & EMERGENCY COMBINATION UNIT, GREEN LETTERS ON WHITE THERMOPLASTIC HOUSING, SELF TEST/SELF DIAGNOSTICS

- NOTES:**
1. EXIT LIGHT FIXTURE. REFER TO THE PLANS FOR THE NUMBER OF FACES REQUIRED AT EACH EXIT. INSTALL THE NUMBER OF FACES REQUIRED AT EACH EXIT. FIELD ADJUST THE LOCATION OF THE EXIT SIGNS FOR THE BEST VISIBILITY POSSIBLE. ALL EXIT LIGHTS SHALL COMPLY WITH ALL LOCAL BUILDING CODES.
  2. THIS EXIT SIGN REQUIRES THE EXTRA BATTERY CAPACITY TO OPERATE THE REMOTELY LOCATED EMERGENCY HEAD FOR EGRESS AWAY FROM THE BUILDING.

DO NOT REPRODUCE THESE DRAWINGS AND SPECIFICATIONS WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE DESIGNER. THE DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF THE SERVICE AND SHALL REMAIN THE PROPERTY OF THE DESIGNER. WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THESE DRAWINGS AND SPECIFICATIONS SHALL NOT BE USED BY ANYONE, ON ANY OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT BY OTHERS EXCEPT BY THE EXPRESSED WRITTEN PERMISSION OF THE DESIGNER.

Bighorn Consulting Engineers, Inc.  
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Phone: (970) 241-8709

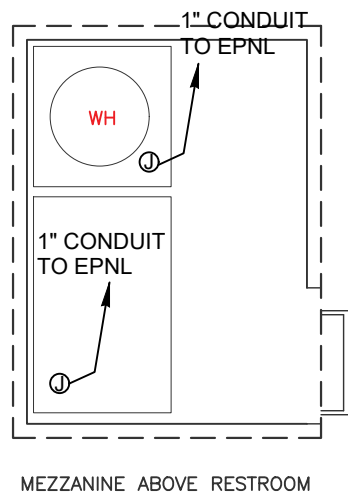
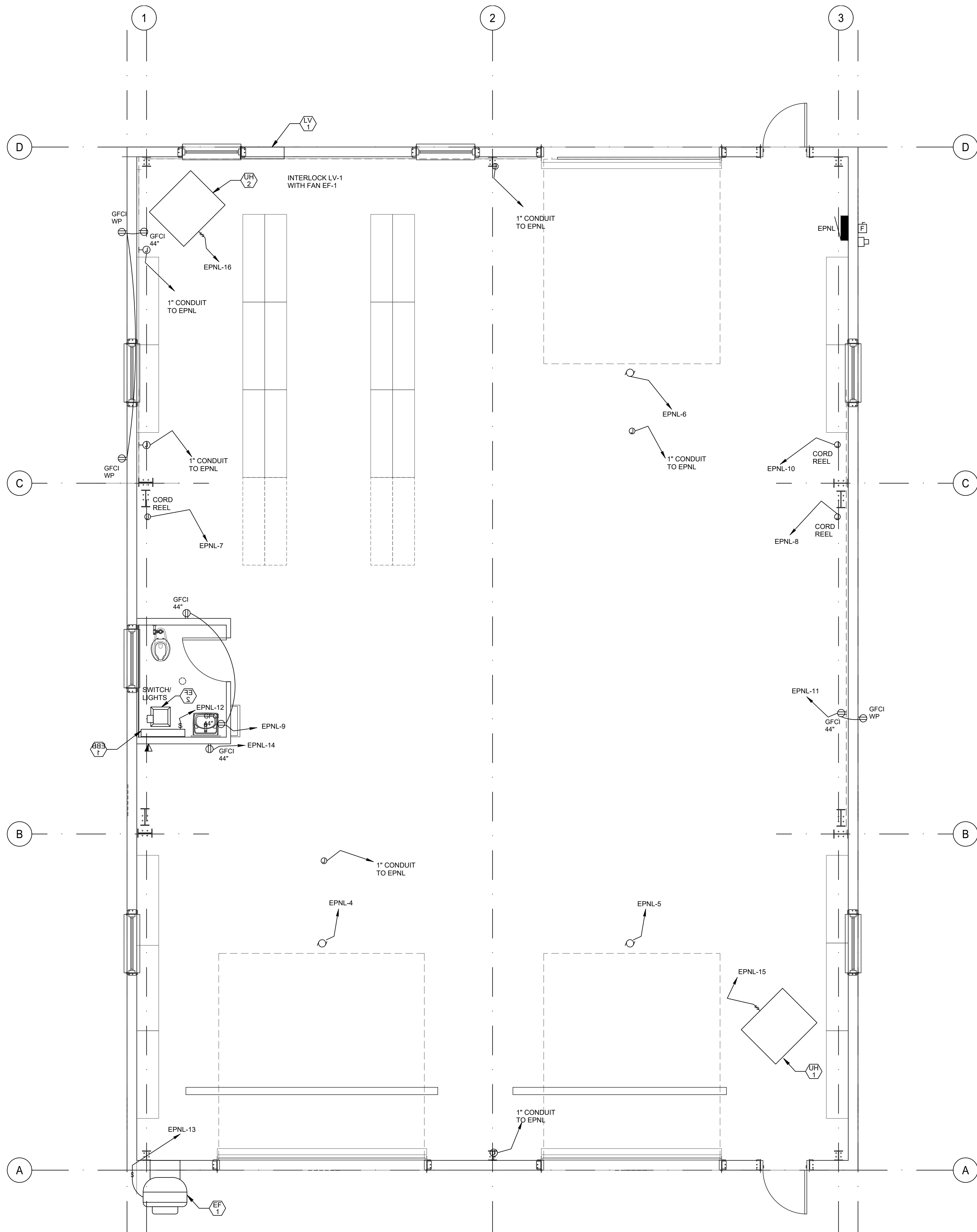


CMC SV MAINTENANCE BUILDING  
LIGHTING - FLOOR PLAN  
TRACT 3, ADAIR RIPPY EXEMPTION  
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT
05/28/25	CONTRACT DOCUMENT
07/07/25	OWNER REQUESTED UPDATES
08/04/25	PERMIT DRAWINGS



DATE:	05/28/25
JOB NO:	24-068
DRAWN BY:	BCE
CHECKED BY:	BCE
SCALE:	AS SHOWN
SHEET NUMBER:	E1-1

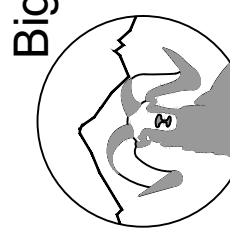


# ELECTRICAL - FLOOR PLAN

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

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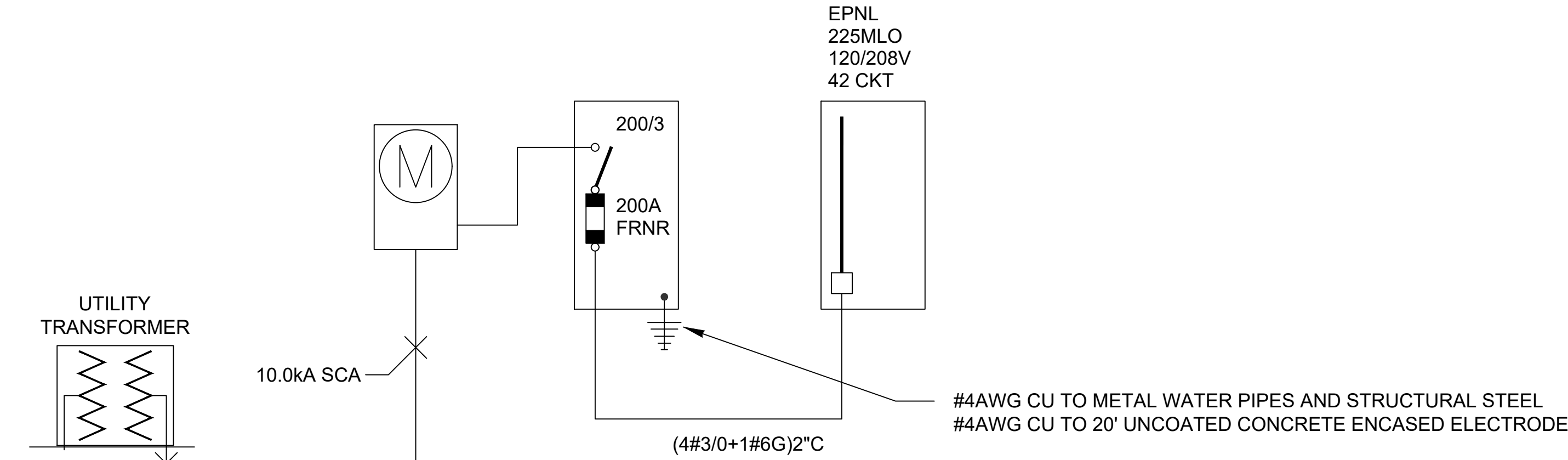


