



Contract Drawings For

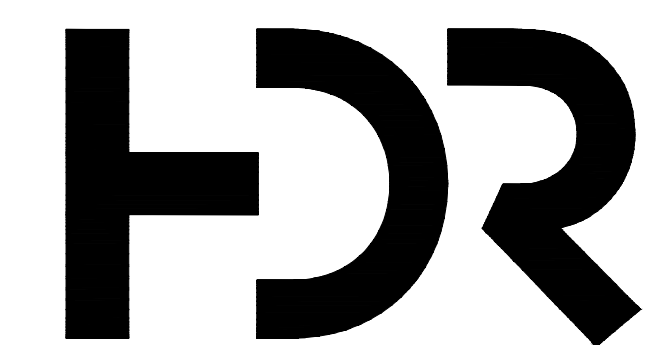
RESORT MUNICIPALITY OF WHISTLER SOUTH WHISTLER WATER SUPPLY PHASE 2

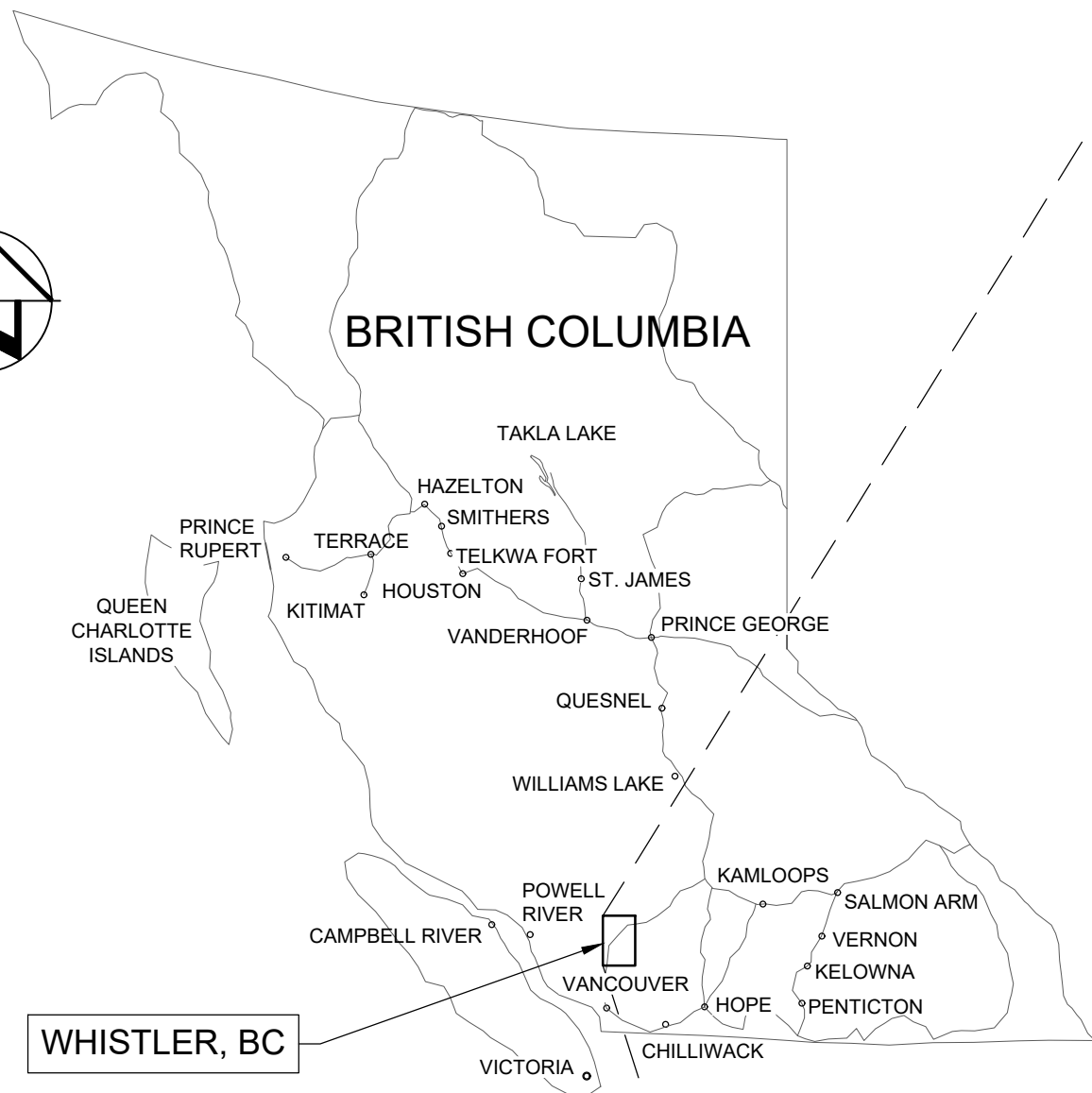
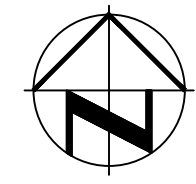
WHISTLER, BC

