

REVISED NEW WELL 5 PUMPING STATION

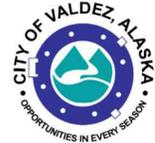
CITY OF VALDEZ, ALASKA

PROJECT NO. 21-310-2538

CONSTRUCTION CONTRACT NO. 2227

JANUARY 2026

OWNER



PO BOX 307
VALDEZ, AK 99686

ENGINEER



PO BOX 651 • EUREKA, NEVADA 89316 • (775) 293-1743
5 EAST PARK STREET • FALLON, NEVADA 89406 • (775) 423-9090

CONSULTANTS

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CHITINA, ALASKA 99566
(907) 823-2280

ARCHITECT

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PALMER, AK 99645
(907) 746-6670

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PND ENGINEERS
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(907) 707-1081

ELECTRICAL & MECHANICAL

RSA MECHANICAL & ELECTRICAL CONSULTING ENGINEERS
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BRIAN PEKAR, P.E.
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CONTROLS/INTEGRATION

STEAD AND ASSOCIATES
JAMES SWANSON
13200 S.E. 30TH ST.
BELLEVUE, WA 98005
(425) 644-1700



LOCATION MAP

VALDEZ, ALASKA

SHEET LIST

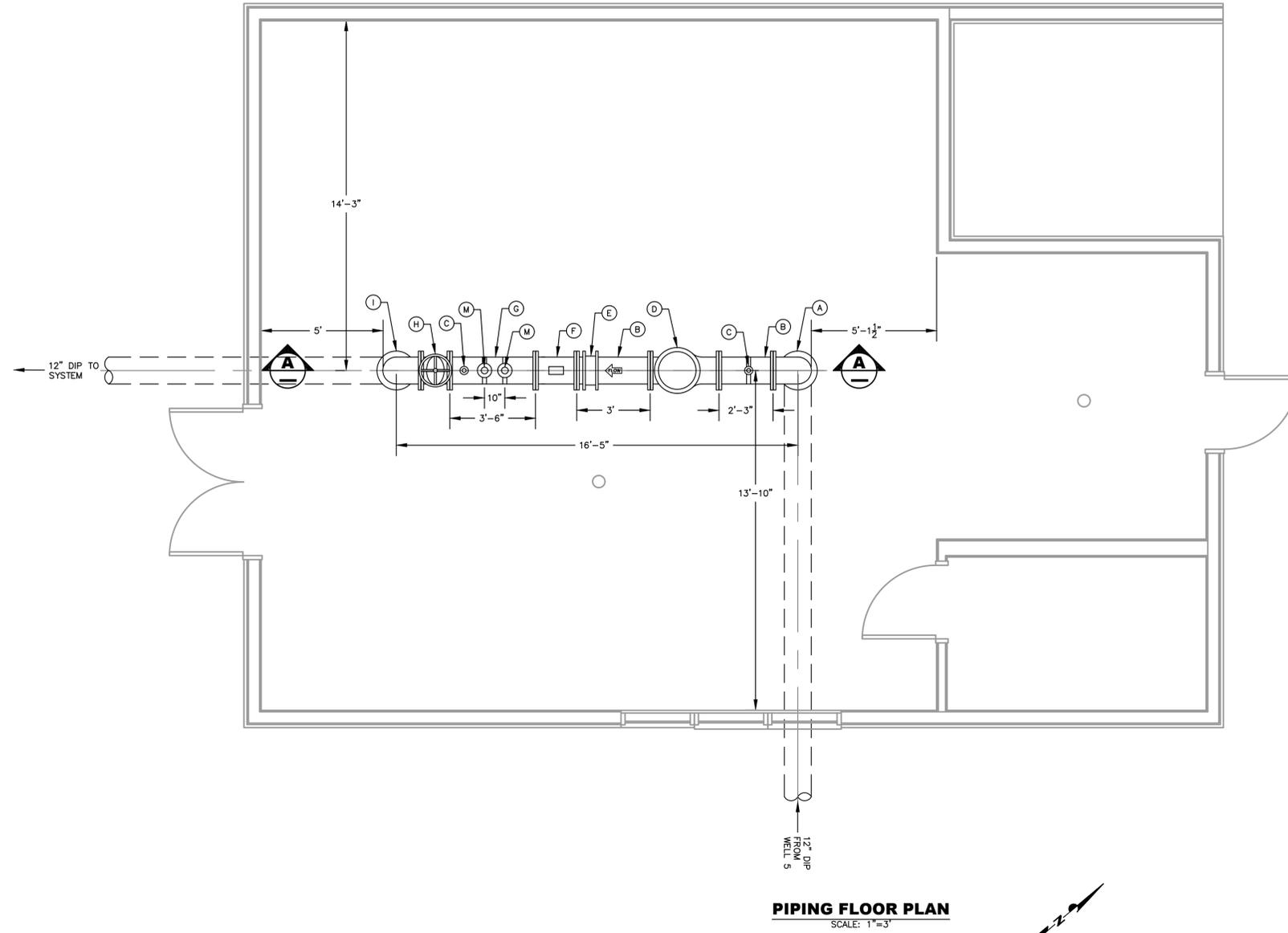
SHEET NO.	DESCRIPTION
C1	TITLE SHEET
C2	GENERAL NOTES, ABBREVIATIONS, AND LEGEND
C3	SITE PIPING PLAN
C4	SITE GRADING PLAN
C5	BUILDING PIPING PLAN AND SECTION
C6	WELL 5 TRANSMISSION MAIN
C7	BUILDING DRAIN PLAN AND PROFILE
C8	WELL CROSS SECTION
D1-D2	GENERAL DETAILS
G1.1	CODE PLAN DESIGN DEVELOPMENT
G0.01	ARCHITECTURAL SYMBOLS AND ABBREVIATIONS
G0.02	TYPICAL ADA DETAILS
A1.1	FIRST FLOOR & REFLECTED CEILING PLANS
A1.2	ROOF PLAN & DETAILS
A2.1	EXTERIOR ELEVATIONS
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A3.2	WALL SECTIONS
A4.1	INTERIOR ELEVATIONS
A5.1	WINDOW & DOOR DETAILS
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A5.3	PLAN DETAILS
A6.1	SCHEDULES
S1.1	DESIGN CRITERIA
S1.2	SPECIAL INSPECTIONS
S1.3	CONCRETE REINFORCING SCHEDULES AND TYPICAL DETAILS
S1.4	WOOD FRAMING SCHEDULES AND TYPICAL DETAILS
S1.5	WOOD SHEAR WALL SCHEDULES AND TYPICAL DETAILS
S2.0	FOUNDATION & SLAB PLAN
S2.1	ROOF FRAMING PLAN
S3.0	DETAILS
S4.0	TRUSS ELEVATION AND NOTES
M1	MECHANICAL LEGEND, ABBREVIATIONS, AND SCHEDULE
M2	MECHANICAL PLAN
M3	MECHANICAL DETAILS
E1	ELECTRICAL LEGEND AND SCHEDULE
E2	ELECTRICAL SITE PLAN - PUMP STATION 5
E3	ELECTRICAL PLANS - PUMP STATION 5
E4-E5	ELECTRICAL DETAILS
I1-I2	STANDARDS SHEET
I3	WIRING INTERFACE GENERAL DETAILS
I4	EQUIPMENT WIRING FOR DISCRETE AND VIRTUAL DATA
I5	QUICK CONNECT CABLING STANDARDS
I6	SUBMERSIBLE PROBE (DISCRETE) DETAIL
I7	SUBMERSIBLE PROBE INSTALLATION
I8	MAG FLOWMETER (NETWORKED)
I9	MAG FLOWMETER (DISCRETE) DETAIL
I10	MAG METER INSTALLATION
I11	VFD (NETWORKED) DETAIL
I12	FLOOD SWITCH DETAIL
I13	INTRUSION LIMIT SWITCH DETAIL
I14	STATION ANTENNA INSTALLATION DETAIL
I15	POWER METER (NETWORKED)
I16	GAUGE PRESSURE TRANSMITTER
I17	PRESSURE TRANSMITTER DETAILS
I18	BLOCK DIAGRAM - AUTOMATION POWER & ANCILLARY SYSTEMS
I19	RTU BLOCK DIAGRAM PUMP ROOM WELL OPERATIONS
I20	BLOCK DIAGRAM CONTROL SYSTEM NETWORK DIAGRAM
I21	WELL 5 BACKUP PANEL PRESENTATION
I22	WELL 4/ RESERVOIR 2 BLOCK DIAGRAM RIO PANEL
I23	WELL 4/ RESERVOIR 2 BLOCK DIAGRAM CONTROL SYSTEM NETWORK DIAGRAM
I24	WELL 4/ RESERVOIR 2 I/O BACK PANEL PRESENTATION

BASIS OF BEARINGS:

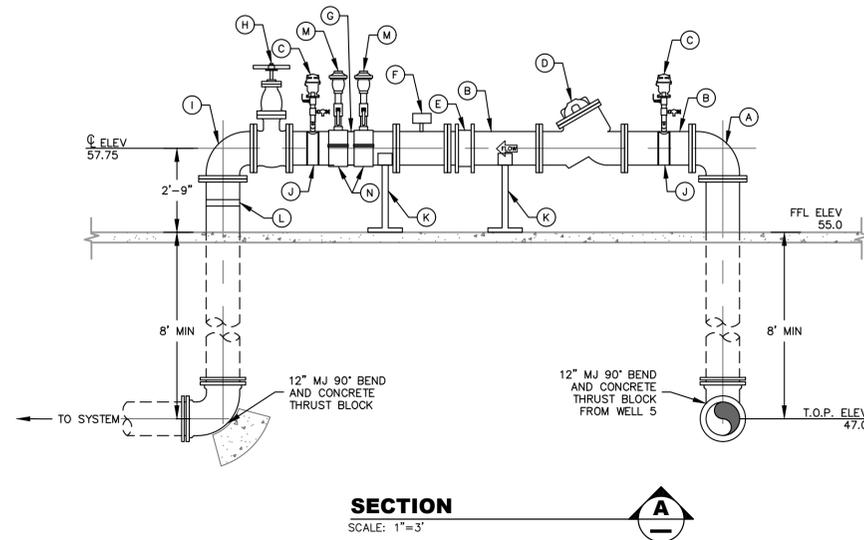
THE BASIS OF BEARING, COORDINATES, BEARINGS, DISTANCES ARE ALL BASED ON HIGH PRECISION GPS RTK, NAD83 ALASKA STATE PLANE ZONE 3 IN FEET.

BASIS OF ELEVATION:

THE BASIS OF ELEVATION IS BASED ON HIGH PRECISION GPS RTK, NAVD88 GEOID 12b.



PIPING FLOOR PLAN
SCALE: 1"=3'



SECTION
SCALE: 1"=3'

MATERIALS LIST		
ITEM	QTY	DESCRIPTION
A	1	12" DI FL 90
B	2	12" DI FLxPE SPOOL
C	2	2" COMBINATION AIR VALVE WITH SAMPLE TAP
D	1	12" CHECK & BOOSTER PUMP CONTROL VALVE (BERMAD 740 EN)
E	1	12" REST. FL ADAPT. (ROMAC RFCA)
F	1	12" MAG METER (BADGER M2000)
G	1	12" DI FLxFL SPOOL
H	1	12" OS&Y FL RES. WEDGE GATE VALVE (AFC 2500)
I	1	12" DI FL 90
J	2	2" DOUBLE STRAP TAPPING SLEEVE
K	1	PIPE SUPPORT
L	1	1 1/2" SERVICE SADDLE
M	2	2" BERMAD PRESSURE RELIEF VALVES (SEE DETAIL SHEET 3/D1)
N	2	12"x2" STAINLESS SADDLES

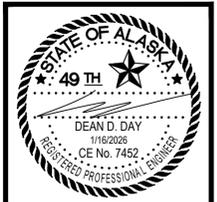
- NOTE:
 1) SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL SHEETS FOR BUILDING DETAILS.
 2) FEDERAL SAFETY BLUE SHERWIN-WILLIAMS MACROPOXY EPOXY FOR POTABLE WATER OR EQUAL, 2 COATS AND 10 MILS MINIMUM ON ALL EXPOSED POTABLE WATER PIPING AND FITTINGS.

DATE	BY	REVISION
9/3/2025	MU	ITEM L MOVED TO OTHER SIDE OF CHECK VALVE AND CHANGED SIZE
9/23/2025	MU	ADDED NOTE FOR PAINT ELEVATIONS ADDED
10/31/2025	MU	ELEVATIONS ADDED

BUILDING PIPING PLAN AND SECTION

NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

TITLE PROJECT

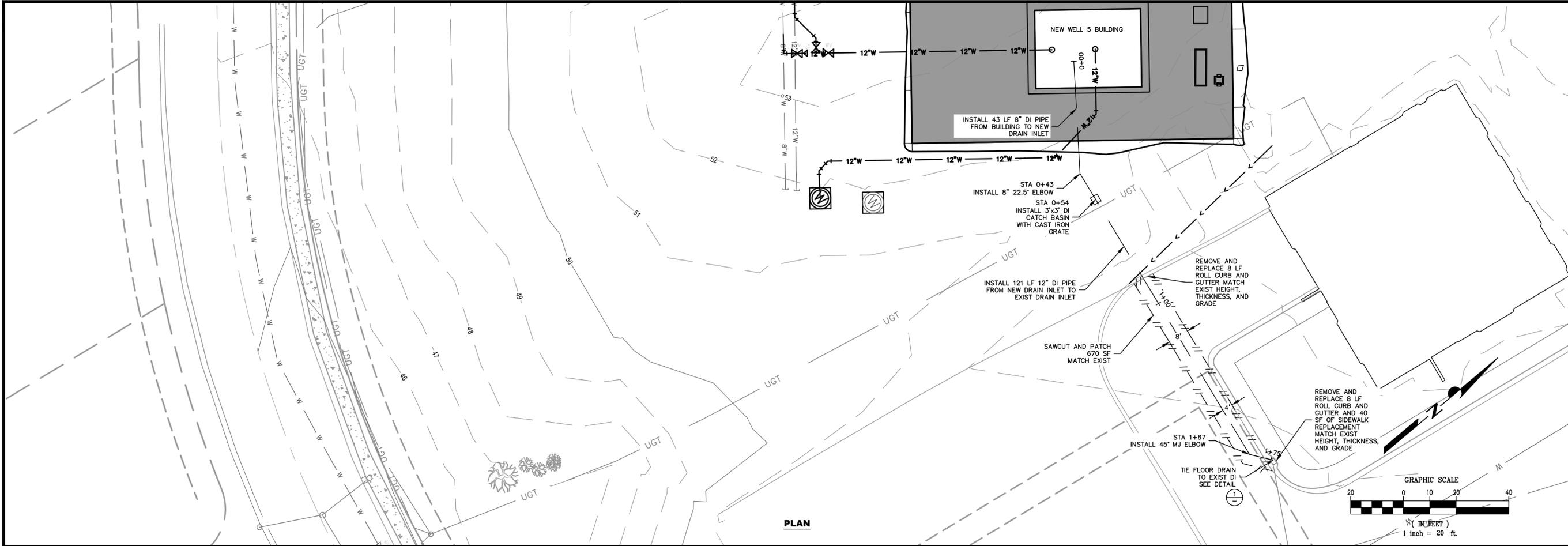


DAY ENGINEERING

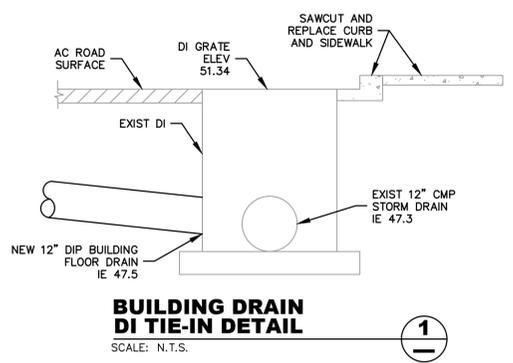
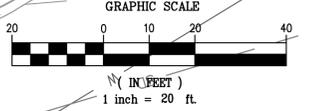
PO BOX 151778 • ELY, NEVADA 89315 • (775) 299-5333
 63 KEYSTONE AVENUE #206 • RENO, NEVADA 89503 • (775) 346-8824

BY : DATE : JAN 2026
 SCALE : AS SHOWN

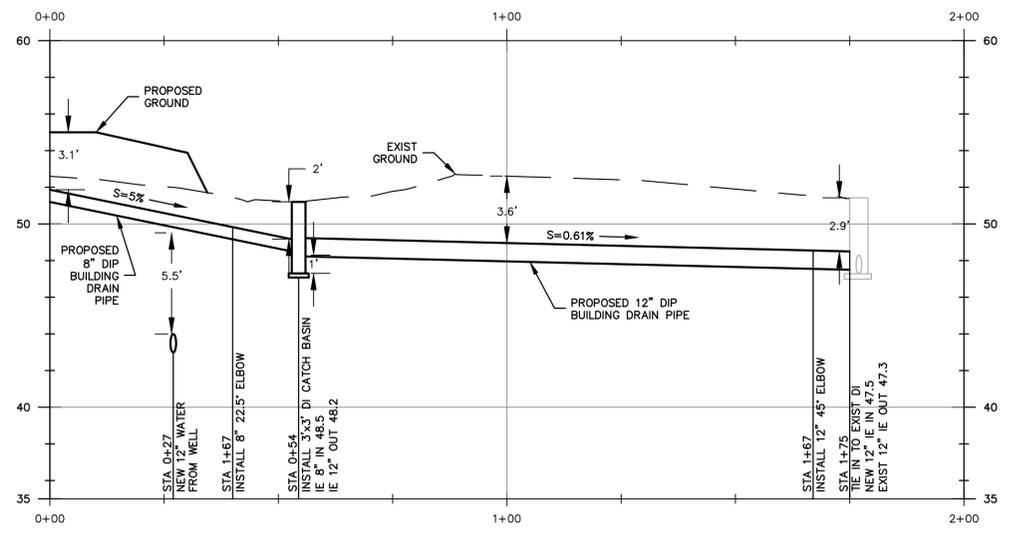
SHEET **C5** OF **8** SHEETS



PLAN



BUILDING DRAIN DI TIE-IN DETAIL
SCALE: N.T.S.



PROFILE
HOR SCALE: 1"=20'
VER SCALE: 1"=5'

APPROVAL	REVI	DATE	BY	REVISION

BUILDING DRAIN PLAN AND PROFILE
PROJECT
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

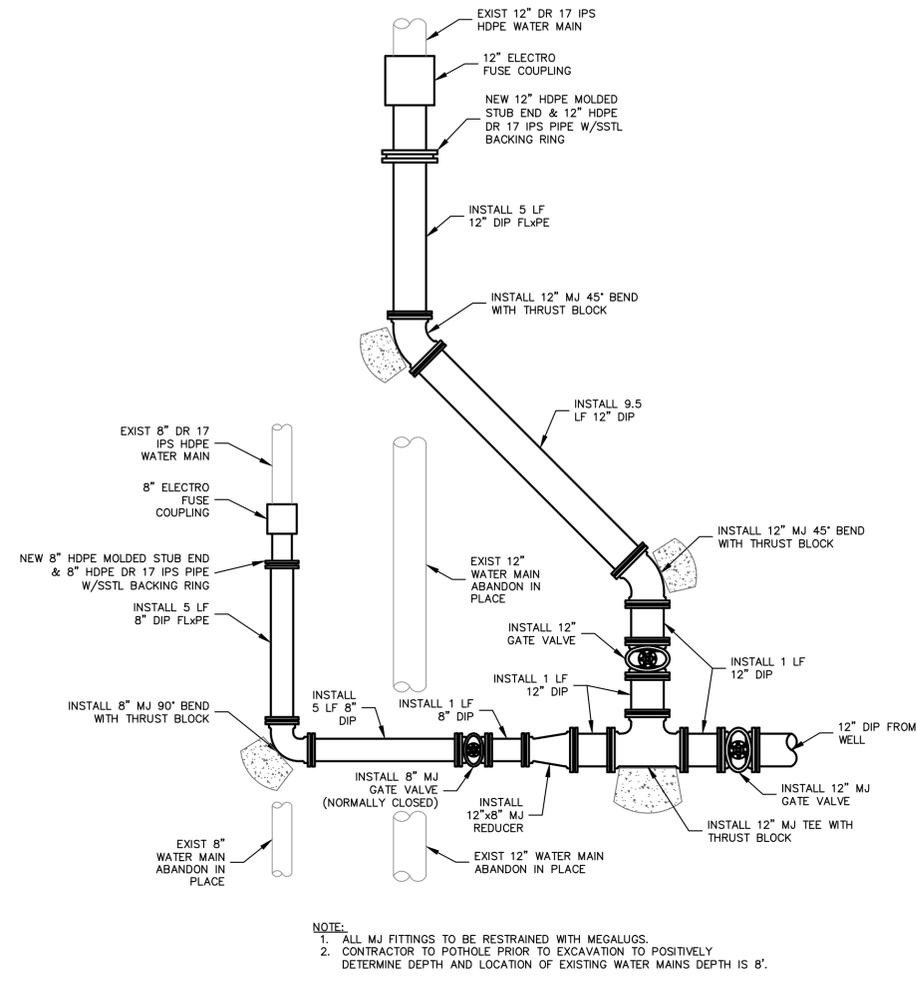


DAY ENGINEERING
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63 KEYSTONE AVENUE #206 • RENO, NEVADA 89503 • (775) 346-8824

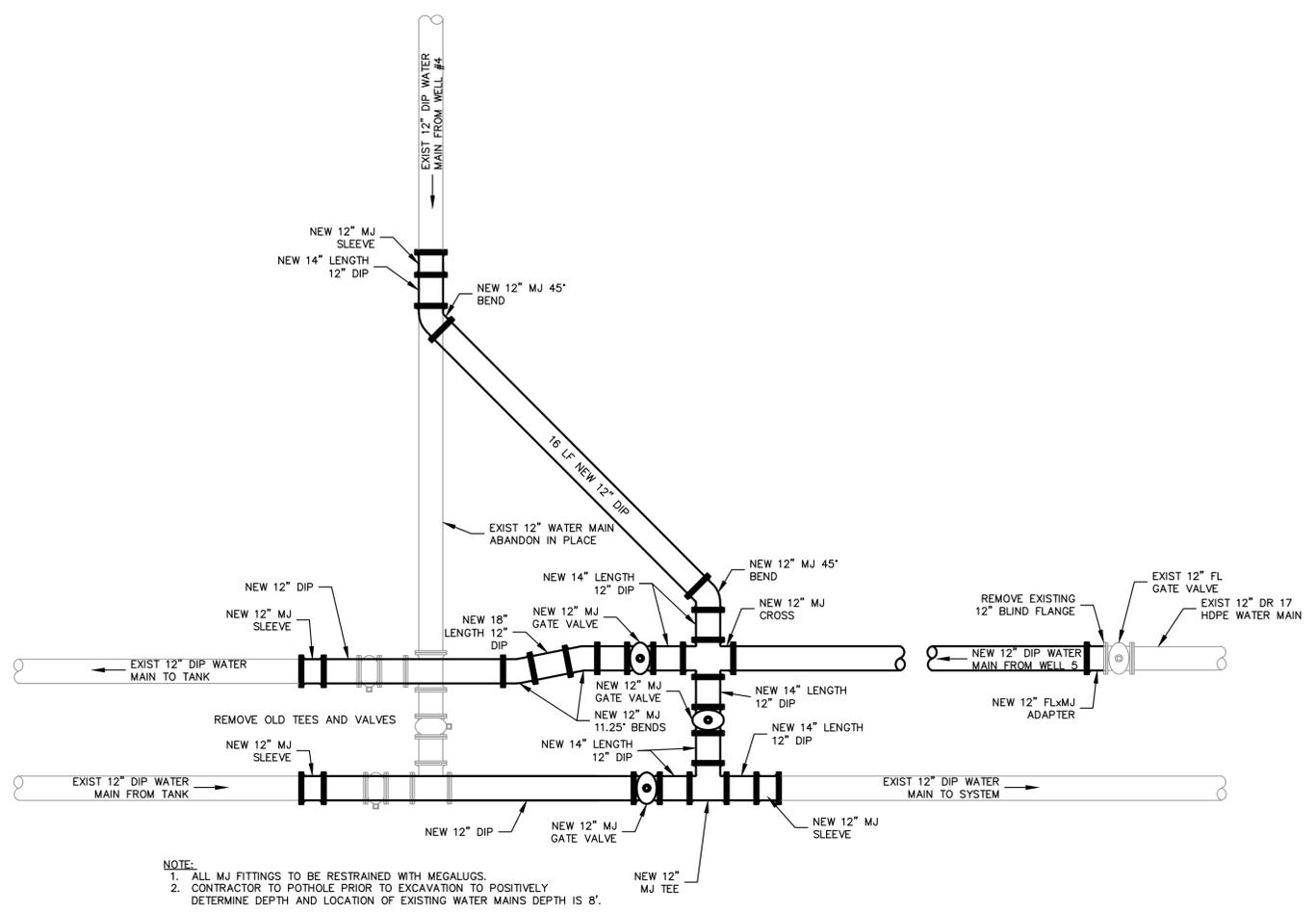
BY : _____ DATE : JAN 2026
SCALE : AS SHOWN

SHEET **C7** OF **8** SHEETS

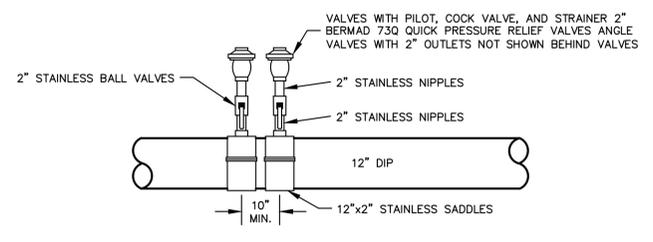




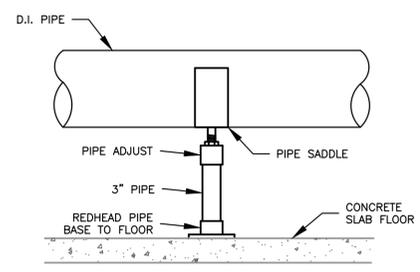
EXIST WATER MAIN TIE-IN 1
SCALE: N.T.S.



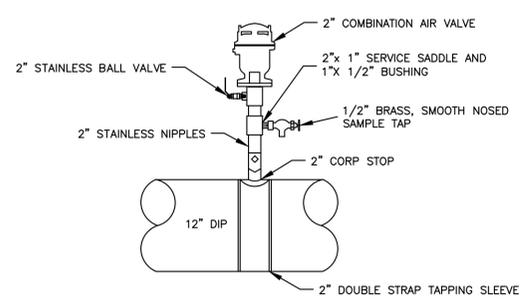
WELL 5 TO WELL 4 TIE-IN 2
SCALE: N.T.S.



PRESSURE RELIEF VALVE 3
SCALE: N.T.S.



PIPE STAND DETAIL 4
SCALE: N.T.S.



AIR VALVE WITH SAMPLE TAP DETAIL 5
SCALE: N.T.S.

