PROJECT DATA:

BUILDING AREA: 3,500 SF

APPLICABLE BUILDING CODES:

International Building Code – 2021
International Mechanical Code – 2021
International Energy Conservation Code – 2021
NFPA 170 Standard Symbols – 2021

USE AND OCCUPANCY CLASSIFICATION

OCCUPANCY GROUP:	S2
DESCRIPTION OF OCCUPANCY:	STORAGE SHOP
ACCESSORY OCCUPANCIES:	NONE

GENERAL BUILDING HEIGHTS AND AREAS

	ALLOWABLE	SHOWN ON PLANS
HEIGHT	60'	24'–1"
STORIES	S2(2)	1
SF	S2(27K)	3,500

TYPE OF CONSTRUCTION

TYPE OF CONSTRUCTION: V–B

FIRE–RESISTANCE RATING REQS FOR BUILDING ELEMENTS (TABLE 601)

STRUCTURAL FRAME	0
EXTERIOR BEARING WALLS	0
INTERIOR BEARING WALLS	0
EXTERIOR NON–BEARING WALLS	0
INTERIOR NON–BEARING WALLS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

FIRE AND SMOKE PROTECTION FEATURES

ALLOWABLE WALL OPENING AREA (TABLE 705.8)

	FIRE SEPARATION DISTANCE	OPENING PROTECTION	ALLOWABLE AREA
NORTH	> 30'–0"	UP, S	NO LIMIT
EAST	> 30'–0"	UP, S	NO LIMIT
SOUTH	> 30'–0"	UP, S	NO LIMIT
WEST	> 30'–0"	UP, S	NO LIMIT

OCCUPANCY CALCULATIONS PER TABLE 1004.1.2

FUNCTION/USE:	SF PER OCC:	AREA:	OCCUPANTS:
Parts	300	772 SF	3
Bays	500	2667 SF	6
		TOTAL:	9

MEANS OF EGRESS

EXITS REQ'D: 2(MAIN)
EXITS PROVIDED: 2
EXIT WIDTH: 2 DOORS = 72"

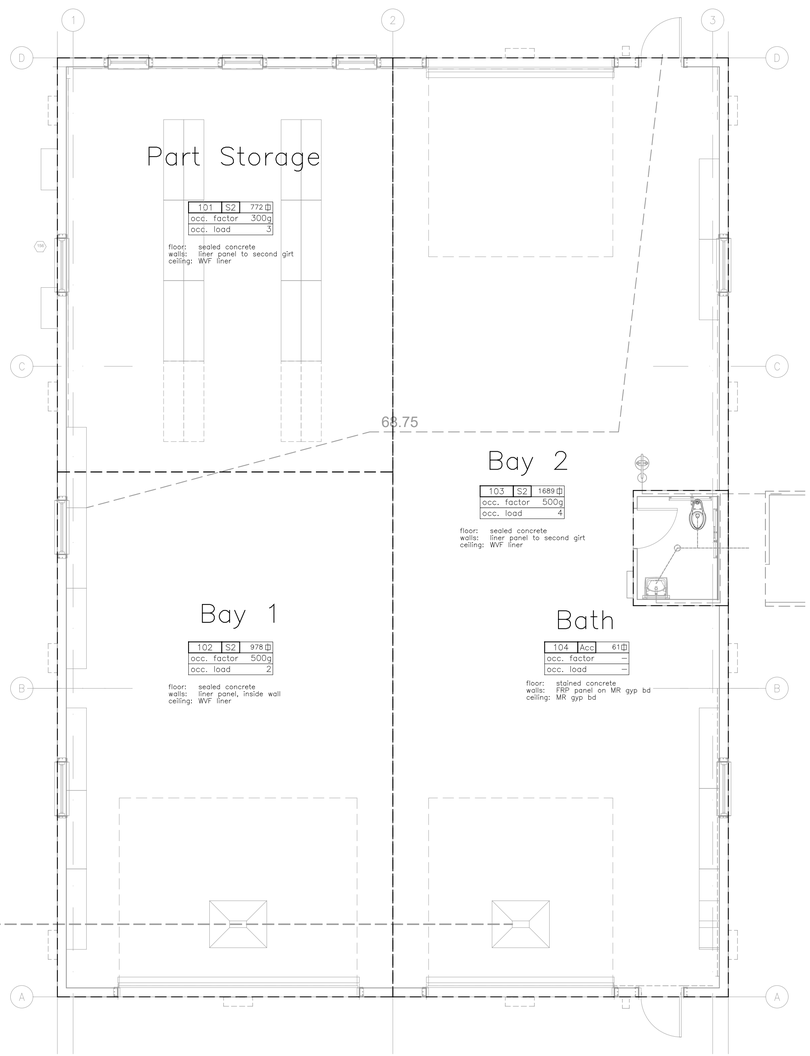
DOORS:

1. All Main Floor doors and hardware shall be in compliance with ANSI A117.1 2009 standard

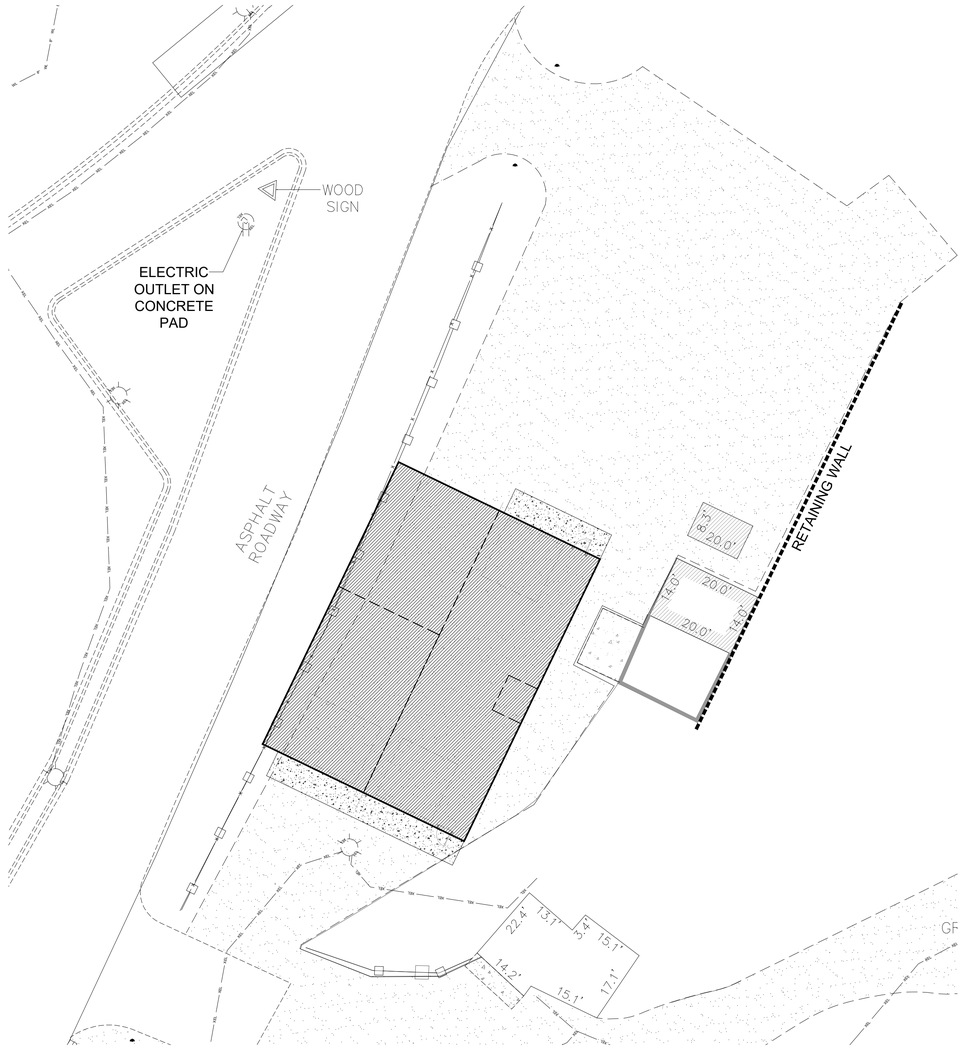
MAXIMUM EXIT TRAVEL DISTANCE (TABLE 1017.2):
S–2 WITH SPRINKLER SYSTEM = 250'

FIRE PROTECTION SYSTEMS

PROVIDED:
–AUTOMATIC SPRINKLER SYSTEM MONITORING AND ALARMS WILL BE PROVIDED.
–SPRINKLER DESIGN AND CALCULATIONS TO BE SUBMITTED UNDER SEPARATE COVER. (REQUEST DEFERRED SUBMITTAL)



02 A1.1 **Code Plan**
scale: 3/16" = 1'-0"



02 A1.1 **Site Plan**
scale: 1/16" = 1'-0"

WALL AND CEILING FINISHES

All interior finish materials shall comply with Class designation of flame spread and smoke–developed indexes, as tested in accordance to 2015 IBC Section 803.1.2

GROUP S, sprinklered
Class Spread C flame spread index 76–200
smoke–developed index 0–450

PLUMBING FACILITIES

FUNCTION/USE:	WC:	LAV:	Provided:
S–1 STORAGE SHOP	1 per 100	1 per 100	yes

Provide accessible; free standing water cooler in shop
Provide eye wash station

SPECIAL INSPECTIONS

STRUCTURAL ENGINEER SHALL PROVIDE STATEMENT OF SPECIAL INSPECTIONS RELATING TO PRP–ENGINEERED METAL BUILDING AND FOUNDATION

Sheet Index:

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Development

Notes, Index & Site Plan

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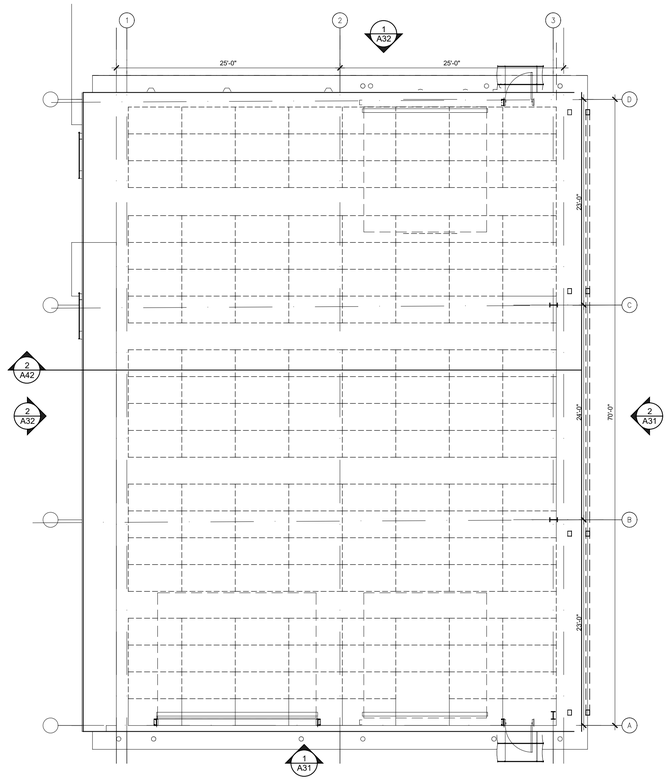
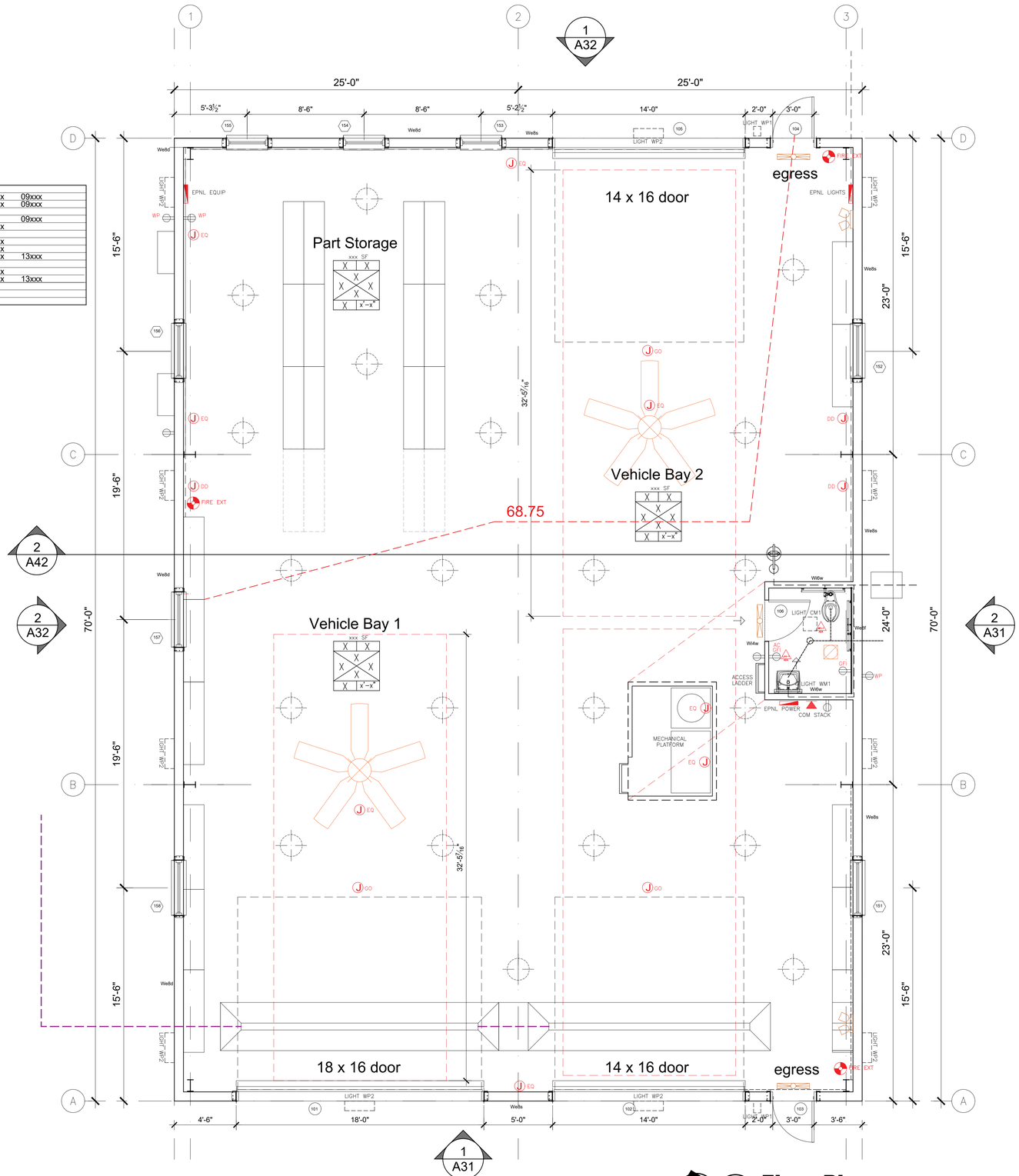