ISSUED FOR TENDER

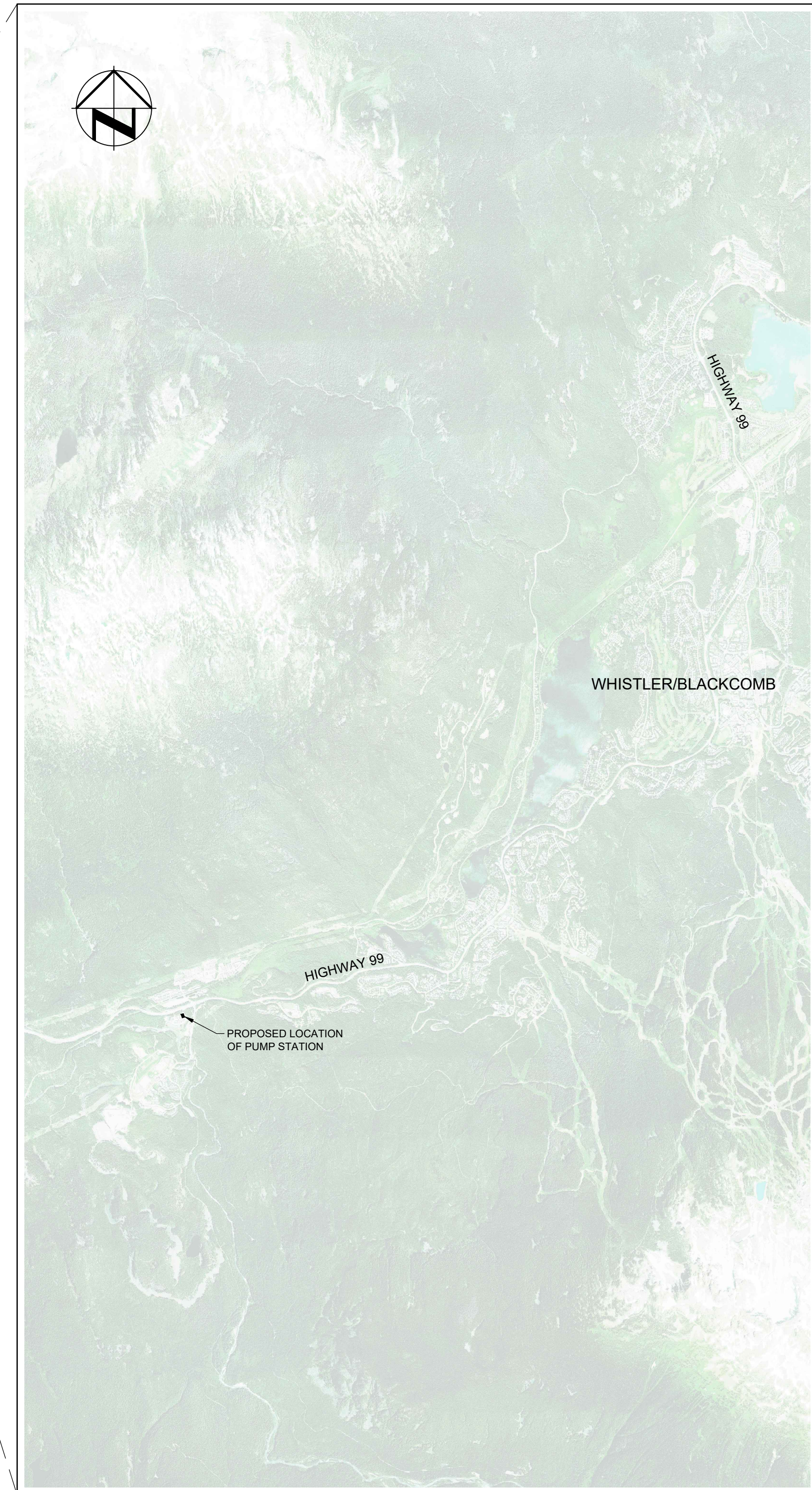
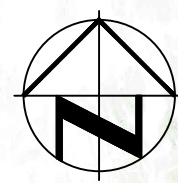
Project No. E20307

Date: SEPTEMBER 19, 2023





LOCATION PLAN
NOT TO SCALE



AREA PLAN
NOT TO SCALE

DRAWING INDEX

GENERAL

- G000 COVER PAGE
- G001 LOCATION & AREA PLANS - DRAWING INDEX

CIVIL

- C001 OVERALL SITE PLAN
- C002 CIVIL NOTES & LEGEND
- C003 SITE REMOVALS PLAN
- C004 SITE LAYOUT PLAN
- C005 PAVEMENT ELEVATION & GRADING PLAN
- C006 SITE CROSS SECTIONS - SHEET 1
- C007 VILLAGE WATERMAIN PLAN/PROFILE - STA 2+358 TO STA 2+385
- C008 WATER RESERVOIR SUPPLY PLAN/PROFILE - STA 3+000 TO STA 3+034
- C009 WATER RESERVOIR RETURN PLAN/PROFILE - STA 4+000 TO STA 4+024
- C010 OVER PRESSURE DISCHARGE LINE PLAN/PROFILE - STA 5+000 TO STA 5+011
- C011 CAUSTIC SODA LINE PLAN/PROFILE - STA 6+000 TO STA 6+022
- C012 DECHLORINATION AND STORM WATER PIPES PLAN/PROFILES
- C013 PIPE TIE-IN STAGING DETAILS
- C014 PIPE TIE-IN TO FUNCTION JUNCTION PUMP STATION
- C015 CIVIL DETAILS - SHEET 1
- C016 CIVIL DETAILS - SHEET 2
- C017 CIVIL DETAILS - SHEET 3

ARCHITECTURAL

- A001 ARCHITECTURAL SITE PLAN
- A002 CODE ANALYSIS
- A003 BUILDING LAYOUT & REFLECTED CEILING PLAN
- A004 BUILDING ELEVATIONS
- A005 ARCHITECTURAL DETAILS - SHEET 1