NO.	DATE	BY	REVISION
1	10/31/2025	MU	NOTES REVISED

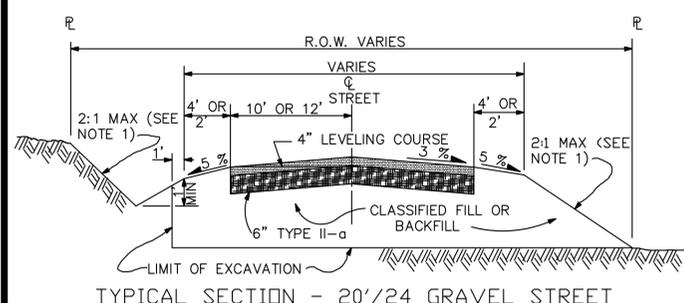
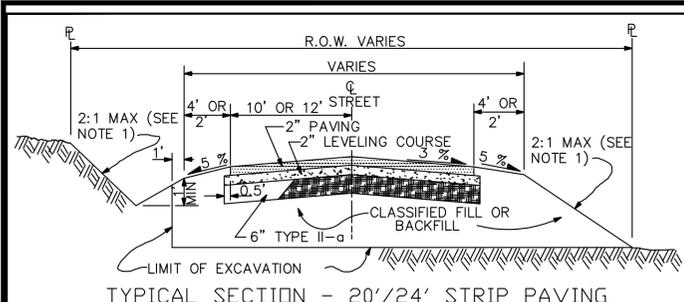
GENERAL DETAILS

**NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA**



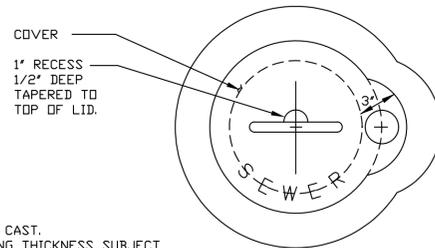
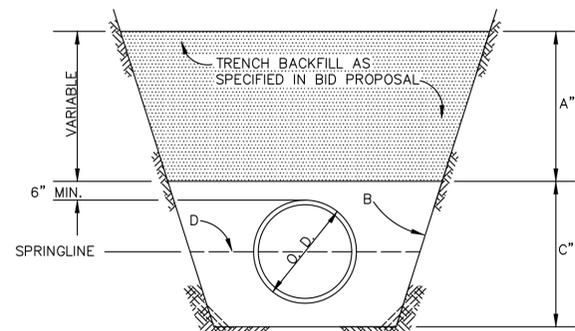
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BY : **D1** OF **2** SHEETS
DATE : JAN 2026
SCALE : AS SHOWN



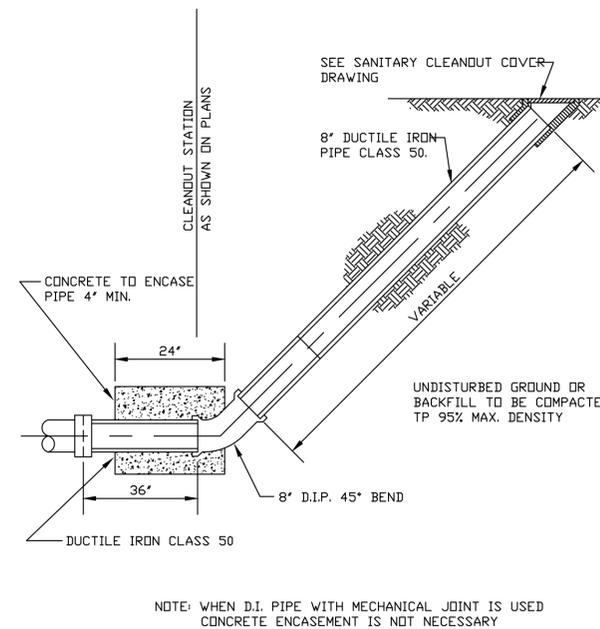
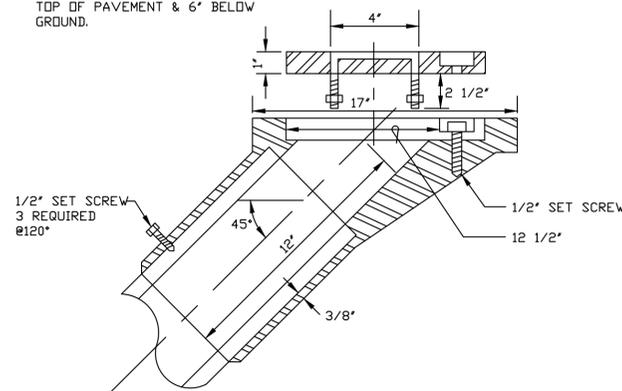
- NOTES:
1. MATERIAL TO BE PLACED OR REMOVED AND GRADED IN A NEAT MANNER FROM EXCAVATION LIMITS TO EXISTING ELEVATION AT PROPERTY LINE AS DIRECTED BY THE ENGINEER.
 2. DEPTH OF EXCAVATION TO BE DETERMINED BY THE ENGINEER.
 3. THE TOP 6" OF CLASSIFIED FILL OR BACKFILL IMMEDIATELY BENEATH THE LEVELING COURSE SHALL BE RESTRICTED TO MINUS 3-INCH MATERIAL.
 4. UNLESS OTHERWISE APPROVED, THE C OF STREET WILL BE THE C OF R.O.W.

- NOTES:
- (A) TRENCH BACKFILL MATERIAL PLACED AND COMPACTED TO DEPTHS AS DETERMINED BY THE ENGINEER.
 - (B) TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH AND CHARACTER. SLOPES TO CONFORM TO SAFETY STANDARDS.
 - (C) CLASS "B" OR "C" BEDDING.
 - (D) BEDDING TO SPRING LINE ONLY WHEN DUCTILE IRON PIPE IS INSTALLED.



NOTE:

1. TO BE CAST.
2. CASTING THICKNESS SUBJECT TO FOUNDRY REQUIREMENTS.
3. CASTING MUST BE SIZED TO 8" AND OVER, CLASS 22 C.I. OR CLASS 50 D.I. PIPE.
4. COVER SHALL BE 1/4" BELOW TOP OF PAVEMENT & 6" BELOW GROUND.



NOTE: WHEN D.I. PIPE WITH MECHANICAL JOINT IS USED CONCRETE ENCASEMENT IS NOT NECESSARY

SCALE: NTS
APPROVED: 02/03
REVIS: 02/03

TYPICAL SECTIONS FOR 20'/24' STRIP PAVING AND GRAVEL STREETS

SECTION: 20.01 THRU: 20.14
DETAIL #: 20-1

SCALE: NONE
APPROVED: 1/88
REVIS: 1/88

TRENCH BACKFILL

SECTION: 20.07
DETAIL #: 20-11

SCALE: 3"=1'-0"
APPROVED: 11/87
REVIS: 11/87

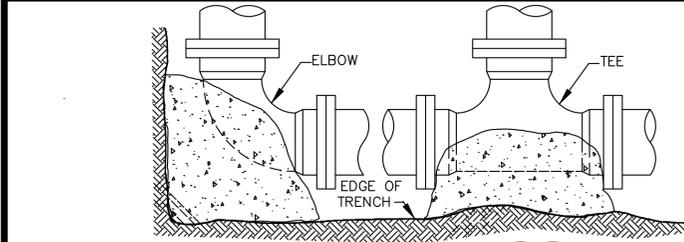
SANITARY CLEANOUT COVER

SECTION: 50.12
DETAIL #: 50-20

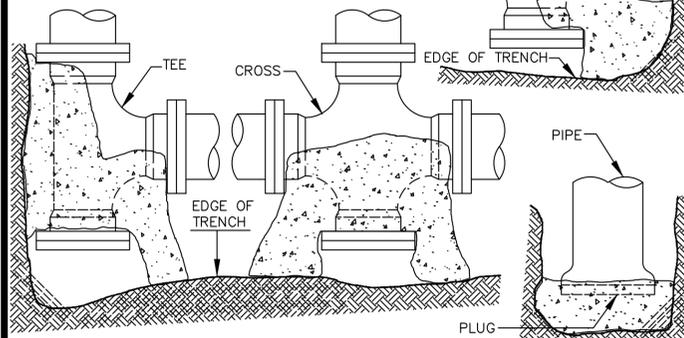
MUNICIPALITY: OF ANCHORAGE
SCALE: 1/2"=1'-0"
APPROVED: 11/87
REVIS: 11/87

SANITARY CLEANOUT

SECTION: 50.12
DETAIL #: 50-21



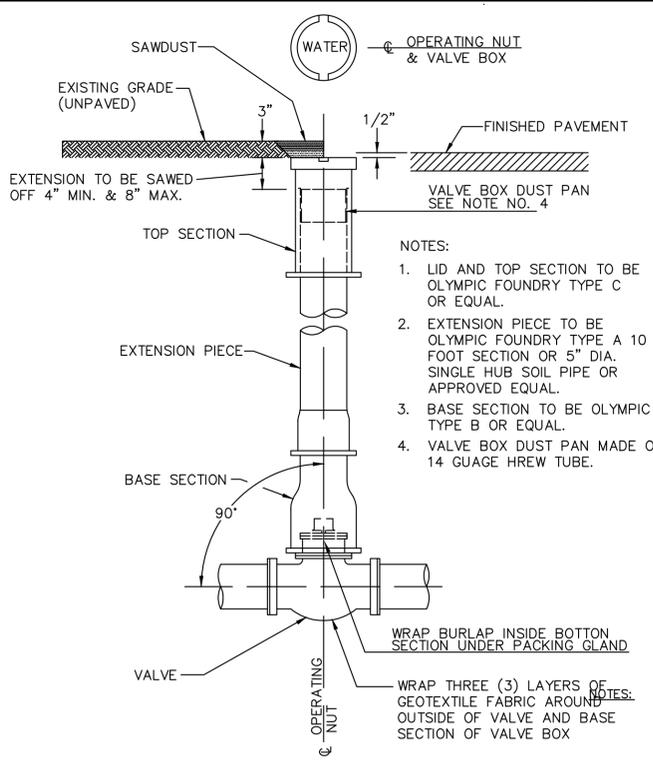
PIPE SIZE	90° BEND	45° BEND	PLUG
6"	2.0	1	2.0
8"	2.5	1.5	2.5
10"	4.5	2.5	4.5
12"	6	3.5	6
14"	8	4.5	8
16"	10.5	6	10.5
24"	24	13	24



SCALE: NTS
APPROVED: 11/87
REVIS: 11/87

THRUST BLOCK

SECTION: 60.02
DETAIL #: 60-2

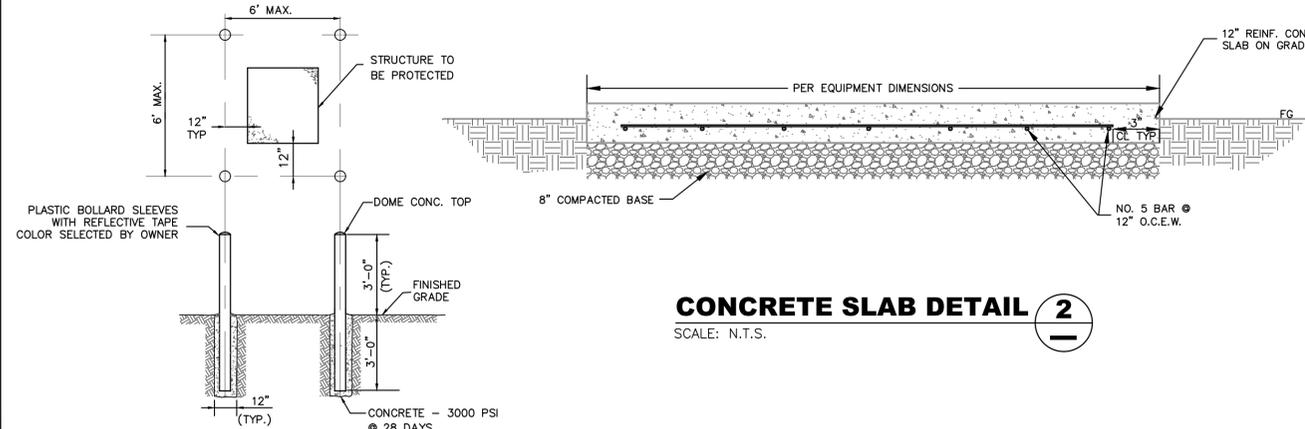


- NOTES:
1. LID AND TOP SECTION TO BE OLYMPIC FOUNDRY TYPE C OR EQUAL.
 2. EXTENSION PIECE TO BE OLYMPIC FOUNDRY TYPE A 10 FOOT SECTION OR 5" DIA. SINGLE HUB SOIL PIPE OR APPROVED EQUAL.
 3. BASE SECTION TO BE OLYMPIC TYPE B OR EQUAL.
 4. VALVE BOX DUST PAN MADE OF 14 GAUGE HREW TUBE.

SCALE: NTS
APPROVED: 11/87
REVIS: 11/87

TYPICAL VALVE BOX

SECTION: 60.03
DETAIL #: 60-4



CONCRETE SLAB DETAIL 2

SCALE: N.T.S.

1. BOLLARDS TO BE 6" SCH. 40 STEEL PIPE, 6'-0" LONG AND FILLED WITH CONCRETE.
2. BOLLARDS ON SIDE NOT ACCESSIBLE TO VEHICLES MAY BE OMITTED.
3. DO NOT BLOCK HOSE CONNECTIONS ON HYDRANT.
4. BOLLARD SPACING PER PLANS.

BOLLARD DETAIL

SCALE: N.T.S.

NO.	REVISION	DATE	BY

GENERAL DETAILS

NEW WELL 5 PUMPING STATION VALDEZ, ALASKA

TITLE

PROJECT



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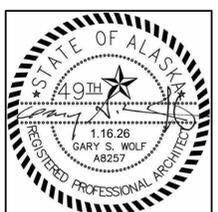
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DATE: JAN 2026
SCALE: AS SHOWN

SHEET D2 OF 2 SHEETS

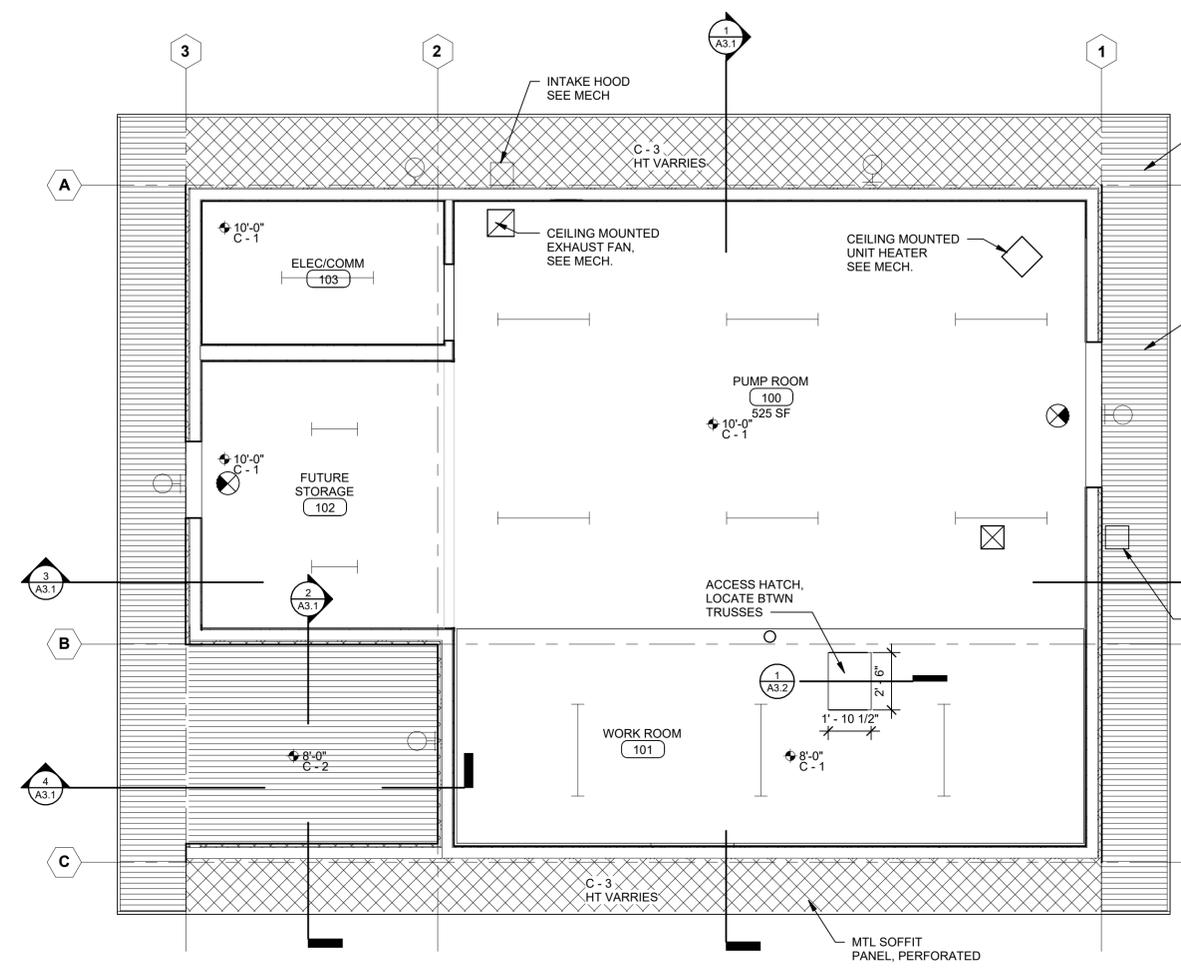
REVISION	BY	DATE	APPROVAL

WOLF
ARCHITECTURE
625 S Cobb St Palmer, AK 99645
907.746.6670 | wolfarchitecture.com

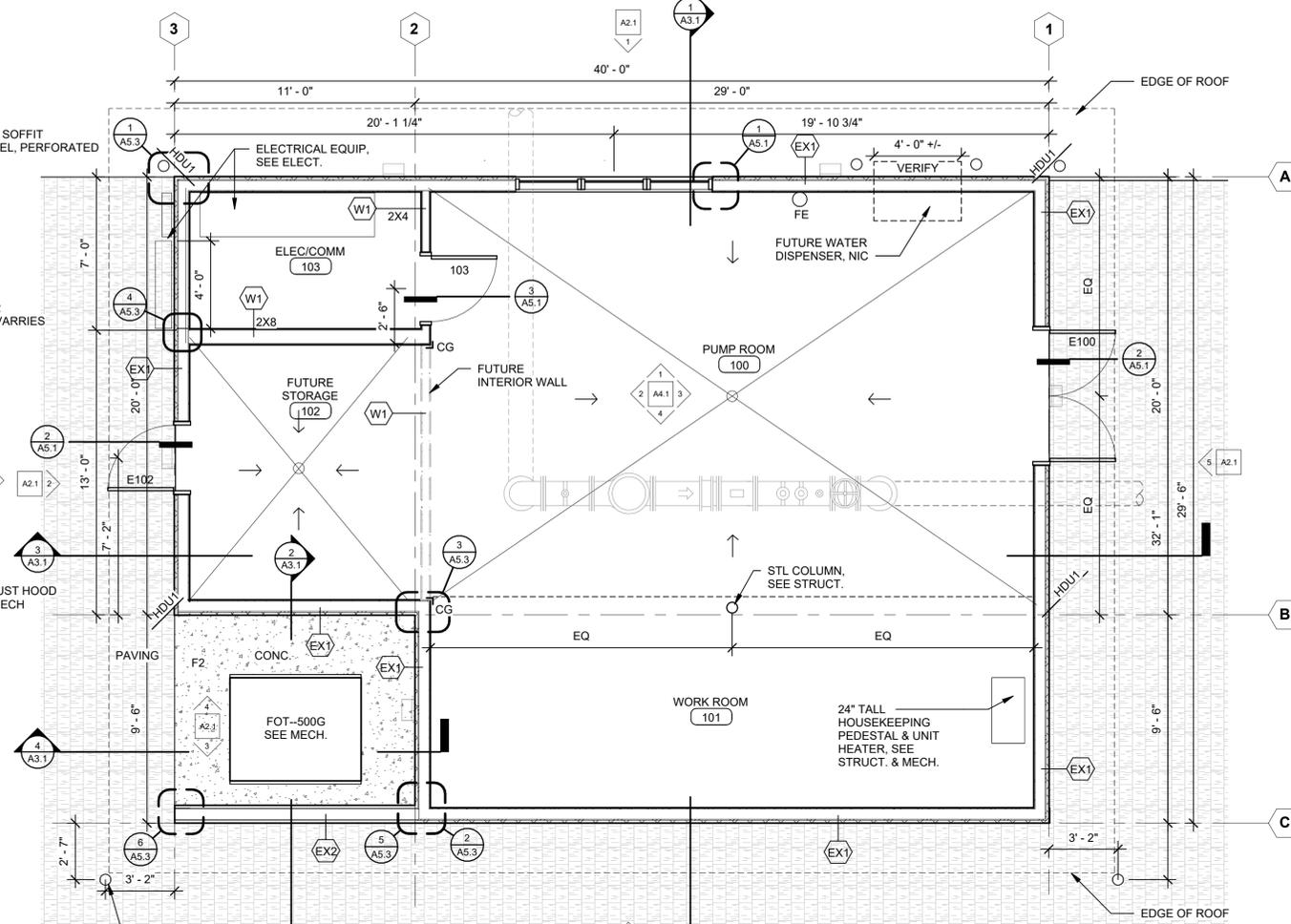
TITLE: **FIRST FLOOR & REFLECTED CEILING PLANS**
PROJECT: **NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA**



DAY ENGINEERING
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BY: **A1.1** DATE: 1/16/26 SCALE: 1/4" = 1'-0"



FIRST FLOOR REFLECTED CEILING PLAN
Scale: 1/4" = 1'-0"



FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"

GENERAL RCP NOTES

- SEE FINISH SCHEDULE FOR COLORS.
- ALL GYP BD CEILINGS AND SOFFITS TO BE PAINTED.
- EXCEPT AT ELECTRICAL UTILITY ROOMS PAINT ALL EXPOSED DUCTWORK, PIPING AND CONDUITS.
- CEILING HEIGHT TO BE MEASURED FROM FINISH FLOOR LEVEL OF THE ROOM OR THE AREA WHERE CEILING IS IN.

RCP - CODED NOTES

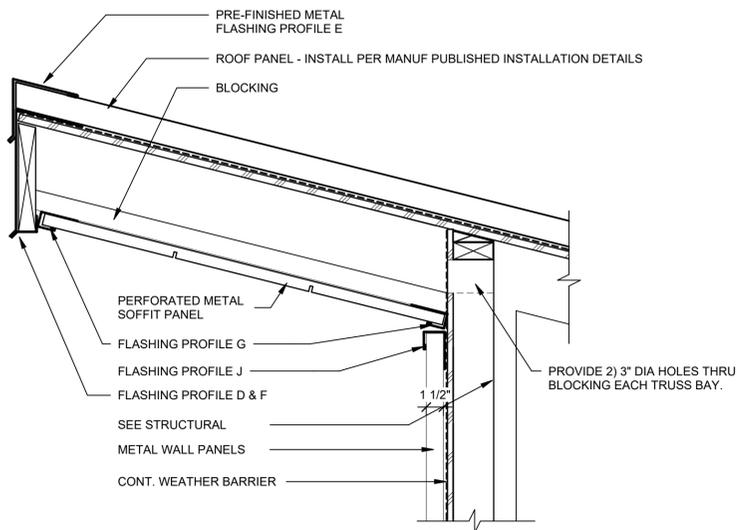
- C - 1 5/8" GWB
- C - 2 METAL SOFFIT PANEL
- C - 3 PERFORATED METAL SOFFIT PANEL

LEGEND

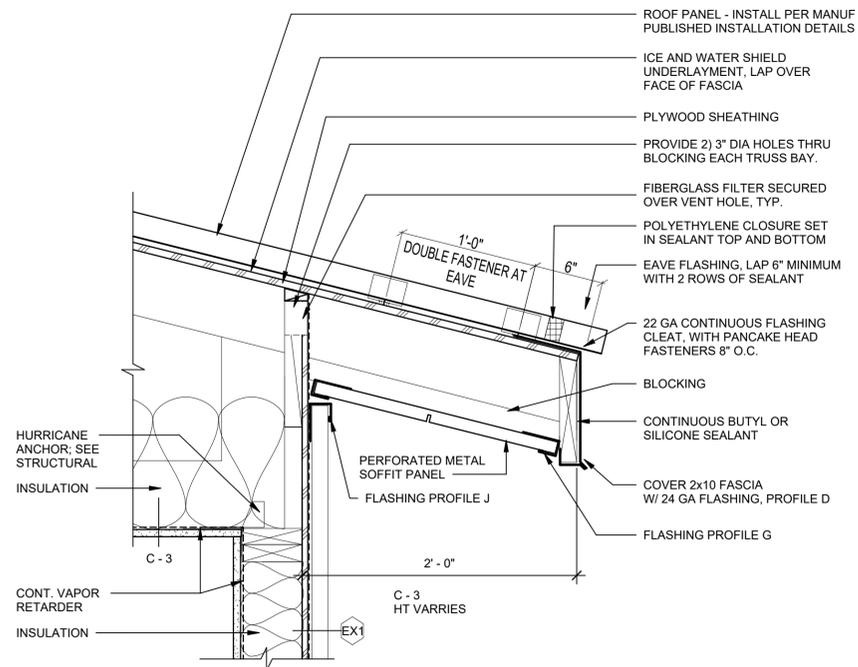
- 1'-0" C-1 CEILING HEIGHT (HEIGHTS INDICATED ARE RELATIVE TO 100'-0" FLOOR LEVEL).
- STRIPLIGHT - PENDANT OR SURFACE MTD WALL
- SURFACE MOUNTED LIGHT FIXTURES
- ⊠ SUPPLY DIFFUSERS
- ⊠ RETURN AIR REGISTER OR EXHAUST FAN
- ⊗ EXIT LIGHT

GENERAL NOTES

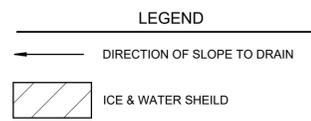
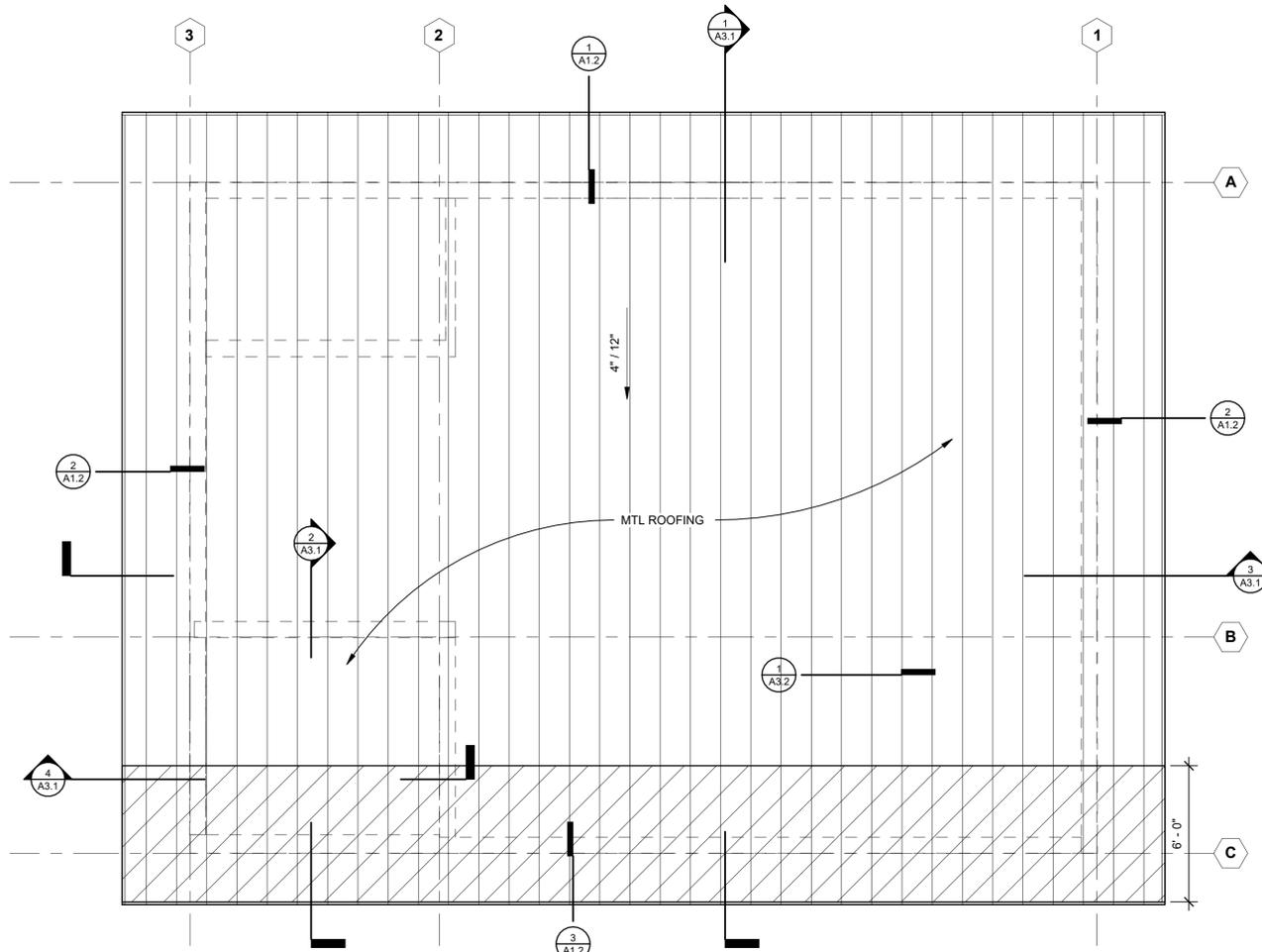
- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DRAWINGS, DIMENSIONS, SPECIFICATIONS, AND SCHEDULES PRIOR TO PROCEEDING WITH ANY WORK OF FABRICATION. NOTIFY ARCHITECT IMMEDIATELY OF ANY UNCERTAINTY OR DISCREPANCY.
- DRAWINGS SHALL NOT BE SCALED.
- WHERE NOTES ON THE DRAWINGS INDICATE A CONDITION AT ONE LOCATION, WHETHER INDICATED AS TYPICAL OR NOT, THE NOTE SHALL APPLY TO ALL SIMILAR LOCATIONS UNLESS NOTED OTHERWISE.
- SEE SHEET G0.01 FOR SYMBOLS, ABBREVIATIONS, ETC.
- SEE SHEET G0.02 FOR TYPICAL ADA DETAILS AND CLEARANCES.
- SEE SHEET G0.02 FOR TYPICAL ACCESSORY MOUNTING HEIGHTS.
- DIMENSIONS ARE TYPICALLY TAKEN TO GRID LINE, FACE OF STUD WALL, UNLESS NOTED OTHERWISE OR INDICATED ON DETAILS. A DIMENSION NOTING "5'-0" CLEAR" WOULD DENOTE FACE OF FINISH.
- WALL TYPES W1 UNLESS NOTED OTHERWISE.