01 A1.2 **Roof Plan**
scale: 1/8" = 1'-0"

Finish Legend

floor	1	sealed concrete	03xxx	09xxx
	2	stained concrete	03xxx	09xxx
base	3	resilient wall base		09xxx
	3	base flashing	07xxx	
walls	4	metal wall liner panel 12'-0"	07xxx	
	5	moisture resist gyp. bd.	09xxx	
	6	wvf membrane	13xxx	13xxx
clg	7	moisture resist gyp. bd.	09xxx	
	8	wvf membrane	13xxx	13xxx
	9	none		

floor | clg
walls
base | clg ht



02 A1.2 **Floor Plan**
scale: 1/4" = 1'-0"

3,500 SF

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Roof & Floor Plan

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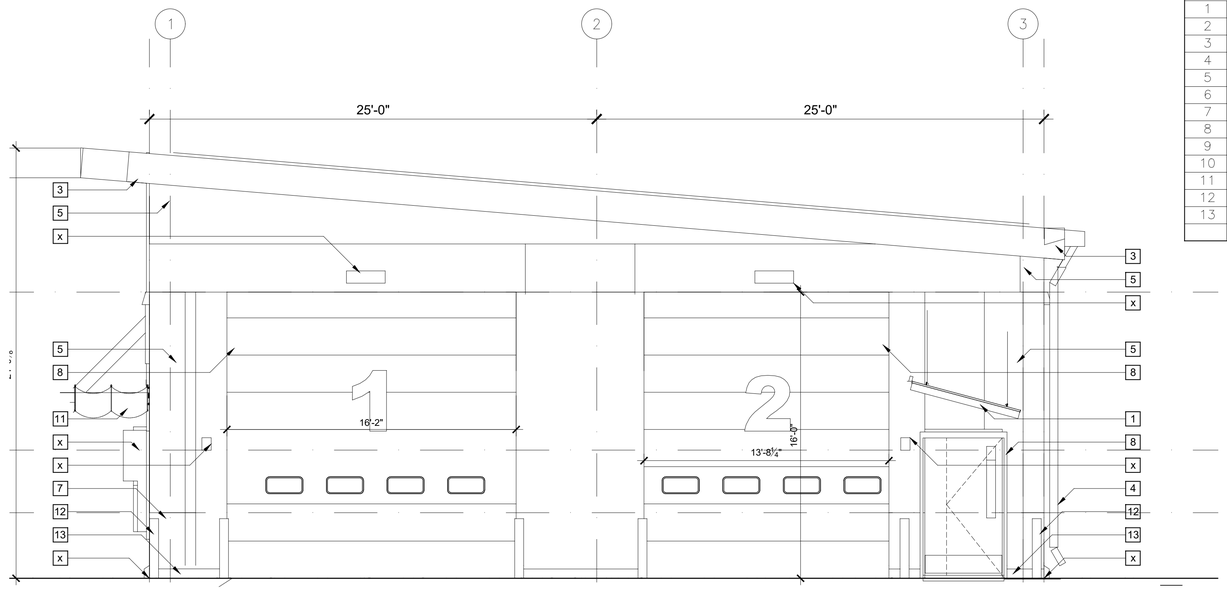
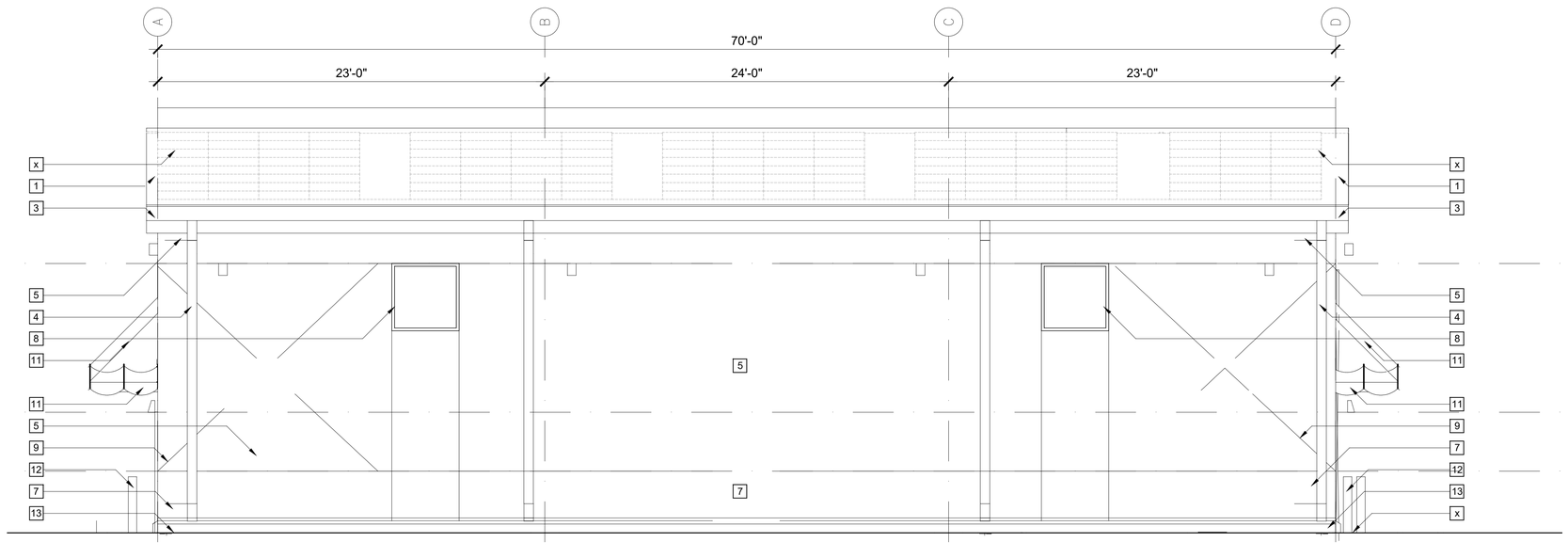
Exterior Finish Legend		
1	metal roof panel	13xxx
2	prefinished parapet flashing	13xxx
3	metal eave trim	13xxx
4	gutter/ downspout	07xxx
5	metal wall panel	13xxx
6	transition flashing	13xxx
7	API stucco faced insulated panel	13xxx
8	window/ door assembly	08xxx
9	pre-engineered cross bracing	13xxx
10	outdoor lighting	16xxx
11	metal canopy assembly	13xxx
12	painted bollard	02xxx
13	concrete apron	03xxx



01 A3.1 **South Elevation**
scale: 1/4" = 1'-0"



02 A3.1 **West Elevation**
scale: 1/4" = 1'-0"

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Building Elevations

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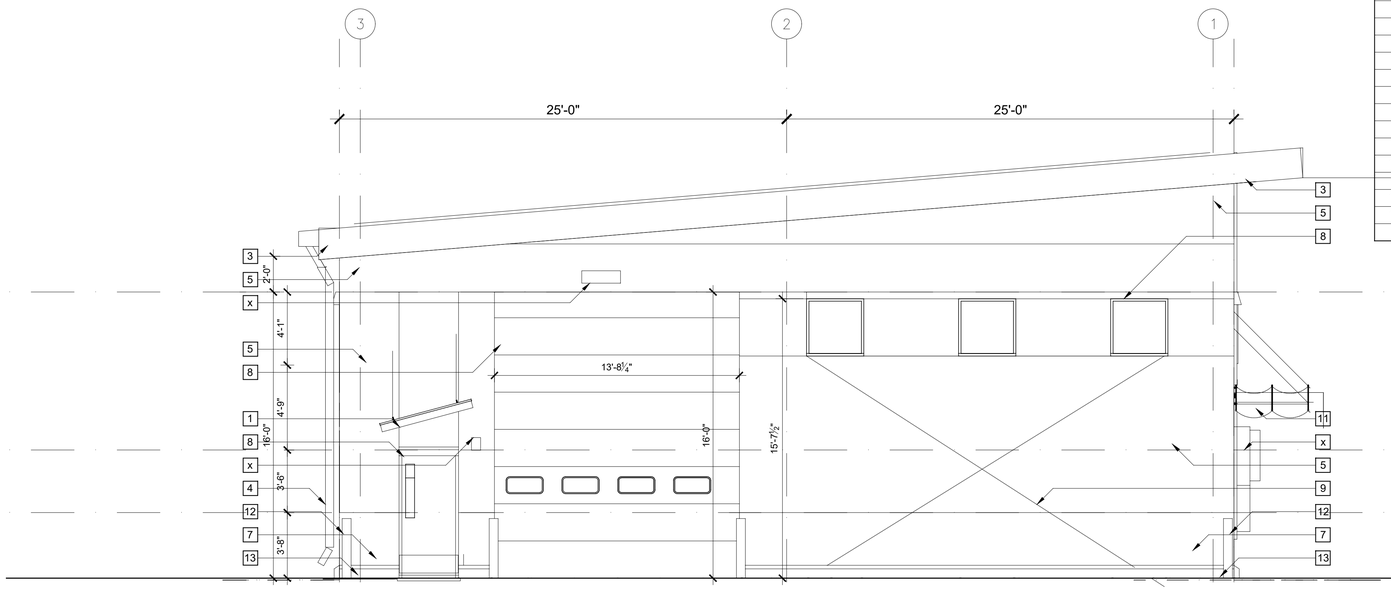

01 A3.2 **North Elevation**
scale: 1/4" = 1'-0"

Exterior Finish Legend		
1	metal roof panel	13xxx
2	prefinished parapet flashing	13xxx
3	metal eave trim	13xxx
4	gutter/ downspout	07xxx
5	metal wall panel	13xxx
6	transition flashing	13xxx
7	API stucco faced insulated panel	13xxx
8	window/ door assembly	08xxx
9	pre-engineered cross bracing	13xxx
10	outdoor lighting	16xxx
11	metal canopy assembly	13xxx
12	painted bollard	02xxx
13	concrete apron	03xxx

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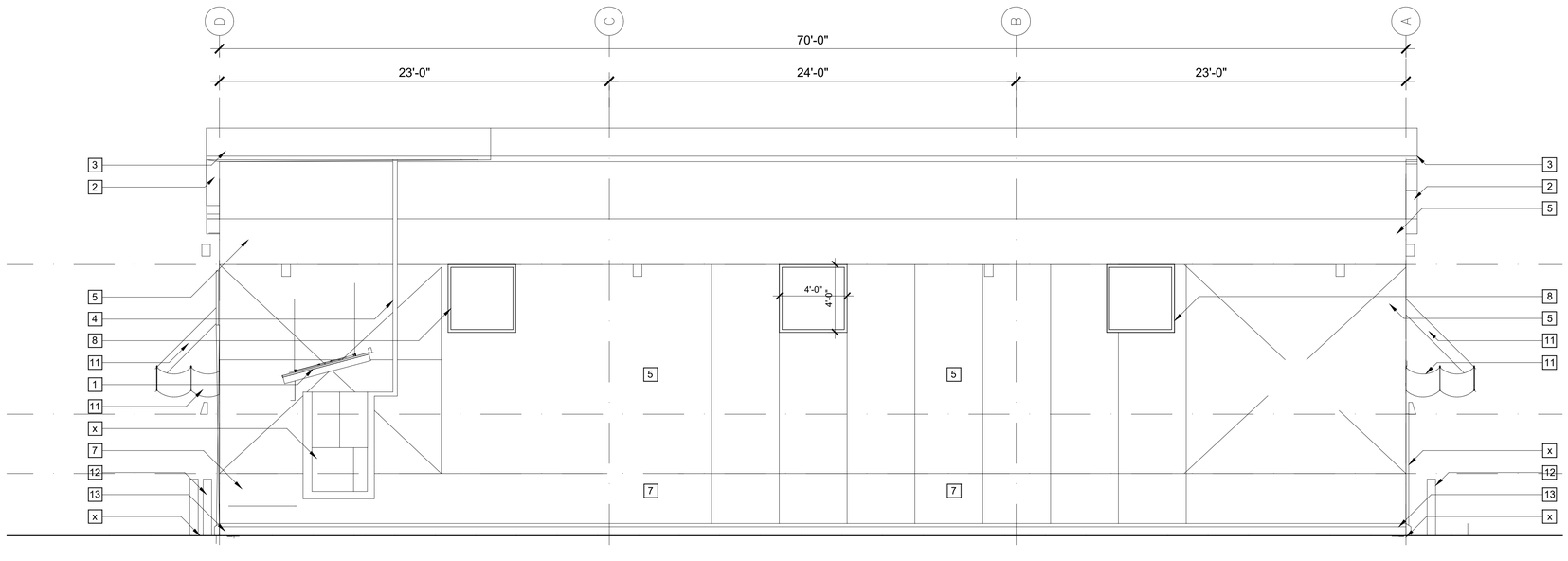

02 A3.2 **East Elevation**
scale: 1/4" = 1'-0"

Development
Building Elevations
Date: 05-22-24
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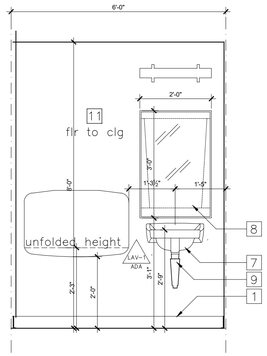

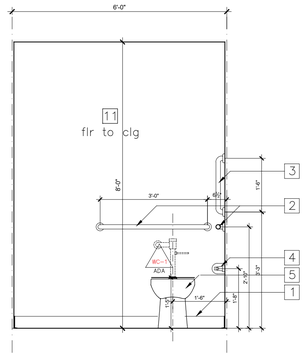

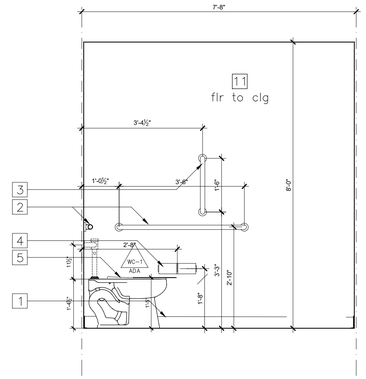

Bath Items:

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. baby changing station
11. FRP wall panels

provide continuous silicon sealant at perimeter edges of all plumbing fixtures

provide appropriate blocking support for all wall mounted items,

ADA requires that the drain lines and water supply lines be fully insulated or concealed to protect against contact.