PROCESS

- D001 PROCESS GENERAL ARRANGEMENT
- D002 PROCESS SECTIONS - SHEET 1
- D003 PROCESS SECTIONS - SHEET 2
- D004 PROCESS SECTIONS - SHEET 3
- D005 PROCESS SECTIONS - SHEET 4
- D006 PROCESS SECTIONS - SHEET 5
- D007 PROCESS SECTIONS - SHEET 6
- D008 W212 PUMP STATION MODIFICATIONS PUMP AND VALVE STATION PLAN AND SECTION REMOVALS
- D009 W212 PUMP STATION MODIFICATIONS PUMP AND VALVE STATION PLAN AND SECTION
- D010 P279 - PUMP STATION MODIFICATIONS PIPING PLAN REMOVALS AND MATERIAL LIST

- D011 P279 - PUMP STATION MODIFICATIONS PIPING PLAN AND MATERIAL LIST
- D012 P279 - PUMP STATION MODIFICATIONS PIPING SECTIONS - SHEET 1 OF 2
- D013 P279 - PUMP STATION MODIFICATIONS PIPING SECTIONS - SHEET 2 OF 2
- D014 P279 - PUMP STATION MODIFICATIONS ANALYZER REMOVAL AND REPLACEMENT
- D015 P279 - PUMP STATION MODIFICATIONS STANDARD DETAILS

STRUCTURAL

- S001 GENERAL NOTES - SHEET 1
- S002 GENERAL DETAILS / DETAILS
- S003 FOUNDATION FORMWORK & REINFORCEMENT
- S004 WALL PLAN & REINFORCEMENT / ROOF PLAN
- S005 WALL VIEWS
- S006 SECTIONS

MECHANICAL

- M001 PLUMBING LAYOUT PLAN
- M002 DOMESTIC PLUMBING SYSTEM LAYOUT PLAN
- M003 PLUMBING DETAILS
- M004 PLUMBING SCHEMATIC
- M005 HVAC LAYOUT PLAN
- M006 HVAC SCHEDULES AND DETAILS

ELECTRICAL

REFER TO ELECTRICAL AND INSTRUMENTATION DRAWING LIST ON E000

PROCESS & INSTRUMENTATION DIAGRAMS

- Y001 LEGEND AND NOTES
- Y002 PROCESS AND INSTRUMENTATION DIAGRAM PROCESS PUMPING AND PIPING
- Y003 PROCESS AND INSTRUMENTATION DIAGRAM CAUSTIC STORAGE TANKS AND PIPING
- Y004 PROCESS AND INSTRUMENTATION DIAGRAM SIDESTREAM SUPPLY, CAUSTIC DOSING PUMP AND TRANSFER PUMP
- Y005 PROCESS AND INSTRUMENTATION DIAGRAM HVAC

GENERAL NOTES:

1. DRAWINGS ARE IN REFERENCE TO NAD83 UTM10N COORDINATE SYSTEM. COMBINED SCALE FACTOR: 0.9997083.
2. ALL UNDERGROUND UTILITIES, INCLUDING WATER, STORM, GAS, CABLE, TELEPHONE, AND ELECTRICAL AS SHOWN ON THESE PLANS ARE FOR INFORMATION ONLY. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE RMOW OR HDR CORPORATION AS TO THEIR LOCATION OR OMISSIONS.
3. THE CONTRACTOR SHALL NOTIFY THE VARIOUS UTILITY AGENCIES FOR ON-SITE INFORMATION AS TO THE ACTUAL LOCATION PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF TRANSPORTATION ASSOCIATION OF CANADA (TAC) GUIDELINES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY AND SHALL BE THE "PRINCIPAL CONTRACTOR" AS DEFINED BY THE WORKERS COMPENSATION ACT AND REGULATIONS.
6. THE CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL REQUIREMENTS AS DEFINED BY THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH THE GUIDELINES FOR LAND DEVELOPMENT WORK WITHIN BRITISH COLUMBIA, ISSUED BY THE MINISTRY OF ENVIRONMENT.
7. ALL WATER VALVES SHALL ONLY BE OPERATED BY THE RMOW, INCLUDING BOTH SUPPLY AND GRAVITY DISCHARGE PIPES. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE RMOW FOR REQUESTS TO OPERATE VALVES.
8. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
9. ALL CONNECTIONS TO THE RMOW WATER SYSTEM SHALL BE DONE IN THE PRESENCE OF RMOW WATERWORKS STAFF. THE CONTRACTOR SHALL PROVIDE A MINIMUM 48 HOURS NOTICE TO THE RMOW PRIOR TO INSTALLING ANY CONNECTIONS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

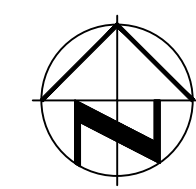
ORIGINAL
SEALED
EGBC
#1001547



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
LOCATION & AREA PLANS
& DRAWING INDEX**

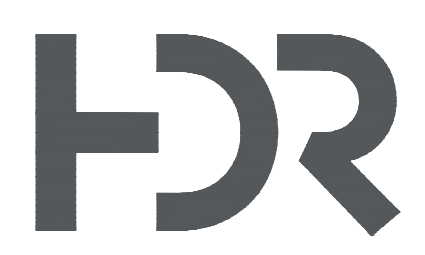
FILENAME | 10299470-G01-201-G001.dwg | SHEET
SCALE | N.T.S. | **G001**



Legal Description:
 Replacement Crown Land Tenure Agreement -
 Standard Lease No. 244659, covering District Lot
 3638, Group 1, New Westminster District, except
 thereout road shown on Survey Plan 7Tube1986
 held on file in the Crown Land Registry, containing
 4.52 hectares (the "Land") for municipal
 wastewater treatment plant and works yard
 purposes.