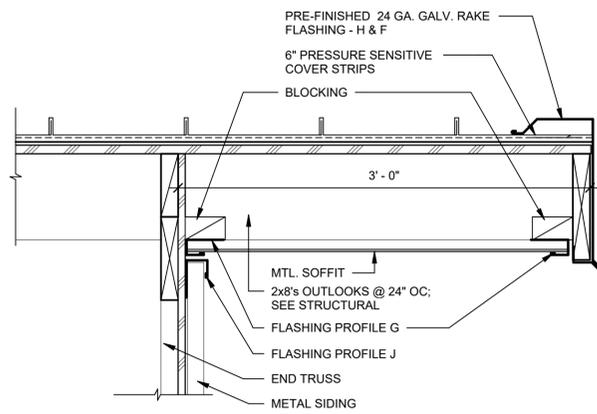
1 TYP - TOP OF EAVE DETAIL
Scale: 1 1/2" = 1'-0"



3 TYP - EAVE DETAIL
Scale: 1 1/2" = 1'-0"



ROOF PLAN
Scale: 1/4" = 1'-0"



2 TYP - RAKE DETAIL
Scale: 1 1/2" = 1'-0"

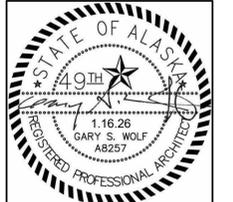
GENERAL NOTES

- SEE G SHEETS FOR TYPICAL ROOF CONSTRUCTION
- VENTS, EXHAUST, & COWLS ARE MECHANICAL PENETRATION ITEMS. SEE MECHANICAL FOR LOCATIONS, TYPES, SIZES AND QUANTITY OF ALL PENETRATIONS. PENETRATIONS SHALL BE MIN 18" FROM ANY RIDGE VALLEY HIP, OR EDGE OF ROOF.
- ALL FLASHING & ROOFING TIE-INS TO PLUMBING & HVAC PENETRATIONS ARE BY ROOFING CONTRACTOR.
- PROVIDE MINIMUM R-38 INSUL AT ALL ROOFS OCCURRING ABOVE INTERIOR BUILDING AREA. SEE DETAILS.
- SEE EXTERIOR ELEVATIONS FOR ADDITIONAL ROOFING DETAIL INDICATIONS.
- SEE A5.3 FOR FLASHING DETAILS

NO.	REVISION	BY	DATE	APPROVAL

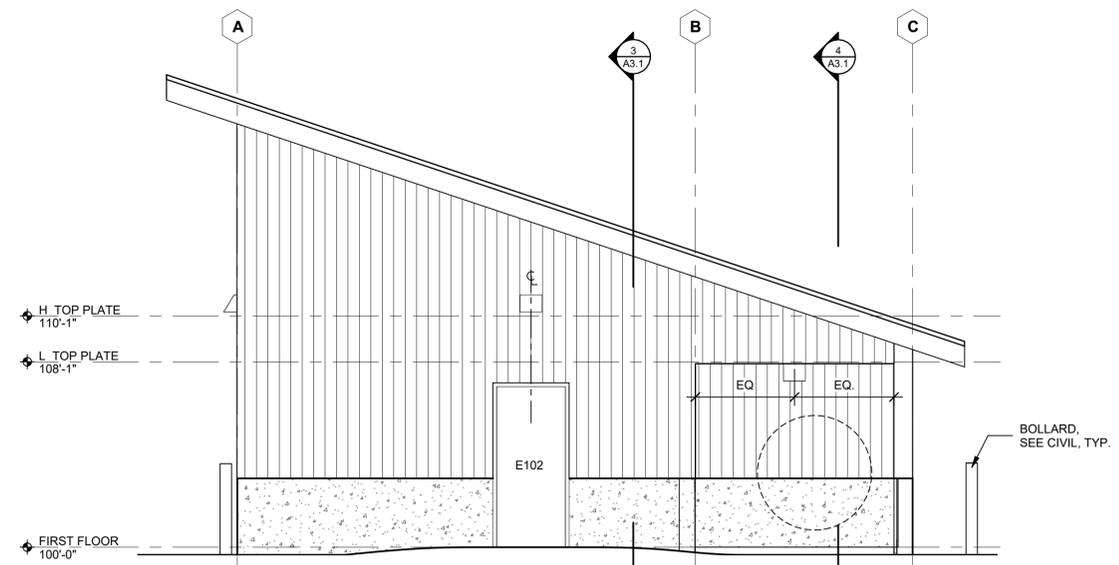
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625 S Cobb St Palmer, AK 99645
907.746.6670 | wolfarchitecture.com

ROOF PLAN & DETAILS
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

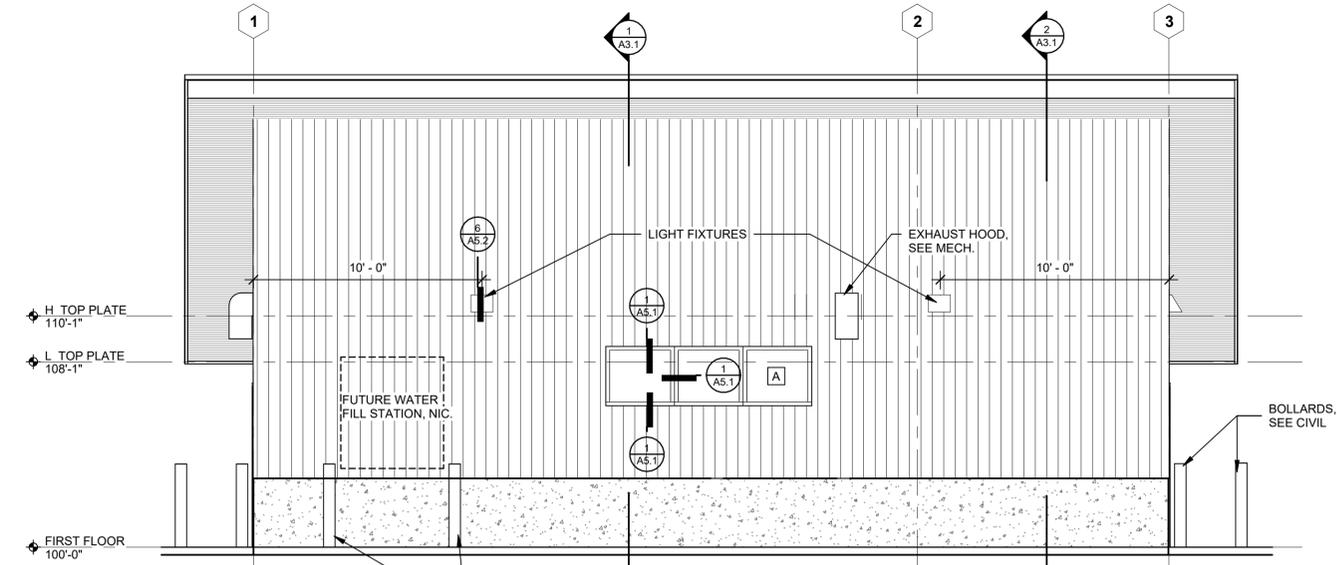


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BY: **A1.2** DATE: 1/16/26 SCALE: **AS SHOWN**

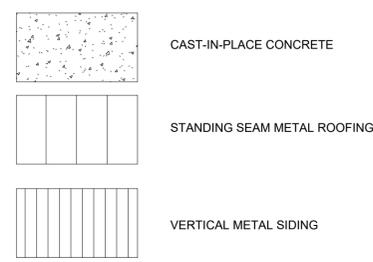


2 NORTHEAST ELEVATION
Scale: 1/4" = 1'-0"



1 SOUTHEAST ELEVATION
Scale: 1/4" = 1'-0"

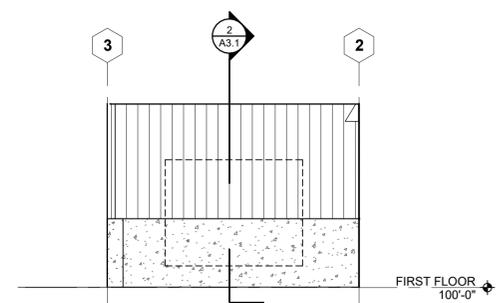
MATERIALS LEGEND



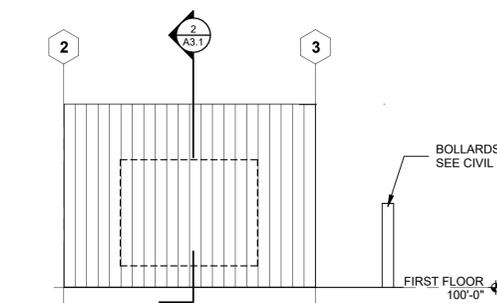
NOTE: THIS LEGEND DOES NOT INCLUDE ALL MATERIALS. SEE NOTES & REFERENCED DETAILS FOR ADDITIONAL INFORMATION.

EXTERIOR ELEVATION GENERAL NOTES

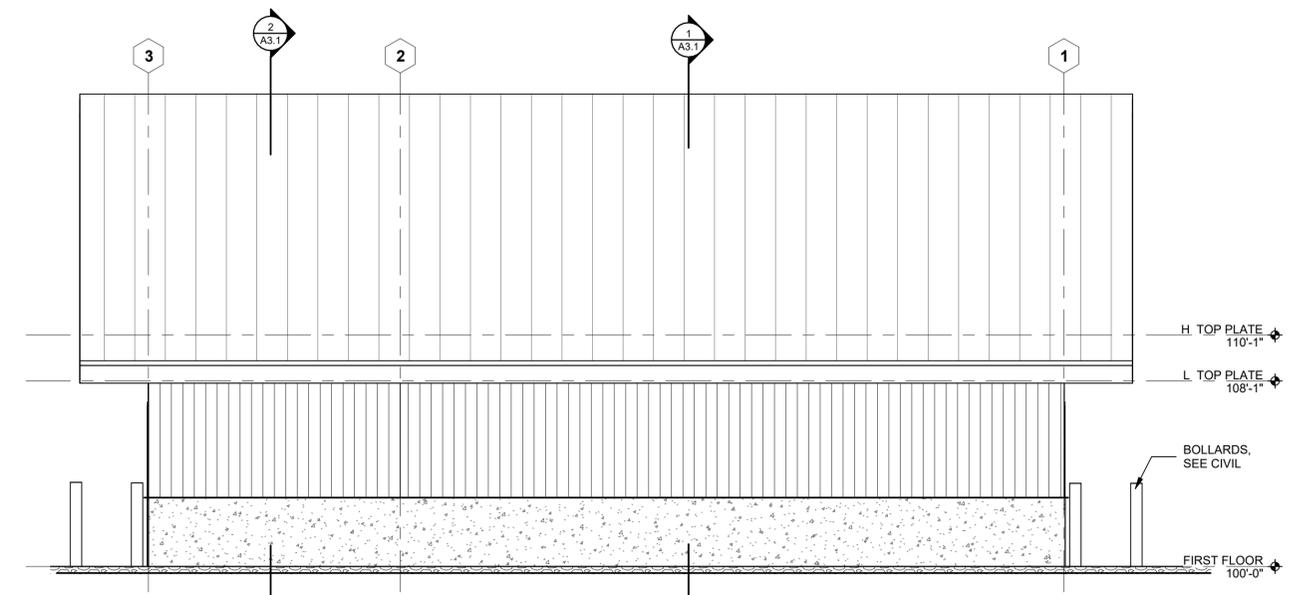
1. LOCATION AND SPACING OF WINDOW MULLIONS, MASONRY CONTROL JOINTS AND COURSE PATTERNS, ETC., ARE TO BE AS SHOWN ON EXTERIOR ELEVATIONS. WHERE NOT DIMENSIONED OR DETAILED, WINDOW MULLIONS AND MATERIAL JOINTS ARE TO BE EQUALLY SPACED AND/OR CENTERED/ALIGNED W/ ADJACENT ELEMENT (MASONRY COLUMN, EDGE OR CENTER LINE OF WINDOW OR DOOR OPENING, ETC.) AS SHOWN.
2. SEE SHEET AX.X FOR ALUMINUM LOUVER TYPES AND SEE MECH FOR COORDINATION WITH DUCTWORK.
3. REFER TO DETAILS FOR DIMENSION REFERENCE POINTS.
4. C.J'S EXTEND FULL HEIGHT OF MASONRY, TYP. WHERE "C.J" IS INDICATED AT INSIDE CORNERS THE JOINT SHALL PENETRATE THE MASONRY SURFACE ON WHICH THE LABEL OCCURS. SEE DETAILS FOR ADDITIONAL C.J LOCATIONS.
5. ALL WINDOW AND LOUVER DIMENSIONS ARE FOR ROUGH OR MASONRY OPENING, UNLESS NOTED OTHERWISE. SEE PLANS FOR ADDITIONAL DIMENSION INFORMATION.
6. 100'-0" IS THE DATUM ELEVATION AND CORRESPONDS TO THE REFERENCED FLOOR SLAB ELEVATION 1078.00'. SEE CIVIL FOR FURTHER INFORMATION.
7. EXTERIOR WALL FINISHES EXTEND FULL HEIGHT TO SOFFITS (NOT SHOWN WHERE EAVES OBSCURE VIEW). SEE BUILDING SECTIONS & DETAILS.
8. SEE REFLECTED CEILING PLANS (RCP) FOR SHEET METAL CLAD SOFFIT COLORS. SHEET METAL CLAD FIN'S & VERT FACE OF SOFFIT TO MATCH COLOR OF ASSOCIATED SOFFIT AS NOTED ON RCP.



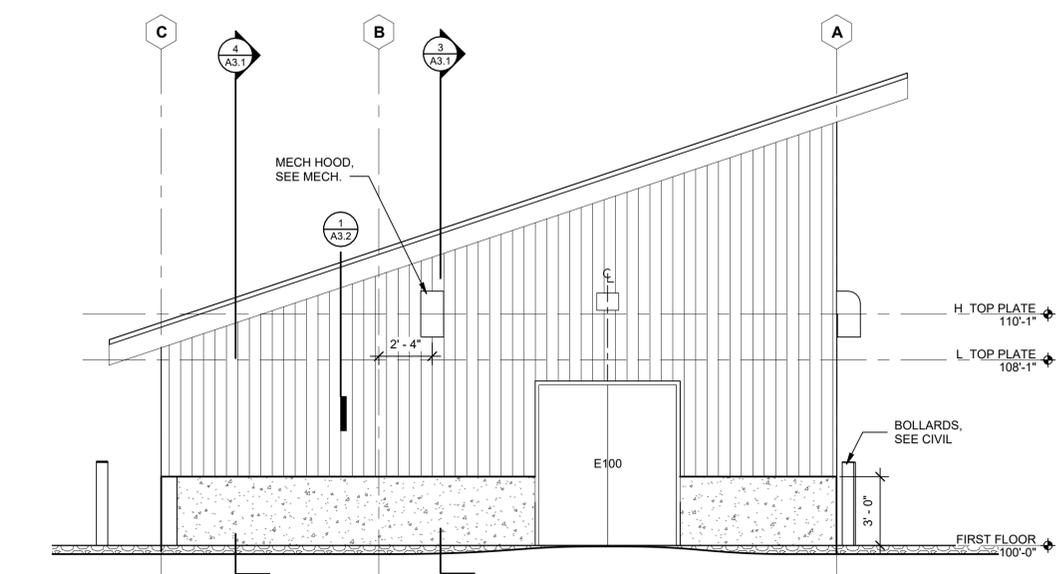
4 NW ELEVATION 2
Scale: 1/4" = 1'-0"



3 SE ELEVATION 2
Scale: 1/4" = 1'-0"



6 NORTHWEST ELEVATION
Scale: 1/4" = 1'-0"



5 SOUTHWEST ELEVATION
Scale: 1/4" = 1'-0"

NO.	REVISION	DATE	BY

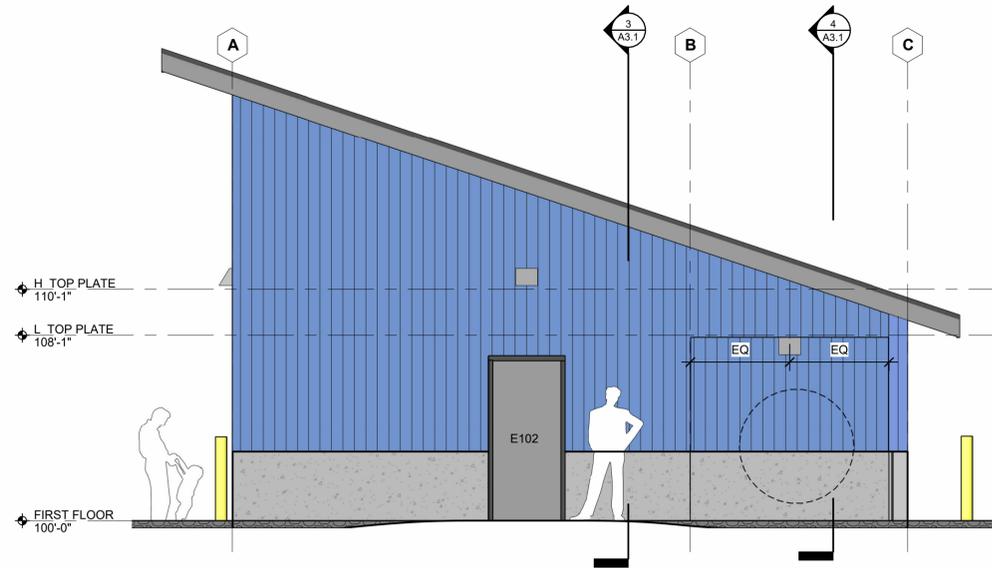
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EXTERIOR ELEVATIONS
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

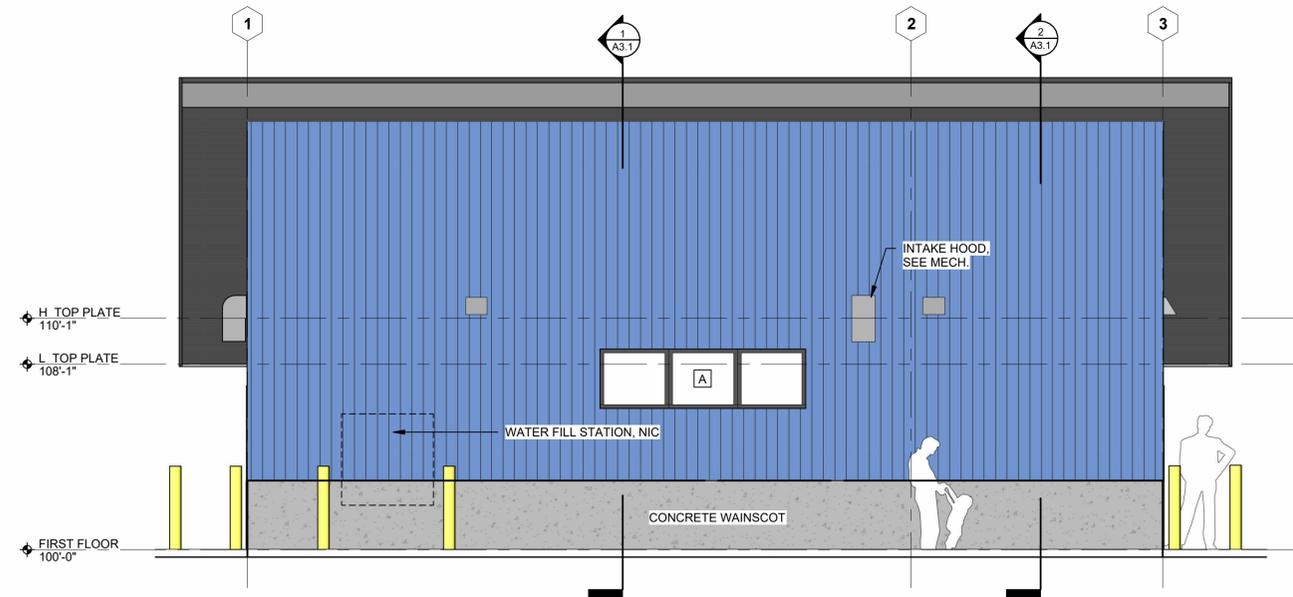


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BY: DATE: 1/16/26
SCALE: **A2.1**

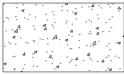
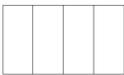
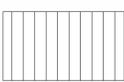


2 NORTHEAST ELEVATION COLOR
Scale: 1/4" = 1'-0"



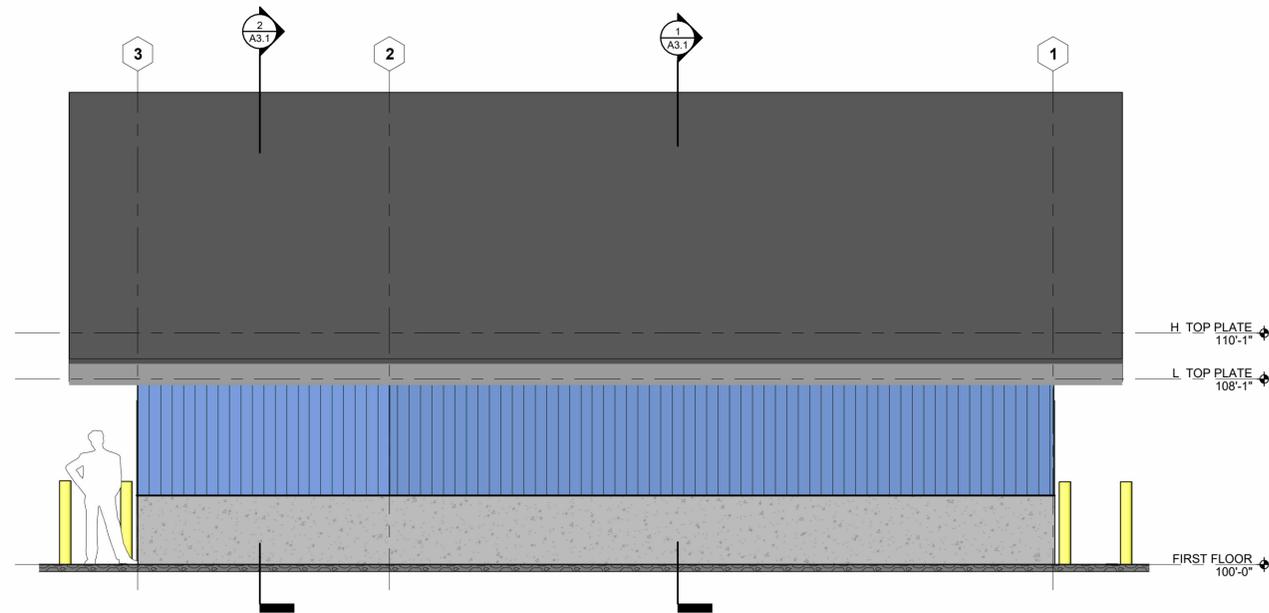
1 SOUTHEAST ELEVATION COLOR
Scale: 1/4" = 1'-0"

MATERIALS LEGEND

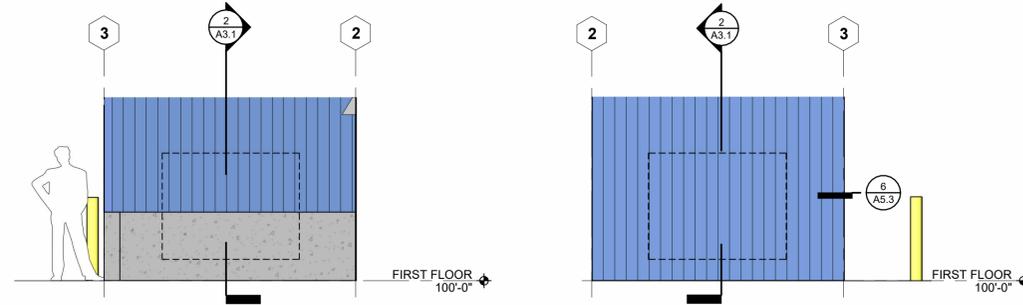
-  CAST-IN-PLACE CONCRETE
-  STANDING SEAM METAL ROOFING
-  VERTICAL METAL SIDING

NOTE: COLORED ELEVATIONS ARE PROVIDED FOR MATERIAL AND FINISH REFERENCE. CONFIRM COLOR SELECTION WITH ARCHITECT AND OWNER PRIOR TO ORDERING MATERIAL.