Provide LAVGUARD2 pipe protection from TRUEBRO IPS Corporation

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

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CMC SV Garage Door Schedule

No.	Location			Door Size						Door Finish		Fire Rating	Hard ware	Remarks
	From	To	Tag	Width	Height	Thk	Type	Mat	Core	Door	Frame			
101	Exterior	Vehicle Bay 1	GARAGE	18'-0"	16'-0"		Sectional Overhead	Metal	Insulated	By Manuf	custom, trim out		By Manuf	weatherstrip, operator
102	Exterior	Vehicle Bay 2	GARAGE	14'-0"	16'-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	14'-0"	16'-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

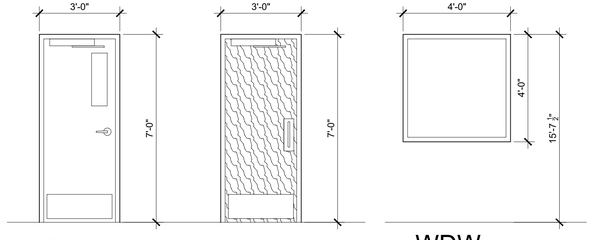
No.	From	Oper.		Width	Height	Head	Remarks
151	Vehicle Bay 2	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
152	Vehicle Bay 2	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
153	Part Storage	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
154	Part Storage	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
155	Part Storage	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
156	Part Storage	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
157	Vehicle Bay 2	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx
158	Vehicle Bay 2	Fixed		4'-0"	4'-0"	15'-7 1/2"	088xxx

DOORS:
2 QTY 14'-0" wide x 16'-0" high sectional garage door by Overhead
1 QTY 16'-0" wide x 16'-0" high sectional garage door by Overhead
Cut sheet provided

2 QTY 4x8 personnel door
rough opening equals 49" wide and 97" high
Aluminum swing door profile glass pivot entrance by Doorwin
https://doorwingroup.com/collections/pivot-doors/products/canada-calgary

1 Standard 36" x 84"

WINDOWS:
9 QTY 4x4 fixed
rough opening equals 49" wide and 49.5" high
Alu Plus intergrated window system by Doorwin
https://doorwingroup.com/pages/alu-plus-collection



2 / A42 xxxx
scale: 1/4" = 1'-0"

3 / A42 Schedules

Development

Building Sections & Schedules

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Wi4w

09xxx 5/8" gypsum board

06xxx 3 1/2" wood stud @ 16" o.c.
07xxx acoustic insulation
09xxx 5/8" gypsum board moisture resist, wet side
09xxx FRP Wall liner

Wi6w

09xxx 5/8" gypsum board

06xxx 3 1/2" wood stud @ 16" o.c.
07xxx acoustic insulation
09xxx 5/8" gypsum board moisture resist, wet side
09xxx FRP Wall liner

We8s

13xxx metal wall panel

13xxx metal wall girt

07xxx vinyl faced batt insulation

We8d

13xxx metal wall girt

13xxx metal wall panel to second girt
06xxx 2x furring @ 16" o.c.

09xxx 5/8" gypsum board

07xxx vinyl faced batt insulation

We8f

13xxx metal wall girt

13xxx metal wall panel
06xxx 2x2 wood furring @ 16" o.c.

09xxx 5/8" gypsum board

07xxx vinyl faced batt insulation

09xxx FRP Wall liner

Rs1

13xxx metal roofingpanel

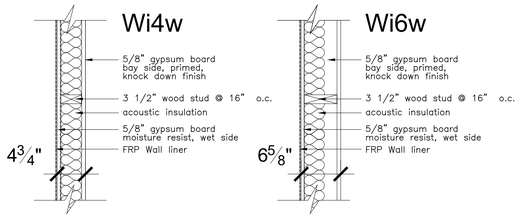
13xxx metal purlin

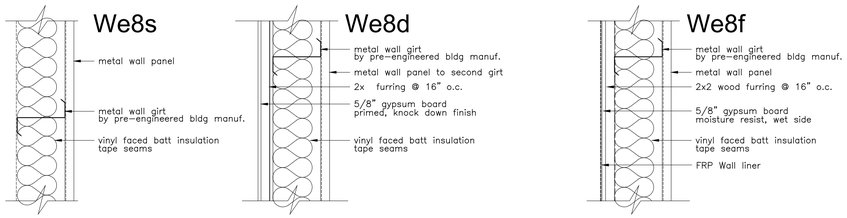
07xxx vinyl faced batt insulation

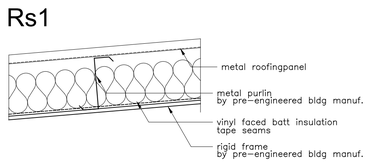
13xxx rigid frame

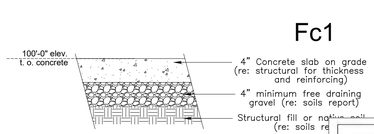
Fc1

03xxx 4" Concrete slab on grade
02xxx 4" free draining aggregate









Mechanical Notes

- Rooms with fuel burning appliances that must bring in outside combustion air (B-vented appliances) are to be separated from the rest of the home.
- Building cavities are no longer allowed to be used as supply or return ducts.
- All domestic hot water lines 3/4" and over are required to be insulated to R-3.
- Whole house ventilation mandatory. Can use ERV's or HRV's
- Heating equipment required to be sized to Manual S and Manual J standards or other approved methodology. Contractors will collaborate with Garfield County to obtain the required documentation.

Electrical Power & Lighting

Not Less than 90 percent of the permanently installed lighting fixtures shall contain only high – efficacy lamps

Mechanical Ventilation

Shall comply with IRC and IMC or other approved means of ventilation

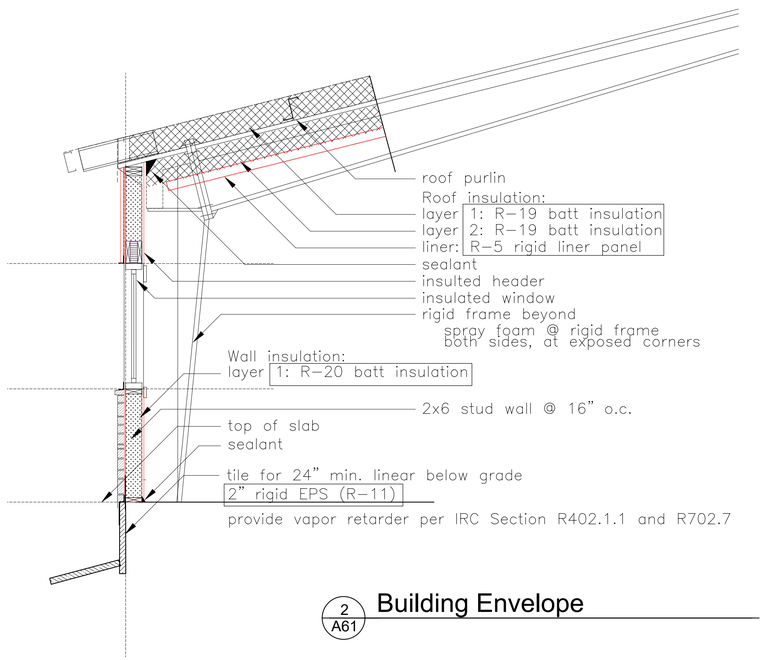
Duct Leakage

Shall comply with IRC Section R403.3.3

Refer to local municipality for Duct testing Requirements

All ducts, air handlers, and filter boxes shall be sealed

1 A61 Assemblies



2 A61 Building Envelope

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, R-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	Duct shafts, utility penetrations, and flue 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 ICC 400.

3 A61 Air Barrier Requirements

Development

Assemblies & Envelope

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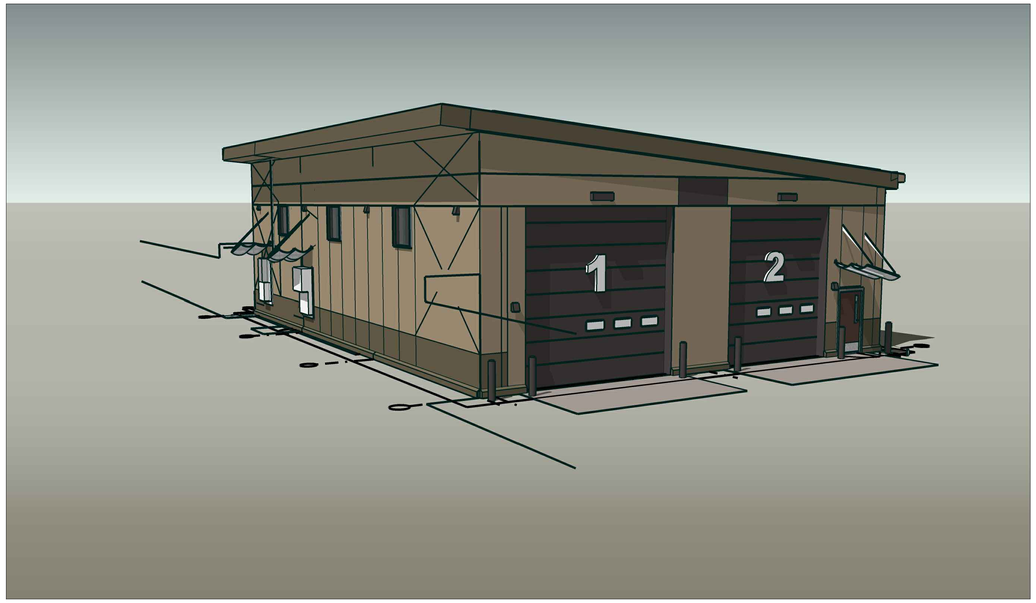