DL 3638

PLAN
 SCALE 1:200



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
 SEALED
 EGBC
 #1001547



SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

2023

P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY

OVERALL SITE PLAN

FILENAME	10299470-C01-201-C001.dwg	SHEET	
SCALE	AS NOTED		
			C001

GENERAL CIVIL MAPPING SYMBOLOGY

	EMBANKMENT SLOPE (CUT)
	EMBANKMENT SLOPE (FILL)
	EMBANKMENT SLOPE RIGHT ARROW RIGHT
	EMBANKMENT SLOPE LEFT ARROW LEFT
	SPOT ELEVATION/POINT #
	SURVEY BENCHMARK
	SURVEY CONTROL POINT
	HORIZONTAL CONTROL POINT
	VERTICAL CONTROL POINT
	SECTION CORNER MONUMENT
	SECTION CORNER NO MONUMENT
	IDENTIFICATION AND APPROXIMATE LOCATION OF BORE HOLE
	SOIL BORING
	BUOY
	FLOW ARROW
	WATER LEVEL IN SECTION/PROFILE
	TIDE GAUGE
	EXISTING UTILITY POLE
	GUY WIRE AND ANCHOR
	EXTERIOR UTILITY JUNCTION BOX
	HAY BALE SILT CHECK
	TEMPORARY SEDIMENT TRAP
	PIEZOMETER
	SIGN

	CLEANOUT
	CULVERT END SYMBOL (WITH CULVERT SHOWN BETWEEN SYMBOLS)
	FIRE HYDRANT
	FUEL OIL METER
	FUEL OIL MANHOLE
	FUEL OIL VAULT
	GREASE TRAP
	GRIT CHAMBER
	HEADWALL
	NATURAL GAS METER
	NATURAL GAS RECEIVER
	NATURAL GAS TRAP
	NATURAL GAS LINE VAULT
	MONITORING WELL
	POST INDICATOR VALVE
	PUMP STATION
	SANITARY MANHOLE
	SEPTIC TANK
	TANK BELOW GROUND
	TANK HORIZONTAL ABOVE GROUND
	TANK VERTICAL ABOVE GROUND
	STORM CATCH BASIN
	STORM ROUND CATCH BASIN
	STORM DRAINAGE MANHOLE
	WATER/AIR VENT
	WATER BACKFLOW PREVENTER
	WATER BLOWOFF
	WATER METER
	WATER SHUTOFF
	WATER SOFTENER
	WATER VALVE VAULT
	WATER WELL
	VALVE
	ELECTRICAL MANHOLE

GENERAL UTILITY / CIVIL LINE SYMBOLOGY

	PIPELINE
	LARGE PIPELINE
	UTILITY BENEATH STRUCTURE
	CENTERLINE
	BOTTOM OF DITCH
	QUARTER SECTION LINE
	EASEMENT
	LIMITS OF CONSTRUCTION
	EXISTING CONTOUR (MINOR)
	EXISTING CONTOUR W/ ELEVATION (MAJOR)
	EXISTING FENCE
	EXISTING VEGETATION / BRUSH LINE / TREE LINE
	FENCE - BARB WIRE
	FENCE - CHAIN LINK
	FENCE - FIELD
	FENCE - OTHER
	FENCE - WOOD
	FENCE - WOVEN WIRE
	HIGHWAY GUARDRAIL
	NEW CONTOUR (MINOR)
	NEW CONTOUR (MAJOR)
	ROCK BERM
	SILT FENCE
	TOE OF SLOPE
	TOP OF SLOPE
	FIBRE OPTIC
	CABLE
	OVERHEAD POWER
	U/G POWER / INSTRUMENTATION
	TELEPHONE
	FUEL OIL
	NATURAL GAS
	INDUSTRIAL WASTE WATER
	SANITARY SEWER
	STORM SEWER
	WATER
	WATER NON-POTABLE

PHASE 2 - CIVIL LEGEND & CONSTRUCTION NOTES

LEGEND

	PHASE 1 WATERMAIN
	PHASE 2 WATERMAIN
	EX. CHEAKAMUS WATER RESERVOIR RETURN
	EX. CHEAKAMUS WATER RESERVOIR SUPPLY
	EX. VILLAGE MAIN
	EX. WATER WELL WATERMAIN
	EX. WATERMAIN
	EX. WATERMAIN ABANDONED
	EX. ELECTRICAL
	EX. DITCH
	EX. SANITARY SEWER
	EX. TELEPHONE
	EX. STREETLIGHT
	EX. DER ELECTRICAL
	EX. DES ELECTRICAL
	EX. DOM PRESSURE GAS
	EX. INT PRESSURE GAS
	EX. PROPERTY LINE
	LIMIT OF WORK
	EX. PIPE REMOVAL
	PROP. PULL BOX
	PROP. GATE VALVE
	PHASE 2 GATE VALVE
	PROP. AIR VALVE

CONSTRUCTION NOTES:

- 2500 PIPES TO BE AWWA C900 PVC DR18 OR AWWA C151 DI WITH CEMENTIOUS LINING WITH FLEXIBLE RESTRAINED JOINTS, US PIPE TR FLEX OR EQUIVALENT, AND FACTORY SEAL COATED, FIELD INSTALLED IN POLYETHYLENE SHEATH PER AWWA C105.
- 4000, 3500 AND 3000 PIPES TO BE AWWA C151 DI WITH FLEXIBLE RESTRAINED JOINTS, US PIPE TR FLEX OR EQUIVALENT, AND FACTORY SEAL COATED, FIELD INSTALLED IN POLYETHYLENE SHEATH PER AWWA C105.
- ALL WATER MAIN JOINTS TO BE WRAPPED WITH PETROLATUM TAPE.
- FIBRE CONDUITS TO HAVE PULL STRINGS INSTALLED.
- ALL EXISTING UTILITY LOCATIONS TO BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION.