NOTE: THIS LEGEND DOES NOT INCLUDE ALL MATERIALS. SEE NOTES & REFERENCED DETAILS FOR ADDITIONAL INFORMATION.

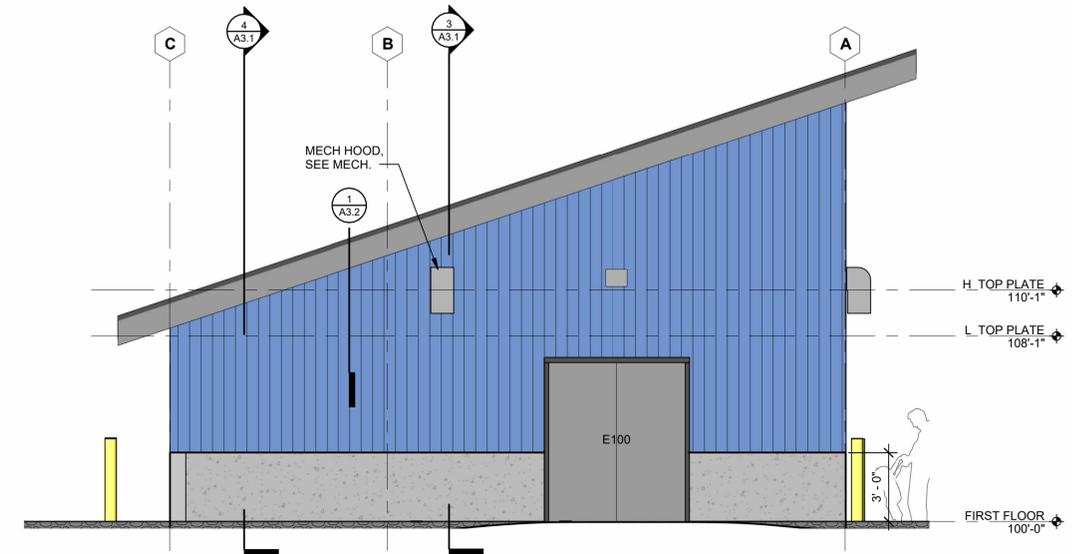


6 NORTHWEST ELEVATION COLOR
Scale: 1/4" = 1'-0"



4 NW ELEVATION 2 COLOR
Scale: 1/4" = 1'-0"

3 SE ELEVATION 2 COLOR
Scale: 1/4" = 1'-0"



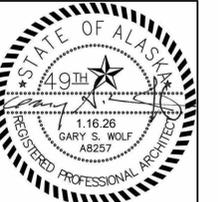
5 SOUTHWEST ELEVATION COLOR
Scale: 1/4" = 1'-0"

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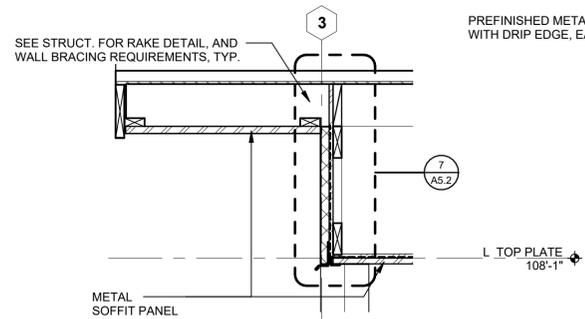
ELEVATIONS - COLOR
 NEW WELL 5 PUMPING STATION
 VALDEZ, ALASKA



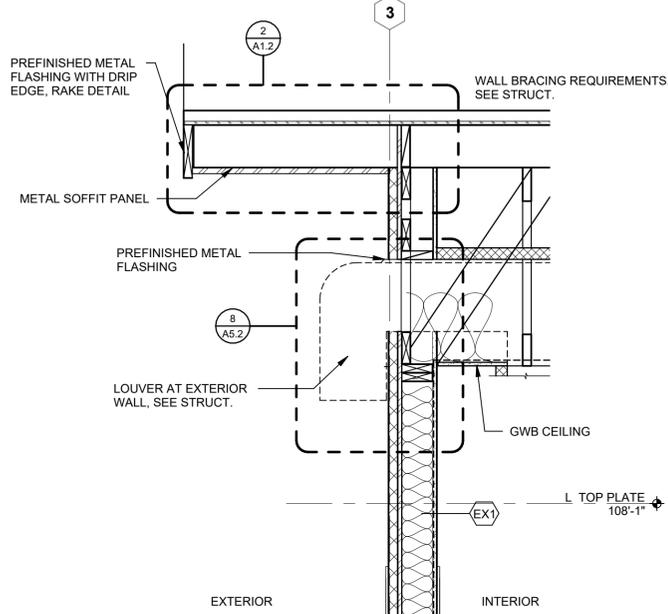
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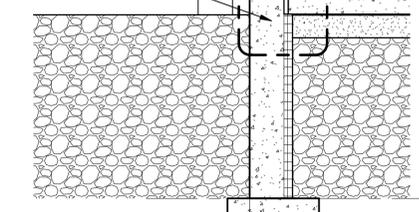
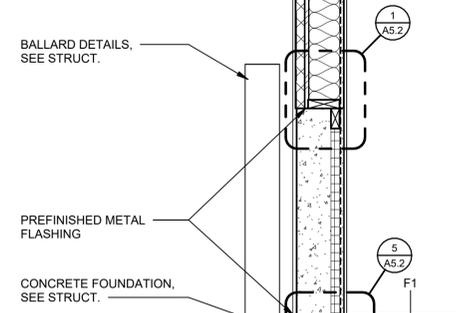
BY: DATE: 01/16/2026
SCALE: **A2.2**



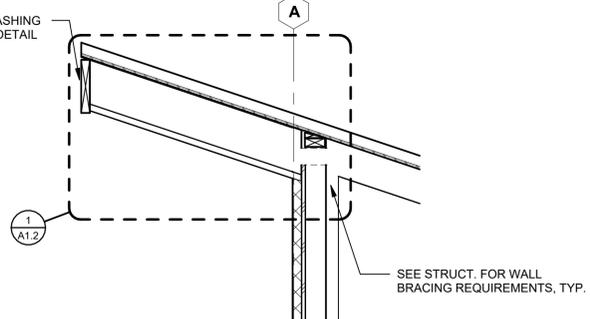
3 WALL SECTION 2
Scale: 3/4" = 1'-0"



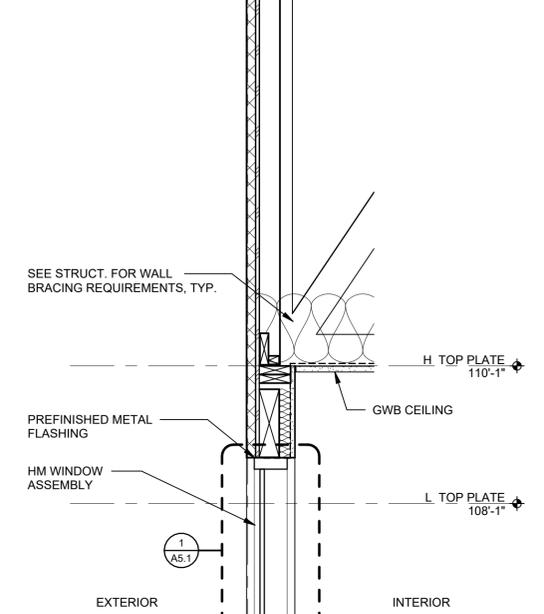
EXTERIOR INTERIOR



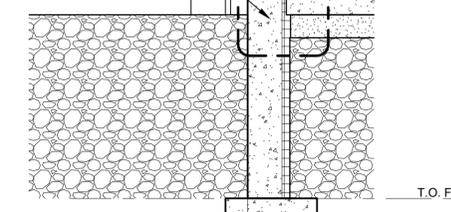
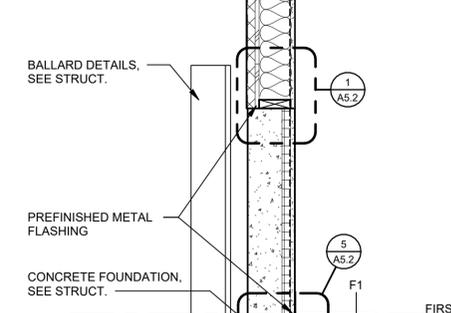
8 WALL SECTION 8
Scale: 3/4" = 1'-0"



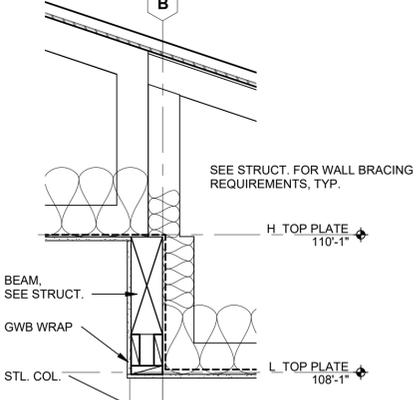
3 WALL SECTION 6
Scale: 3/4" = 1'-0"



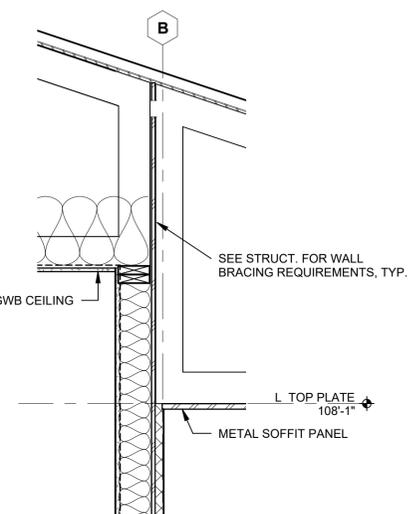
EXTERIOR INTERIOR



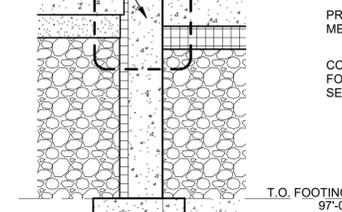
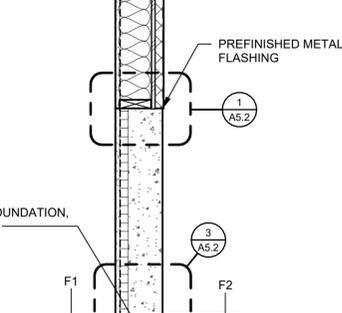
7 WALL SECTION 7
Scale: 3/4" = 1'-0"



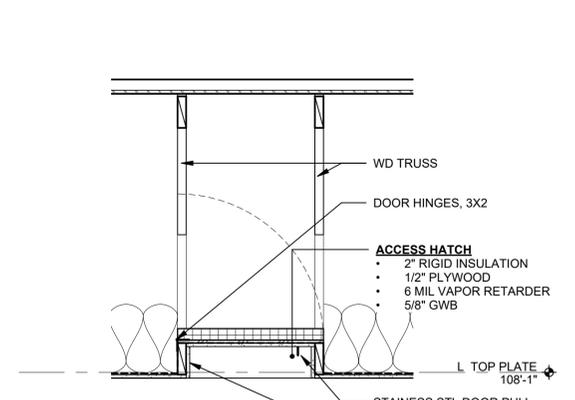
2 WALL SECTION 1
Scale: 3/4" = 1'-0"



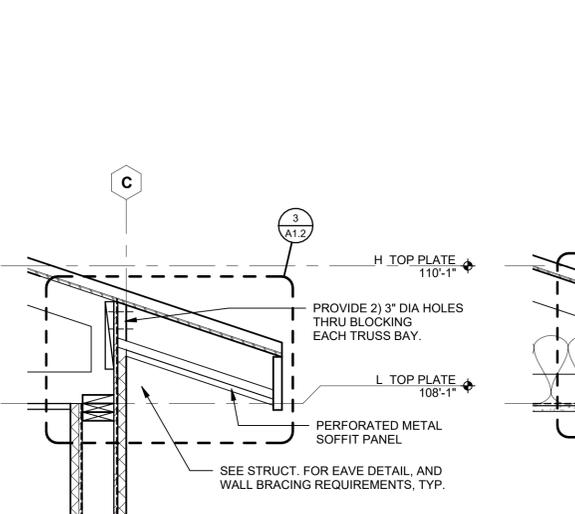
INTERIOR COVERED EXTERIOR



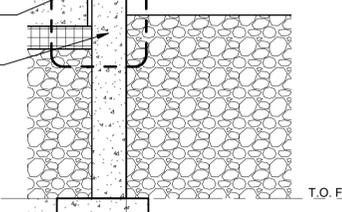
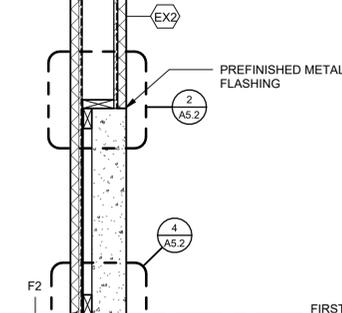
6 WALL SECTION 5
Scale: 3/4" = 1'-0"



1 ATTIC ACCESS
Scale: 3/4" = 1'-0"

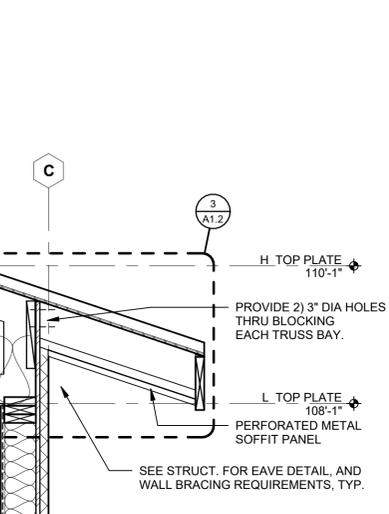


COVERED EXTERIOR EXTERIOR

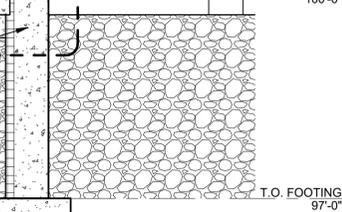
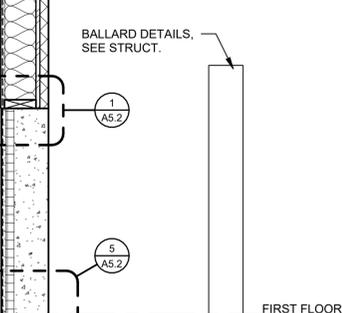


5 WALL SECTION 4
Scale: 3/4" = 1'-0"

SHEET NOTES:
1. SEE SHEET G1.1 FOR WALL CONSTRUCTION
2. SEE A5.3 FOR FLASHING DETAILS



INTERIOR EXTERIOR

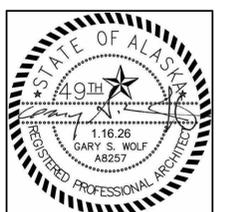


4 WALL SECTION 3
Scale: 3/4" = 1'-0"

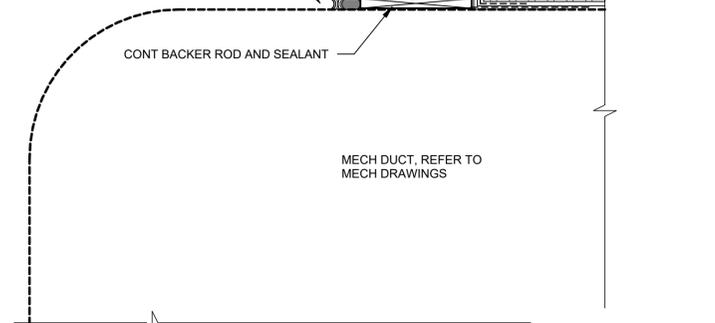
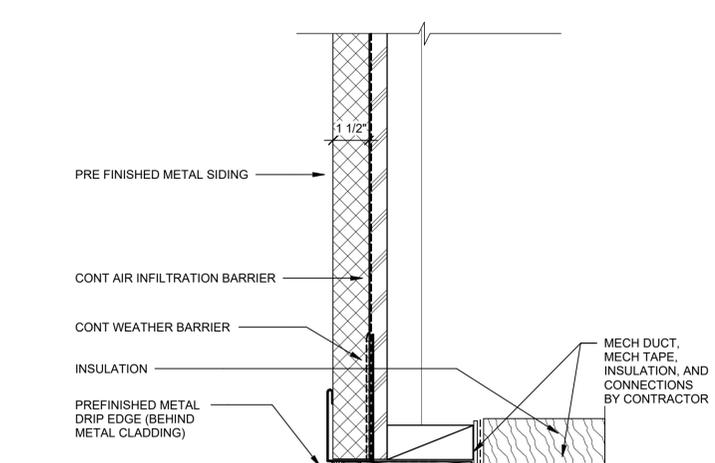
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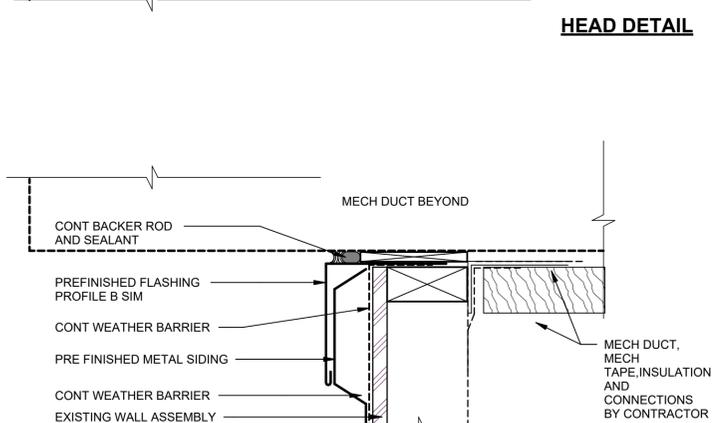
WALL SECTIONS
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA



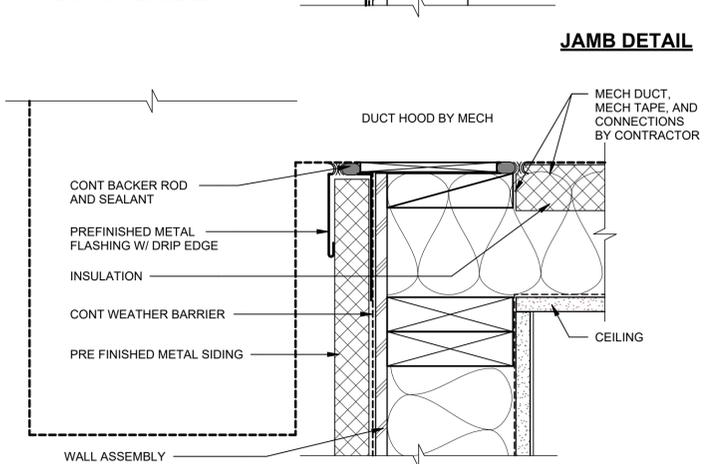
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SCALE: **A3.2**



HEAD DETAIL



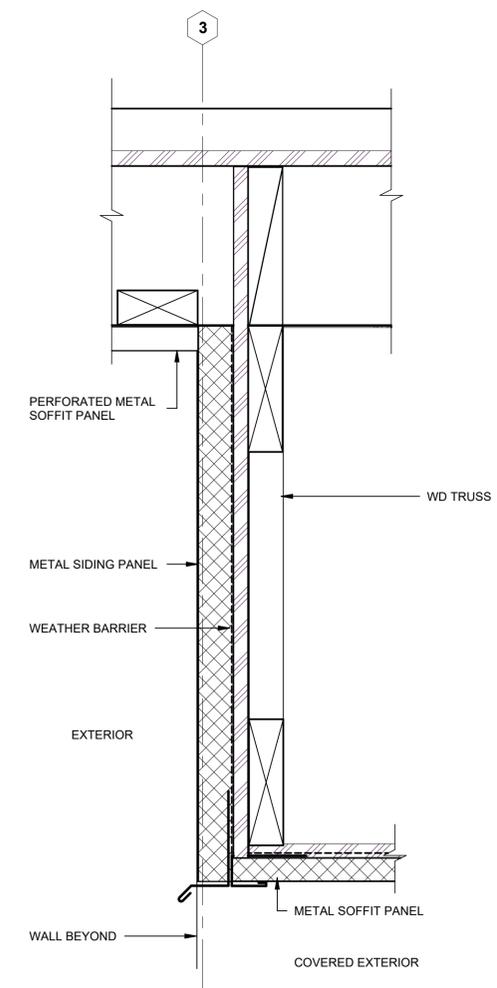
JAMB DETAIL



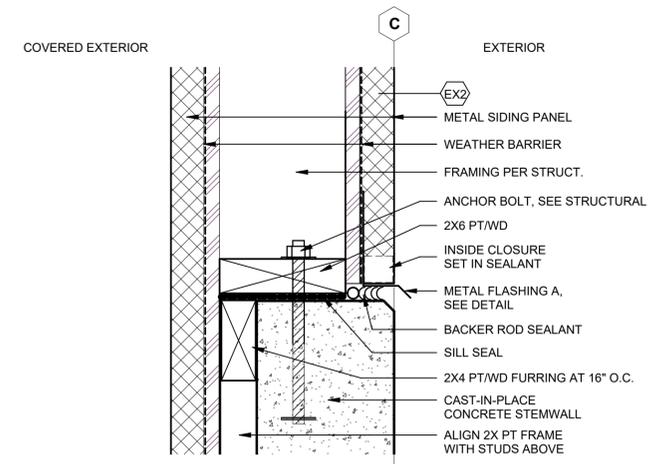
SILL DETAIL

8 LOUVER AT EXTERIOR WALL
Scale: 3" = 1'-0"

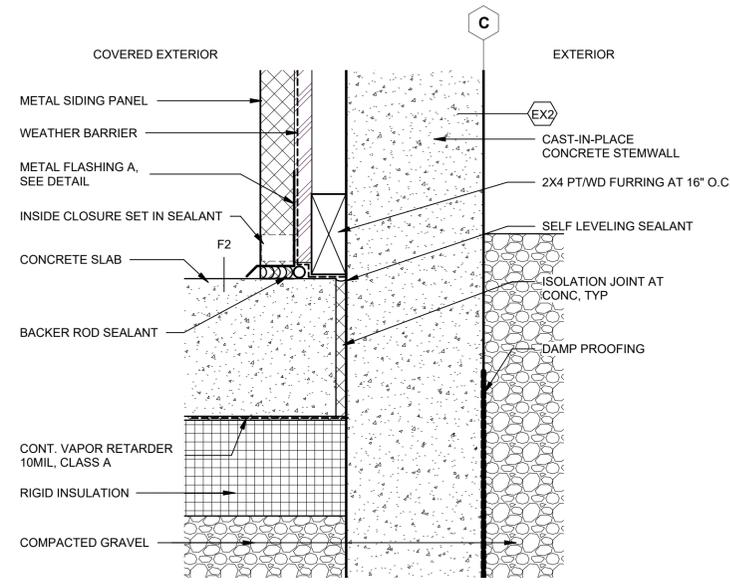
SHEET NOTES:
1. SEE SHEET G1.1 FOR WALL CONSTRUCTION
2. SEE A5.3 FOR FLASHING DETAILS



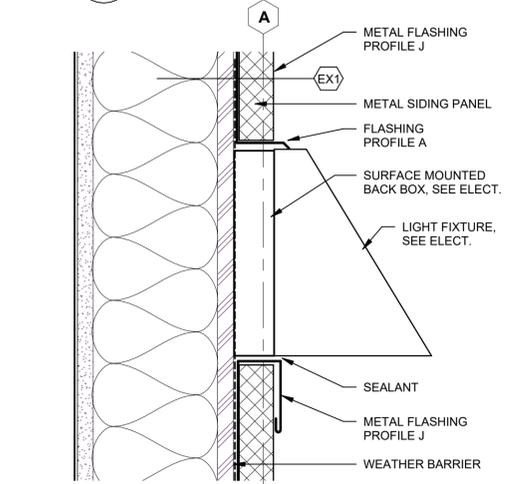
7 WALL DETAIL 7 - RAKE
Scale: 3" = 1'-0"



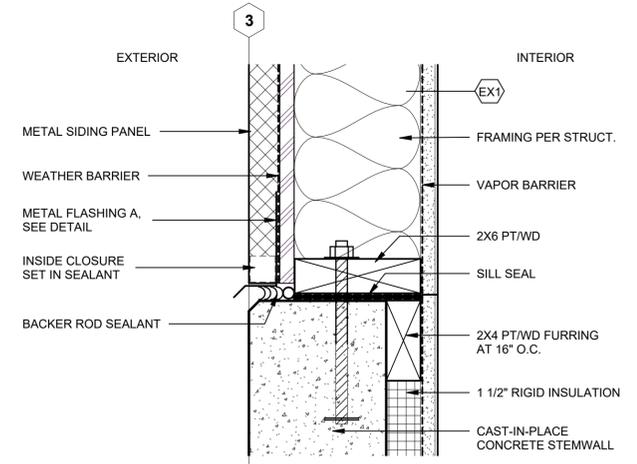
2 EXT. WALL - UPPER
Scale: 3" = 1'-0"



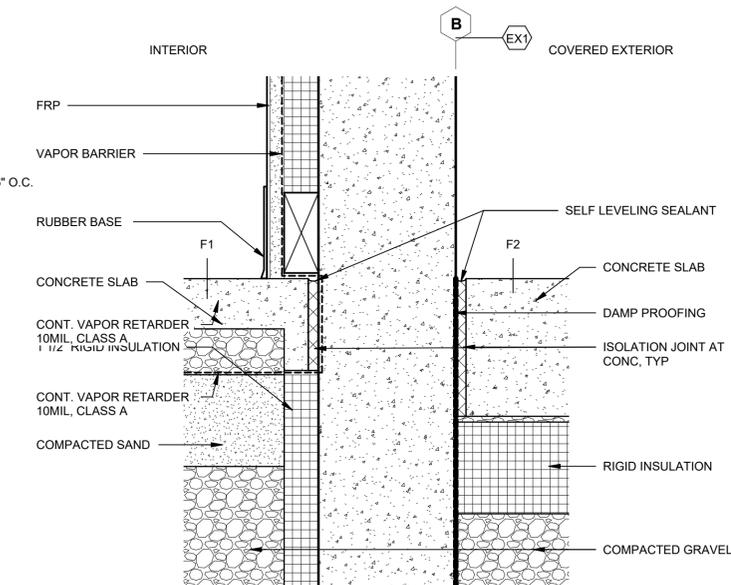
4 EXT. WALL - BASE
Scale: 3" = 1'-0"