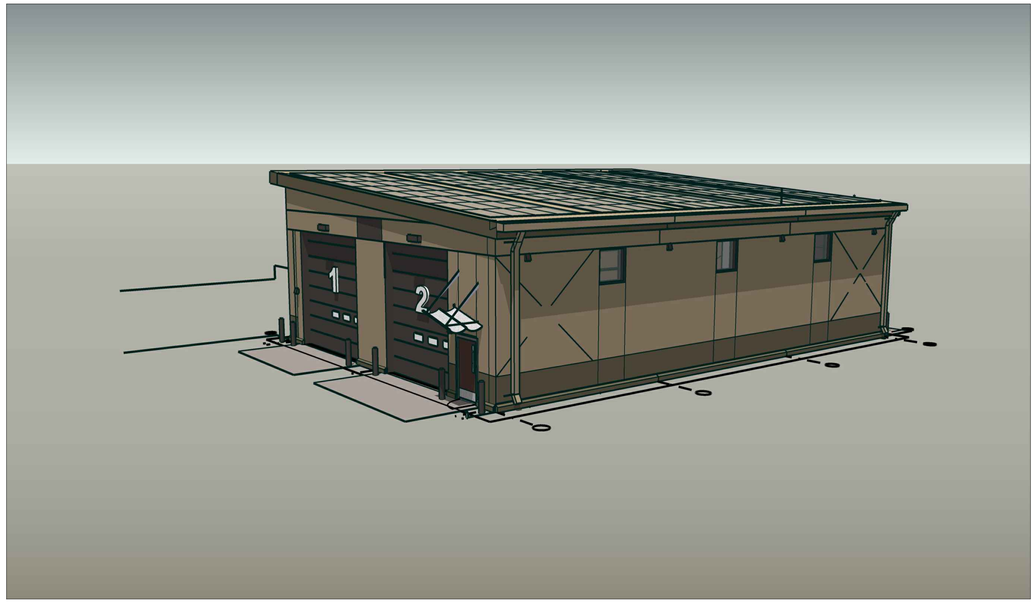

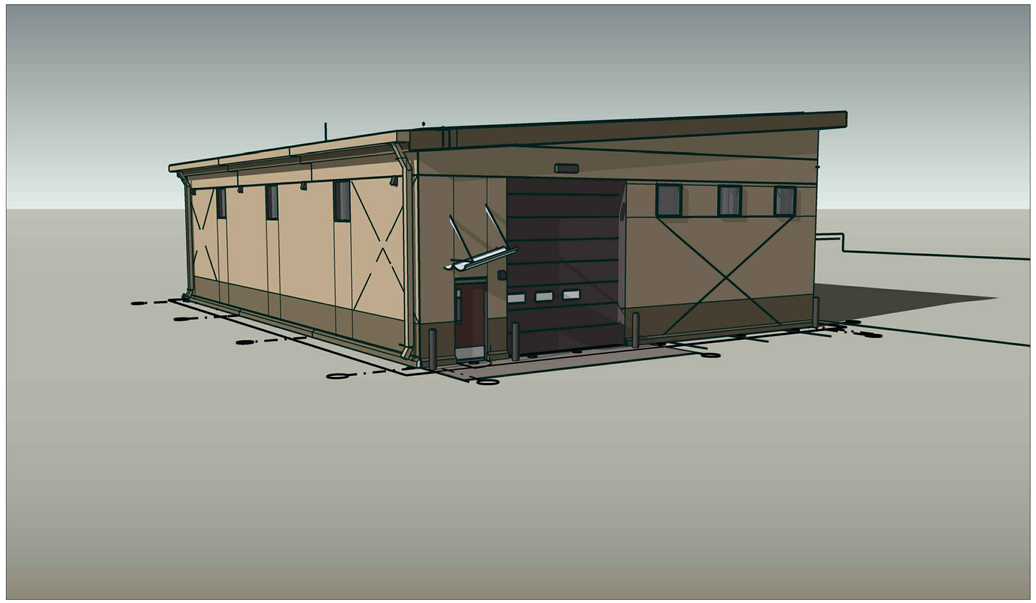

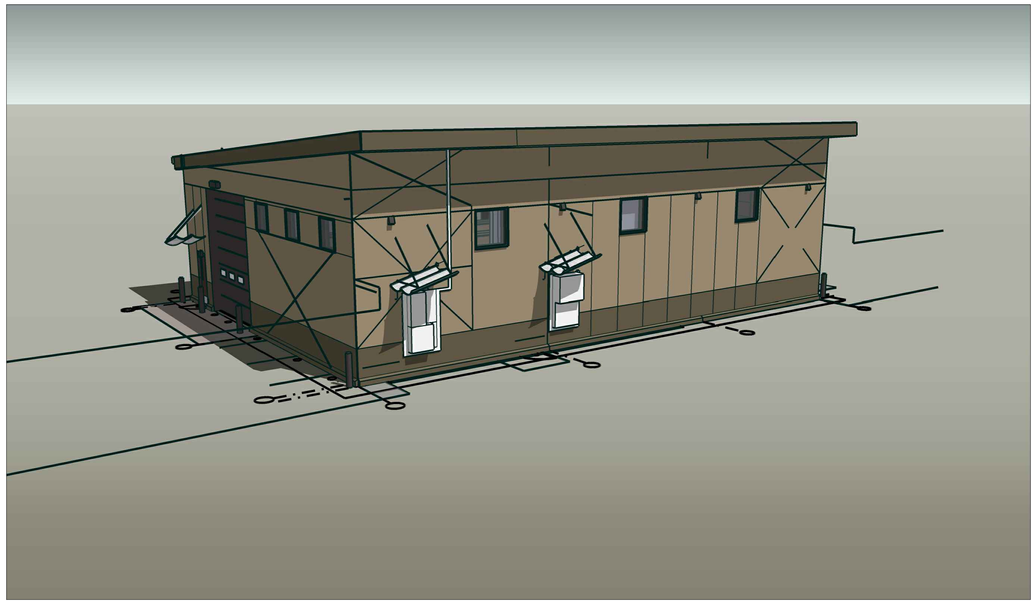

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Building Images

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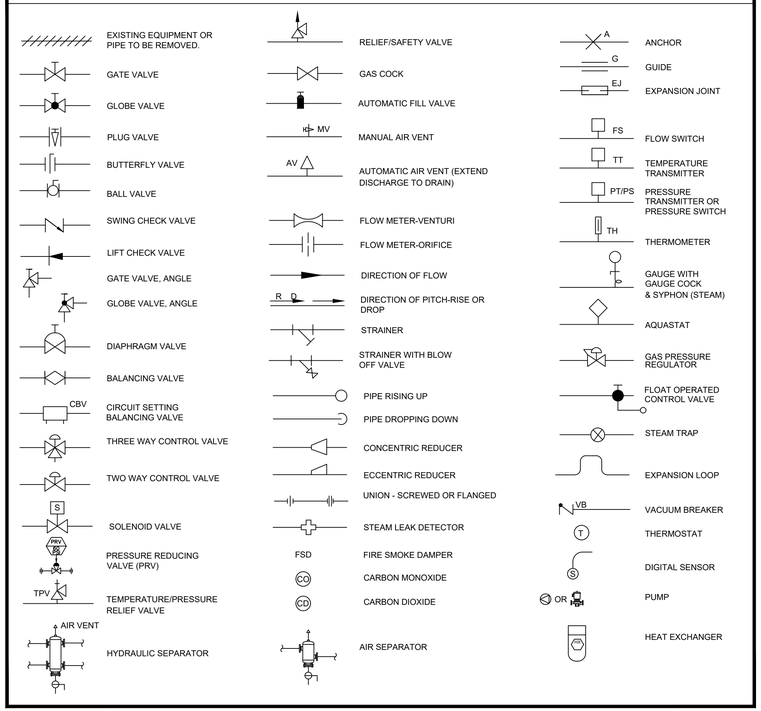
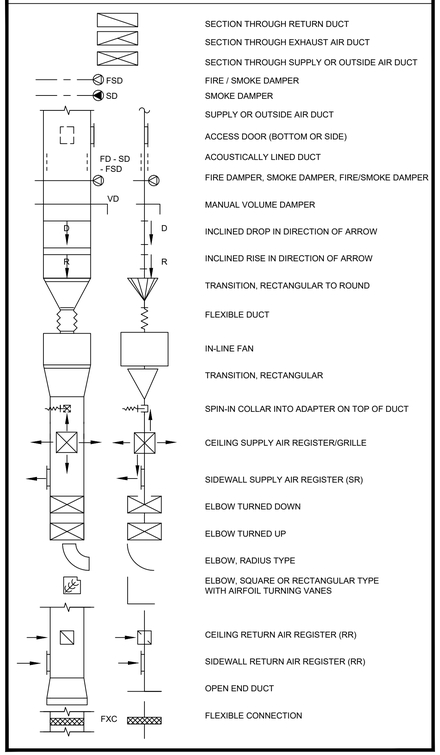
MECHANICAL ELEMENTS / VALVING



HVAC & DUCTWORK SYMBOLS



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:
1. MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1)NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
2. 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.

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.

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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.

ABBREVIATIONS:

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

Bighorn Consulting Engineers, Inc.
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Grand Junction, CO 81501
Phone: (970) 241-8709

CMC SV MAINTENANCE BUILDING

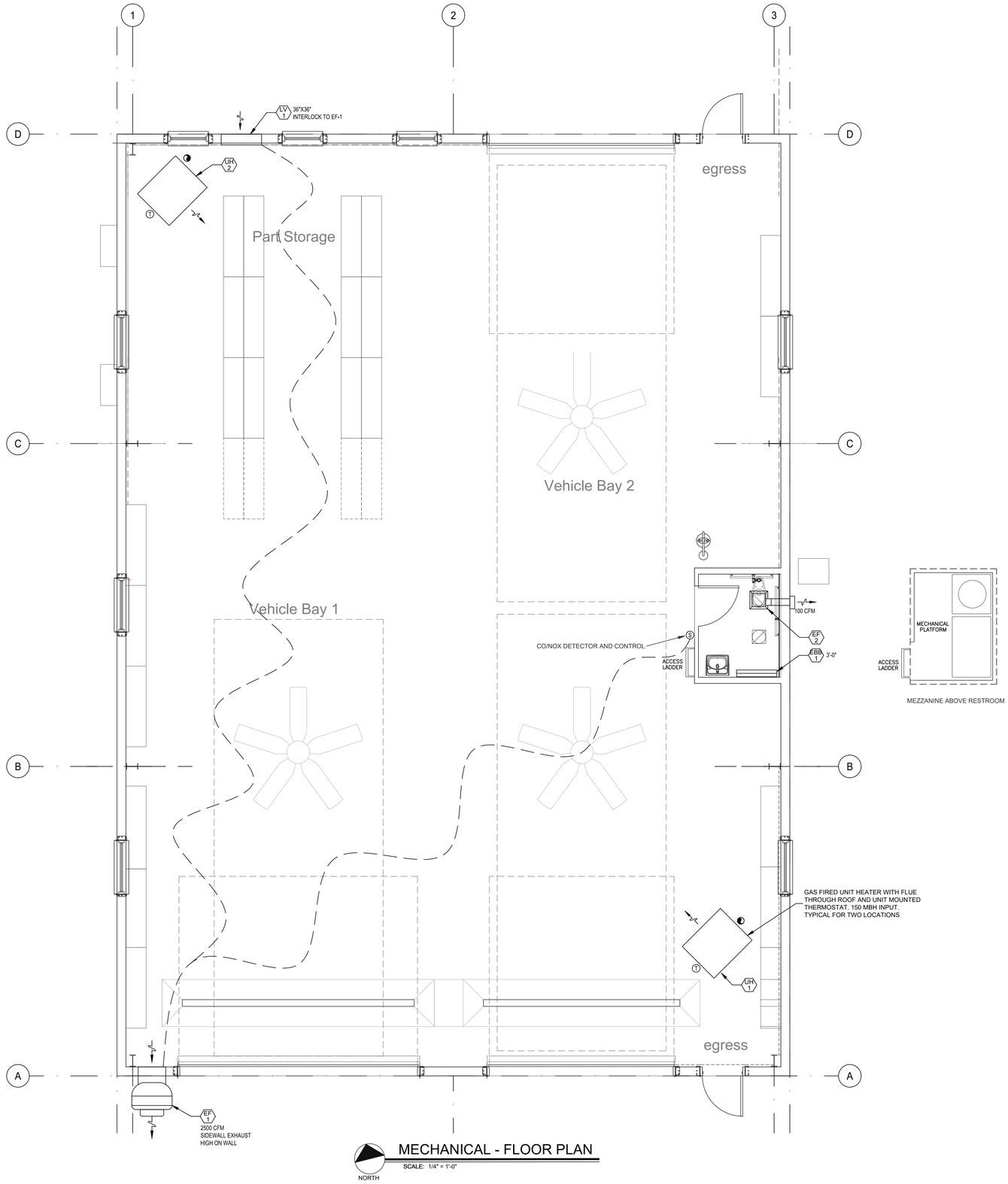
MECHANICAL - COVER SHEET

TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT

DATE:	05/21/2024
JOB NO:	24-068
DRAWN BY:	---
CHECKED BY:	---
SCALE:	
SHEET NUMBER:	M0-1

May 16, 2024 - 9:41:31am



MECHANICAL - FLOOR PLAN

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

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PLUMBING PIPE DESIGNATIONS

LINE TYPE	DESCRIPTION
140	HIGH TEMPERATURE (140°) WATER PIPE
	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
PRV	PRESSURE REDUCING VALVE (PRV)
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	BALL VALVE
	SWING CHECK VALVE
	LIFT CHECK VALVE
	GATE VALVE, ANGLE
	GLOBE VALVE, ANGLE
TPV	TEMPERATURE AND PRESSURE RELIEF VALVE
	RELIEF/SAFETY VALVE
	GAS COCK
	GAS PRESSURE REGULATOR
	STRAINER
	STRAINER WITH BLOW OFF VALVE
WH	WATER HEATER
M	WATER METER
	PRESSURE GAGE
	TEMPERATURE GAGE

LINE TYPE	DESCRIPTION
	PIPE RISING UP
	PIPE DROPPING DOWN
	UNION - SCREWED OR FLANGED
PT/PS	PRESSURE TRANSMITTER OR PRESSURE SWITCH
TH/TI	THERMOMETER/TEMPERATURE INDICATOR
PI/GA	GAUGE WITH GAUGE COCK/ PRESSURE INDICATOR
	BACKFLOW PREVENTOR (REDUCED ZONE)
SA	BACKFLOW PREVENTOR (DOUBLE CHECK VALVE ASSEMBLY)
	WATER HAMMER ARRESTER
	CIRCUIT SETTING
HB	HOSE BIBB
RD	ROOF DRAIN
FD	FLOOR DRAIN
AD	AREA DRAIN
CO	FLOOR CLEAN OUT
FS	FLOOR SINK
COG	CLEAN OUT TO GRADE
CO	WALL CLEAN OUT
	FLEXIBLE-CONNECTION
	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
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PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
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CT COOLING TOWER
CT CURRENT TRANSFORMER
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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
DIA DIAMETER
DIAG DIAGRAM
DIFF DIFFERENTIAL
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ORD OVERFLOW ROOF DRAIN
OZ OUNCE
PBD PARALLEL BLADE DAMPER
PD PRESSURE DROP
PH PHASE
POS POSITIVE PRESSURE
POS POINT OF SALES
PRV PRESSURE REDUCING VALVE
PS PRESSURE SWITCH
PSI POUNDS PER SQUARE INCH
PT PRESSURE TRANSMITTER
PTAC PACKAGED TERMINAL AIR CONDITIONER
PV PLUG VALVE
PVC POLYVINYL CHLORIDE
QTY QUANTITY
RA RETURN AIR GRILLE / REGISTER
RCP REFLECTED CEILING PLAN
RD ROOF DRAIN
REL RELIEF
REQD REQUIRED
RF RETURN FAN
RH RELATIVE HUMIDITY
RHC REHEAT COIL
RLA RATED LOAD AMPS
RM ROOM
RPM REVOLUTIONS PER MINUTE
SA SUPPLY AIR GRILLE / REGISTER
SC SHORT CIRCUIT
SCA SHORT CIRCUIT AVAILABLE
SCCR SHORT CIRCUIT CURRENT RATING
SCH SCHEDULE
SD SMOKE DAMPER
SEF SMOKE EXHAUST FAN
SF SUPPLY FAN
SH SENSIBLE HEAT
SH SHOWER
SP STATIC PRESSURE
SPD SURGE PROTECTION DEVICE
SPEC SPECIFICATION
SQ SQUARE
SS STAINLESS STEEL
SS SAFETY SHOWER
STD STANDARD
STL STEEL
SYS SYSTEM
TEMP TEMPERATURE
TR TRANSFER GRILLE / REGISTER
TR TAMPER RESISTANT
TT TEMPERATURE TRANSMITTER
TTB TELECOMMUNICATIONS TERMINAL BACKBOARD
TYP TYPICAL
TX TRANSFORMER
UC UNDERCUT DOOR
UH UNIT HEATER
UNO UNLESS NOTED OTHERWISE
UNOCC UNOCCUPIED
UR URINAL
V VOLTS
VA VOLT AMPERE
VA VALVE
VAV VARIABLE AIR VOLUME UNIT
VFD VARIABLE FREQUENCY DRIVE
VRF VARIABLE REFRIGERANT FLOW
VOLT VOLTAGE
VTR VENT THROUGH ROOF
W WIDTH
W WATTS
W/ WITH
W/O WITHOUT
WB WET BULB
WC WATER COLUMN
WC WATER CLOSET
WG WATER GAUGE
WP WEATHERPROOF
WPIU WEATHERPROOF IN-USE
WSR WITHSTAND RATING
XFMR TRANSFORMER