CIVIL GENERAL NOTES:

- FLEX COUPLERS AT MECHANICAL-PIPING INTERFACE TO BE GF MULTIFLEX, RATED TO 232 PSI FOR LOW PRESSURE LINES AND 250 PSI FOR THE HIGH PRESSURE LINE.
- WATERMAIN TO BE DUCTILE IRON CEMENT MORTAR LINED PC350 TR FLEX RESTRAINED PIPE BY CANADA PIPE OR US PIPE.
- WATERMAIN FITTINGS TO BE DUCTILE IRON TR FLEX.
- CONTRACTOR TO FLUSH, DISINFECT, AND PRESSURE TEST WATERMAIN INSTALLED AS PART OF PHASE 1 PRIOR TO AUTHORIZATION FOR USE.

LEGEND NOTES:

- THIS IS A STANDARD CIVIL SYMBOLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
- SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547

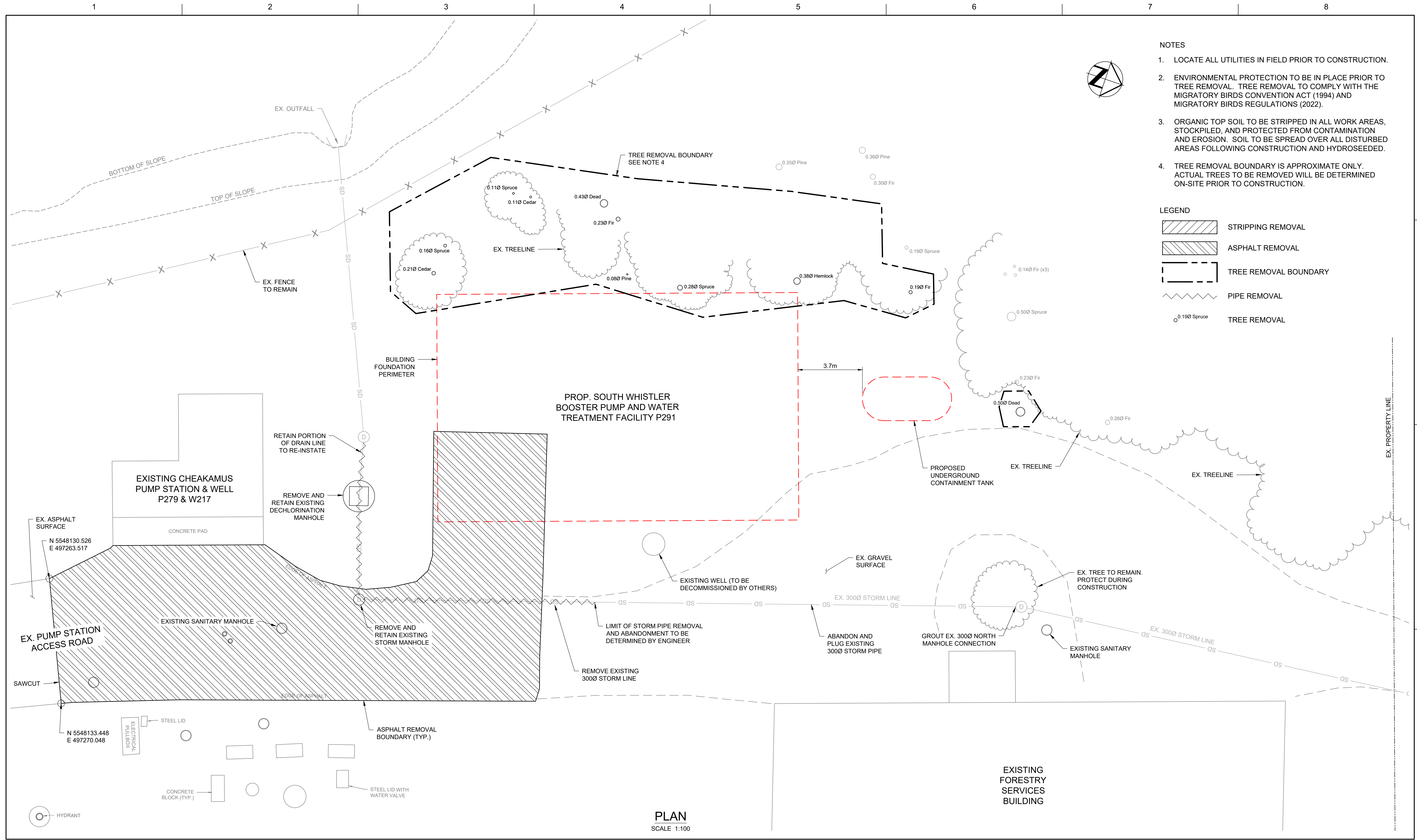


SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY

CIVIL NOTES & LEGEND

FILENAME	10299470-C01-201-C002.dwg	SHEET	C002
SCALE	N.T.S.		