## CMC SV MAINTENANCE BUILDING ELECTRICAL - FLOOR PLAN TRACT 3, ADAIR RIPPY EXEMPTION GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT
05/28/25	CONTRACT DOCUMENT
07/07/25	OWNER REQUESTED UPDATES
08/04/25	PERMIT DRAWINGS



DATE:	05/28/25
JOB NO:	24-068
DRAWN BY:	BCE
CHECKED BY:	BCE
SCALE:	AS SHOWN
SHEET NUMBER:	E2-1



## ONE-LINE DIAGRAM

NOT TO SCALE

### NOTES:

- PROVIDE GROUNDING AND BONDING TO MEET THE 2023 NEC ARTICLE 250 REQUIREMENTS.
- FAULT CURRENT CALCULATIONS BASED UPON AN ANTICIPATED 50kVA TRANSFORMER AT AN ESTIMATED DISTANCE OF 50FT FROM THE TRANSFORMER TO THE SERVICE DISTRIBUTION PANEL.
- PROVIDE LABELING TO MEET THE REQUIREMENTS OF NEC 110.21.

### FAULT CURRENT CALCULATIONS:

$F = \frac{L \times I \times 3^{1/2}}{N \times C \times E}$   
L - LENGTH OF CABLE IN FEET  
I - AVAILABLE FAULT CURRENT  
N - NUMBER OF CONDUCTORS PER PHASE  
C - CONDUCTANCE CONSTANT  
- 250kCMIL ALUMINUM: 12,862  
E - VOLTAGE LINE TO LINE  
F - INTERMEDIARY VALUE FOR COMPUTATION  
 $M = 1/(1+F)$   
M - MULTIPLIER TO ACHIEVE AVAILABLE FAULT  
 $I(SC) = I(SC) \times M$

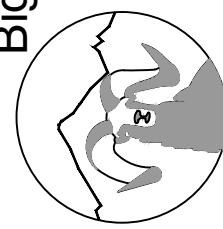
### RUN #1: SERVICE DISCONNECT TO HOUSE PANEL

$F = \frac{L \times I \times 2}{N \times C \times E} = \frac{50FT \times 14,800 A \times 3^{1/2}}{1 \times 12,862 \times 208 V} = 0.479$   
 $M = \frac{1}{1+F} = \frac{1}{1+0.479} = 0.676$   
 $I(SC) = I \times M = 14,800A \times 0.676 = 10,006 A$

PANEL SCHEDULE -		EPNL	TYPE: VOLTAGE: ENCLOSURE:	PANELBOARD 120/208 NEMA1	BUS SIZE: MAIN BRKR: MOUNTING:		225 NONE SURFACE	PHASES: WIRES: SC RATING:	3 4 10000	NEUTRAL BUS: GROUND BUS:	YES YES
LOAD TYPE	LOAD DESCRIPTION			AMPS POLES	CKT# LOAD	Ø	CKT# LOAD	AMPS POLES	LOAD TYPE	LOAD DESCRIPTION	
LIGHTING	SOUTH VEHICLE BAYS, RESTROOM ---			20A 1P	1 1000	A	2 1000	20A 1P	LIGHTING	EXTERIOR BUILDING ---	
LIGHTING	NORTH VEHICLE BAYS ---			20A 1P	3 1400	B	4 1800	20A 1P	MOTOR	GARAGE DOOR ---	
MOTOR	GARAGE DOOR ---			20A 1P	5 1800	C	6 1800	20A 1P	MOTOR	GARAGE DOOR ---	
RECEPTACLE	CORD REEL GROUND FAULT BREAKER 5 MA			20A 1P	7 1800	A	8 1800	20A 1P	RECEPTACLE	CORD REEL GROUND FAULT BREAKER 5 MA	
RECEPTACLE	SHOP OUTLET ---			20A 1P	9 360	B	10 1800	20A 1P	RECEPTACLE	CORD REEL GROUND FAULT BREAKER 5 MA	
RECEPTACLE	BATHROOM & OUTSIDE ---			20A 1P	11 360	C	12 750	20A 1P	MECH HEATING	BATHROOM ELECTRIC HEAT ---	
MECH YEAR ROUND	UNIT EF-1			20A 1P	13 1500	A	14 180	20A 1P	RECEPTACLE	SHOP OUTLET ---	
MECH HEATING	UNIT UH-1 ---			20A 1P	15 500	B	16 500	20A 1P	MECH HEATING	UNIT UH-1 ---	
SPACE	---			---	17 0	C	18 0	---	SPACE	---	
SPACE	---			---	19 0	A	20 0	---	SPACE	---	
SPACE	---			---	21 0	B	22 0	---	SPACE	---	
SPACE	---			---	23 0	C	24 0	---	SPACE	---	
SPACE	---			---	25 0	A	26 0	---	SPACE	---	
SPACE	---			---	27 0	B	28 0	---	SPACE	---	
SPACE	---			---	29 0	C	30 0	---	SPACE	---	
SPACE	---			---	31 0	A	32 0	---	SPACE	---	
SPACE	---			---	33 0	B	34 0	---	SPACE	---	
SPACE	---			---	35 0	C	36 0	---	SPACE	---	
SPACE	---			---	37 0	A	38 0	---	SPACE	---	
SPACE	---			---	39 0	B	40 0	---	SPACE	---	
SPACE	---			---	41 0	C	42 0	---	SPACE	---	
LOADS BY TYPE:					LOADS BY PHASE:						
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)	PHASE		CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)			
LIGHTING	3400.00	1.25	4250.00	A		7280.00	60.67	A-B: 87.4			
KITCHEN	0.00	0.00	0.00	B		6360.00	53.00	B-C: 74.1			
PROCESS	0.00	1.00	0.00	C		4710.00	39.25	C-A: 64.7			
RECEPTACLES	6300.00	1.00	6300.00	TOTAL/AVERAGE		18350.00	50.97	75.4			
MECH HEATING	1750.00	1.00	1750.00	NOTES:  1. THE LARGEST CONNECTED MOTOR LOAD IS INCLUDED IN MECHANICAL, PROCESS, OR MOTOR LOADS.							
MECH COOLING	0.00	1.00	0.00								
MECH YEAR ROUND	1500.00	1.00	1500.00								
APPLIANCE	0.00	1.00	0.00								
MISCELLANEOUS	0.00	1.00	0.00								
MOTOR	5400.00	1.00	8100.00								
SPARE	0.00	1.00	0.00								
LARGEST MOTOR <sup>1</sup>	ABOVE	0.25	450.00								
TOTAL	18350.00		19650.00								

DO NOT REPRODUCE THESE DRAWINGS AND SPECIFICATIONS WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE DESIGNER. THE DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF THE SERVICE AND SHALL REMAIN THE PROPERTY OF THE DESIGNER. WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THESE DRAWINGS AND SPECIFICATIONS SHALL NOT BE USED BY ANYONE ON ANY OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT BY OTHERS EXCEPT BY THE EXPRESSED WRITTEN PERMISSION OF THE DESIGNER.