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

CMC SV MAINTENANCE BUILDING

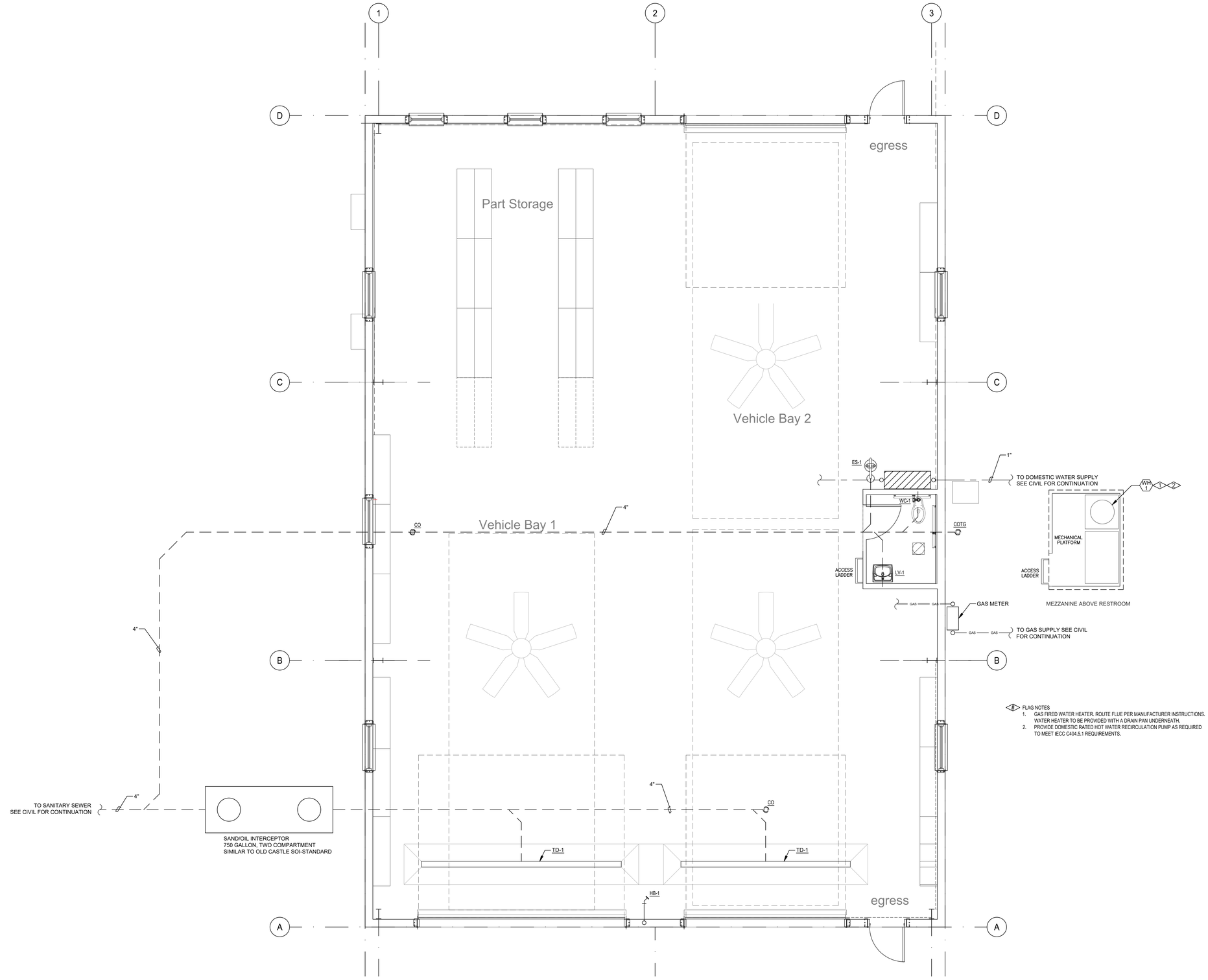
PLUMBING - COVER SHEET

TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT

DATE: 05/21/2024
JOB NO: 24-068
DRAWN BY: ---
CHECKED BY: ---
SCALE:
SHEET NUMBER:
P0-1

May 16, 2024 - 9:41:32am



PLUMBING - FLOOR PLAN

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

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CMC SV MAINTENANCE BUILDING

PLUMBING - FLOOR PLAN

TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
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SCALE:	AS SHOWN
SHEET NUMBER:	P1-1

May 16, 2024 - 9:41:32am

FIRE ALARM EQUIPMENT LEGEND

FACP	FIRE ALARM CONTROL PANEL
F	FIRE ALARM PULL STATION
	FIRE ALARM HORN
	FIRE ALARM STROBE
	FIRE ALARM HORN/STROBE
	CEILING MOUNTED SPEAKER
D	DUCT DETECTOR
R	REMOTE LAMP
S P	SMOKE DETECTOR - PHOTOELECTRIC
H 135°	135° STANDARD HEAT DETECTOR
PIR	PIR DETECTOR
DH	DOOR HOLD - MAGNETIC HOLD
FS	FLOW SWITCH
TS	TAMPER SWITCH

COMMUNICATION LEGEND

	CLOCK ONLY
CS	CLOCK / PA SPEAKER WALL MOUNTED
S	ROUND CEILING MOUNTED SPEAKER
S	SQUARE SPEAKER
IC	INTERCOM PUSH TO CALL SWITCH
WAP	WIRELESS ACCESS POINT ABOVE THE CEILING
PROJECTOR	ABOVE THE CEILING PROJECTOR CONNECTION
HDMI	WALL MOUNTED HDMI
	PLAIN DATA OUTLET
80"	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
HC	ADA DOOR OPERATOR PUSH BUTTON
DS	ELECTRIC DOOR STRIKE
CR	CARD READER FOR DOOR OPERATOR

LIGHTING LEGEND

NOTES:

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
$TO	MANUAL MOTOR STARTER
$P	PILOT LIGHT SWITCH
$DS	AUTO ON / AUTO OFF LIGHT SWITCH
$MO	DUAL TECHNOLOGY MOTION / OCCUPANCY SENSOR LIGHT SWITCH
$DMA	MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
$K	KEY OPERATED LIGHT SWITCH
$T	MANUAL ON - TIMED OFF LIGHT SWITCH
DS DS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
MA MA	CEILING MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR
DS DS	CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
$SC	SCENE CONTROL STATION
$MS	UNIT LIGHTING MANAGEMENT CONTROL STATION,

LIGHT FIXTURES

A	1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
A	2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
A	2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	OPEN STRIP FIXTURE
	WALL BRACKET LINEAR FIXTURE
A	WALL MOUNTED SCONCE LIGHT FIXTURE
A	RECESSED DOWNLIGHT CAN FIXTURE
A	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:

1. ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IECC AND ALL APPLICABLE GOVERNING CODES.
2. FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
3. ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.

WIRING:

1. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
2. 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.
3. 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.
4. ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER.
5. 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.
6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS.
7. COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
8. COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS.
9. BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY.
10. 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.
11. 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.
12. 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.
13. 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
F	FUSED SAFETY SWITCH / DISCONNECT COMBINATION
	MOTOR STARTER
	CONTACTOR
LA-7	CIRCUITRY HOMERUN: PANEL LA - CIR. #7
	CONDUIT OR WIRE CONCEALED IN WALL/CLG. (SOLID LINE TYPE)
	CONDUIT OR WIRE UNDERFLOOR/UNDERGND. (CENTER LINE TYPE)

MAIN DISTRIBUTION GEAR

	CIRCUIT BREAKER IN A PANEL BOARD
	PAD MOUNTED UTILITY TRANSFORMER
100 A 2 POLE FUSED DISCONNECT	FUSED DISCONNECT 100A = AMP RATING 2P = NUMBER OF POLES
M	ELECTRICAL METER SHOWN ON ONE-LINE DIAGRAMS
PP1 225A MCB 120/208V 3PH, 4W / PP1 225A MLO 120/208V 3PH, 4W	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

ELECTRICAL DEVICE LEGEND

J	CEILING JUNCTION BOX - SURFACE/FLUSH
J	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
T	THERMOSTAT
	OPEN/CLOSE/STOP PUSH BUTTON
	DRAWING KEY NOTES
ROOM 100	ROOM DESIGNATION

LUMINAIRES:

1. 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.
2. LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
3. 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.
4. VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
5. ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
6. 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.
7. COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.

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:
1. MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1)NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
2. 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
A	AMPS
A.D.	ACCESS DOOR
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AC	AIR CONDITIONING UNIT
AC	ABOVE COUNTER
AD	AREA DRAIN (SEE SYMBOLS)
A.F.C.	ABOVE FINISHED CEILING
A.F.G.	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AFCI	ARC FAULT CIRCUIT INTERRUPTERS
A.F.F.	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
AP	ACCESS PANEL OR DOOR
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO / VIDEO
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
BAS	BUILDING AUTOMATION SYSTEM
BB	BASEBOARD
BD	BACK DRAFT DAMPER
BFP	BACK FLOW PREVENTOR
BL	BOILER
BLDG	BUILDING
BLW	BELOW
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
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
CRI	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
DIA	DIAMETER
DIAG	DIAGRAM
DIFF	DIFFERENTIAL
DISCH	DISCHARGE
DIV	DIVISION
DN	DOWN
DS	DUCT SILENCER
DWG	DRAWING
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR GRILLE/REGISTER
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY FUNCTION
ENT	ENTERING
EMT	ELECTRIC METALLIC TUBE
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EX	EXHAUST
EXPAN	EXPANSION
EXT	EXTERNAL
F	DEGREES FAHRENHEIT
FA	FREE AREA
FC	FAN COIL UNIT
FC	FOOTCANDLE
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER
FD	FLOOR DRAIN
FIN	FINISHED
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIRE PROTECTION
FP	FIRE PUMP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FSD	FIRE/SMOKE DAMPER
FT	FEET
FXC	FLEXIBLE CONNECTION
GND	GROUND
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GEC	GROUND ELECTRODE CONDUCTOR
GFCI / GFI	GROUND FAULT CIRCUIT INTERRUPTER
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRS/LB	GRAINS PER POUND
H 2O	WATER
HB	HOSE BIBB
HD	HEAD (SEE SCHEDULES)
HP	HEAT PUMP
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTR	HEATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	INCHES
INV	INVERT
JBOX	JUNCTION BOX
K	KELVIN
KW	KILOWATT
KVA	KILO VOLT - AMPS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LV	LAVATORY
LB	POUND
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LIQ	LIQUID
LM	LUMEN
LRA	LOCKED ROTOR AMPS
LV	LOUVER
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MED	MEDIUM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
N	NEUTRAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NL	NIGHT / SECURITY LIGHT - DO NOT SWITCH
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCC	OCCUPIED
OCP	OVER CURRENT PROTECTION
OD	OUTSIDE DIAMETER
OL	OVERLOAD
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PH	PHASE
POS	POSITIVE PRESSURE
POS	POINT OF SALES
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TRANSMITTER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RA	RETURN AIR GRILLE / REGISTER
RCP	REFLECTED CEILING PLAN
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REL	RELIEF
REQD	REQUIRED
RF	RETURN FAN
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RPM	REVOLUTIONS PER MINUTE
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SEF	SMOKE EXHAUST FAN
SF	SUPPLY FAN
SH	SENSIBLE HEAT
SH	SHOWER
SP	STATIC PRESSURE
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SS	SAFETY SHOWER
STD	STANDARD
STL	STEEL
SYS	SYSTEM
TEMP	TEMPERATURE
TR	TRANSFER GRILLE / REGISTER
TR	TAMPER RESISTANT
TT	TEMPERATURE TRANSMITTER
TTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
TYP	TYPICAL
TX	TRANSFORMER
UC	UNDERCUT DOOR
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNOCC	UNOCCUPIED
UR	URINAL
V	VOLTS
VA	VOLT AMPERE
VA	VALVE
VAV	VARIABLE AIR VOLUME UNIT
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VOLT	VOLTAGE
VTR	VENT THROUGH ROOF
W	WIDTH
W	WATTS
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WC	WATER CLOSET
WG	WATER GAUGE
WP	WEATHERPROOF
WPIU	WEATHERPROOF IN-USE
WSR	WITHSTAND RATING
XFMR	TRANSFORMER

SUBSTITUTIONS:

A. UNLESS OTHERWISE: 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.

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

CMC SV MAINTENANCE BUILDING

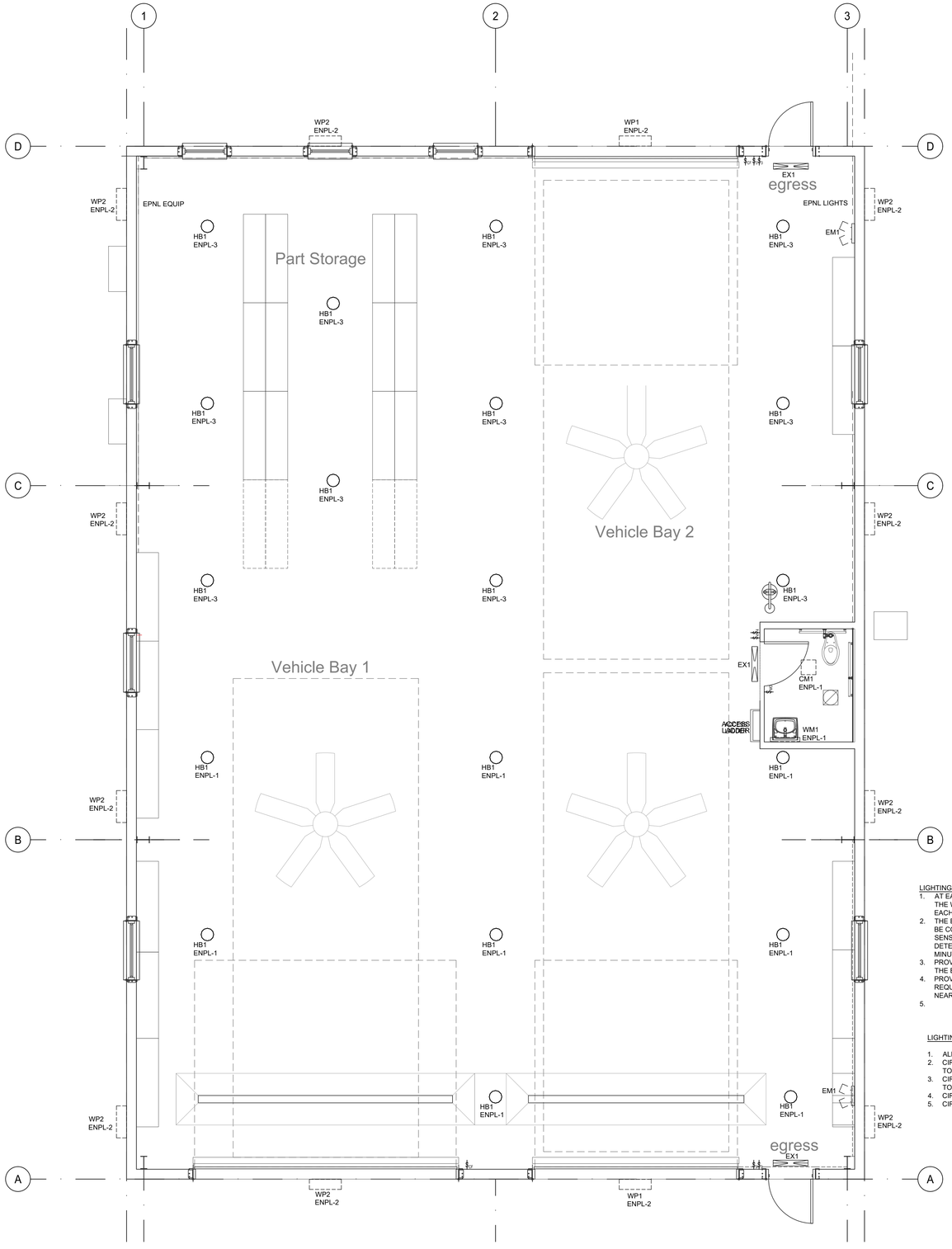
ELECTRICAL - COVER SHEET

TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT

DATE:	05/21/2024
JOB NO:	24-068
DRAWN BY:	---
CHECKED BY:	---
SCALE:	
SHEET NUMBER:	E0-1

May 20, 2024 - 8:16:11am



MEZZANINE ABOVE RESTROOM

NORTH

LIGHTING - FLOOR PLAN

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

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-12-18-MV-L84050-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-BZ-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-BZ-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	RELIANCE SERIES COMPACT LED EMERGENCY LIGHT, 2W LED HEADS W/REMOTE CAPACITY, WHITE FINISH, SELF-DIAGNOSTICS
EMX	ISOLITE RLP-G-LI-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.