PLAN
SCALE 1:100



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
SITE REMOVALS PLAN

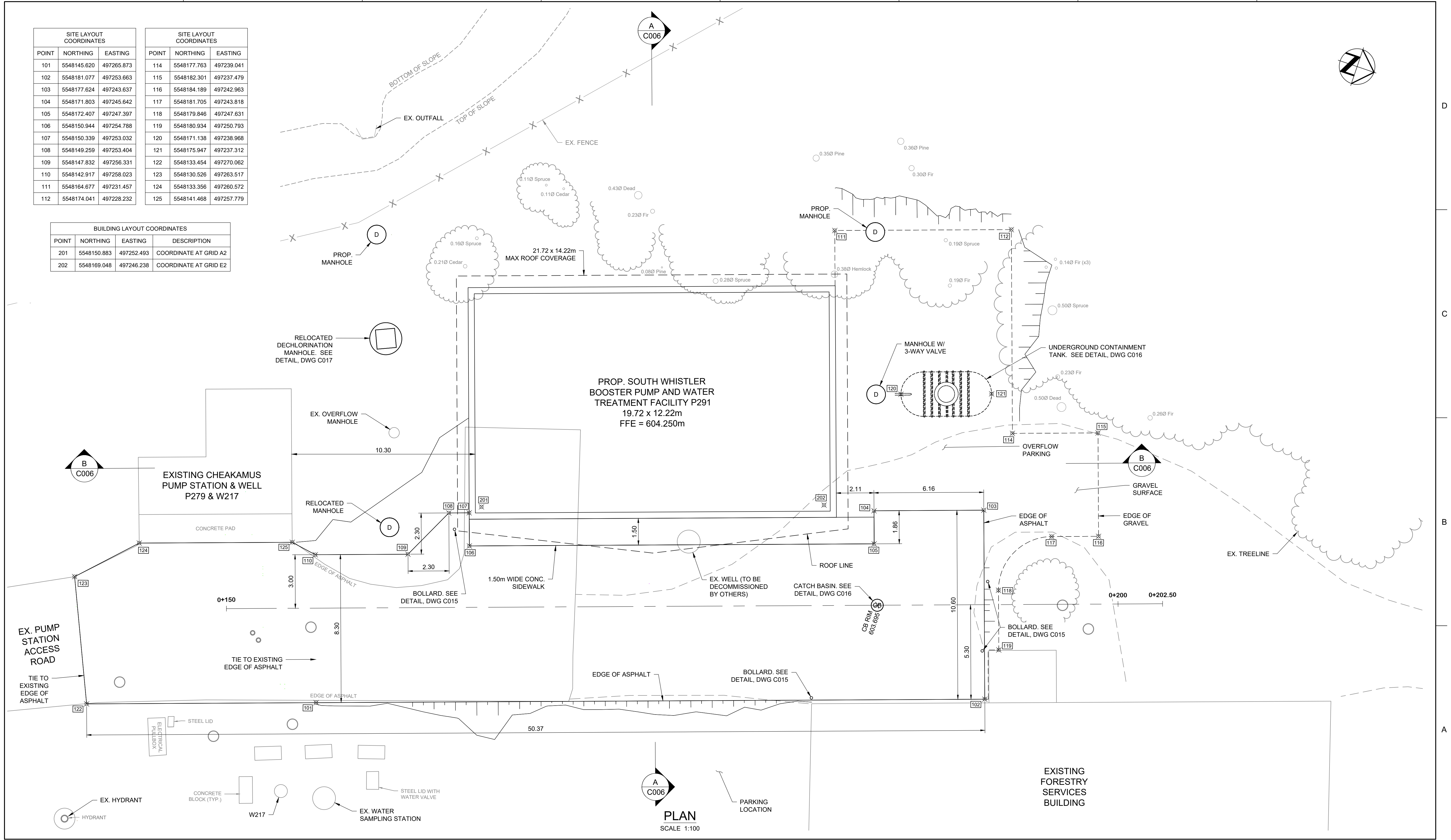
FILENAME | 10299470-C01-201-C003.dwg
SCALE | AS NOTED

SHEET
C003

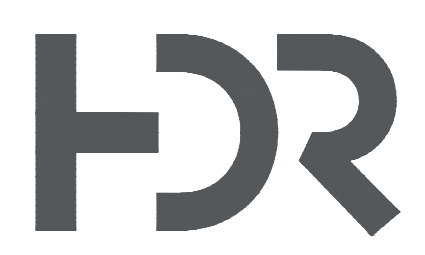
2023

SITE LAYOUT COORDINATES			SITE LAYOUT COORDINATES		
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
101	5548145.620	497265.873	114	5548177.763	497239.041
102	5548181.077	497253.663	115	5548182.301	497237.479
103	5548177.624	497243.637	116	5548184.189	497242.963
104	5548171.803	497245.642	117	5548181.705	497243.818
105	5548172.407	497247.397	118	5548179.846	497247.631
106	5548150.944	497254.788	119	5548180.934	497250.793
107	5548150.339	497253.032	120	5548171.138	497238.968
108	5548149.259	497253.404	121	5548175.947	497237.312
109	5548147.832	497256.331	122	5548133.454	497270.062
110	5548142.917	497258.023	123	5548130.526	497263.517
111	5548164.677	497231.457	124	5548133.356	497260.572
112	5548174.041	497228.232	125	5548141.468	497257.779

BUILDING LAYOUT COORDINATES			
POINT	NORTHING	EASTING	DESCRIPTION
201	5548150.883	497252.493	COORDINATE AT GRID A2
202	5548169.048	497246.238	COORDINATE AT GRID E2