Bighorn Consulting Engineers, Inc.  
Mechanical & Electrical Engineers  
386 Indian Road  
Grand Junction, CO 81501  
Phone: (970) 241-8709



CMC SV MAINTENANCE BUILDING  
ELECTRICAL - ROOF PLAN  
TRACT 3, ADAIR RIPPY EXEMPTION  
GARFIELD COUNTY, COLORADO

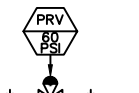
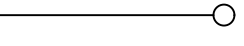
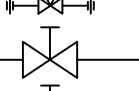
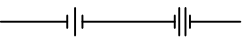
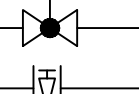

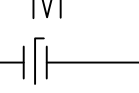
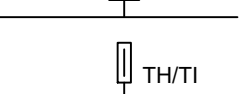
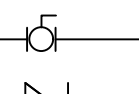
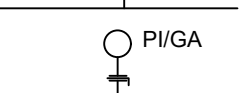
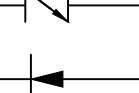
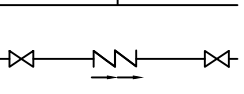
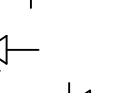
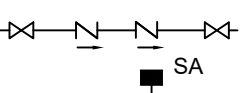
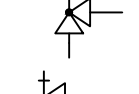
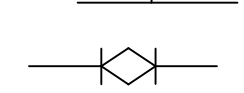

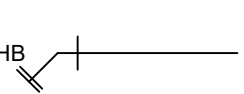
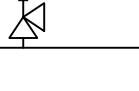
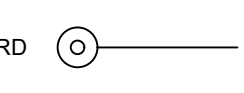
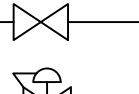
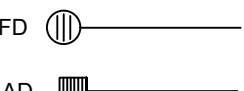
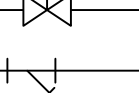
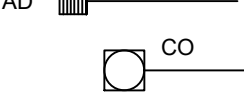
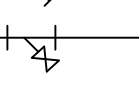
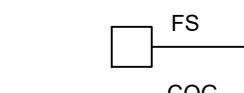

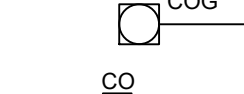
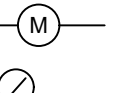
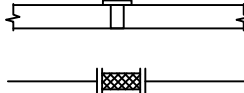

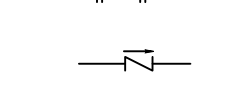

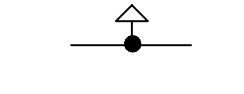







DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT
05/28/25	CONTRACT DOCUMENT
07/07/25	OWNER REQUESTED UPDATES
08/04/25	PERMIT DRAWINGS



DATE:	05/28/25
JOB NO:	24-068
DRAWN BY:	BCE
CHECKED BY:	BCE
SCALE:	AS SHOWN
SHEET NUMBER:	

E2-2

PLUMBING PIPE DESIGNATIONS	
LINE TYPE	DESCRIPTION
140	HIGH TEMPERATURE (140°) WATER PIPE
CW	COLD WATER PIPE (CW)
CA	COMPRESSED AIR
DC	DECONTAMINATION PIPING
DER	DEIONIZED WATER RETURN
DES	DEIONIZED WATER SUPPLY
DIS	DISTILLED WATER SUPPLY
DIR	DISTILLED WATER RETURN
CD	EQUIPMENT CONDENSATE DRAIN
FP	FIRE MAIN
GW	GREASE WASTE PIPE
HE	HELIUM
HPS	HIGH PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE
	HOT WATER RECIRCULATION (HWR)
	HOT WATER PIPE (HW)
H2	HYDROGEN
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MA	MEDICAL AIR
G	NATURAL GAS PIPE
N2	NITROGEN
N2O	NITROUS OXIDE
ORD	OVERFLOW STORM WATER PIPE
O2	OXYGEN
PG	PROPANE GAS
RD	ROOF DRAIN PIPE
	SOIL OR WASTE PIPE
S/O	SOIL / OIL WASTE PIPE
TWR	TOWER WATER RETURN
TWS	TOWER WATER SUPPLY
VAC	VACUUM
	VENT PIPE (V)

PLUMBING ELEMENTS / VALVING			
LINE TYPE	DESCRIPTION	LINE TYPE	DESCRIPTION
	PRESSURE REDUCING VALVE (PRV)		PIPE RISING UP
	GATE VALVE		PIPE DROPPING DOWN
	GLOBE VALVE		UNION - SCREWED OR FLANGED
	PLUG VALVE		PRESSURE TRANSMITTER OR PRESSURE SWITCH
	BUTTERFLY VALVE		THERMOMETER/TEMPERATURE INDICATOR
	BALL VALVE		GAUGE WITH GAUGE COCK/ PRESSURE INDICATOR
	SWING CHECK VALVE		BACKFLOW PREVENTOR (REDUCED ZONE)
	LIFT CHECK VALVE		BACKFLOW PREVENTOR (DOUBLE CHECK VALVE ASSEMBLY)
	GATE VALVE, ANGLE		WATER HAMMER ARRESTER
	GLOBE VALVE, ANGLE		CIRCUIT SETTING
	TEMPERATURE AND PRESSURE RELIEF VALVE		HOSE BIBB
	RELIEF/SAFETY VALVE		ROOF DRAIN
	GAS COCK		FLOOR DRAIN
	GAS PRESSURE REGULATOR		AREA DRAIN
	STRAINER		FLOOR CLEAN OUT
	STRAINER WITH BLOW OFF VALVE		FLOOR SINK
	WATER HEATER		CLEAN OUT TO GRADE
	WATER METER		WALL CLEAN OUT
	PRESSURE GAGE		FLEXIBLE-CONNECTION
	TEMPERATURE GAGE		CHECK VALVE
			VACUUM BREAKER

RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT	23	23	26	--
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

- SUBSCRIPT FOOTNOTES:
- MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
  - IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER DIVISION 26.

ABBREVIATIONS:

44" MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA DIAMETER	HP HORSEPOWER	PTAC PACKAGED TERMINAL AIR CONDITIONER
A AMPS	DIAG DIAGRAM	HR HOUR	PV PLUG VALVE
A.D. ACCESS DOOR	DIFF DIFFERENTIAL	HT HEIGHT	PVC POLYVINYL CHLORIDE
AAV AIR ADMITTANCE VALVE	DISCH DISCHARGE	HTR HEATER	QTY QUANTITY
ABV ABOVE	DIV DIVISION	HWR HEATING WATER RETURN	RA RETURN AIR GRILLE / REGISTER
AC AIR CONDITIONING UNIT	DN DOWN	HWS HEATING WATER SUPPLY	RCR REFLECTED CEILING PLAN
AC ABOVE COUNTER	DSW DUCT SILENCER	HX HEAT EXCHANGER	RD ROOF DRAIN
AD AREA DRAIN (SEE SYMBOLS)	DWG DRAWING	HZ HERTZ	REL RELIEF
A.F.C. ABOVE FINISHED CEILING	DX DIRECT EXPANSION	ID INSIDE DIAMETER	REQD REQUIRED
A.F.G. ABOVE FINISHED GRADE	(E) EXISTING	IG ISOLATED GROUND	RF RETURN FAN
AIC AMPERE INTERRUPTING CAPACITY	EA EXHAUST AIR GRILLE/REGISTER	IN INCHES	RH RELATIVE HUMIDITY
AFCI ARC FAULT CIRCUIT INTERRUPTERS	EAT ENTERING AIR TEMPERATURE	INV INVERT	RHC REHEAT COIL
A.H.U. AIR HANDLING UNIT	EC ELECTRICAL CONTRACTOR	JBOX JUNCTION BOX	RLA RATED LOAD AMPS
ALUM ALUMINUM	ECC ECCENTRIC	K KELVIN	RM ROOM
AP ACCESS PANEL OR DOOR	EF EXHAUST FAN	KW KILOWATT	RPM REVOLUTIONS PER MINUTE
ATS AUTOMATIC TRANSFER SWITCH	EFF EFFICIENCY	KVA KILO VOLT - AMPS	SA SUPPLY AIR GRILLE / REGISTER
AV AUDIO / VIDEO	EL ELEVATION	L LENGTH	SC SHORT CIRCUIT
AVG AVERAGE	ELEC ELECTRIC	LAT LEAVING AIR TEMPERATURE	SCA SHORT CIRCUIT AVAILABLE
AWG AMERICAN WIRE GAGE	ELEV ELEVATOR	LB POUND	SCCR SHORT CIRCUIT CURRENT RATING
BAS BUILDING AUTOMATION SYSTEM	EM EMERGENCY FUNCTION	LD LINEAR DIFFUSER	SCH SCHEDULE
BB BASEBOARD	ENT ENTERING	LF LINEAR FEET	SD SMOKE DAMPER
BD BACK DRAFT DAMPER	EMT ELECTRIC METALLIC TUBE	LIN LINEAR	SEF SMOKE EXHAUST FAN
BFP BACK FLOW PREVENTOR	EQ EQUAL	LIQ LIQUID	SF SUPPLY FAN
BL BOILER	EQUIP EQUIPMENT	LM LUMEN	SH SENSIBLE HEAT
BLDG BUILDING	ES END SWITCH	LRA LOOKED ROTOR AMPS	SH SHOWER
BLW BELOW	ESP EXTERNAL STATIC PRESSURE	LV LOUVER	SP STATIC PRESSURE
BOB BOTTOM OF BEAM	ET EXPANSION TANK	LVT LEAVING WATER TEMPERATURE	SPD SURGE PROTECTION DEVICE
BOD BOTTOM OF DUCT	EWC ELECTRIC WATER COOLER	MBH THOUSANDS OF BTU PER HOUR	SPEC SPECIFICATION
BOP BOTTOM OF PIPE	EWT ENTERING WATER TEMPERATURE	MC MECHANICAL CONTRACTOR	SQ SQUARE
BSMT BASEMENT	EX EXHAUST	MCA MINIMUM CIRCUIT AMPACITY	SS STAINLESS STEEL
BTU BRITISH THERMAL UNIT	EXPAN EXPANSION	MCB MAIN CIRCUIT BREAKER	SS SAFETY SHOWER
C CHILLER	EXT EXTERNAL	MD MOTORIZED DAMPER	STD STANDARD
CAFCI COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	F DEGREES FAHRENHEIT	MDP MAIN DISTRIBUTION PANEL	STL STEEL
CAP CAPACITY	FA FREE AREA	MED MEDIUM	SYS SYSTEM
CB CIRCUIT BREAKER	FC FAN COIL UNIT	MFR MANUFACTURER	TEMP TEMPERATURE
CBV CIRCUIT BALANCING VALVE	FC FOOTCANDLE	MIN MINIMUM	TR TRANSFER GRILLE / REGISTER
CCT CORRELATED COLOR TEMPERATURE	FCV FLOW CONTROL VALVE	MISC MISCELLANEOUS	TR TAMPER RESISTANT
CKT CIRCUIT	FD FIRE DAMPER	MLO MAIN LUG ONLY	TT TEMPERATURE TRANSMITTER
CFH CUBIC FEET PER HOUR	FD FLOOR DRAIN	MOCP MAXIMUM OVERCURRENT PROTECTION	TTB TELECOMMUNICATIONS TERMINAL BACKBOARD
CFM CUBIC FEET PER MINUTE	FIN FINISHED	MTD MOUNTED	TYP TYPICAL
CHWR CHILLED WATER RETURN	FLA FULL LOAD AMPS	MUA MAKE-UP AIR UNIT	TX TRANSFORMER
CHWS CHILLED WATER SUPPLY	FLEX FLEXIBLE	N NEUTRAL	UC UNDERCUT DOOR
CI CAST IRON	FLR FLOOR	NC NORMALLY CLOSED	UH UNIT HEATER
CL CENTER LINE	FOB FLAT ON BOTTOM	NEG NEGATIVE	UNO UNLESS NOTED OTHERWISE
CLG CEILING	FOT FLAT ON TOP	NIC NOT IN CONTRACT	UNOCC UNOCCUPIED
CMU CONCRETE MASONRY UNIT	FP FIRE PROTECTION	NL NIGHT / SECURITY LIGHT - DO NOT SWITCH	UR URINAL
COL COLUMN	FPM FEET PER MINUTE	NO NORMALLY OPEN	V VOLTS
COMP COMPRESSOR	FPS FEET PER SECOND	NOM NOMINAL	VA VOLT AMPERE
CONC CONCRETE	FS FLOW SWITCH	NTS NOT TO SCALE	VA VALVE
COND CONDENSATE	FSD FIRE/SMOKE DAMPER	OA OUTSIDE AIR	VAV VARIABLE AIR VOLUME UNIT
CONN CONNECTION	FT FEET	OBD OPPOSED BLADE DAMPER	VFD VARIABLE FREQUENCY DRIVE
CONT CONTINUATION	FXC FLEXIBLE CONNECTION	OC ON CENTER	VRF VARIABLE REFRIGERANT FLOW
CONTR CONTRACTOR	GND GROUND	OCC OCCUPIED	VOLT VOLTAGE
CRI COLOR RENDERING INDEX	GAL GALLON	OCPP OVER CURRENT PROTECTION	VTR VENT THROUGH ROOF
CT COOLING TOWER	GALV GALVANIZED	OD OUTSIDE DIAMETER	W WIDTH
CT CURRENT TRANSFORMER	GEC GROUND ELECTRODE CONDUCTOR	OL OVERLOAD	W WATTS
CU CONDENSING UNIT	GFCI / GFI GROUND FAULT CIRCUIT INTERRUPTER	ORD OVERFLOW ROOF DRAIN	W/ WITH
CU COPPER	OG GENERAL CONTRACTOR	OZ OUNCE	WIO WITHOUT
CUH CABINET UNIT HEATER	GPH GALLONS PER HOUR	PBD PARALLEL BLADE DAMPER	WB WET BULB
CVB CONSTANT VOLUME BOX	GPM GALLONS PER MINUTE	PD PRESSURE DROP	WC WATER COLUMN
CWR CONDENSER WATER RETURN	GRSIB GRAMS PER POUND	PH PHASE	WC WATER CLOSET
CWS CONDENSER WATER SUPPLY	H2O WATER	POS POSITIVE PRESSURE	WG WATER GAUGE
DB DRY BULB	HB HOSE BIBB	POS POINT OF SALES	WP WEATHERPROOF
DEPT DEPARTMENT	HD HEAD (SEE SCHEDULES)	PRV PRESSURE REDUCING VALVE	WPIU WEATHERPROOF IN-USE
DF DRINKING FOUNTAIN	HP HEAT PUMP	PS PRESSURE SWITCH	WSR WITHSTAND RATING
		PT PRESSURE TRANSMITTER	XFMR TRANSFORMER

SUBSTITUTIONS:

A. SUBSTITUTIONS. SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.

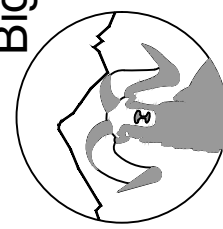
C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL..

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386 Indian Road  
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Phone: (970) 241-8709



CMC SV MAINTENANCE BUILDING  
PLUMBING - COVER SHEET  
TRACT 3, ADAIR RIPPY EXEMPTION  
GARFIELD COUNTY, COLORADO

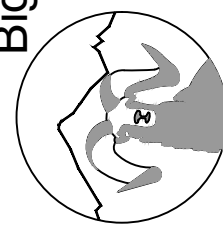
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08/04/25	PERMIT DRAWINGS