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 "CF".
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.

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CMC SV MAINTENANCE BUILDING

LIGHTING - FLOOR PLAN

TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

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05/21/2024	DESIGN DEVELOPMENT

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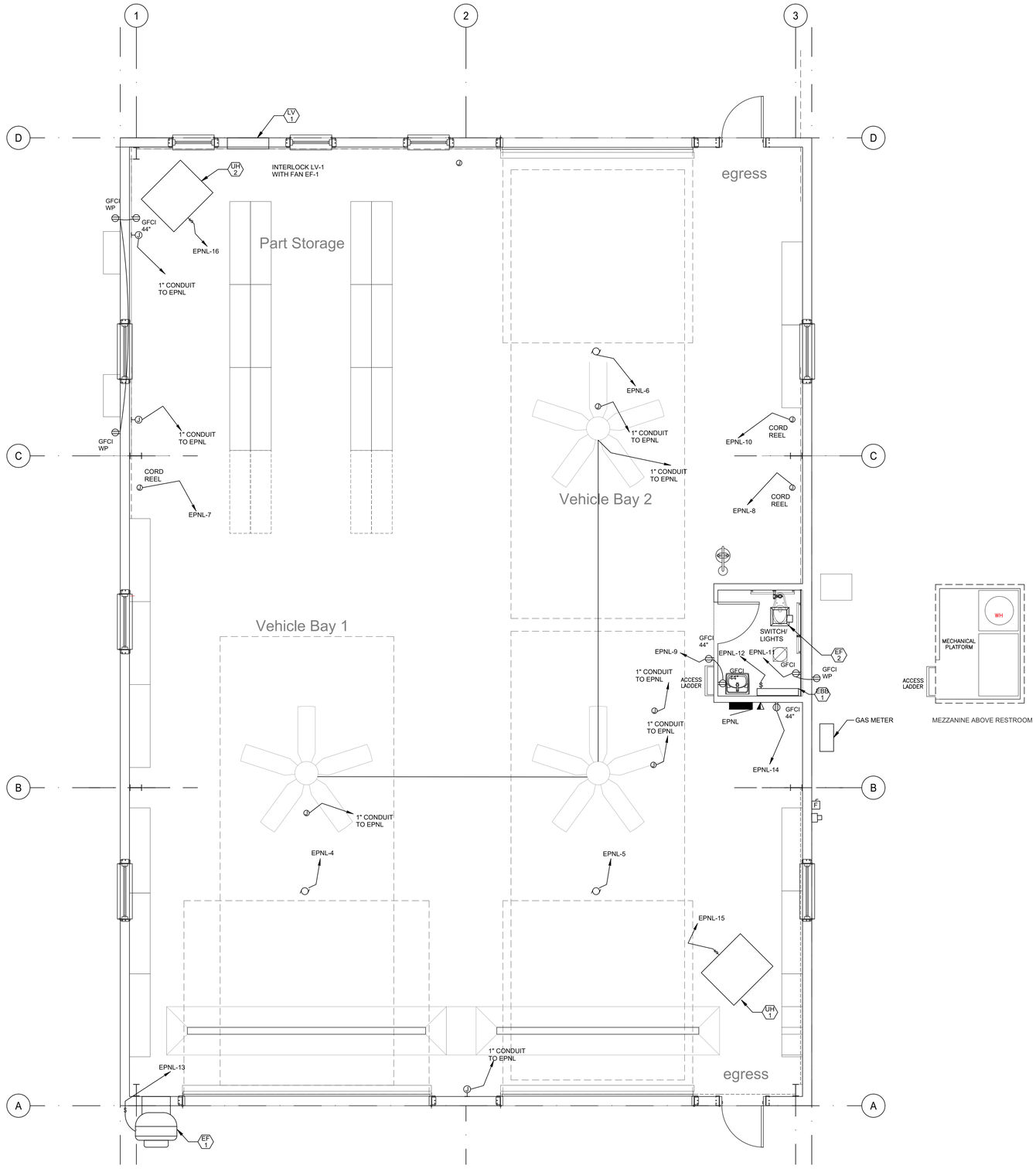
May 20, 2024 - 8:16:14am



ELECTRICAL - FLOOR PLAN

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

NORTH

Bighorn Consulting Engineers, Inc.
Mechanical & Electrical Engineers
386 Indian Road
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CMC SV MAINTENANCE BUILDING

ELECTRICAL - FLOOR PLAN

TRACT 3, ADAIR RIPPY EXEMPTION
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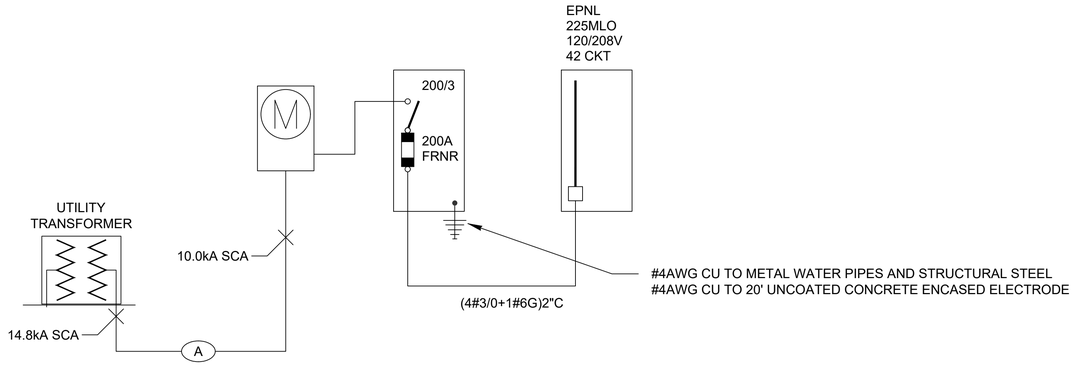
May 20, 2024 - 8:16:15am



ONE-LINE DIAGRAM

NOT TO SCALE

NOTES:

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

PANEL SCHEDULE - EPNL | TYPE: PANELBOARD | BUS SIZE: 225 | PHASES: 3 | NEUTRAL BUS: YES
VOLTAGE: 120/208 | MAIN BRKR: NONE | WIRES: 4 | GROUND BUS: YES
ENCLOSURE: NEMA1 | MOUNTING: SURFACE | SC RATING: 10000

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:

LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)
LIGHTING	3400.00	1.25	4250.00
KITCHEN	0.00	0.00	0.00
PROCESS	0.00	1.00	0.00
RECEPTACLES	6300.00	1.00	6300.00
MECH HEATING	1750.00	1.00	1750.00
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 [1]	ABOVE	0.25	450.00
TOTAL	18350.00		19650.00

LOADS BY PHASE:

PHASE	CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)
A	7280.00	60.67	A-B: 87.4
B	6360.00	53.00	B-C: 74.1
C	4710.00	39.25	C-A: 64.7
TOTAL/AVERAGE	18350.00	50.97	75.4

NOTES:

1. THE LARGEST CONNECTED MOTOR LOAD IS INCLUDED IN MECHANICAL, PROCESS, OR MOTOR LOADS.

FAULT CURRENT CALCULATIONS:

$F = \frac{LxIx3^{1/2}}{NxCxE}$

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)*M

RUN #1: SERVICE DISCONNECT TO HOUSE PANEL

$F = \frac{LxIx2}{NxCxE} = \frac{50FT \times 14{,}800\ A \times 3^{1/2}}{1 \times 12{,}862 \times 208\ V} = 0.479$

$M = \frac{1}{1+F} = \frac{1}{1+0.479} = 0.676$

I(SC) = IxM = 14,800A x 0.676 = 10,006 A

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CMC SV MAINTENANCE BUILDING

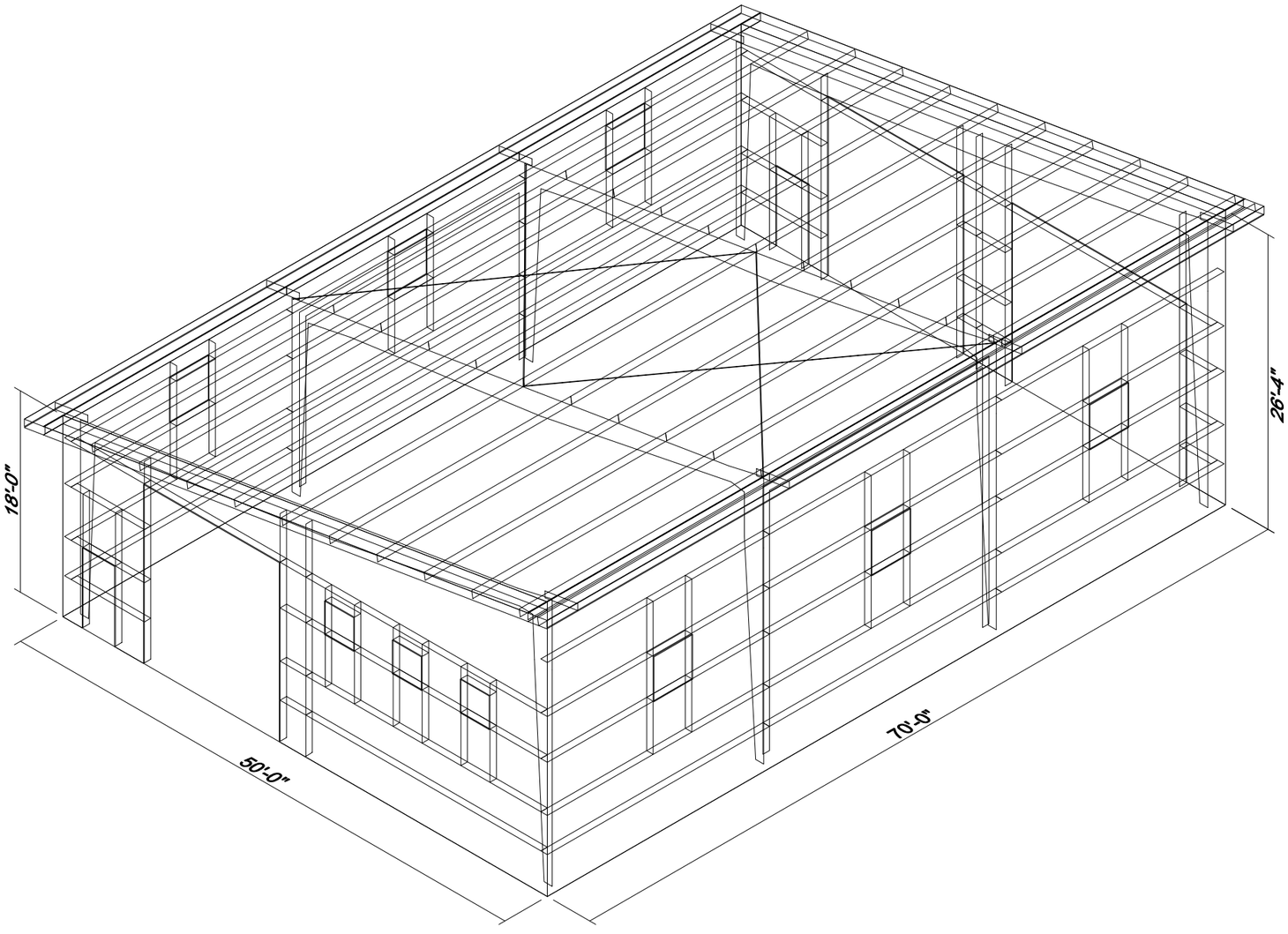
ELECTRICAL - ROOF PLAN

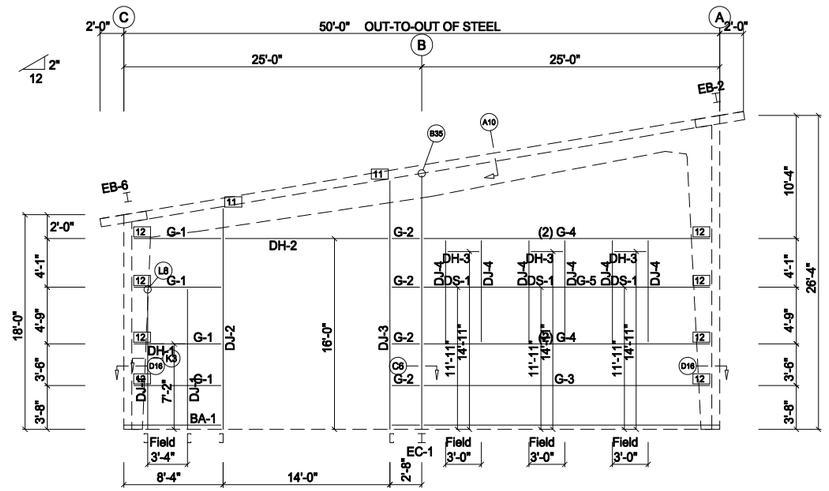
TRACT 3, ADAIR RIPPY EXEMPTION
GARFIELD COUNTY, COLORADO

DATE:	ISSUED FOR:
05/21/2024	DESIGN DEVELOPMENT

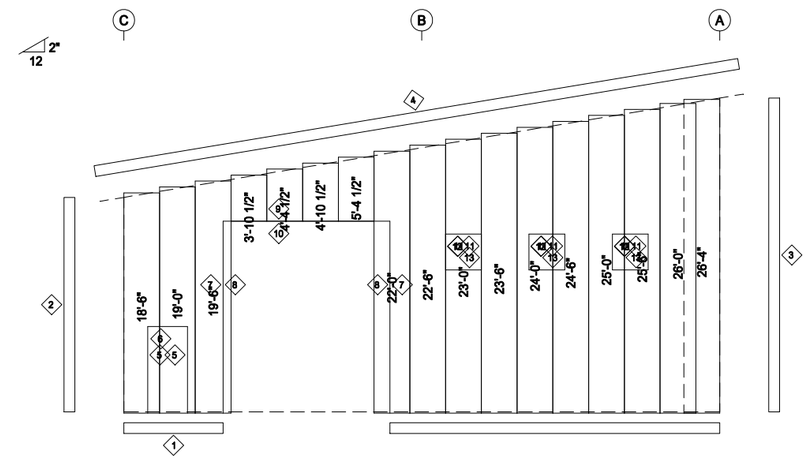
DATE: 05/21/2024
JOB NO: 24-068
DRAWN BY: ---
CHECKED BY: ---
SCALE: AS SHOWN
SHEET NUMBER: E2-2