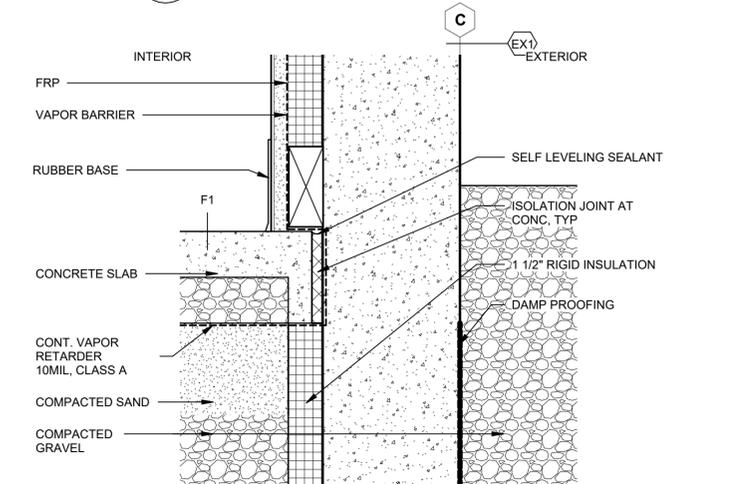
6 LIGHT FIXTURE DETAIL, TYP.
Scale: 3" = 1'-0"



1 WALL DETAIL 1
Scale: 3" = 1'-0"



3 WALL DETAIL 3
Scale: 3" = 1'-0"

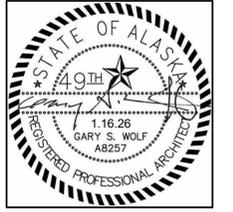


5 WALL DETAIL 5
Scale: 3" = 1'-0"

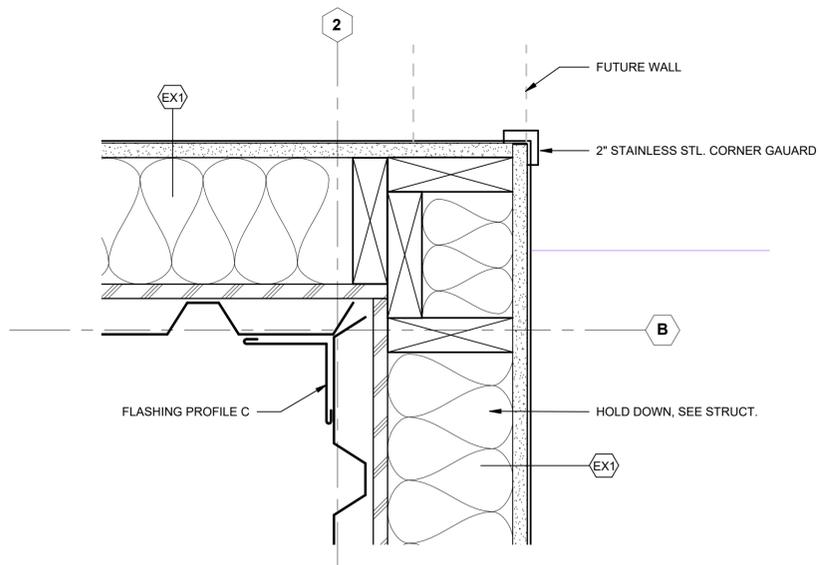
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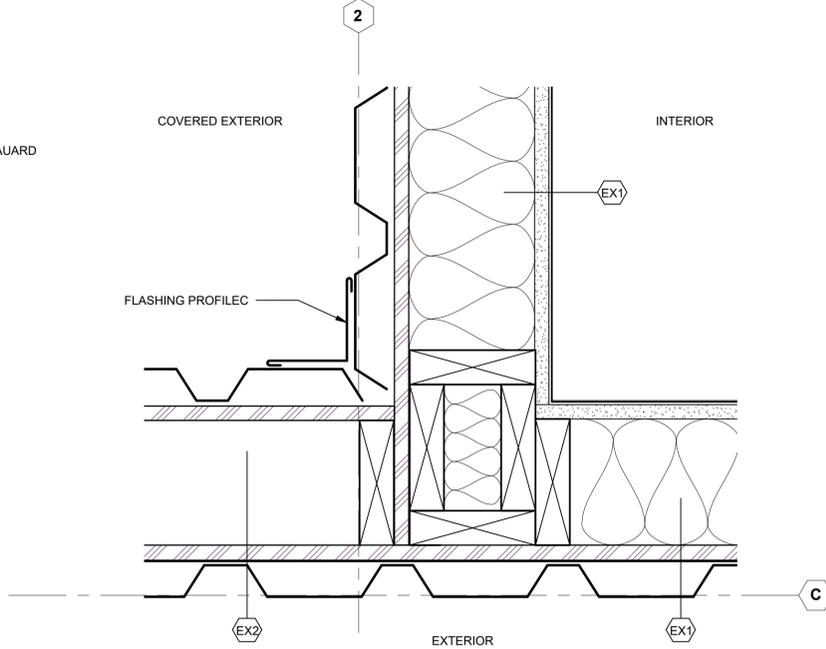
WALL DETAILS
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA



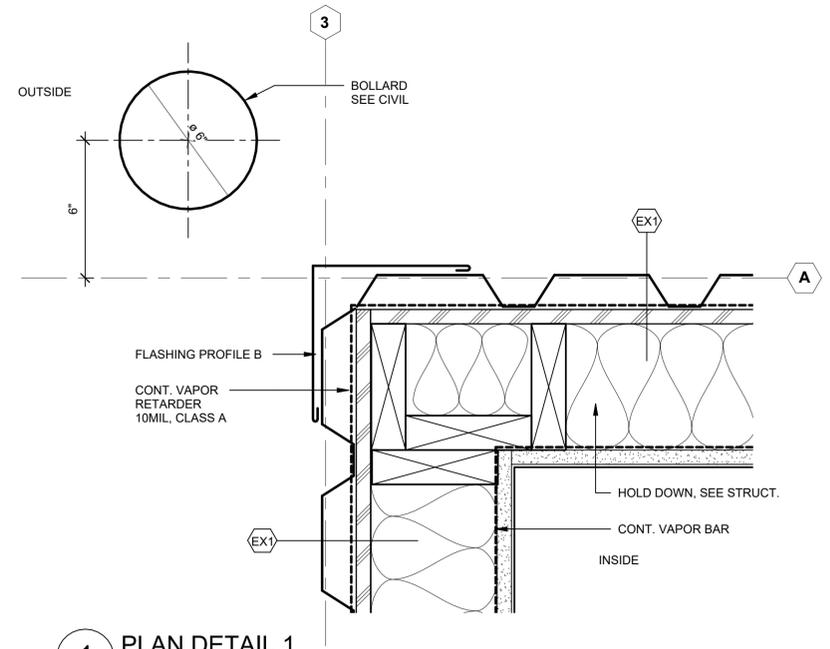
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BY: DATE: 01/16/2026
SCALE: **A5.2**



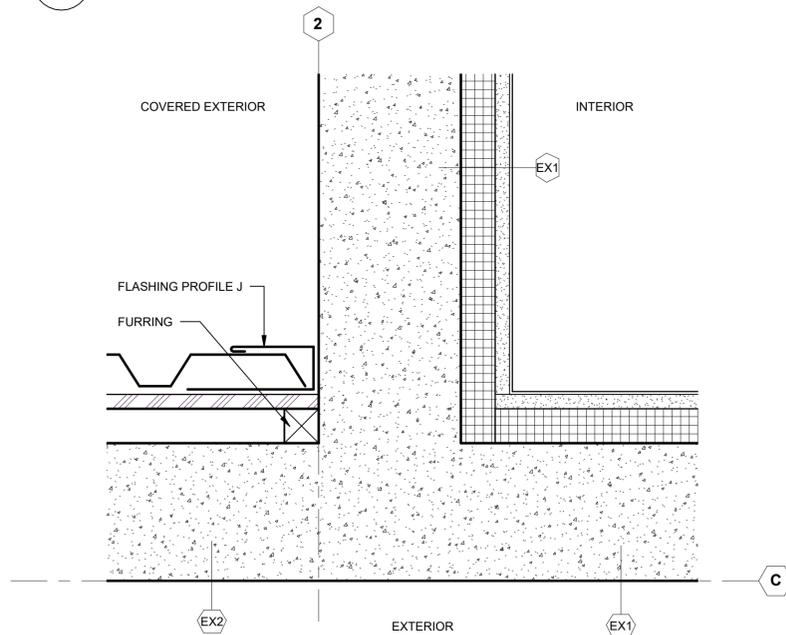
3 PLAN DETAIL 5
Scale: 3" = 1'-0"



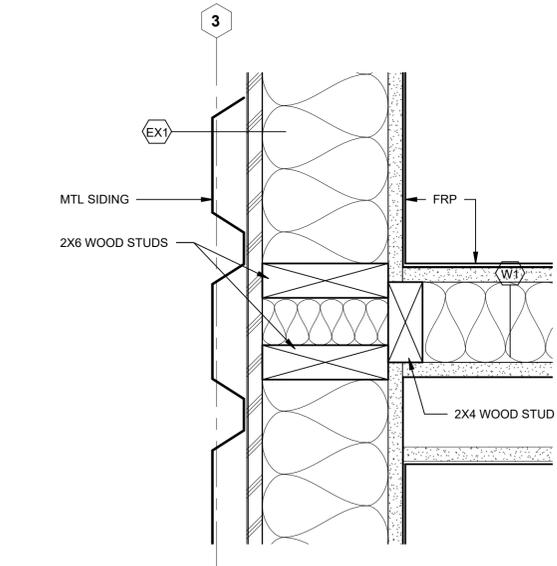
2 PLAN DETAIL 6 UPPER
Scale: 3" = 1'-0"



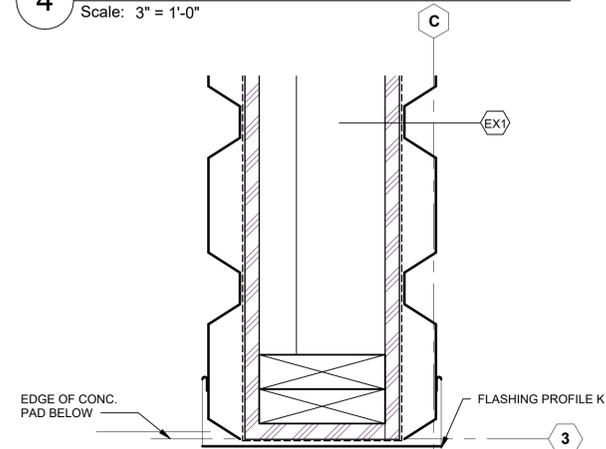
1 PLAN DETAIL 1
Scale: 3" = 1'-0"



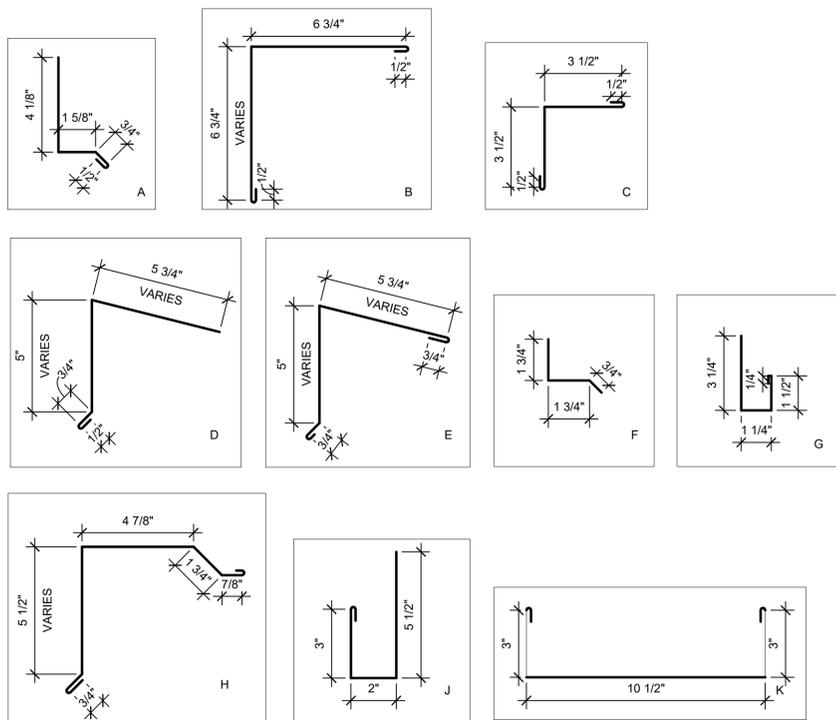
5 PLAN DETAIL 3 LOWER
Scale: 3" = 1'-0"



4 PLAN DETAIL 2
Scale: 3" = 1'-0"



6 DETAIL 4
Scale: 3" = 1'-0"

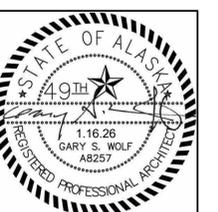


8 FLASHING PROFILES
Scale: 3" = 1'-0"

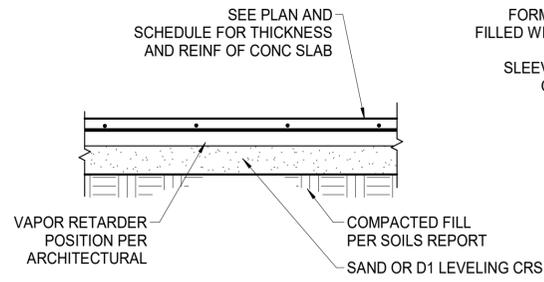
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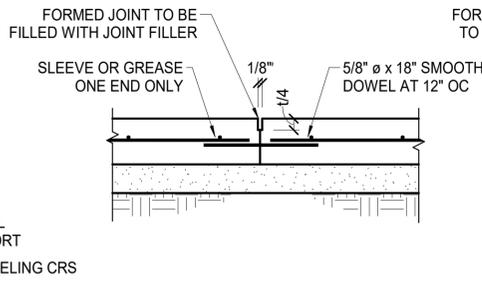
PLAN DETAILS
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA



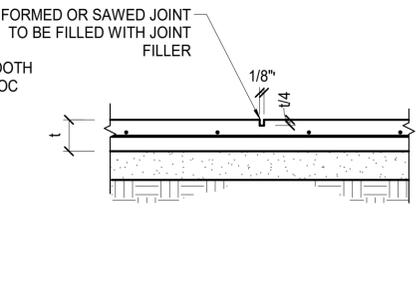
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BY: DATE: 01/16/2026
SCALE:
A5.3
SHEET



TYPICAL INTERIOR SLAB ON GRADE

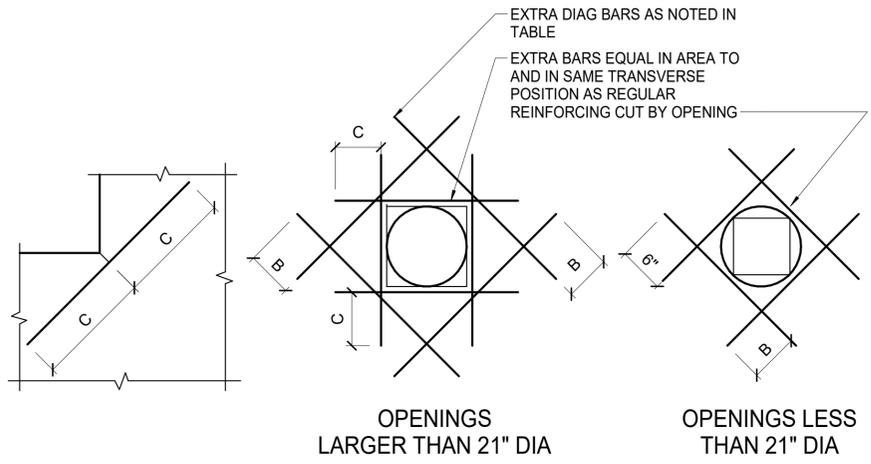


TYPICAL SLAB CONSTRUCTION JOINTS



TYPICAL SLAB CONTROL JOINT

1 TYPICAL SLAB JOINTS
3/4" = 1'-0"



RE-ENTRANT CORNERS

OPENING REINFORCING

C=LAP SPLICE MIN
B=12" MIN
EXTRA BARS NOT REQUIRED AT SLEEVES OR WALL PIPES WHEN REINFORCING IS NOT CUT AND OPENING IS LESS THAN 10 INCH

EXTRA DIAG BARS	
CONCRETE THICKNESS	BAR SIZE
4"-7.99"	4
8"-9.99"	5
10"-11.99"	5 T&B
12"-18"	6 T&B

SLAB REINFORCING SCHEDULE			
THICKNESS	TYPE	REINFORCING	CONCRETE COVER
4"	ON GRADE	#3 @ 16" OC EACH WAY	2" FROM TOP
6"	ON GRADE	#3 @ 16" OC EACH WAY	2" FROM TOP

NOTES:

CONCRETE WALL REINFORCING SCHEDULE					
MARK	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING	POSITION	REMARKS
6C	6"	#5 @ 16" OC	#5 @ 12" OC	CENTERED	TYPICAL CONCRETE STEM WALL

NOTES:
ALL HORIZONTAL REINFORCING SHALL TERMINATE AT WALL ENDS, INTERSECTIONS AND JAMBS WITH A STANDARD HOOK.

STRIP FOOTING REINFORCING SCHEDULE					
MARK	FTG WIDTH	FTG DEPTH	T.O.F. ELEV.	LONGITUDINAL REINFORCING	TRANSVERSE REINFORCING
SF3	3'-0"	12"	SEE PLAN	(4) #5 TOP & BOTTOM	#5 AT 12" OC

NOTES:

ACI STANDARD 90° HOOK DIMENSIONS						
BAR SIZE	#3	#4	#5	#6	#7	#8
MIN. BEND DIAM. (d)	2 1/4"	3"	3 3/4"	4 1/2"	5 1/4"	6"
EXTENSION LENGTH (L)	6"	6"	8"	9"	11"	12"

NOTE: REFERENCE ACI 318-14 SEC. 25.3

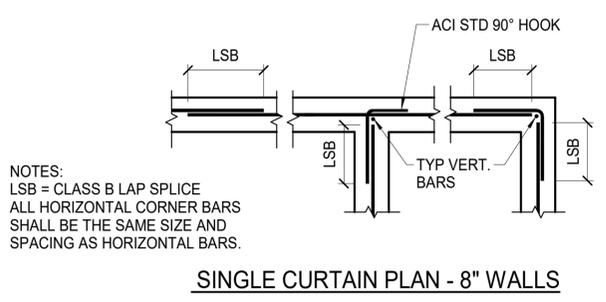
LAP SPLICES IN WALLS, FOOTINGS AND SLABS-ON-GRADE (3000 PSI)						
BAR SIZE	#3	#4	#5	#6	#7	#8
CLASS B SPLICE	22"	29"	36"	43"	63"	72"

NOTE: INCREASE TABULATED LAP LENGTH BY 20% FOR BUNDLES OF 3 BARS.

REINFORCING CLEARANCE/COVER		
EXPOSURE CONDITION	MIN. COVER	TOLERANCE*
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	-3/8", +1"
EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER BARS: #6 AND LARGER BARS:	-1/4", +1/2" -1/4", +1/2"
NOT EXPOSED TO EARTH, WEATHER OR IN CONTACT WITH GROUND:	3/4"	-1/4", +3/8"
TIES AND STIRRUPS	1 1/2"	-1/4", +1/2"

NOTES: "-" INDICATES TOLERANCE DECREASE TOWARDS MEMBER FACE. "+" INDICATES AWAY FROM MEMBER FACE.

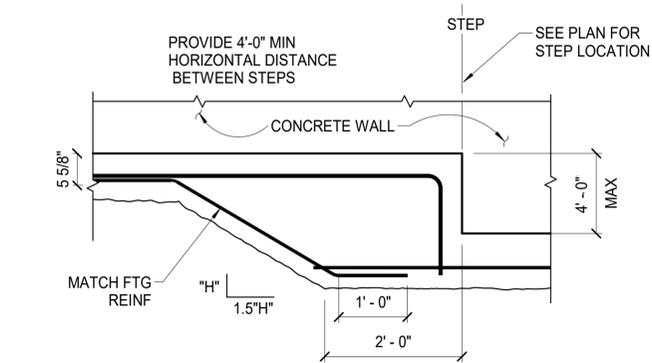
2 TYPICAL WALL OPENING REINFORCING
1" = 1'-0"



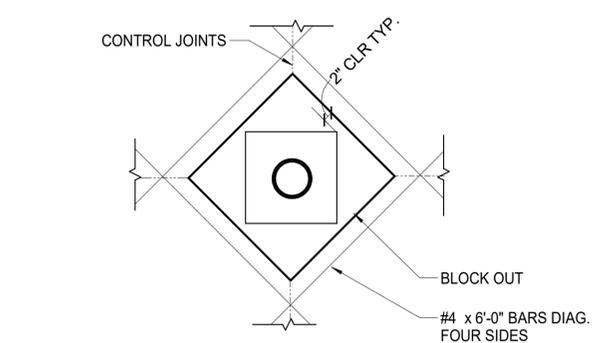
NOTES:
LSB = CLASS B LAP SPLICE
ALL HORIZONTAL CORNER BARS SHALL BE THE SAME SIZE AND SPACING AS HORIZONTAL BARS.

SINGLE CURTAIN PLAN - 8" WALLS

3 TYPICAL WALL CORNER REINFORCING
3/4" = 1'-0"



4 TYPICAL STEP FOOTING
3/4" = 1'-0"

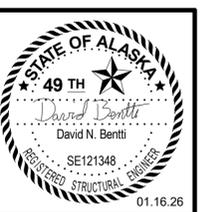


5 COLUMN ISOLATION JOINTS
3/4" = 1'-0"

NO.	DATE	BY	REVISION

P N D
ENGINEERS, INC.
625 South Cobb Street, Suite 202
Palmer, AK 99645
PH 907.707.1981
WWW.PNDEENGINEERS.COM
AK LIC# A500250

TITLE CONCRETE REINFORCING SCHEDULES AND TYPICAL DETAILS
PROJECT NEW WELL 5 PUMPING STATION VALDEZ, ALASKA

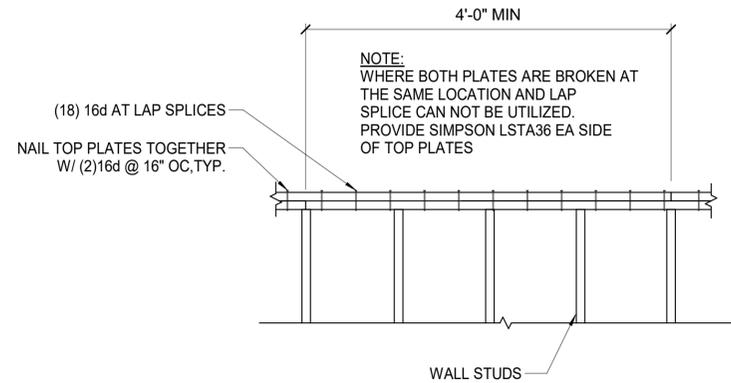


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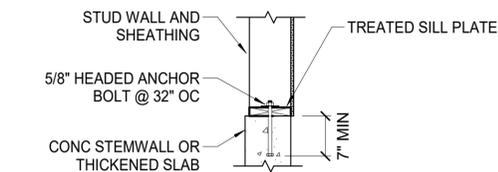
BY: DNB
DATE: 01/16/2026
SCALE:

S1.3
SHEET

HEADER SCHEDULE				
MARK	SIZE	TRIMMER STUDS	KING STUDS	NOTES
H1	4x12	(1) 2x6	(2) 2x6	
H2	5.5x12 GLB	(2) 2x6	(4) 2x6	
NOTE: ALL HEADERS ARE LOCATED AT THE TOP OF OPENING.				

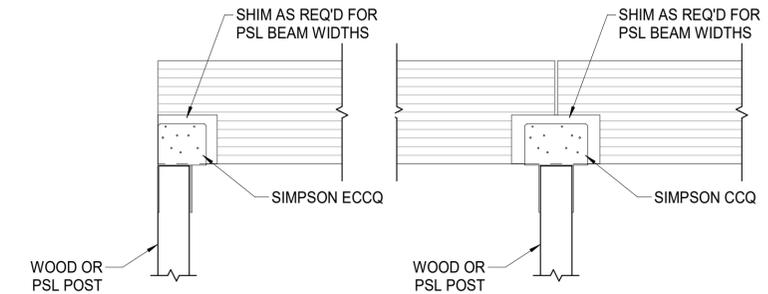


1 TYPICAL TOP PLATE SPLICE
3/4" = 1'-0"

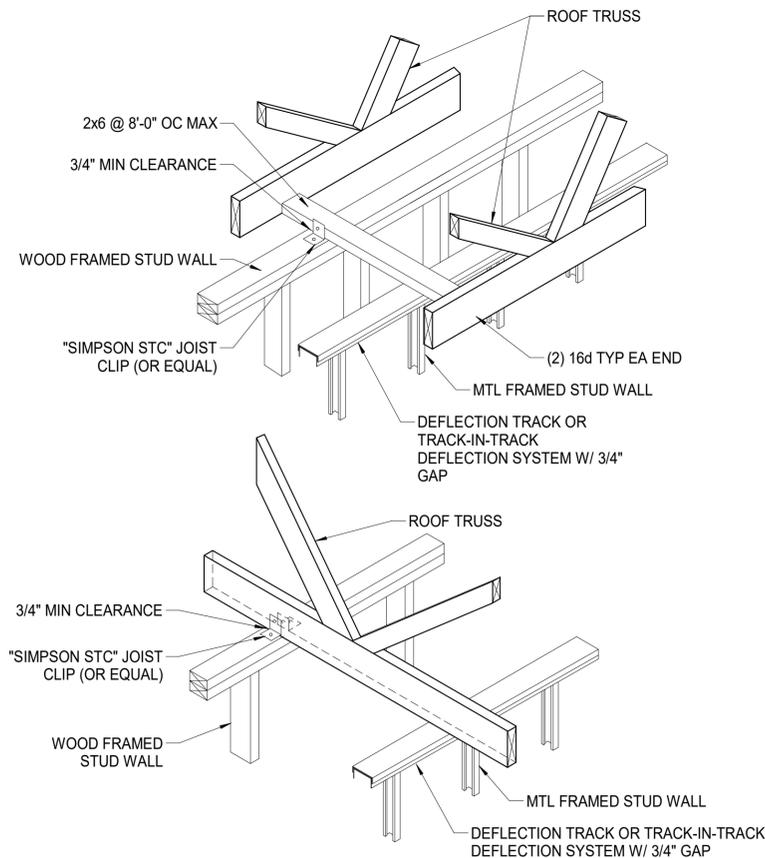


- NOTE:
- ANCHOR SIZE AND SPACING AND SILL PLATE SIZE SPECIFIED THIS DETAIL FOR ALL NON-SHEAR STRUCTURAL BEARING WALLS. SIZE AND SPACING FOR SHEAR WALLS CAN BE FOUND IN THE SHEAR WALL SCHEDULE.
 - ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED ASTM A307 BOLTS OR THREADED RODS.
 - ALL ANCHORS SHALL HAVE A GALV STD WASHER BETWEEN SILL PLATE AND NUT.
 - ALL ANCHORS SHALL BE PLACED A MINIMUM OF 3" AWAY FROM EDGE OF CONC AND LOCATED NO CLOSER THAN 6" FROM END OF WALL.