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SCALE:	
SHEET NUMBER:	P0-1

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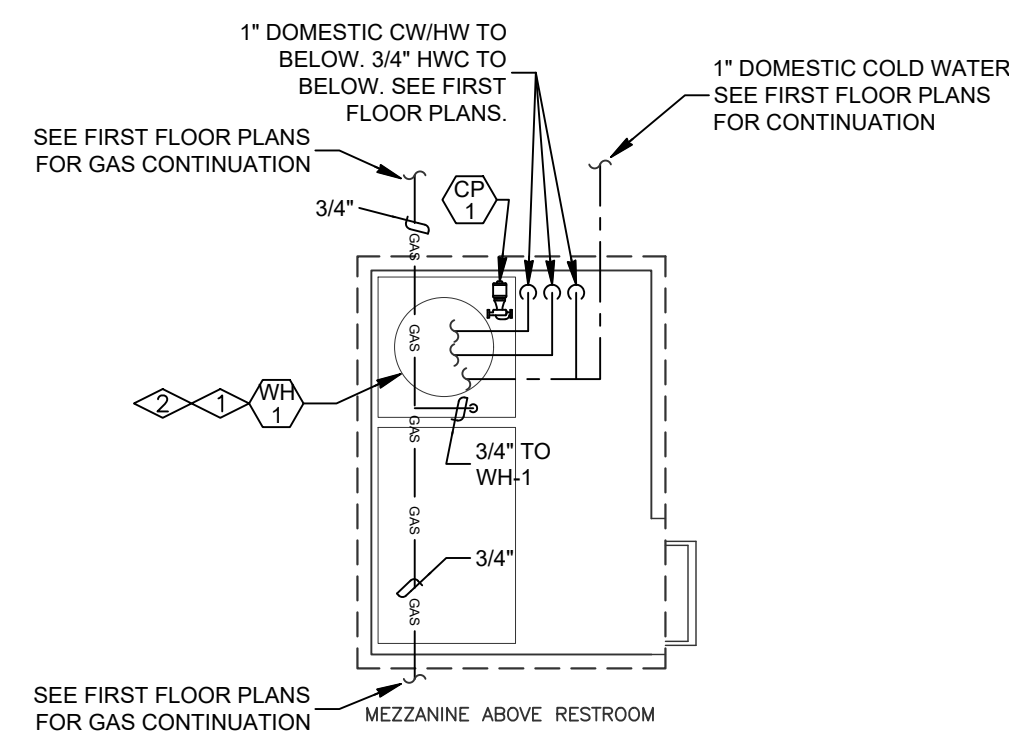
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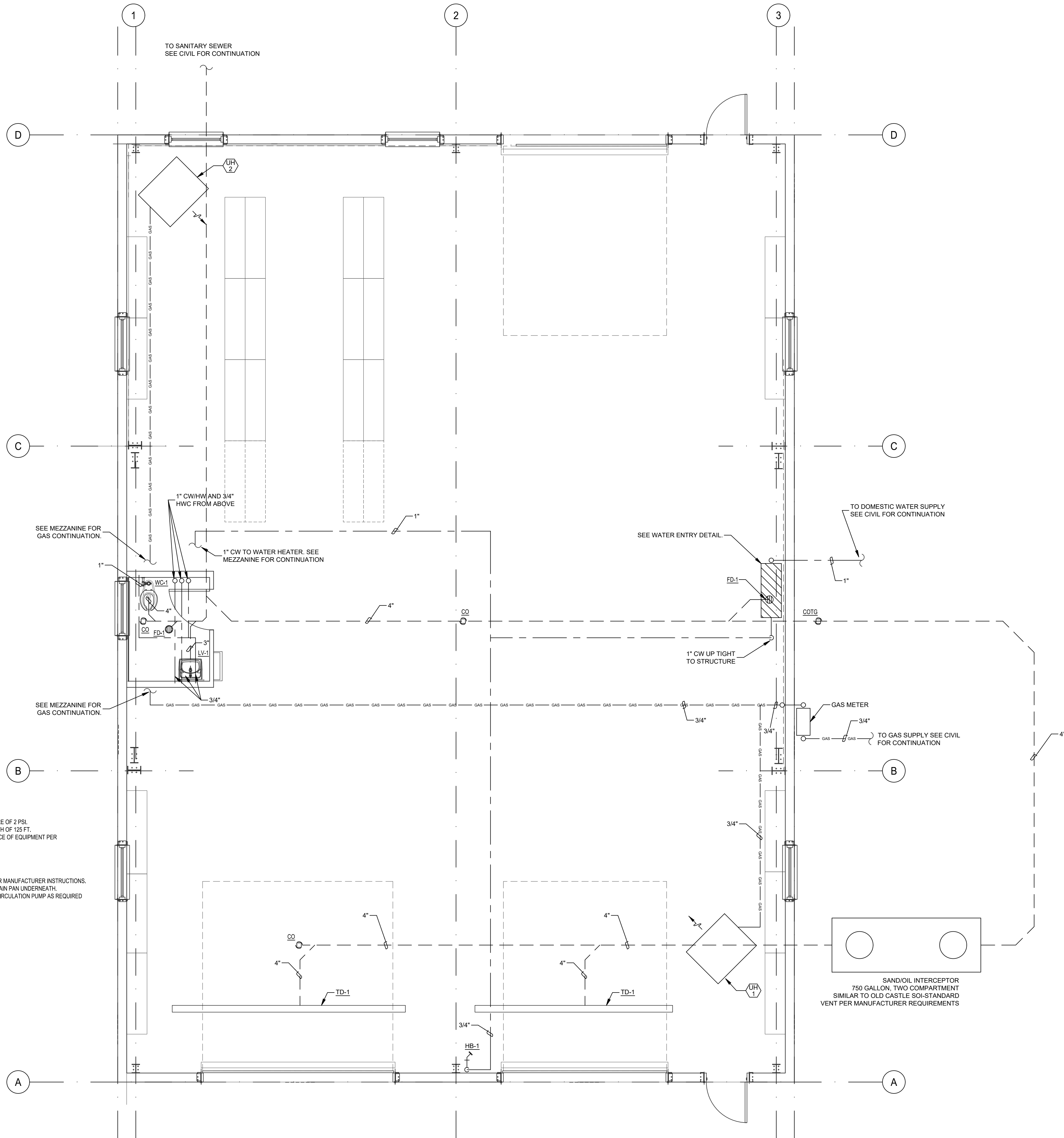
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SCALE:	AS SHOWN
SHEET NUMBER:	P1-1

August 04, 2025 - 10:07:52am



- GAS DESIGN NOTES
1. TOTAL GAS METER LOAD: 400 MBH (498 CFH).
  2. PIPE SIZING BASED ON A DELIVERY PRESSURE OF 2 PSI.
  3. PIPE SIZING BASED ON LONGEST PIPE LENGTH OF 125 FT.
  4. REGULATORS TO BE PROVIDED AT EACH PIECE OF EQUIPMENT PER MANUFACTURER REQUIREMENTS.

- FLAG NOTES
1. GAS FIRED WATER HEATER. ROUTE FLUE PER MANUFACTURER INSTRUCTIONS. WATER HEATER TO BE PROVIDED WITH A DRAIN PAN UNDERNEATH.
  2. PROVIDE DOMESTIC RATED HOT WATER RECIRCULATION PUMP AS REQUIRED TO MEET IECC C404.5.1 REQUIREMENTS.



PLUMBING - FLOOR PLAN

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

PLUMBING SPECIFICATION

1. SCOPE OF WORK

A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.

B. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION), ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.

C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.

D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED AS EQUAL" BY THE ENGINEER OR ARCHITECT.

2. PERMITS

A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

3. SHOP DRAWINGS

A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.

4. DOMESTIC WATER SUPPLY PIPING

A. UNDERGROUND: PROVIDE TYPE "K" SOFT DRAWN COPPER TUBING WITH BRAZED CONNECTIONS.

B. ABOVE GROUND: PROVIDE TYPE "L" HARD DRAWN COPPER TUBING WITH 125 PSI SOLDER JOINTS, COPPER OR BRASS FITTINGS. ALL SOLDER TO BE "NO LEAD" TYPE.

C. ALL HOT WATER PIPING TO BE INSULATED WITH 1" FIBERGLASS INSULATION.

D. ALL COLD WATER PIPING TO BE INSULATED WITH ½" FOAM INSULATION.

5. SANITARY/STORM DRAINAGE AND VENT PIPING

A. ABOVE GRADE:

-2" BELOW: SCHEDULE 40 GALV. STEEL PIPE WITH SCREWED ENDS OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS OR DWV COPPER WITH SOLDER JOINTS. ALL SOLDER TO BE "NO LEAD" TYPE.

-3" AND ABOVE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.

B. BELOW GRADE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.

C. PVC PIPING SHALL NOT BE USED IN AIR PLENUM CEILINGS AND SHALL NOT CROSS FIRE RATED WALLS, CEILINGS, OR FLOORS.

D. DRAINAGE PIPING SHALL BE RUN AS STRAIGHT AS POSSIBLE AND SHALL HAVE LONG TURN FITTINGS.

E. DRAINAGE PIPING 3" SIZE AND SMALLER SHALL RUN AT A UNIFORM GRADE OF AT LEAST 1/8" PER FOOT, AND PIPING LARGER THAN 3" SHALL BE RUN AT A GRADE OF NO LESS THAN 1/8" PER FOOT.

F. ALL VENT PIPING SHALL BE SLOPED TO DRAIN BACK TO FIXTURES.

G. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FLASHING OF THE VENT PIPING RUN THROUGH THE ROOF.

H. PVC USED TO BE SOLID CORE TYPE SCHEDULE 40 PVC.

7. PIPE SUPPORTS

A. ABOVE GRADE: ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE AND PERFORATED METAL TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL BE AS SPECIFIED IN INTERNATIONAL PLUMBING CODE (LATEST EDITION).