May 20, 2024 - 8:16:15am


26'-4"
18'-0"
50'-0"
70'-0"



ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1

PANELS: 26 Ga. PBR - SIG 200 WALL

TRIM TABLE
FRAME LINE 1

◇ID	QUAN	PART	LENGTH	DETAIL
1	4	DF-01RC	10'-2"	TRIM_177
2	1	CT-01RC	18'-0"	TRIM_19
3	2	CT-01RC	13'-3"	TRIM_19
4	5	ST-01RC	10'-3"	TRIM_106
5	2	JT-01RC	7'-4"	TRIM_80
6	1	HT-01RC	3'-8"	TRIM_72
7	2	XFL-37C	16'-2"	TRIM_80
8	2	JT-01RC	16'-2"	TRIM_80
9	1	XFL-37C	14'-4"	TRIM_80
10	1	HT-01RC	14'-4"	TRIM_72
11	6	JT-01RC	3'-2"	TRIM_80
12	3	HT-01RC	3'-4"	TRIM_72
13	3	ST-01RC	3'-3"	TRIM_116

BOLT TABLE
FRAME LINE 1

LOCATION	QUAN	TYPE	DIA	LENGTH
Columns/Raf	2	A325	1/2"	1 1/4"
Jamb	8	A325	1/2"	1 1/4"

CONNECTION PLATES
FRAME LINE 1

□ID	QUAN	MARK/PART
11	2	n1
12	8	CC21

ISSUE	DESCRIPTION	DATE	DRN	CHK	DES
P	PERMIT		DET		DES

Federal Steel Systems

DESCRIPTION	ENDWALL FRAMING
BUYER / CUSTOMER	COLORADO MOUNTAIN COLLEGE
END USER	COLORADO MOUNTAIN COLLEGE
END USE	COMMERCIAL
STREET	3000 COUNTY ROAD 114
CITY, STATE, ZIP	GLENWOOD SPRINGS, CO 81601
COUNTY	GARFIELD COUNTY

S.O.# FS42224AH1 | U/OB# | SCALE N.T.S. | DWG# | EX of EX

Lindauer·Dunn, Inc.
STRUCTURAL ENGINEERS

802 ROOD AVENUE
GRAND JUNCTION, CO 81501
(970) 241-0900
FAX (970) 243-2430

SCHEMATIC DESIGN NARRATIVE

DATE: April 30, 2024

TO: Jeff Johnson Architectural, PC

FROM: Frank Rinaldi

SUBJECT: Colorado Mountain College
SV Maintenance Garage
3000 Co Rd 114
Glenwood Springs, CO 81601
Lindauer·Dunn, Inc. Job # 24.018

The scope of this project is to design the foundation for an approximately 3,500 sq. ft. single-story pre-engineered metal building. The building design will be performed by the building manufacturer and frame designs and reactions will be provided to us prior to completion of construction documents.

Design Codes and Design Criteria

A. Structural design will be performed in accordance with the 2021 International Building Code.

B. Live loads used for design:
- Vehicle Bay and Parts Storage.....250 psf (non-reducible)
- Roof..... 40 psf + drifting or sliding snow per ASCE 7
  Importance Factor (snow) 1.0
- Wind
  Ultimate Wind Speed..... 110 mph
  Exposure .....B
- Seismic
  Site Class.....D
  Risk Category..... II
  Seismic Design Category.....B
  Importance Factor (seismic) 1.0

C. Superimposed dead loads for roof materials, PV Panels, ceiling, lights, mechanical and other equipment above the ceiling is estimated at 20 to 25 pounds per square foot.

Foundation and Main Level Floor:

A. A soils report prepared by H-P Kumar (project #18-7-184) was provided. This report indicates that a concrete stem wall and footing design would be appropriate for the foundation of this structure. The interior shop floor will be a 6" min. concrete slab on compacted subgrade and 4" of washed gravel.

Roof Framing:

A. The roof framing will be rigid steel frames with steel roof purlins and steel panel roofing. This framing will be designed and supplied by the Pre-Engineered Metal Building (PEMB) supplier.

Lateral Load Resisting System:

A. The lateral load resisting system for the building will be designed by the PEMB supplier.

Exterior Walls:

A. The exterior wall systems will be steel girts and metal panel siding that are supported by the building rigid frame system. This is designed by the PEMB supplier.

CMC SPRING VALLEY POLE BARN

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" = 300'

CIVIL PLAN INDEX

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

DATE:	06-05-24	
JOB NO.	33183	
DESIGNED BY	AKC	
DRAWN BY	AKC	
CHECKED BY	CHC	

CMC SPRING VALLEY POLE BARN
GLENWOOD SPRINGS, COLORADO

BUILDING PERMIT-FOR REVIEW

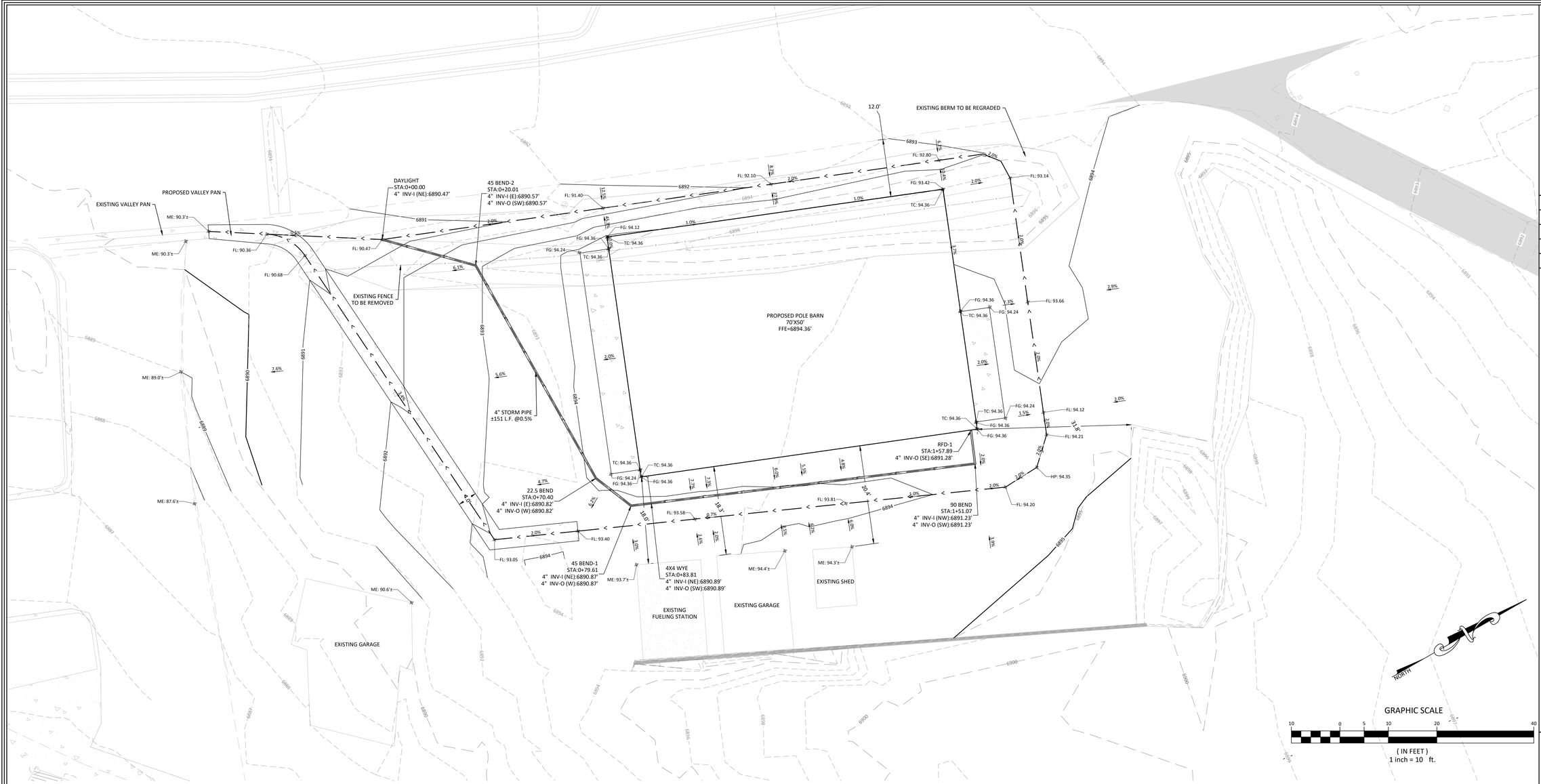
DATE	REVISION

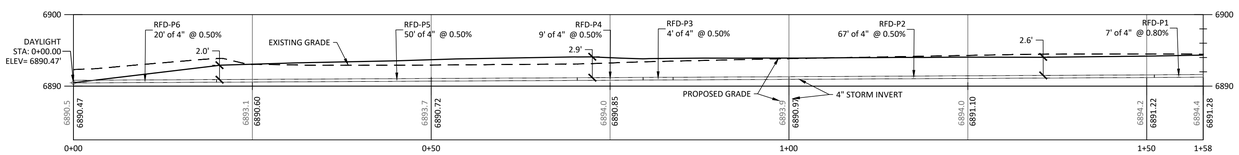
TITLE
COVER SHEET & GENERAL NOTES

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

G:\2023\33183-CMC-SPRING VALLEY\CIVIL\CIVIL DWGS\DR\33183-BP-WK-2.DWG Nov 19, 2024 - 9:49am





ROOF DRAIN STORM PIPE PROFILE
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

PROPOSED LEGEND

- PROPOSED CONTOUR
- 7900 PROPOSED CONTOUR INTERVAL
- WL SVC PROPOSED WATER SERVICE
- 4"SS PROPOSED SANITARY SEWER SERVICE
- UE PROPOSED UNDERGROUND ELECTRIC
- TEL TEL PROPOSED TELEPHONE
- PROPOSED SWALE OR DITCH
- PROPOSED STORM SEWER
- PROPOSED SEWER CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED CURB STOP

PROPOSED LEGEND

- PROPOSED CONCRETE
- PROPOSED GRAVEL

EXISTING LEGEND

- EXISTING CONTOUR
- 7900 EXISTING CONTOUR INTERVAL
- XWL XWL EXISTING 8" WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- XSA XSA EXISTING 8" SANITARY SEWER MAIN
- XGAS XGAS EXISTING GAS
- XFO XFO EXISTING FIBER OPTIC
- XUT XUT EXISTING TELEPHONE
- EXISTING ELECTRIC MANHOLE
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING CURB STOP
- EXISTING ELECTRIC TRANSFORMER
- EXISITING LIGHT POLE
- EXISTING TELEPHONE MANHOLE
- EXISTING SIGN

EXISTING LEGEND

- EXISTING BERM

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 2.0%

SPOT ELEVATION XXX:XXX.XX'

EXAMPLE: TOP OF CONCRETE @ 7900.00' = TC:7900.00'

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

DATE:	06-05-24
JOB NO.	33183
DESIGNED BY	AKC
DRAWN BY	AKC
CHECKED BY	CHC

CMC SPRING VALLEY
GARFIELD COUNTY, COLORADO

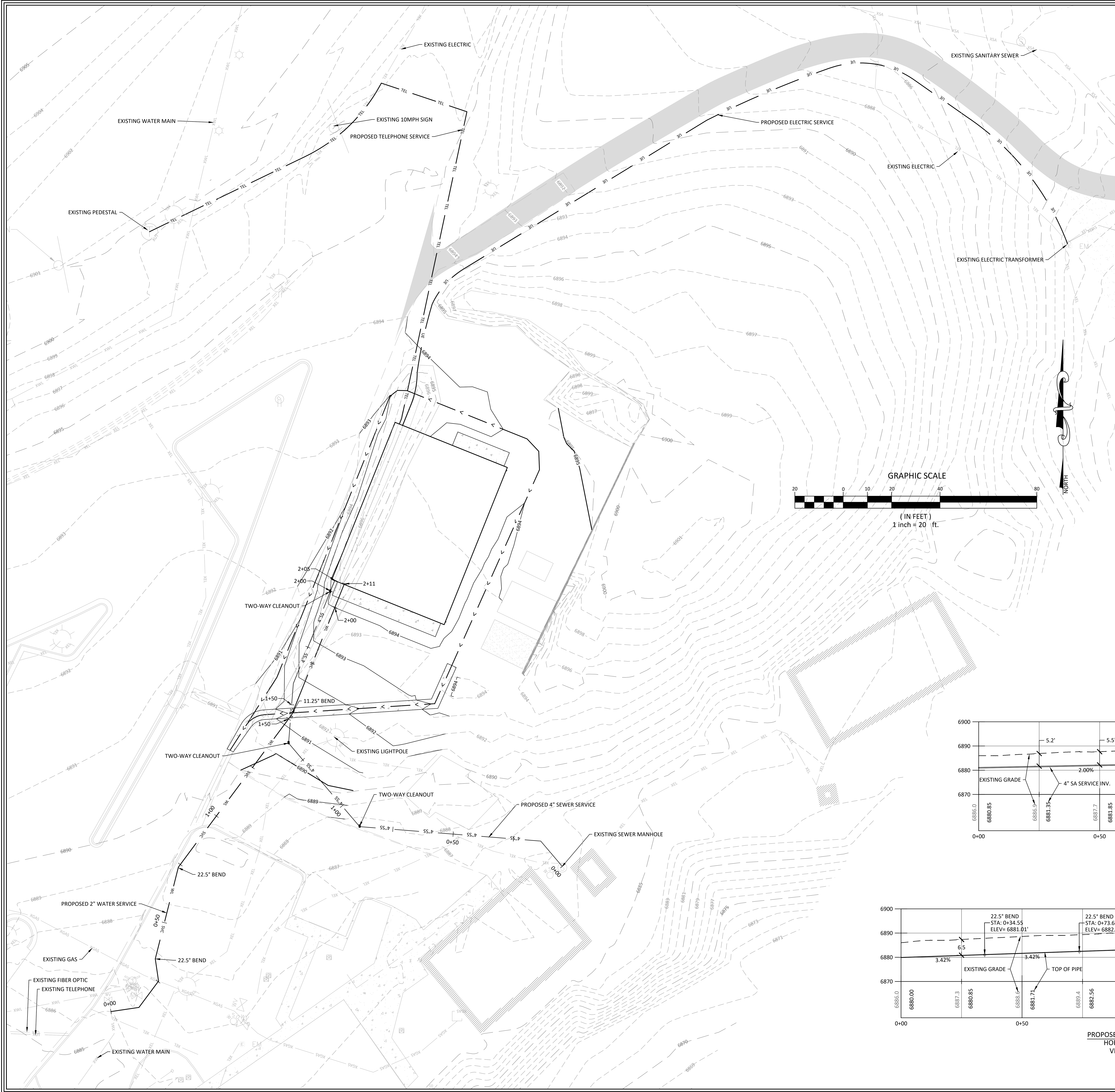
BUILDING PERMIT-FOR REVIEW

DATE	REVISION

TITLE
GRADING AND DRAINAGE PLAN

DRAWING NO.
C-2.0

G:\2023\33183-CMC-SPRING VALLEY\CIVIL\CIVIL DWGS\DR\33183-RF-WK-2.DWG Nov 19, 2024 - 9:49am



PROPOSED LEGEND

- PROPOSED CONTOUR
- PROPOSED CONTOUR INTERVAL
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SEWER SERVICE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED TELEPHONE
- PROPOSED SWALE OR DITCH
- PROPOSED STORM SEWER
- PROPOSED SEWER CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED CURB STOP