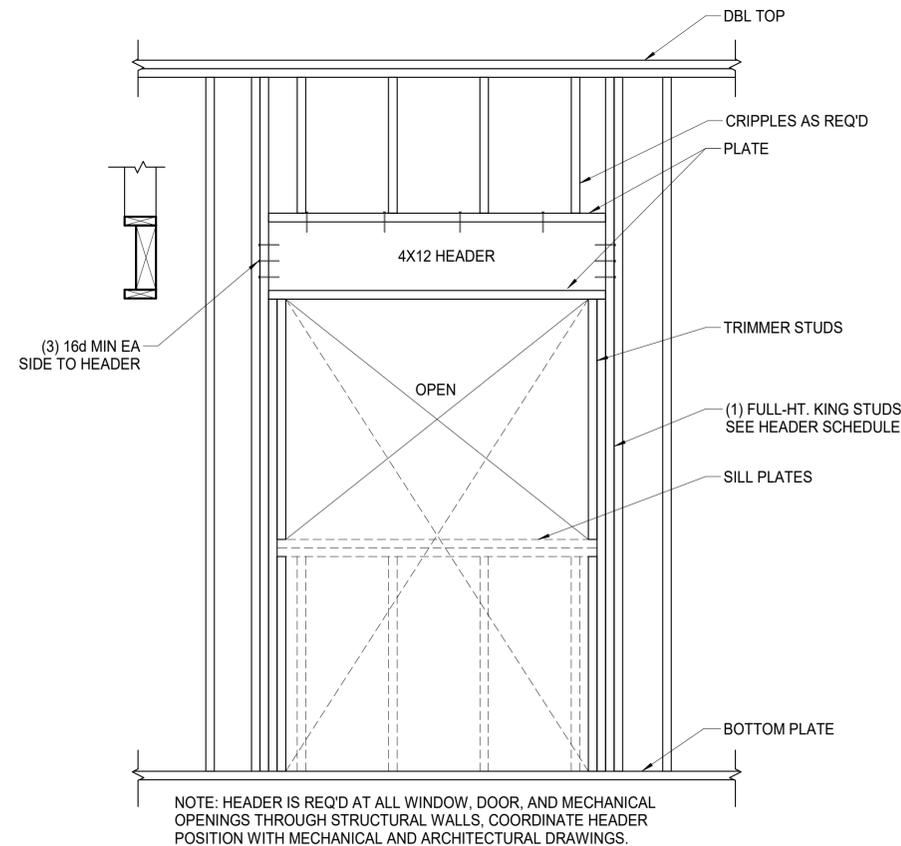
2 TYP SILL PL ANCHOR - NON SHEAR WALL
3/4" = 1'-0"



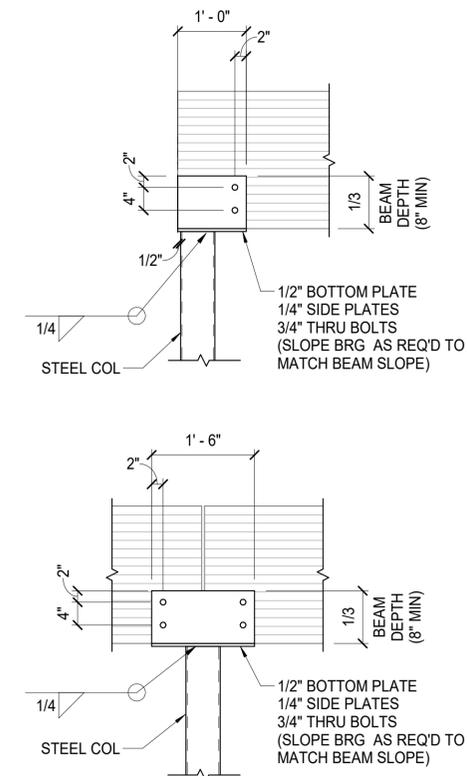
3 TYPICAL TIMBER POST CAP DETAIL
3/4" = 1'-0"



4 NON-BEARING PARTITION DETAILS
3/4" = 1'-0"



5 TYPICAL HEADER DETAIL
3/4" = 1'-0"



6 TYPICAL GLB COLUMN CAPS
3/4" = 1'-0"

APPROVAL	REV	DATE	BY	REVISION

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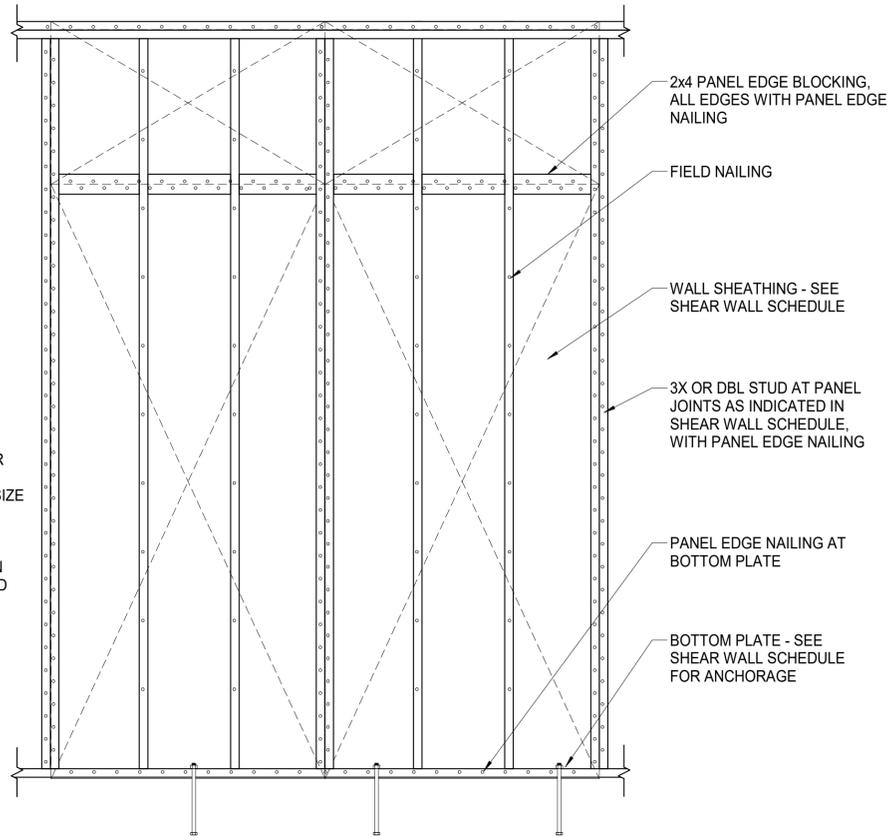
TITLE WOOD FRAMING SCHEDULES AND TYPICAL DETAILS

PROJECT NEW WELL 5 PUMPING STATION VALDEZ, ALASKA



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BY: DNB DATE: 01/16/2026
SCALE: **S1.4** SHEET



- NOTES:
- PANELS ARE SHOWN VERTICAL, BUT MAY BE PLACED HORIZONTAL.
 - MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8".
 - MIN. SHEATHING SHEET SIZE SHALL BE 2'-0"x4'-0".
 - NAILS SHALL NOT BE OVERDRIVEN.
 - NAILS SHALL BE COMMON WIRE TYPE OR APPROVED EQUAL.

WOOD SHEAR WALL SCHEDULE													
MARK	WOOD PANELS			NAIL SIZE	NAIL SPACING		PANEL JOINT STUDS	SILL OR BOTTOM PLATE ATTACHMENT					
	APA Grade	Thick.	Span rating		Edges	Field		Fastener	Detail	Dia.	Spacing	Embed.	Washer
6	Sheathing	15/32"	32/16	8d	6"	12"	2x	Anchor Rod	-	5/8"	32"	7"	4 / S1.5
4	Sheathing	15/32"	32/16	8d	4"	12"	2x	Anchor Rod	-	5/8"	16"	7"	4 / S1.5

- NOTES:
- WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR ITS TYPE IN DOC PS1 OR PS2.
 - APPLY SHEATHING TO THE SIDE OF WALL INDICATED BY THE SYMBOL. PANELS MAY BE INSTALLED HORIZONTALLY OR VERTICALLY. DOUBLE SHEATHED WALLS SHALL HAVE PANELS APPLIED TO BOTH FACES.
 - ALL PANEL EDGES SHALL BE LOCATED ON STUDS, BLOCKING LAID FLAT, PLATES OR RIM JOISTS. WHERE SHEATHING IS APPLIED TO BOTH FACES OF WALL, OFFSET PANEL EDGES TO FALL ON DIFFERENT STUDS.
 - STAGGER PANEL EDGE NAILING AT PANEL JOINTS.
 - ANCHOR RODS SHALL BE HOT-DIPPED GALVANIZED ASTM A307 HEADED BOLTS. FIRST AND LAST ANCHORS SHALL BE LOCATED 6" FROM END OF EACH WALL SEGMENT OR END WALL HOLDOWN.
 - SEE TYPICAL PLATE WASHER DETAIL FOR SILL PLATE ANCHOR INSTALL AND LOCATION REQUIREMENTS.
 - SEE HOLDOWN SCHEDULE FOR HOLDOWNS AND BOUNDARY POST SIZES.
 - ANCHOR ROD EMBEDMENT IS THE DISTANCE FROM TOP OF CONCRETE TO TOP OF NUT OR BOLT HEAD.

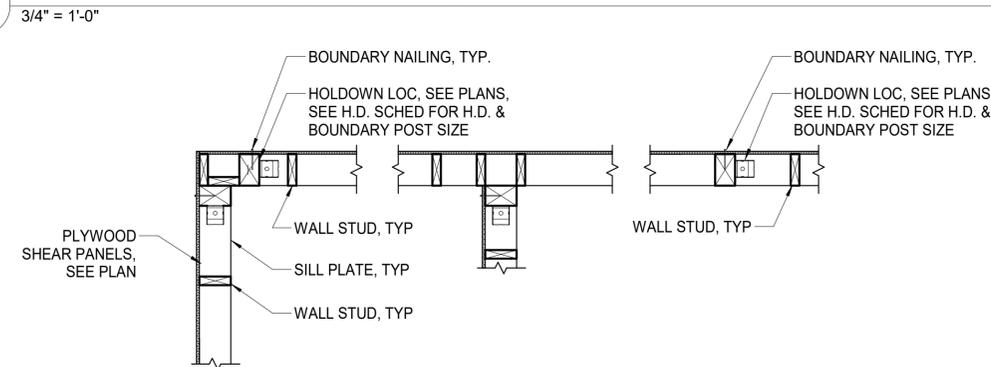
WOOD DIAPHRAGM SCHEDULE										
AREA DESCRIPTION	SHEATHING			NAIL SIZE	NAIL SPACING			NOMINAL THICKNESS OF FRAMING MEMBERS	PANEL EDGE BLOCKING	
	APA Grade	Thick.	Span Rating		Edges (2,3)	Boundary	Field			
ROOF	Sheathing	3/4"	48/24	8d	6"	6"	12"	2x	NONE	

- NOTES:
- APPLY SHEATHING PERPENDICULAR TO FRAMING MEMBERS UNLESS NOTED OTHERWISE.
 - LOCATE PANEL ENDS OVER FRAMING MEMBERS AND STAGGER LOCATION OF ENDS JOINTS BY A MINIMUM OF 2'-0" UNLESS SHOWN OTHERWISE.
 - SEE SCHEDULE FOR PANEL EDGE BLOCKING REQUIREMENTS.
 - STAGGER PANEL EDGE NAILING AT BLOCKED JOINTS.
 - NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF PANELS. HEADS OF NAILS SHALL BE DRIVEN FLUSH WITH THE SURFACE.
 - PANELS SHALL NOT BE LESS THAN 4' x 8' EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE ALL EDGES ARE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.

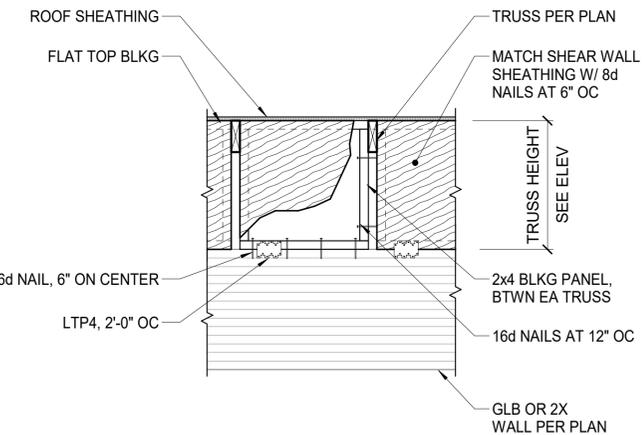
HOLDOWN SCHEDULE					
MARK	HOLDOWN	ANCHOR ROD		BOUNDARY POST SIZE	COMMENTS
		Diam.	Embed.		
HD1	SIMPSON DTT2Z	1/2"	20"	4x6 OR (2) 2x6	

- NOTES:
- HOLDOWNS ARE SIMPSON STRONG-TIE OR EQUAL.
 - ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 HEADED BOLTS OR ASTM A36 THREADED ROD WITH DBL NUT AT BOTTOM.
 - ROD COUPLERS WITH 125% STRENGTH OF THE ROD MAY BE USED TO EXTEND RODS.
 - BOUNDARY POSTS ARE DF No. 1.

1 SHEAR WALL NAILING DETAIL

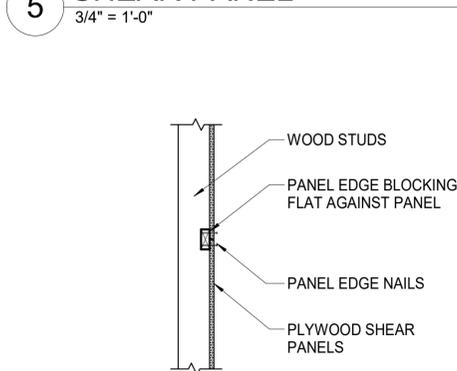


2 TYPICAL HOLDOWN DETAIL AT FOUNDATION

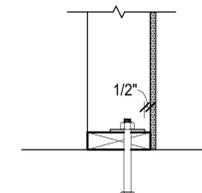


CONTRACTOR OPTION: BLKG PANEL MAY BE SPECIFIED BY TRUSS MFR.

5 SHEAR PANEL



3 PANEL EDGE BLOCKING



SINGLE-SIDED SHEAR WALL

NOTE: 0.229"x3"x3" MIN SIZE PLATE WASHER TO BE USED FOR EACH SILL PLATE ATTACHMENT BOLT. PLATE WASHER MUST BE WITHIN 1/2" OF SHEATHING FACE. SLOTTED HD IN PLATE WASHER PER AWC MAY BE USED PROVIDED A STD CUT WASHER BE PLACED BETWEEN PLATE WASHER AND NUT.

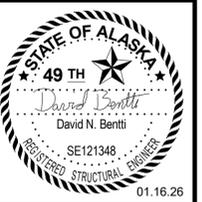
4 TYP SILL PLATE ANCHOR - SHEAR WALLS

1 1/2" = 1'-0"

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WOOD SHEAR WALL SCHEDULES AND TYPICAL DETAILS
NEW WELL 5 PUMPING STATION VALDEZ, ALASKA

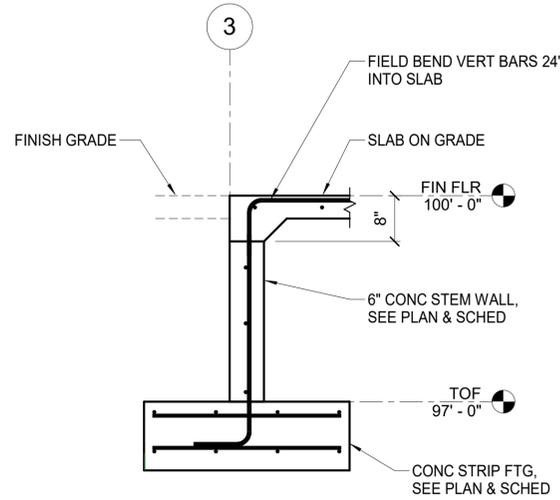


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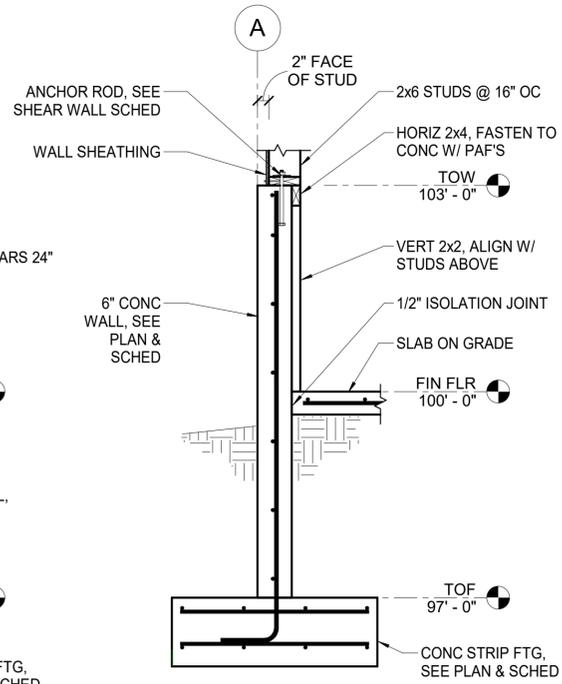
BY: DNB
DATE: 01/16/2026
SCALE:

S1.5
SHEET

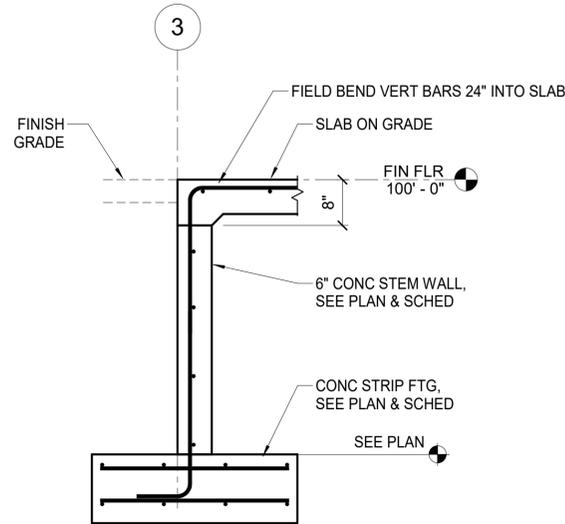
1 DETAIL
3/4" = 1'-0"



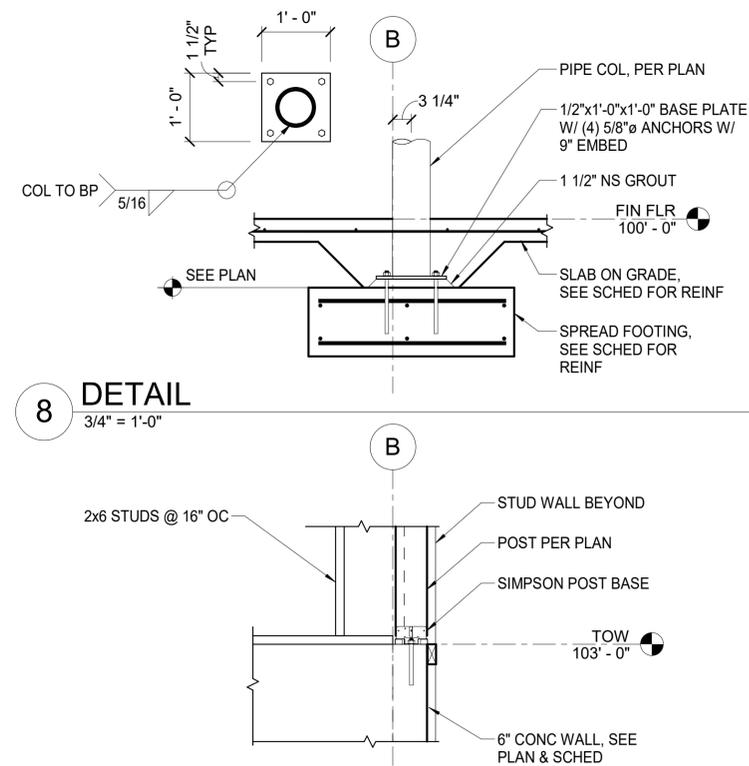
2 DETAIL
3/4" = 1'-0"



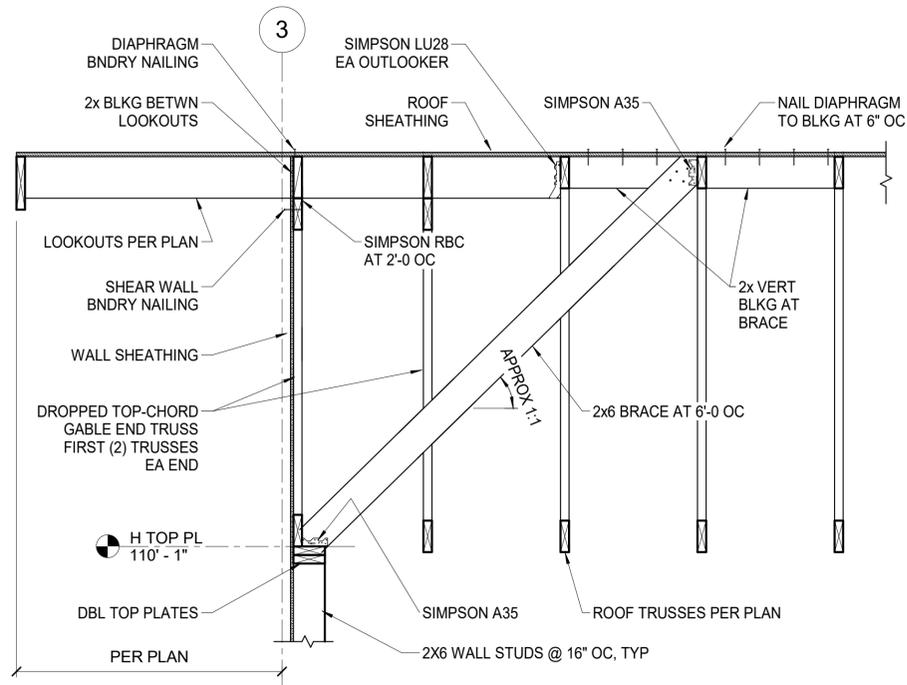
6 DETAIL
3/4" = 1'-0"



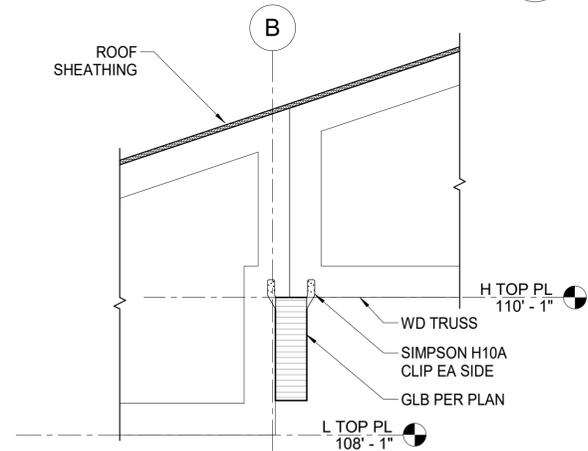
7 DETAIL
3/4" = 1'-0"



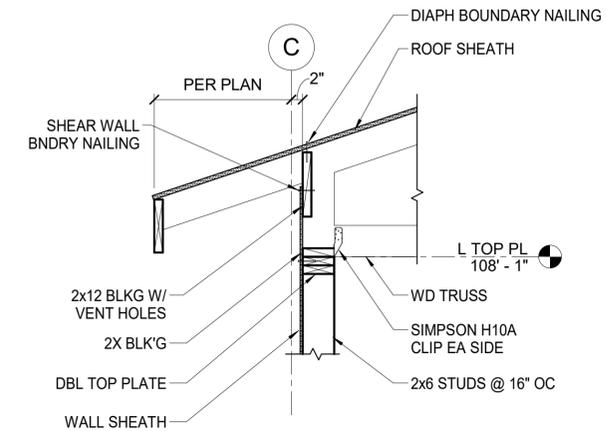
3 DETAIL
3/4" = 1'-0"



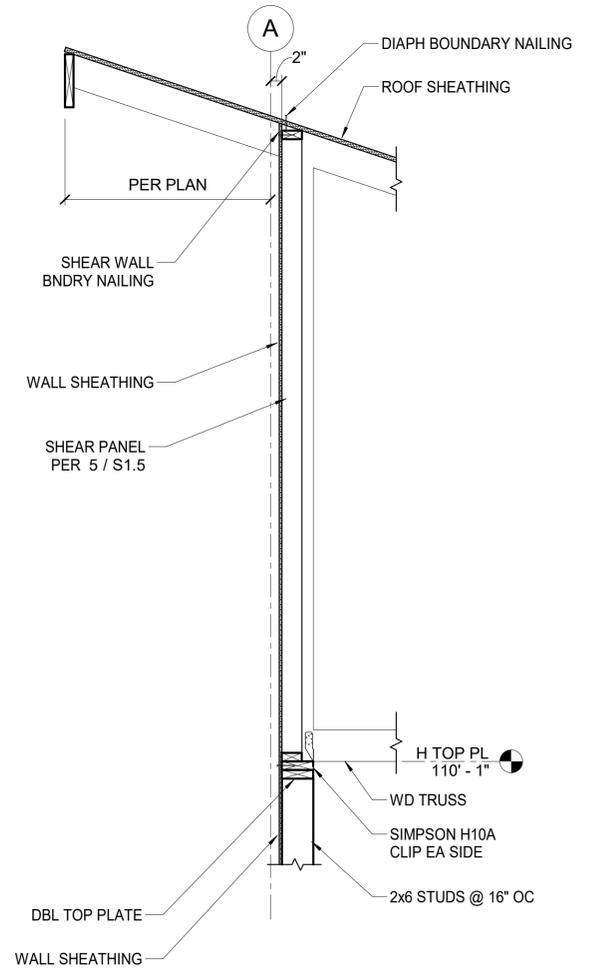
9 DETAIL
3/4" = 1'-0"