B. BELOW GRADE: EARTH SHALL BE EXCAVATED TO A MINIMUM DEPTH WITH AN EVEN SURFACE TO INSURE SOLID BEARING OF PIPE FOR ITS ENTIRE LENGTH.

-INTERIOR: THE PIPE SHALL BE INSTALLED (UNLESS OTHERWISE SPECIFIED) A MINIMUM OF 4 INCHES BELOW THE BOTTOM OF THE SLAB AND SHALL NOT BE IN ANY DIRECT CONTACT WITH THE CONCRETE AT ANY POINT.

-EXTERIOR: THE WATER PIPE SHALL HAVE A MINIMUM OF 60" OF COVER AND THE SANITARY WASTE PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

8. MISCELLANEOUS

A. COORDINATE INSTALLATION OF ALL ROOFS FLASHING AT ROOF PENETRATIONS.

B. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS AND DIMENSIONS AT THE JOB SITE.

C. THE PLUMBING PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION. THE EXACT DIMENSIONS OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT THE AVAILABLE SPACE.

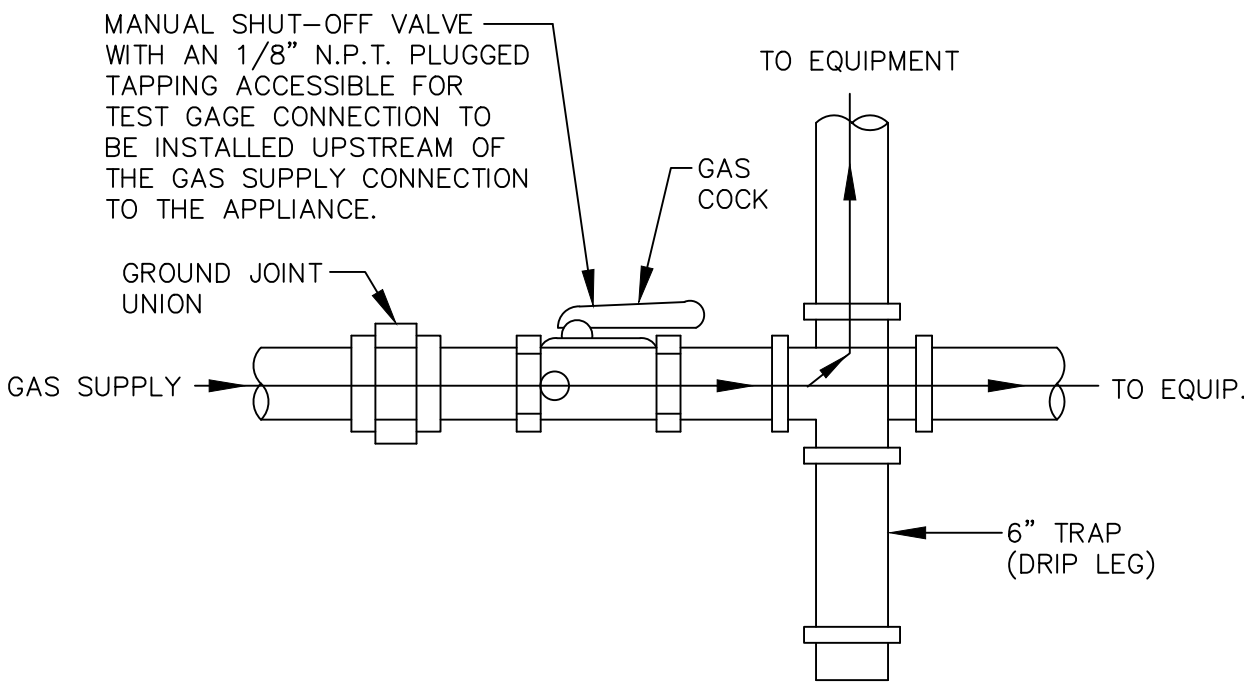
9. TESTING

A. PLUMBING SYSTEM SHALL BE FLOW AND PRESSURE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION).

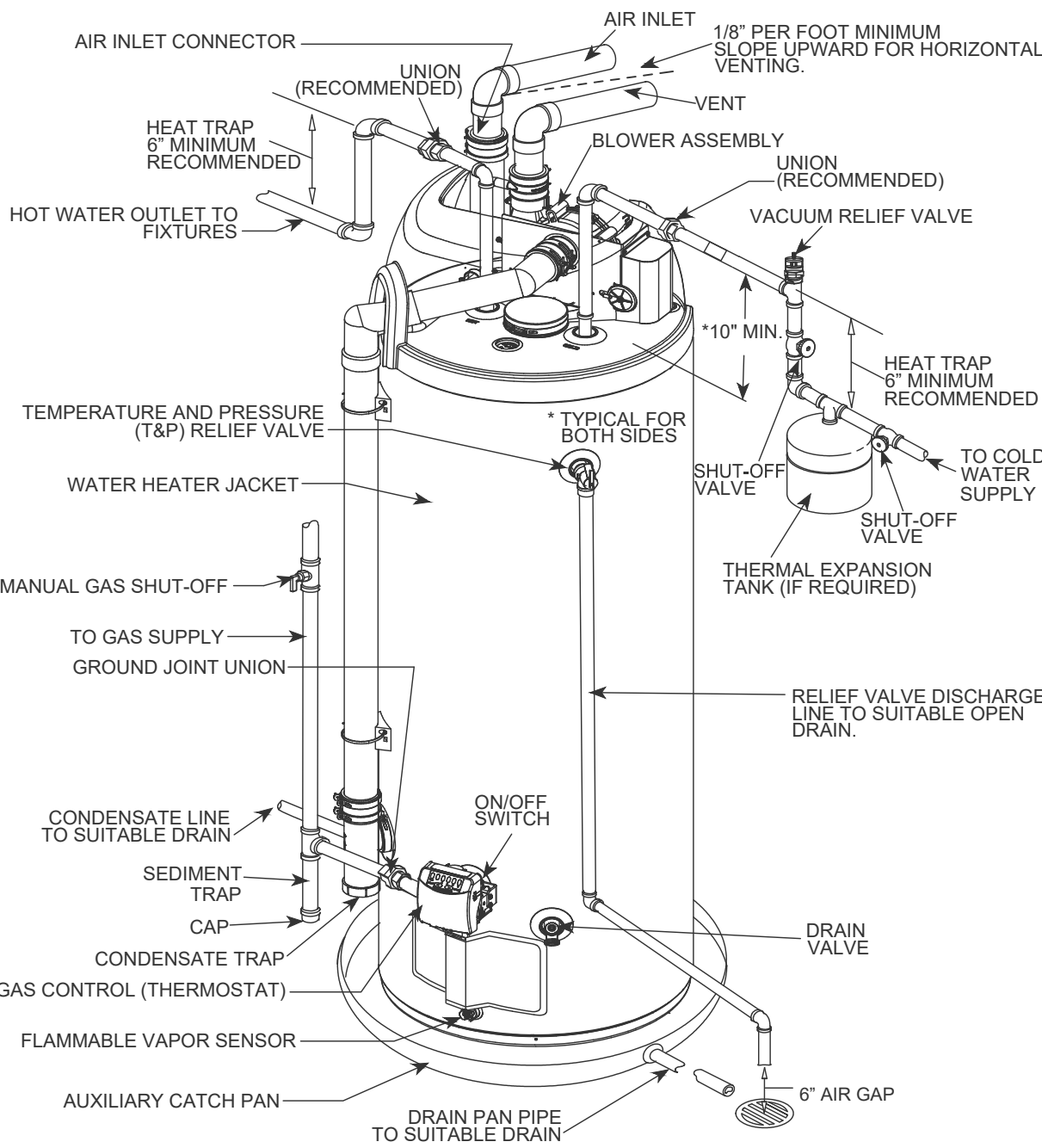
10. GUARANTEE

A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTORS EXPENSE.