PROPOSED LEGEND

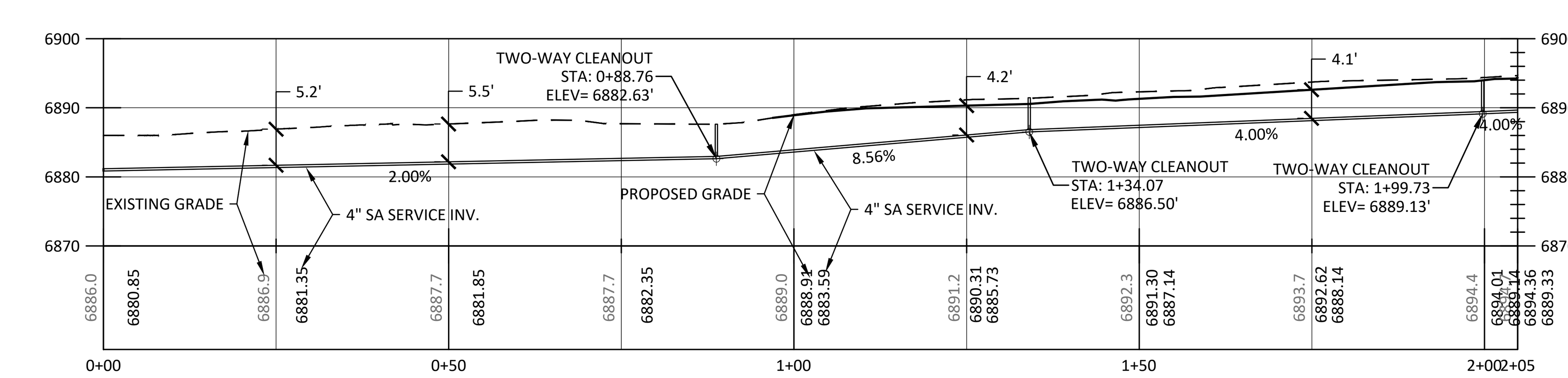
- PROPOSED CONCRETE
- PROPOSED GRAVEL

EXISTING LEGEND

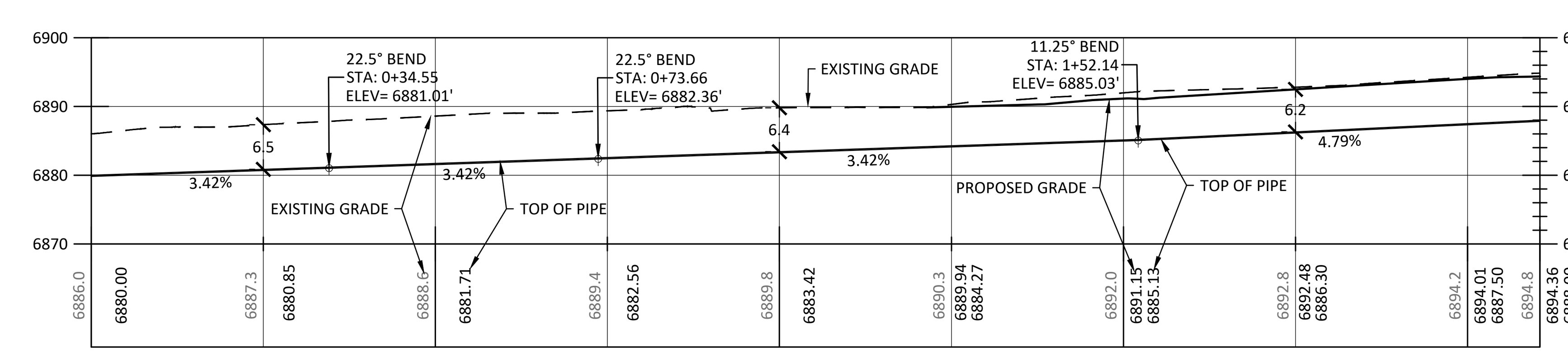
- EXISTING CONTOUR
- EXISTING CONTOUR INTERVAL
- EXISTING 8" WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING 8" SANITARY SEWER MAIN
- EXISTING GAS
- EXISTING FIBER OPTIC
- EXISTING TELEPHONE
- EXISTING ELECTRIC MANHOLE
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING CURB STOP
- EXISTING ELECTRIC TRANSFORMER
- EXISTING LIGHT POLE
- EXISTING TELEPHONE MANHOLE
- EXISTING SIGN

EXISTING LEGEND

- EXISTING BERM



PROPOSED 4" SEWER SERVICE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'



PROPOSED 2" WATER SERVICE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

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

DATE:	06-05-24
JOB NO.	33183
DESIGNED BY	AKC
DRAWN BY	AKC
CHECKED BY	CHC

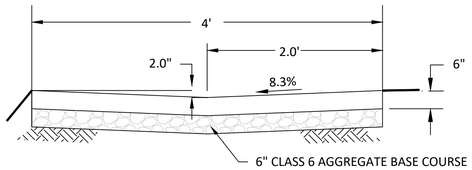
CMC SPRING VALLEY POLE BARN
GLENWOOD SPRINGS, COLORADO

BUILDING PERMIT-FOR REVIEW

DATE	REVISION

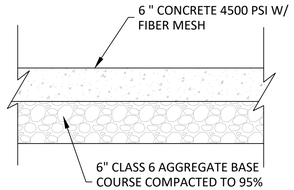
TITLE
UTILITY PLAN

DRAWING NO.
C-3.0



NOTES:
1) STRIP ALL TOPSOIL AND ORGANICS, SCARIFY AND RECOMPACT SUBGRDE 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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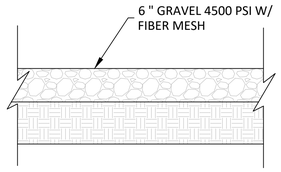
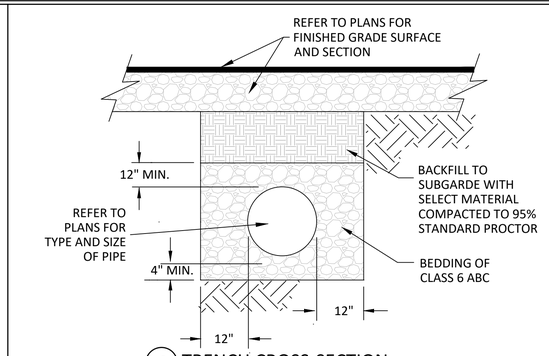
2) CONCRETE: CDOT APPROVED CLASS P CONCRETE
(MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS)

2 CONCRETE PAD
N.T.S.

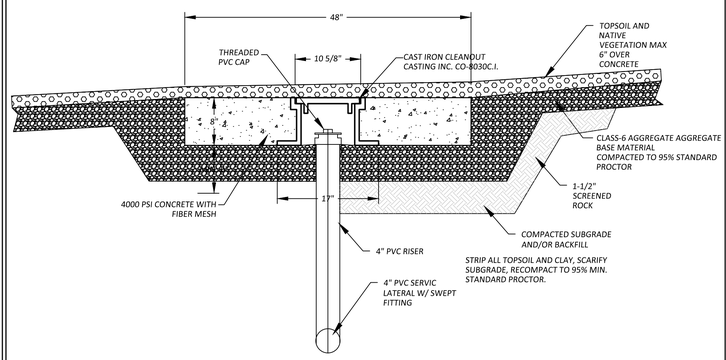


NOTES:
1) STRIP ALL TOPSOIL AND ORGANICS, SCARIFY AND RECOMPACT SUBGRDE A MINIMUM OF 8" DEPTH TO 95% STANDARD PROCTOR.

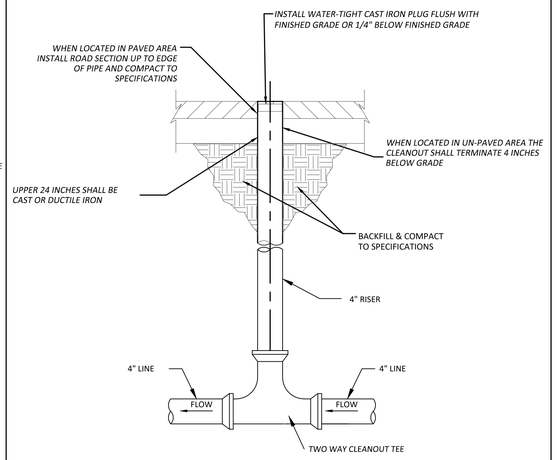
3 GRAVEL PLACEMENT
N.T.S.



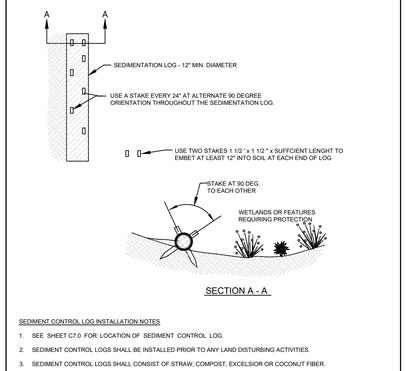
4 TRENCH CROSS-SECTION FOR STORM DRAIN



5 TRAFFIC RATED CLEANOUT BOX
N.T.S.



6 TWO-WAY CLEAN OUT DETAIL
N.T.S.



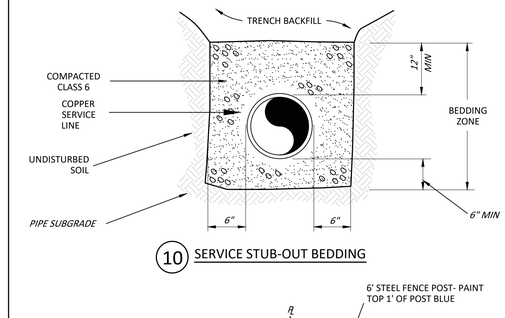
SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE SHEET C7.0 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.

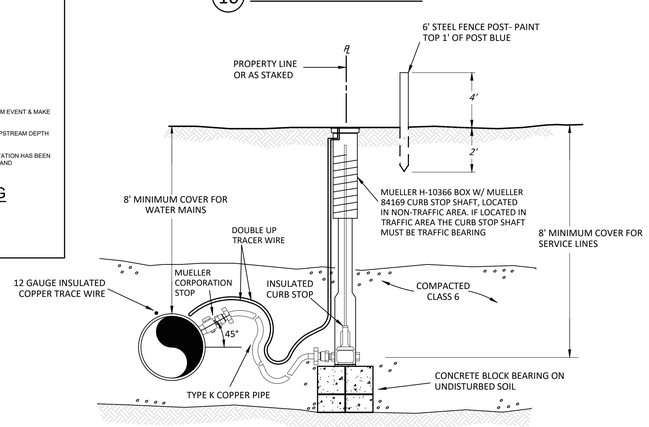
SEDIMENT CONTROL LOG MAINTENANCE NOTES

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 ½ 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.

SCL — SEDIMENT CONTROL LOG
7
(NOT TO SCALE)



10 SERVICE STUB-OUT BEDDING

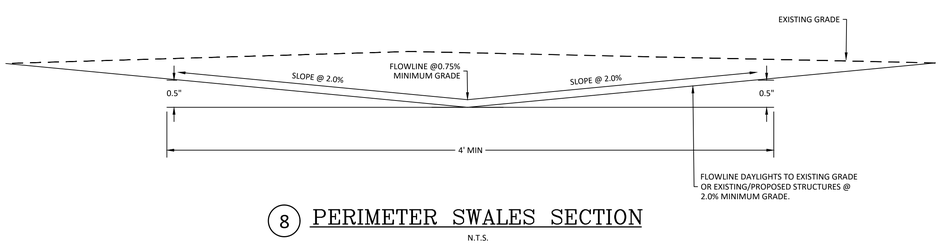


ELEVATION

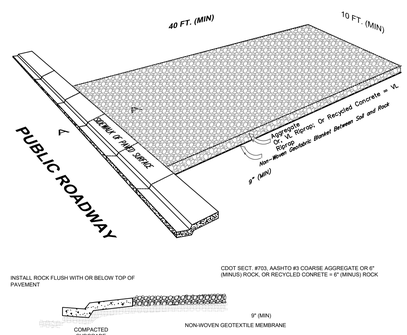
11 WATER SERVICE STUB OUT

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 B25204 OR APPROVED EQUAL.
4. CURB BOX AND LID MUST BE TRAFFIC RATED NOT THE CUR'BSTOP SHAFT. SHAFT MUST NOT BE IN CONTACT WITH CURB BOX.



8 PERIMETER SWALES SECTION
N.T.S.



SECTION A-A
4ITS-

9 VTC VEHICLE TRACKING PAD
(NOT TO SCALE)

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