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



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



DETAILS

NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA



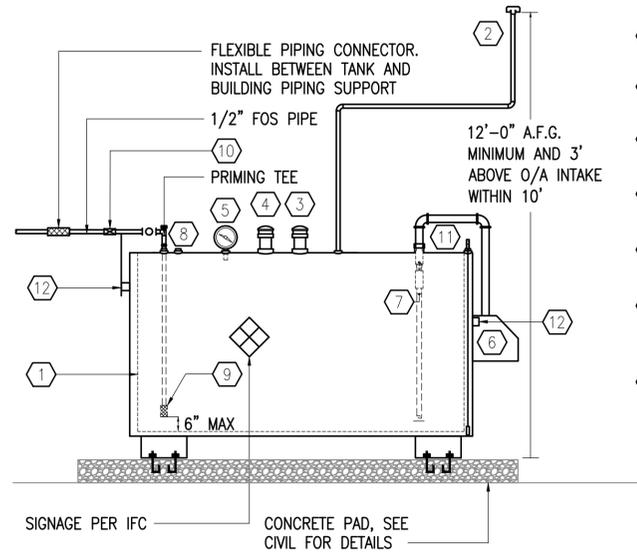
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DATE: 01/16/2026
SCALE:

S3.0
SHEET

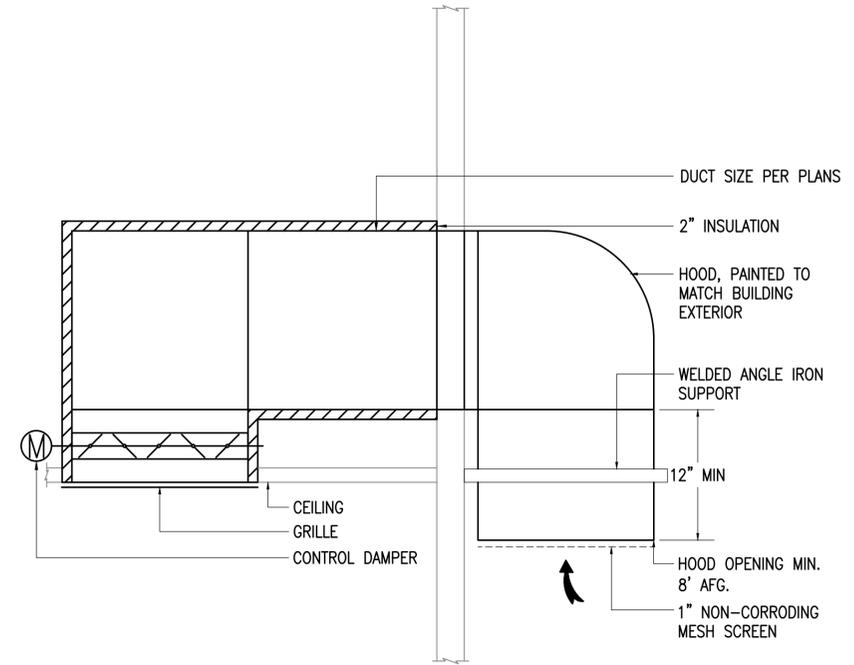
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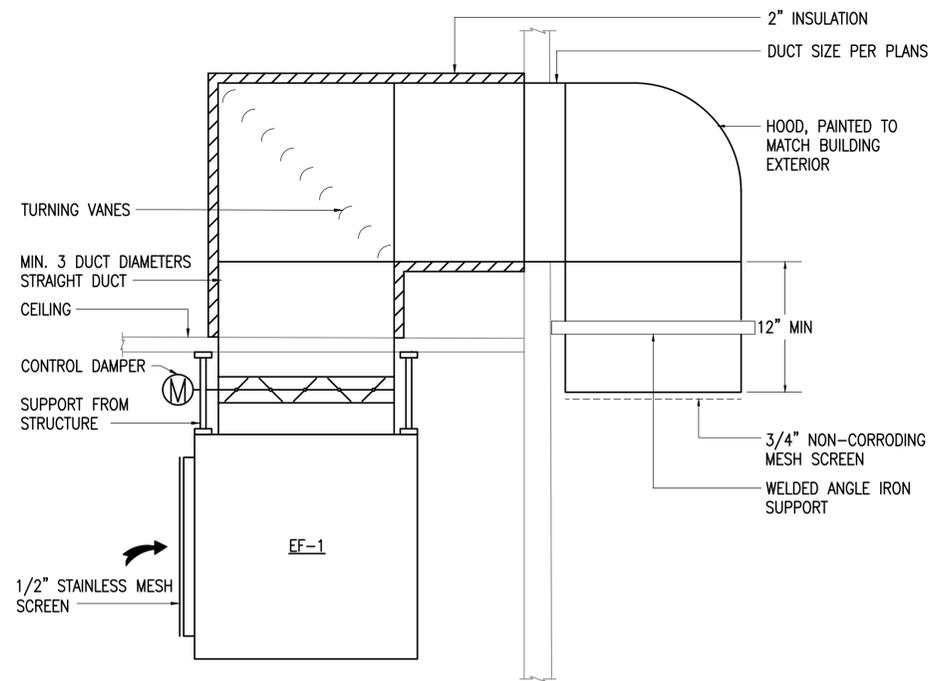


1 FUEL TANK DETAIL
NOT TO SCALE

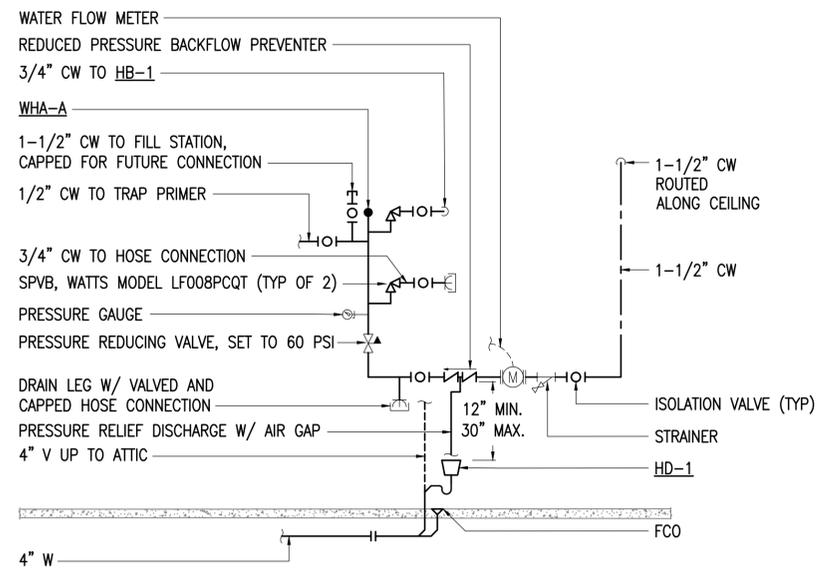
- ① 500 GALLON DOUBLE WALL FUEL OIL STORAGE TANK.
- ② 2" PRIMARY TANK VENT, MORRISON BROTHERS FIG. 922.
- ③ 4" PRIMARY TANK EMERGENCY VENT, MORRISON BROTHERS FIG. 244
- ④ 4" SECONDARY TANK EMERGENCY VENT, MORRISON BROTHERS FIG. 244.
- ⑤ MECHANICAL CLOCK TYPE TANK GAUGE, MORRISON BROTHERS FIG. 818.
- ⑥ REMOTE SPILL CONTAINER, MORRISON BROTHERS FIG. 515. PROVIDE W/ FIG. 246, 800A, 800DC, AND 691B.
- ⑦ OVERFILL PREVENTION VALVE, MORRISON BROTHERS FIG. 9095. COORDINATE APPROPRIATE FLOW RATE WITH LOCAL PURVEYOR OF FUEL.
- ⑧ 4" FPT TAPPING, W/PLUG.
- ⑨ PROVIDE 3/4" SINGLE POPPET FOOT VALVE OPW MODEL 99-0033 OR APPROVED EQUAL, PROVIDE TANK BUSHING AS REQUIRED FOR CONNECTION TO 3/4" FOS DROP TUBE.
- ⑩ ANTI SIPHON VALVE, MORRISON BROTHERS FIG. 912. PROVIDE (1) PER FOS LINE. COORDINATE REQUIRED RELIEF PRESSURE WITH SITE ELEVATION.
- ⑪ KRUEGER SENTRY LEAK GAUGE
- ⑫ MOUNTING CLIPS



2 EXTERIOR WALL HOOD DETAIL
NO SCALE



3 EXHAUST FAN HOOD DETAIL
NO SCALE



4 WATER SERVICE PIPING DETAIL
NO SCALE

NO.	DATE	BY	REVISION

RSA
Mechanical and Electrical Consulting Engineers
670 West Erskine Blvd., Suite 200
Anchorage, AK 99503
(907) 276-0321
Corporate No.: AEC0342
RSA JOB # M4082

MECHANICAL DETAILS

PROJECT
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

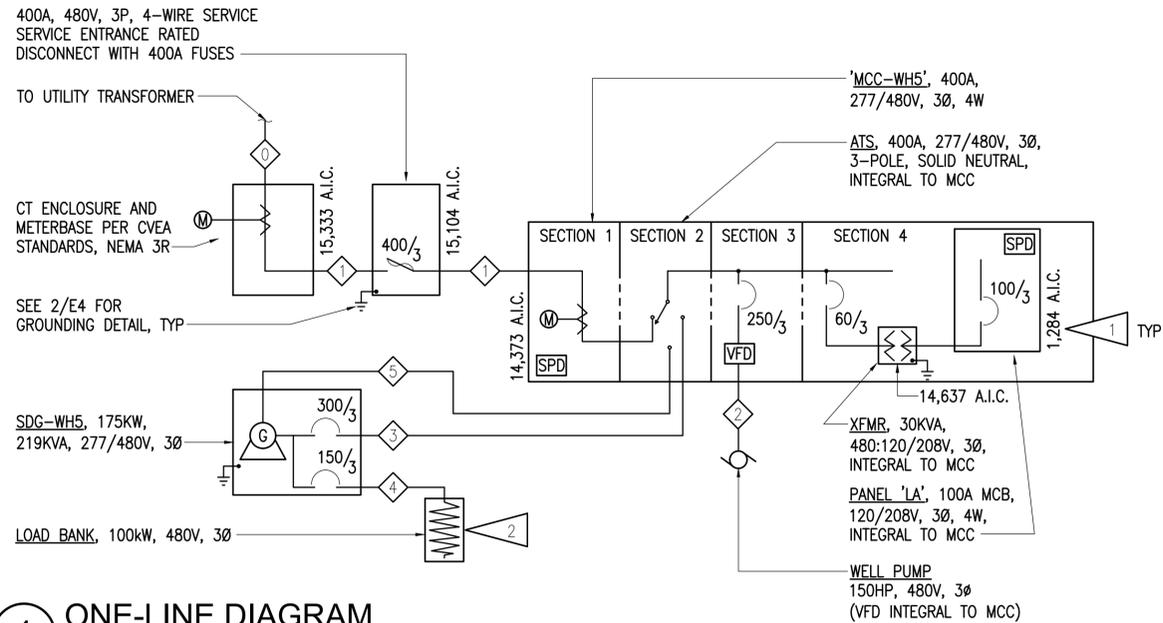


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63 KEystone AVENUE #208 • RENO, NEVADA 89503 • (775) 346-8824

BY: JMC
DATE: 01/16/2026
SCALE: AS NOTED

SHEET **M3** OF 3
SHEETS



FEEDER SCHEDULE	
FEEDER TAG	CONDUIT AND CONDUCTOR SIZE AND QUANTITY
0	CONDUIT ONLY, SIZED AS REQUIRED BY CVEA, CONDUCTORS BY CVEA
1	(2) 2" C, 4#3/0 AWG, 1#2 AWG GND CU, XHHW
2	2" C, 3#4/0 AWG, 1#4 AWG GND CU, XHHW
3	3" C, 4#350 KCMIL, 1#4 AWG GND CU, XHHW
4	1.5" C, 3#1/0 AWG, 1#6 AWG GND CU, XHHW
5	1" C AND GENERATOR START/STOP WIRING PER MANUFACTURER

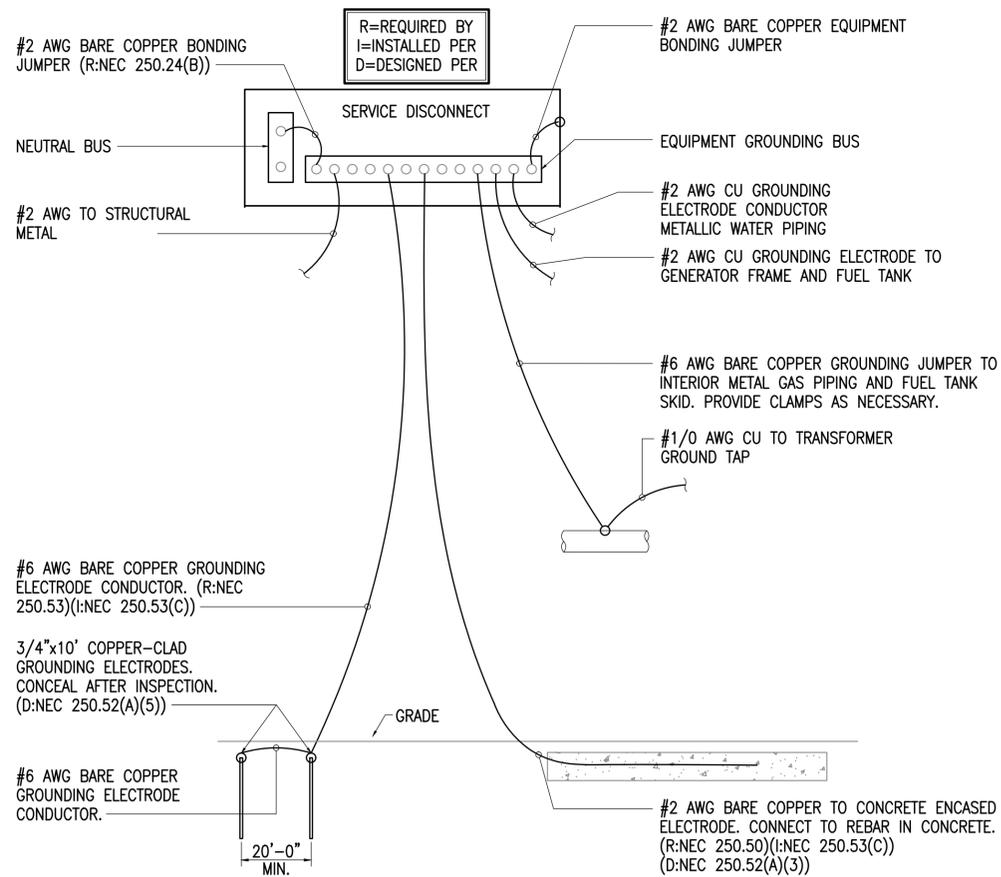
GENERAL NOTES:

- A. SEE SHEET E2 FOR GENERAL NOTES.
- B. SERVICE ENTRANCE EQUIPMENT SHALL BE ASSEMBLED IN CONFORMANCE WITH THE LOCAL SERVING UTILITY'S STANDARDS. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF WITH CVEA.

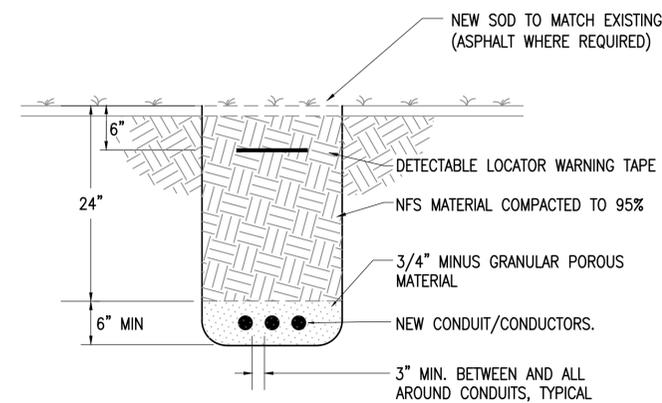
SHEET NOTES:

- 1. EQUIPMENT CALCULATED AIC. PANELBOARDS SHALL HAVE CALCULATED AIC INSTALLED ON NAMEPLATES.
- 2. PROVIDE ADDITIONAL CONTROL AND SIGNAL WIRING BETWEEN LOAD BANK AND GENERATOR IN ACCORDANCE WITH LOAD BANK MANUFACTURER'S INSTRUCTIONS.

1 ONE-LINE DIAGRAM
NO SCALE



2 GROUNDING DETAIL
NO SCALE



3 TRENCHING DETAIL
NO SCALE

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL NOTIFY ALL AREA UTILITY COMPANIES PRIOR TO COMMENCEMENT OF EXCAVATION. THE FOLLOWING IS A PARTIAL LIST:

LOCATE CALL CENTER OF ALASKA 278-3121

COPPER VALLEY ELECTRIC ASSOCIATION 811

NO.	DATE	BY	REVISION

RSA
Mechanical and Electrical Consulting Engineers
670 West Elmwood Lane, Suite 200
Anchorage, AK 99503
(907) 276-0521
Corporate No.: AEC0542
RSA JOB # M4082

ELECTRICAL DETAILS

PROJECT
NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA



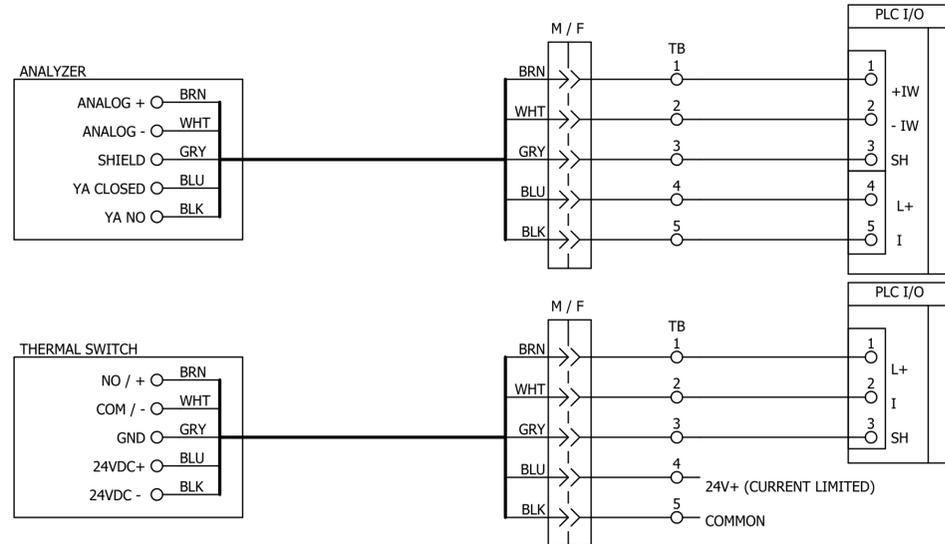
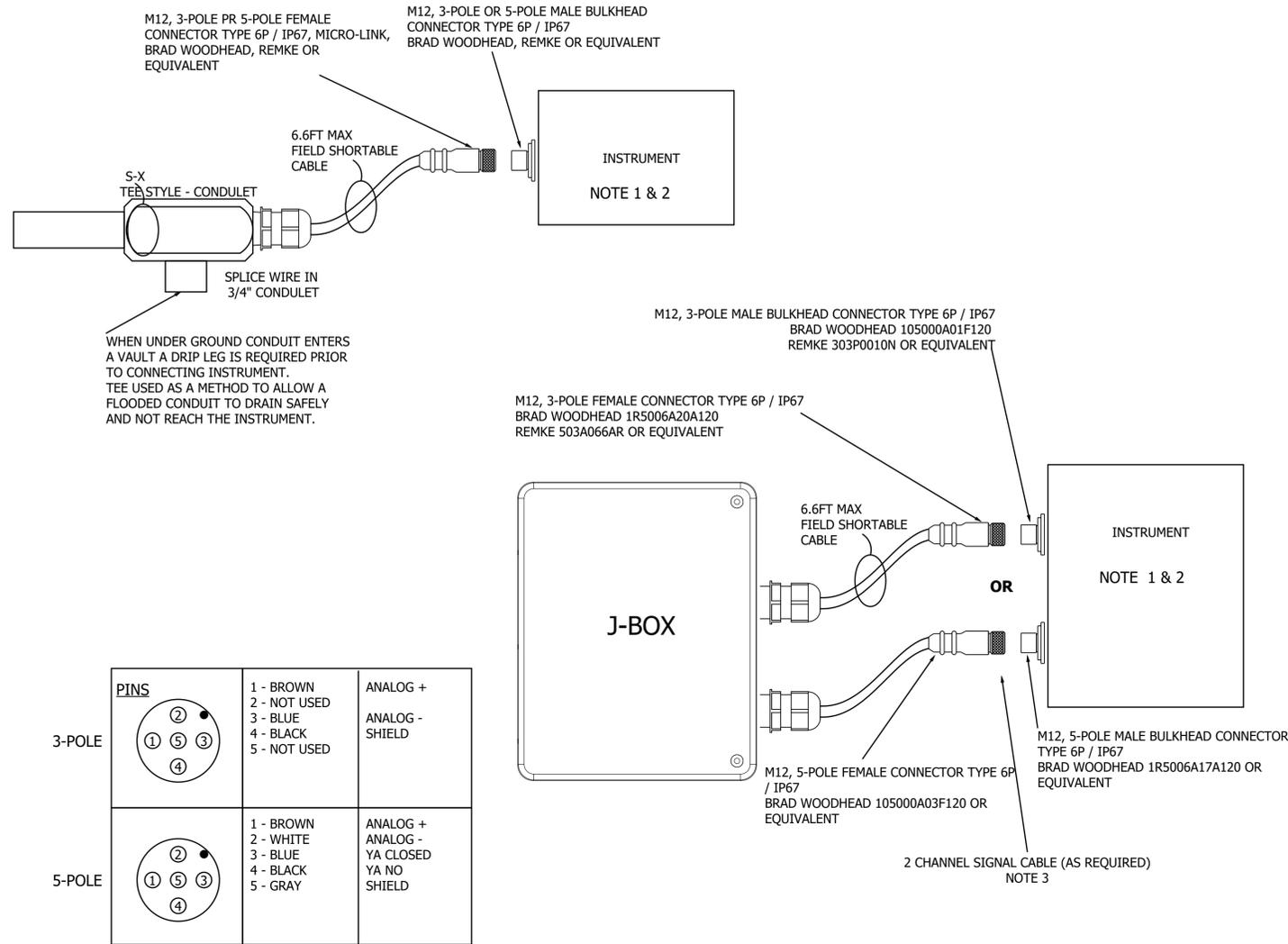
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BY: CSZ/DB
DATE: 01/16/2026
SHEETS 5
SCALE: AS NOTED

SHEET **E4** OF 5

**DETAIL G1
TYPICAL INSTRUMENT CONNECTION DETAIL**



GENERAL SHEET NOTES

- INSTRUMENTS USING 3-POLE M12 CONNECTORS ARE:
 - PRESSURE SWITCHES
 - LEVEL SWITCHES
 - LIMIT SWITCHES
 - FLOW SWITCHES
 - 2-WIRE TRANSMITTERS W/O FAILURE CONTACT
 - ALL ANALOG PRESSURE INSTRUMENTS
 - ULTRASONIC LEVEL PROBE
 - RADAR LEVEL PROBES
 - 4-WIRE TRANSMITTERS USING 120V PRIMARY POWER
- INSTRUMENTS USING 5-POLE M12 CONNECTORS ARE:
 - ALL WATER QUALITY ANALYZERS
 - DUAL ANALOG OUTPUT INSTRUMENTS ANALOG + FAIL
 - THERMAL DISPERSION FLOW SWITCH
 - 4-WIRE TRANSMITTERS USING 24VDC PRIMARY POWER
- AN EXAMPLE, DUAL CHANNEL INSTRUMENT IS A pH SENSOR WITH TEMPERATURE MEASUREMENT.
- 120VAC POWER CABLES USE NEMA L5-15 LOCKING STYLE PLUG CONNECTION.

S & B inc.
13200 S.E. 30th St.
Bellevue, WA 98005
(425) 644-1700
www.sb-inc.com

QUICK CONNECT CABLING STANDARDS

**NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA**

TITLE

PROJECT

ENGINEERING

5 EAST PARK STREET FALLON, NEVADA 89406 (775) 432-8900

BY: JES
DATE: 1/16/2026
SCALE: NTS

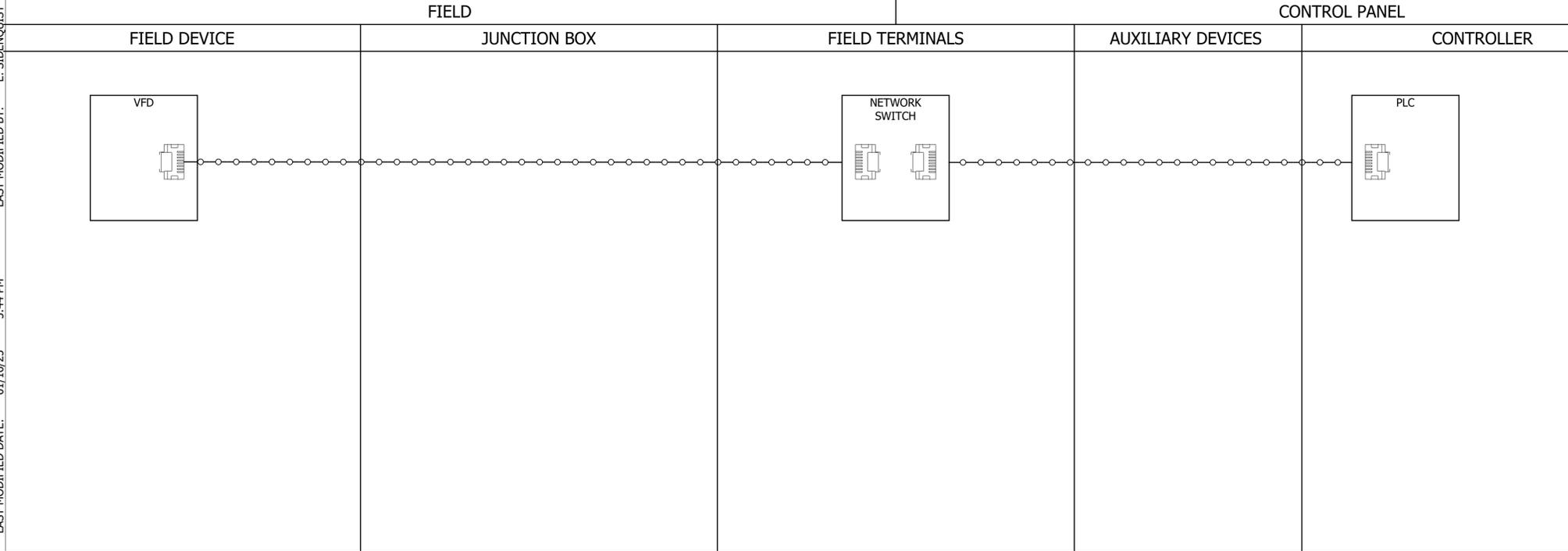
SHEET **15** OF **24**

LAST MODIFIED DATE: 01/16/25 3:44 PM LAST MODIFIED BY: E. SIDENQUIST

File Name: 23830-208_Well 5

WIRING DIAGRAM

GENERAL SHEET NOTES:



APPLICATION:
 VARIABLE FREQUENCY DRIVE MOTOR STARTERS PLC SYSTEM MONITORS MOTOR CONTROLLER VIA PROFINET NETWORK. VFD CONTROLLER PROVIDES ON BOARD LOGIC FOR LOCAL (HAND) AND REMOTE AUTO CONTROL, PROVIDES CONTROL (AS DEFINED BY P&ID), PROVIDES ALARM NOTIFICATION ON FAILURE TO COMMAND WITHIN ALLOTTED TIME, FOR A PROCESS LOGIC VIOLATION AND ALL ALARM CONDITIONS GENERATED BY THE VFD CONTROL UNIT. POWER INFORMATION IS MONITORED FOR OVER AND UNDER LOAD CONDITIONS AS EARLY WARNING INDICATION OF PROCESS ABNORMALITIES. SCADA PROVIDES VISUALIZATION OF MOTOR STATUS AND ALARM CONDITIONS, AUTO OPERATION SETTING, AND SUPERVISORY CONTROL OVERRIDES (HAND/OFF/AUTO). SCADA PROVIDES INDICATION OF ALL NETWORK DERIVED INFORMATION, ARCHIVES RUNTIME, SPEED, KW LOAD AND ALARM CONDITION.