PLAN
SCALE 1:100



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

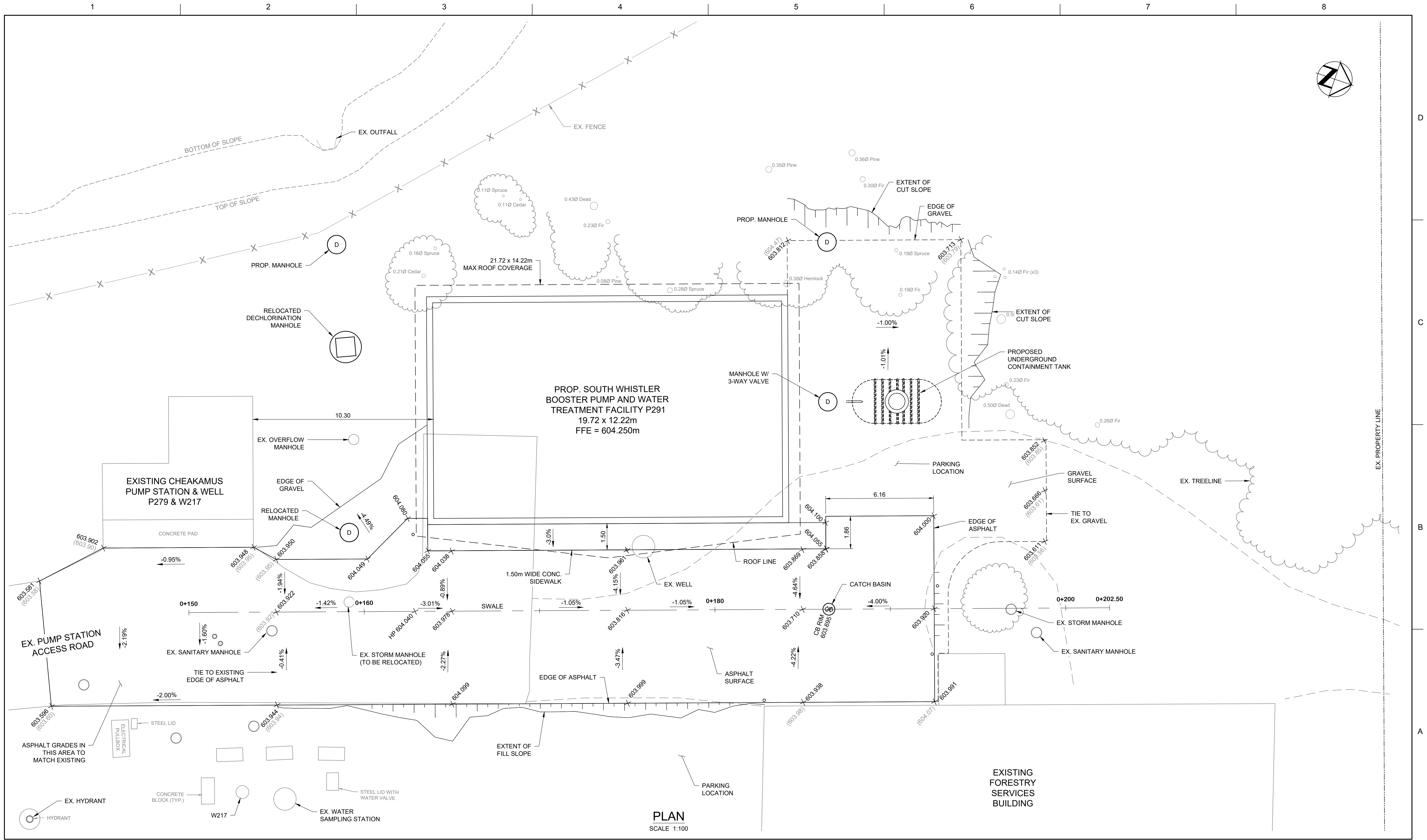


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

SITE LAYOUT PLAN

FILENAME	10299470-C01-201-C004.dwg	SHEET	C004
SCALE	AS NOTED		



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
 SEALED
 EGBC
 #1001547



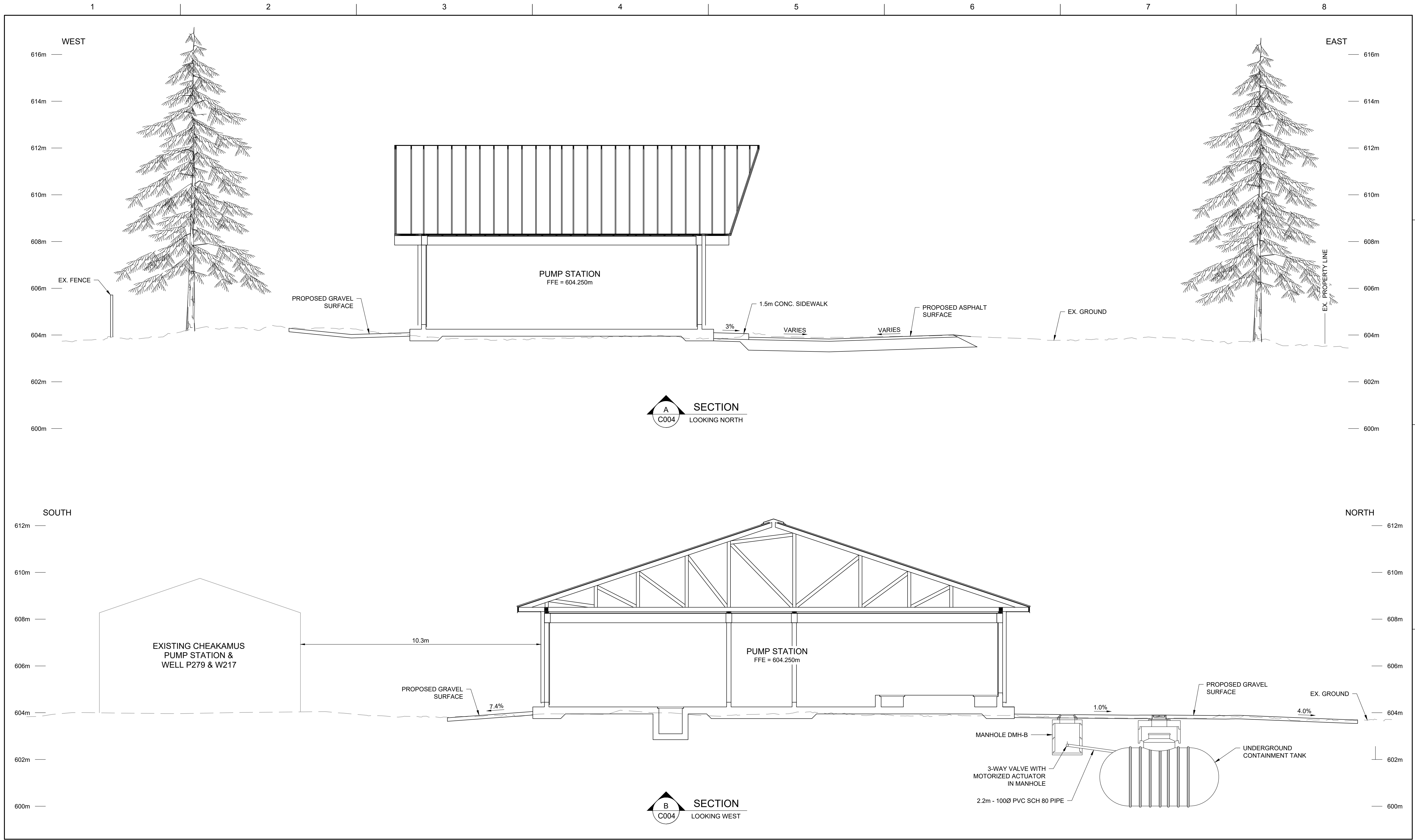
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