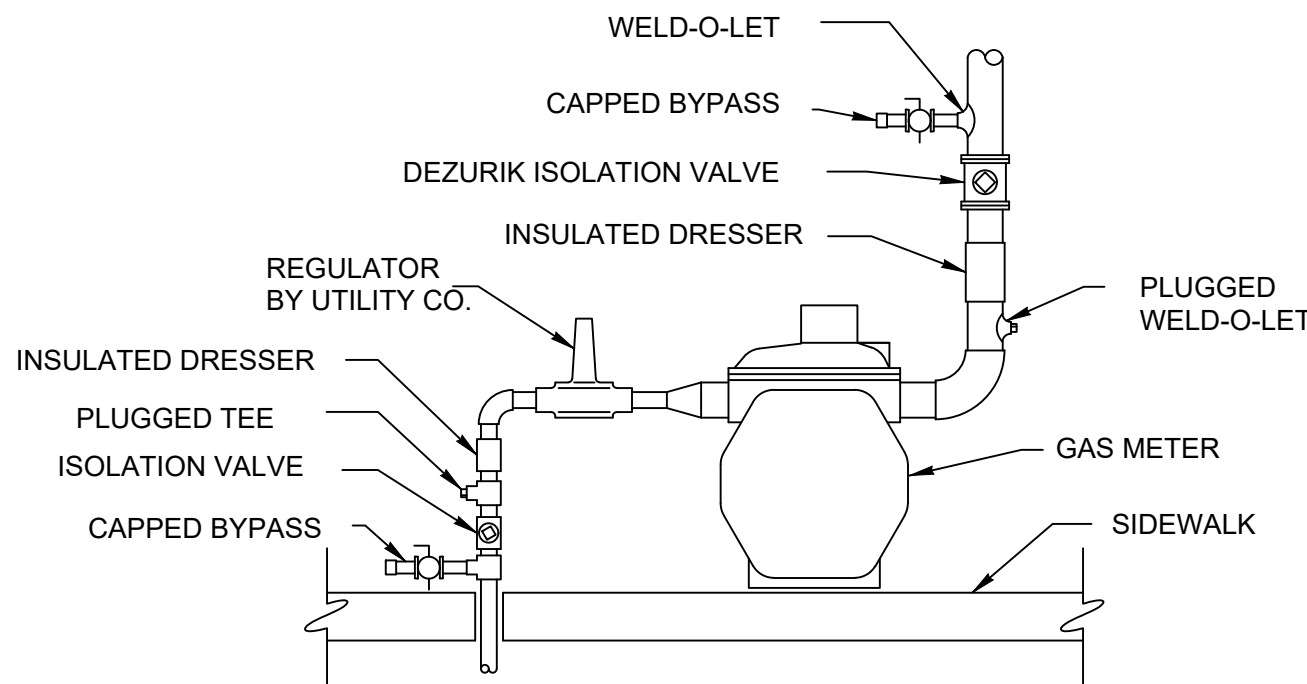
B. FOR THE SAME PERIOD THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.