VIRTUAL I/O

IN AUTO / IN HAND	SPEED FEEDBACK
CALL	SPEED COMMAND
RUNNING	DC LINK VOLTAGE
READY	MOTOR HP
AT SPEED	MOTOR VOLTS
FAULT-VFD FAULT ALARM	MOTOR AMPS
ALARM-VFD WARNING	MOTOR TORQUE
OVERLOAD-MOTOR OVERLOAD	LAST FAULT CODE
TEMPERATURE-VFD/MOTOR OVERTEMP	LAST ALARM CODE

REV	DATE	BY

S & B inc.
 13200 S.E. 30th St.
 Building #25
 Tukwila, WA 98148
 (206) 835-7464
 www.s-and-b.com service@s-and-b.com

SCADA INTERFACE REPRESENTATION

BLOCK DIAGRAM REPRESENTATION

P&ID REPRESENTATION

SCADA FACEPLATE

Title of Instrument xxxxxxxx
FIT 3-2-1

SCADA Ctrl Mode: Off/Local

Control Select: Hand OFF Auto

Alarms: Start Fail, Stop Fail, Start Limit, Warning, Fault, Lockout, Temp, Overload

Warnings: Restart Delay, Low Torque

Pumping Mode: Closed Loop ON

Speed 100.0 %
 Speed SP 100.0 %

DETAILS

Last Start Time: 4/9/1900 12:00:00 AM
 Last Stop Time: 4/9/1900 12:00:00 AM
 Last Auto Selected: 4/9/1900 12:00:00 AM
 Last Time Called: 4/9/1900 12:00:00 AM

Runtime Hours: Lifetime: 1.0, Current Hr: 1.0, Last Hr: 1.0, Today: 1.0, Yesterday: 1.0

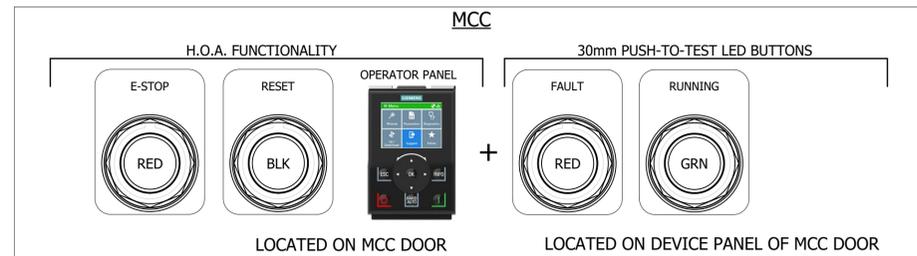
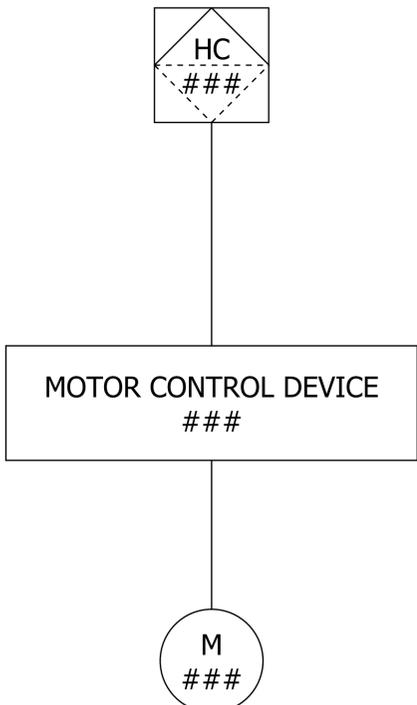
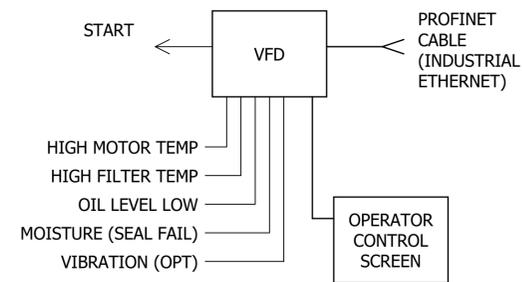
Speed 100.0 %, Frequency: 60.0 Hz, RPM 1800
 Pump HP 888.88 HP, DC link 60.0 V, Torque 1100.00 Nm
 Current HP 88.88 HP, Volts out 60.0 V, Amps 277.00 A
 Start Speed 100.0 %, Motor Load: 100.0 %

Fail Timers/Counters: Start Fail: 100.0, Stop Fail: 100.0, Starts: 100

PID Loop {status}: Integral Status Selector: On, Integral-T: 150.0, Error: 0.500, SP: 9999.9, PV: 9999.9

- SCADA EXTENSION**
- Call
 - StopLoop
 - InAuto
 - IntegralOff
 - StartFail_SP
 - StopFail_SP
 - Starts_SP
 - ProcessVar
 - Speed SP
 - PZD_Status
 - PZD_Speed
 - PZD_Command
 - PZD_Setpoint
 - HOA_Switch
 - Status
 - Required
 - Running
 - Called
 - Ramping
 - Ready
 - Auto
- Alarms**
- Start Fail
 - Stop Fail
 - Start Limit
 - Warning
 - Fault
 - Lockout
 - Overtemp
 - Overload
 - Restart Delay
 - Low Torque
 - High Disch. PSI
 - Low Suct. PSI
 - VFD_Setpoint
 - VFD_Speed
 - VFD_Starts
 - VFD_StartsFail
 - VFD_StopFail
 - VFD_MinSpeed
 - VFD_StartSpeed
 - Motor_RPM
 - Motor_Freq
 - Motor_Volts
 - Motor_Amps
 - Motor_Torque
 - Motor_HP
 - Motor_DClink
- Rated_HP**
- PID_Gain
 - PID_TI
 - PID_error
 - Date_Start
 - Date_Auto
 - Date_Called
 - Date_Stopped
 - Test Mode

NETWORKED VFD, NON-SUBMERSIBLE MOTOR



VFD (Networked) Detail

NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

ENGINEERING

5 EAST PARK STREET FALLON, NEVADA 89406 (775) 432-9906

BY: JES
 DATE: 1/16/2026
 SCALE: NTS

SHEET 111 OF 24

LAST MODIFIED BY: E. SIDENQUIST

3:44 PM

LAST MODIFIED DATE: 01/16/25

File Name: 23830-208_Well 5

WIRING DIAGRAM

FIELD

CONTROL PANEL

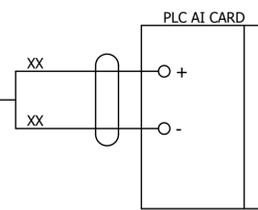
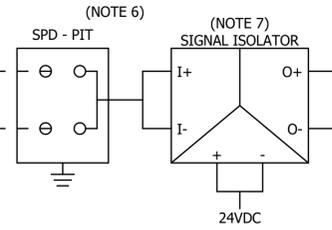
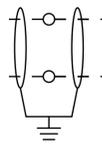
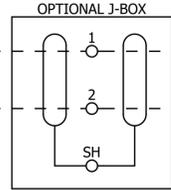
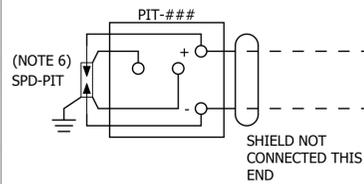
FIELD DEVICE

JUNCTION BOX

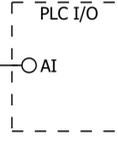
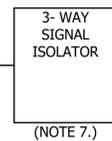
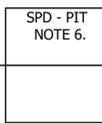
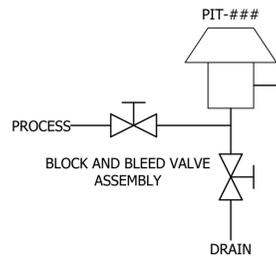
FIELD TERMINALS

AUXILIARY DEVICES

CONTROLLER



BLOCK DIAGRAM



SCADA INTERFACE REPRESENTATION

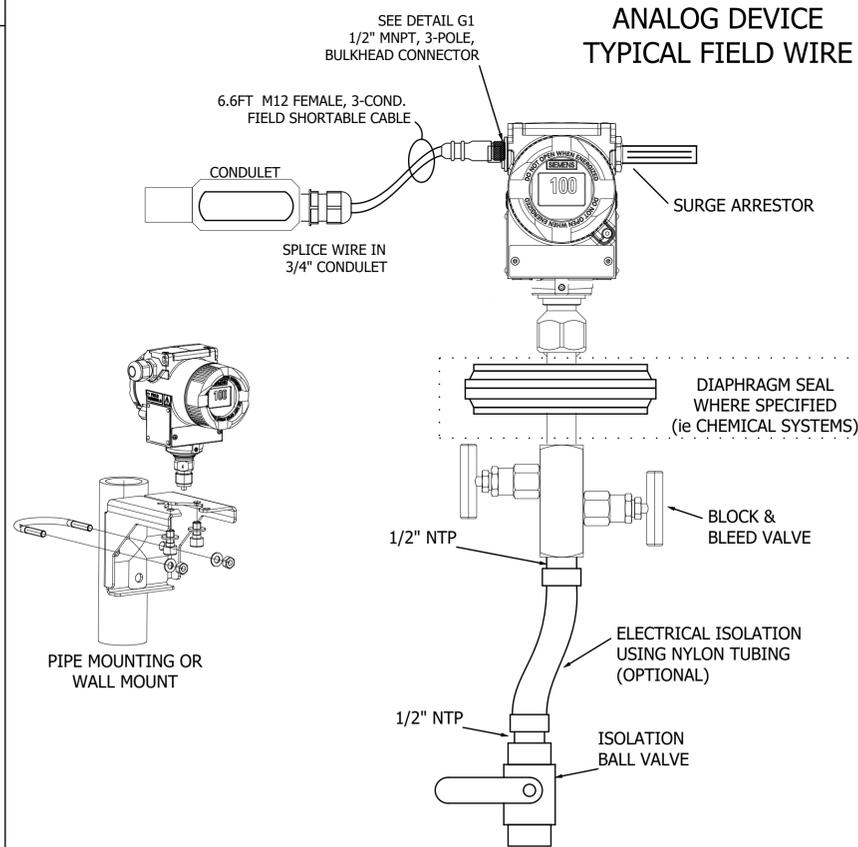
SCADA FACEPLATE

Current Value	9999.99	PSI
High High Alarm	+9999.99	PSI
High Alarm	+9999.99	PSI
Low Alarm	+9999.99	PSI
Low Low Alarm	+9999.99	PSI
Broken Transmitter		
Min EU	+9999.99	PSI
Max EU	+999999.99	PSI
Smoothing	9.99	
Deadband	99.999	

SCADA EXTENSION

- RAWVALUE
- MINEU
- MAXEU
- HH_SP
- HI_SP
- LO_SP
- LL_SP
- ALARMS
 - HIGH-HIGH ALARM
 - HIGH ALARM
 - LOW ALARM
 - LOW-LOW ALARM
 - BROKEN TRANSMITTER
 - SIGNAL LOSS
 - SIGNAL HELD WHILE IN ERROR
 - RATE OF CHANGE
- DBAND
- SMOOTHING
- RATE OF CHANGE EU/SAMPLE
- RATE OF CHANGE NUMBER OF SAMPLES
- PV_REAL

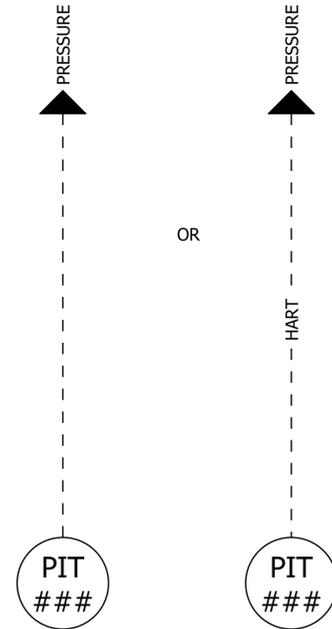
DETAIL



GENERAL SHEET NOTES:

- 1) PRESSURE OR LEVEL CONTINUOUS MEASUREMENT. INSTRUMENT RANGE SELECTED TO SPAN ZERO TO MAXIMUM PRESSURE IN NORMAL OPERATION. INSTRUMENT PRESSURE LIMIT SHALL BE GREATER THAN MAXIMUM POSSIBLE IN THE PROCESS. BLOCK AND BLEED VALVE SUITABLE FOR PROCESS FLUID. MAY BE CONFIGURED FOR HART DATA IN ADDITION TO 4-20MA ANALOG SIGNAL WHEN TEMPERATURE OR REMOTE CALIBRATION IS SPECIFIED.
- 2) SUPPLY FUSE CURRENT LIMITING FOR EACH ANALOG UNLESS ANALOG INPUT CARD PROVIDES 2-WIRE PROTECTION.
- 3) PROCESS CONNECTIONS ROUTED TO PREVENT ENTRAINED AIR AND TO SELF-PURGE WHERE POSSIBLE.
- 4) WHERE HART PROTOCOL SHOWN, ANALOG INPUT SHALL BE HART COMPATIBLE. NO SIGNAL ISOLATOR SHALL BE REQUIRED. REPEATED ANALOG SIGNALS SHALL BE FROM PLC ANALOG OUTPUT.
- 5) TRANSMITTERS MOUNTED REMOTELY FROM THE MAIN PROCESS PIPE OR VESSEL SHALL BE SECURED WITH A PIPE OR WALL MOUNT BRACKET. USE NON-METALLIC FLEXIBLE TUBING BETWEEN THE PROCESS AND THE INSTRUMENT.
- 6) PROVIDE SURGE PROTECTION DEVICE (SPD) AT INSTRUMENT AND CONTROL PANEL TERMINAL BLOCK WHERE INSTRUMENT IS LOCATED IN SEPARATE BUILDING, VAULT OR GROUND PLANE FROM CONTROL PANEL.
- 7) PROVIDE SIGNAL ISOLATOR WHEN 4-20mA SIGNAL IS ROUTED TO MORE THAN ONE CONTROL PANEL. TWO-WIRE TRANSMITTER IS POWERED BY CONTROL PANEL WITH LONGEST DURATION 24V UPS.

P&ID REPRESENTATION



Gauge Pressure Transmitter

NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA

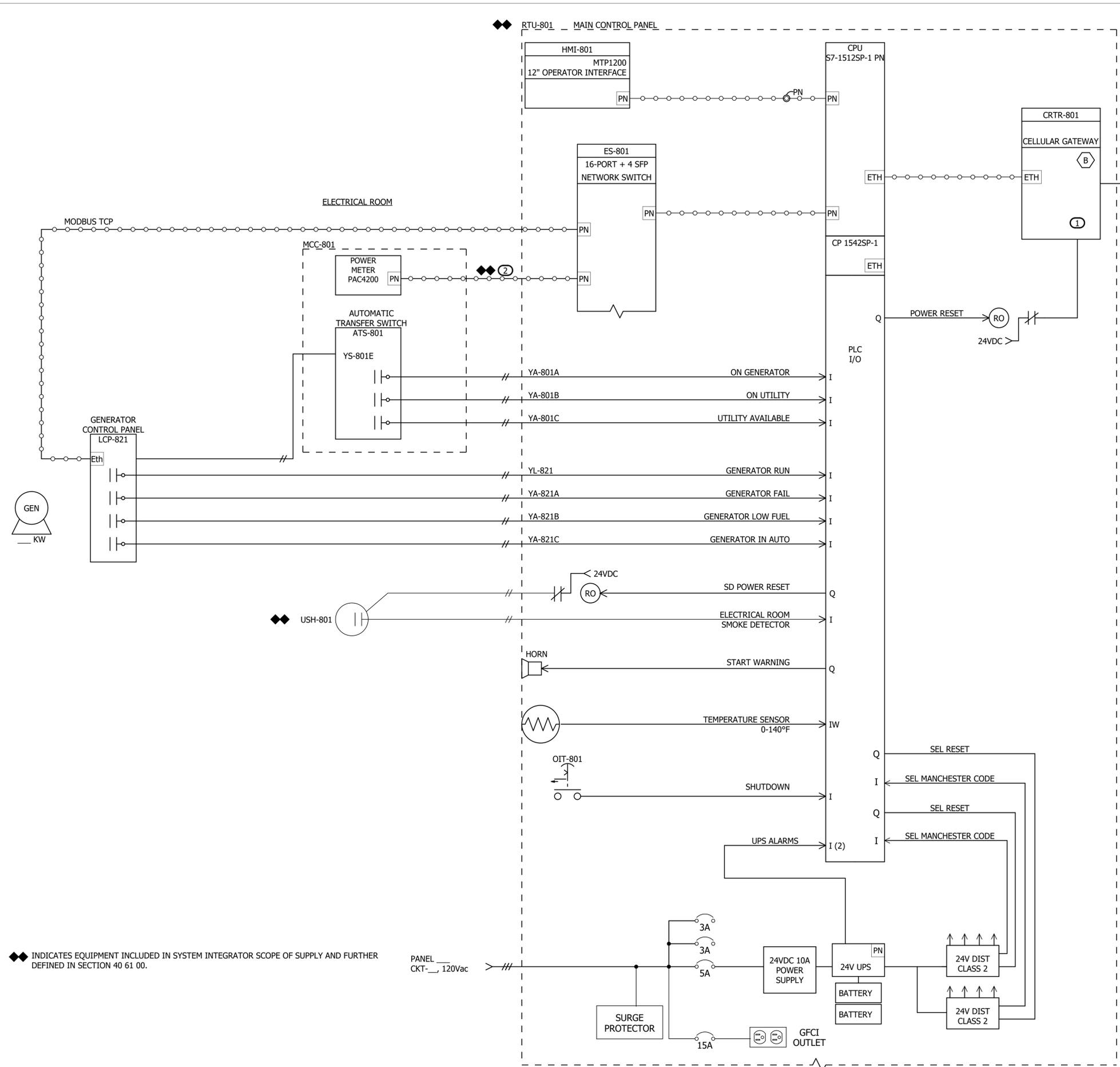


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SCALE: NTS

SHEET 116 OF 24

REV	DATE	BY

File Name: 23830-208_Well_5 LAST MODIFIED DATE: 01/16/26 3:52 PM LAST MODIFIED BY:



◆ INDICATES EQUIPMENT INCLUDED IN SYSTEM INTEGRATOR SCOPE OF SUPPLY AND FURTHER DEFINED IN SECTION 40 61 00.

- NOTES:
- ① CELLULAR GATEWAY PROVIDED BY CITY TO S&B FOR INSTALLATION INTO RTU AT S&B FACILITY
 - ② SYSTEM INTEGRATOR WILL PROVIDE THE PROFINET CABLE AND QUICK CONNECTORS FOR THE POWERMETER COMMUNICATION INTERFACE

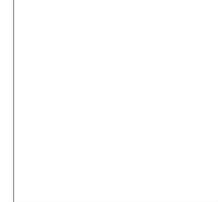
REVISION	BY	DATE	APPRL	REV

S & B inc.
 13200 S.E. 30th St.
 Burien, WA 98148
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**BLOCK DIAGRAM
 AUTOMATION POWER & ANCILLARY SYSTEMS**

**NEW WELL 5 PUMPING STATION
 VALDEZ, ALASKA**

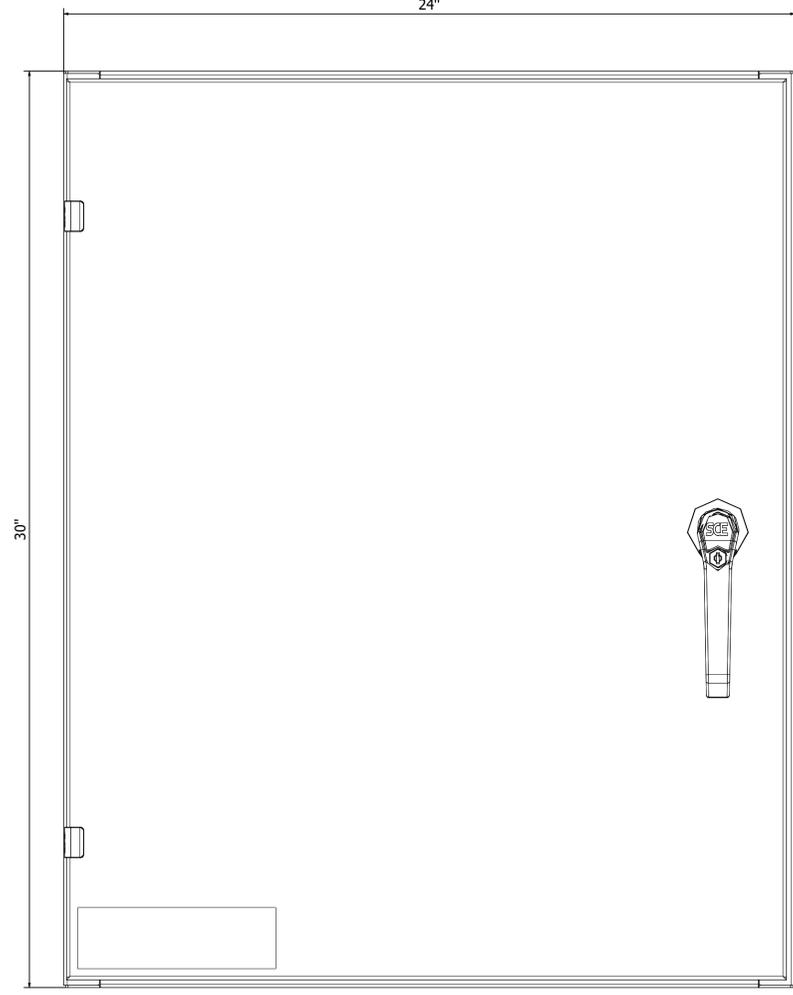
TITLE PROJECT



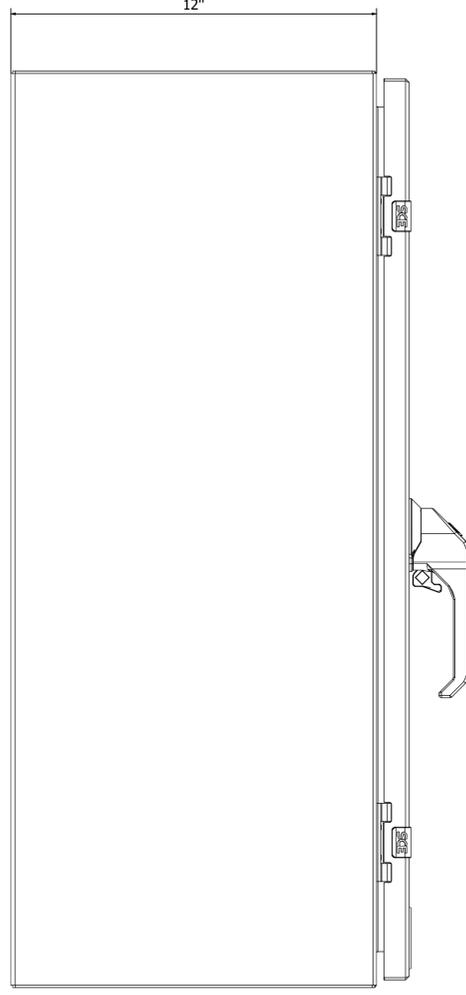
ENGINEERING
 5 EAST PARK STREET FALLON, NEVADA 89406 (775) 432-8999

BY: JES
 DATE: 1/16/2026
 SCALE: NTS

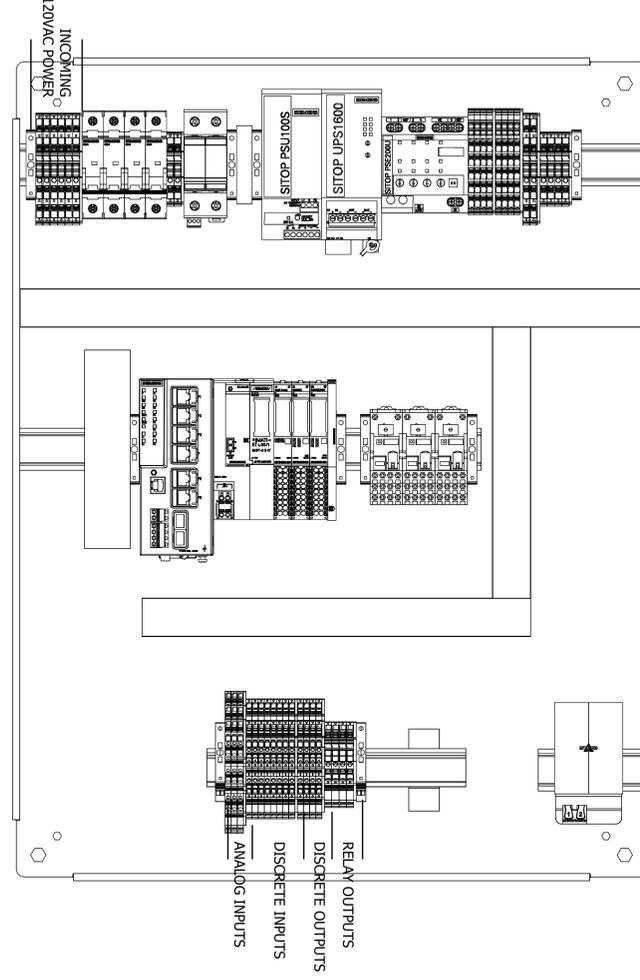
SHEET 118 OF 24 SHEETS



SAGINAW SCE-30EL2412L PPL ENCLOSURE
PAINTED RAL5015 BLUE
FRONT VIEW



SAGINAW SCE-30EL2412L PPL ENCLOSURE
PAINTED RAL5015 BLUE
LEFT SIDE VIEW



5 EAST PARK STREET FALLON, NEVADA 89406 (775) 432-8999

SHEET **124** OF **24**

BY : JES
DATE : 1/16/2026
SCALE : NTS

TITLE

**WELL 4 / RESERVOIR 2 I/O
BACK PANEL PRESENTATION**

PROJECT

**NEW WELL 5 PUMPING STATION
VALDEZ, ALASKA**



Stead & Associates
S & B inc.
13200 S.E. 30th St.
Burien, OR 97149-3105
(435) 644-1700 FAX (435) 746-9312
www.s&b-inc.com service@s&b-inc.com

JES A
09/26/24
BY

DATE
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BY

UPDATED ENCLOSURE SIZE
REVISION