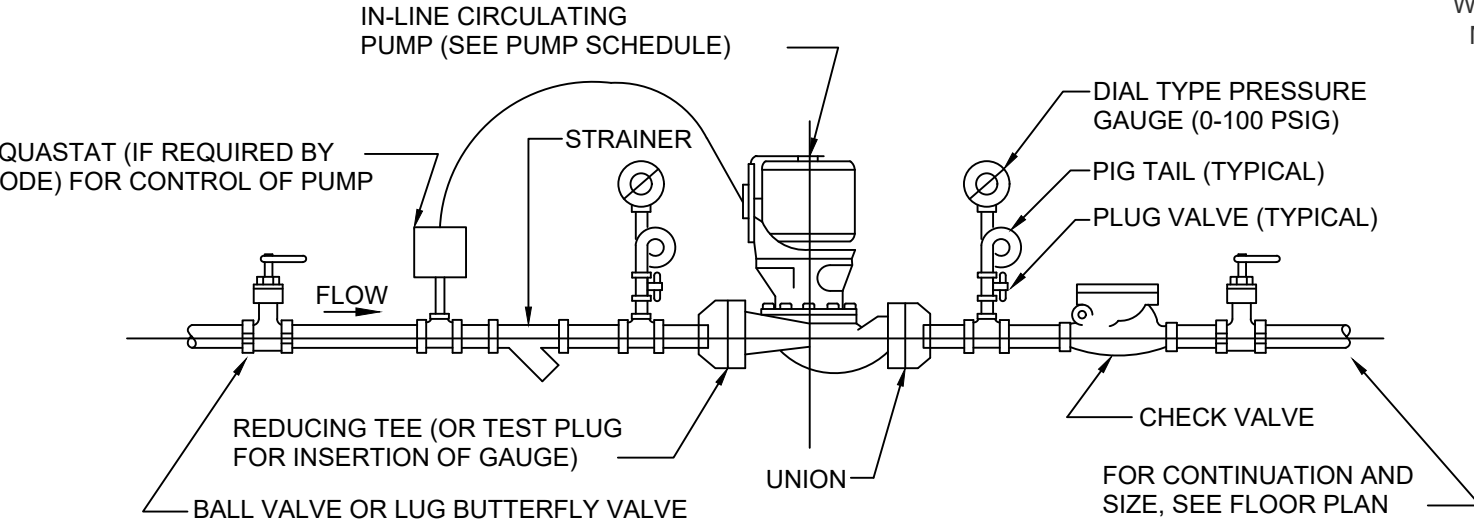
GAS CONNECTION TO EQUIPMENT DETAIL  
NOT TO SCALE



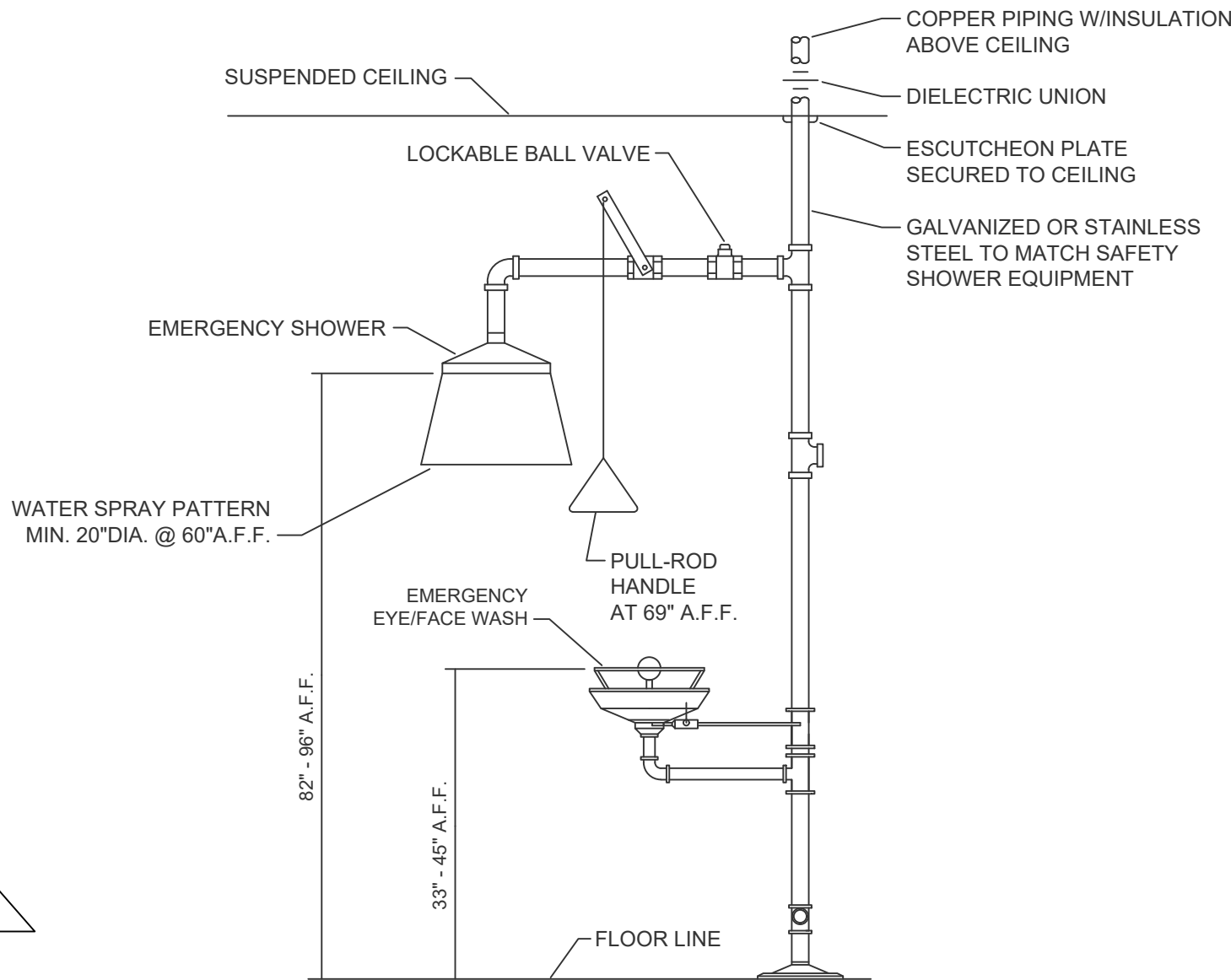
TYPICAL GAS WATER HEATER DETAIL  
NOT TO SCALE



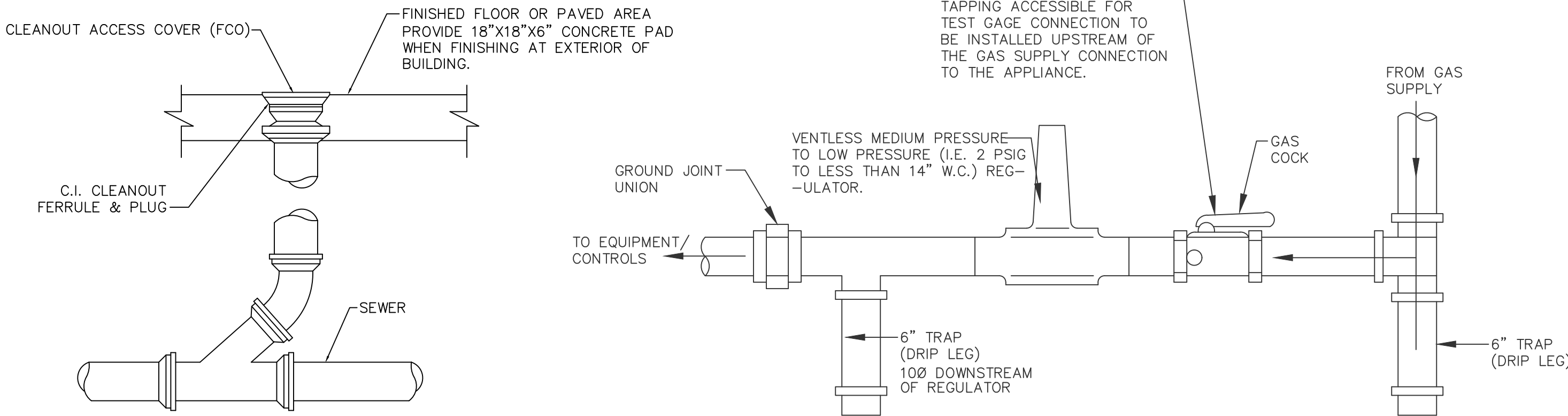
GAS METER DETAIL  
NOT TO SCALE



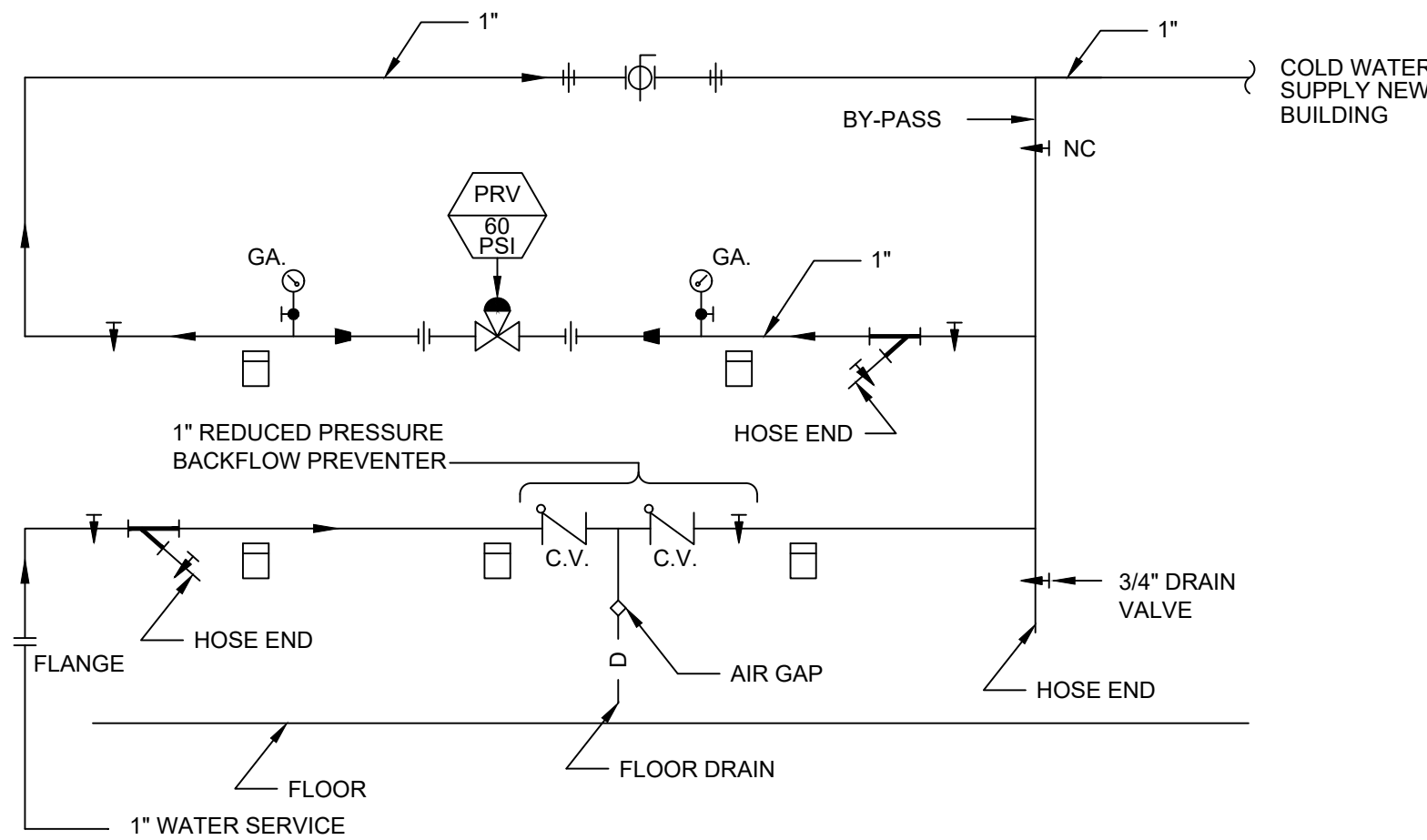
IN-LINE CIRCULATING PUMP DETAIL  
NOT TO SCALE



SAFETY SHOWER & EYEWASH DETAIL  
NOT TO SCALE



GAS CONNECTION TO EQUIPMENT DETAIL  
NOT TO SCALE



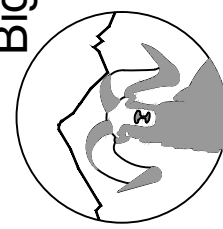
DOMESTIC WATER PRESSURE REDUCING  
STATION DETAIL  
NOT TO SCALE

GAS FIRED WATER HEATER SCHEDULE									
EQUIPMENT NO.	CAPACITY	RECOVERY @100 DEG F. RISE	INPUT (BTU PER HR.)	GAS CONN.	WATER CONN.	MANUFACTURER	MODEL	OPTIONS/ACCESSORIES	
WH-1	75 GAL	116 GAL/HR	100,000	1/2"	3/4"	RHEEM	GHE75SU-100	SEE NOTES BELOW	
NOTES: 1. ASME RELIEF VALVE, HIGH ALTITUDE KIT SIZED PER LOCATION ELEVATION.									

PUMP SCHEDULE									
EQUIPMENT NO.	SERVICE	LOCATION	GPM	HEAD (FT.)	V./PH./HZ	FLA	MANUFACTURER	MODEL	OPTIONS/ACCESSORIES
CP-1	HOT WATER RECIRC.	MECH. MEZZANINE	5	15	120/1/60	0.54	TACO	0015E3-SF	NOTE-1
NOTES: 1. PROVIDE WITH STAINLESS STEEL CONSTRUCTION FOR POTABLE WATER APPLICATION. PROVIDE EC MOTOR AND POWER DISCONNECT.									

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