2023

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 PAVEMENT ELEVATION &
 GRADING PLAN**

FILENAME 10299470-C01-201-C005.dwg
 SCALE AS NOTED

SHEET
C005



A
SECTION
C004
LOOKING NORTH

B
SECTION
C004
LOOKING WEST



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



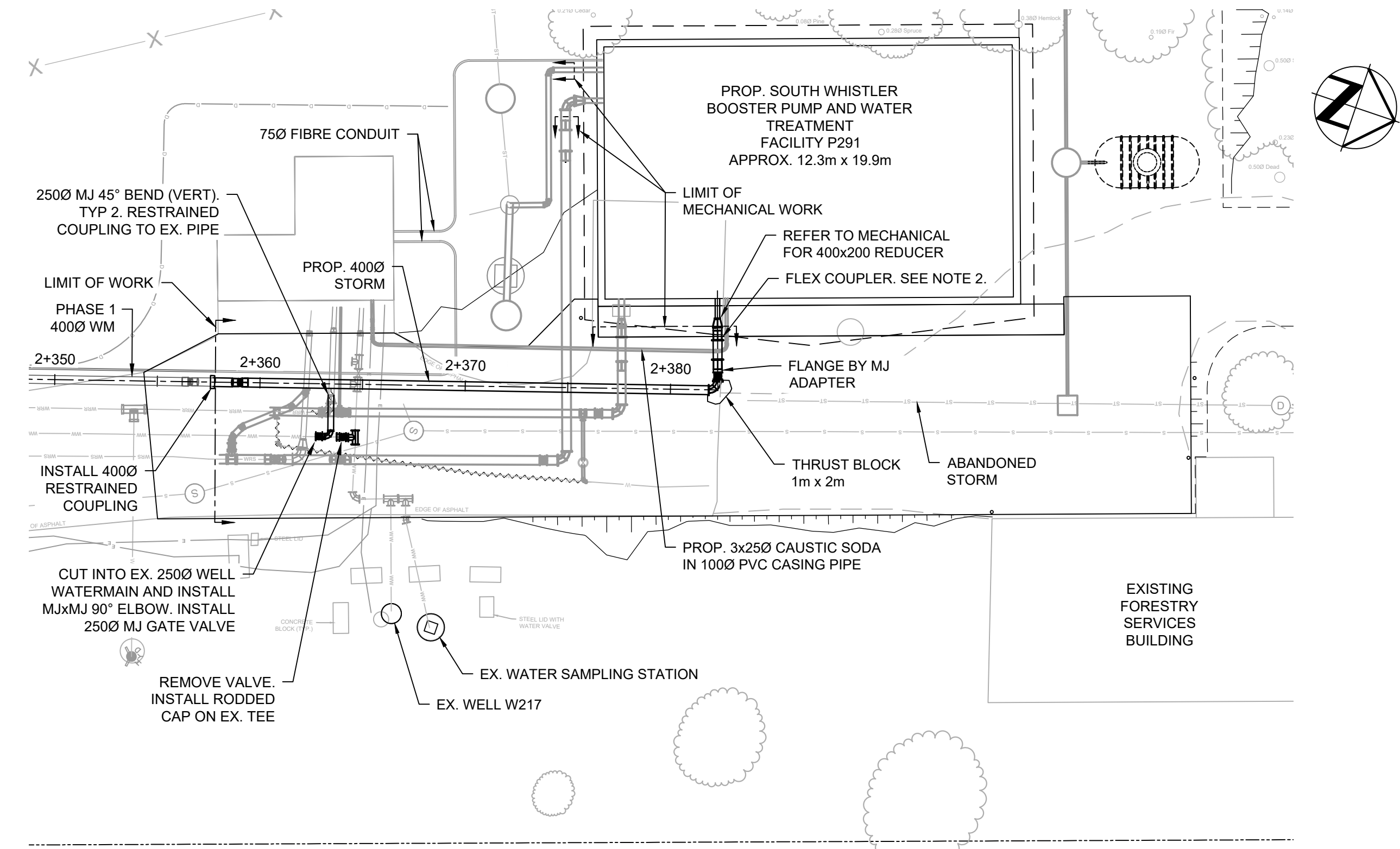
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

SITE CROSS SECTIONS

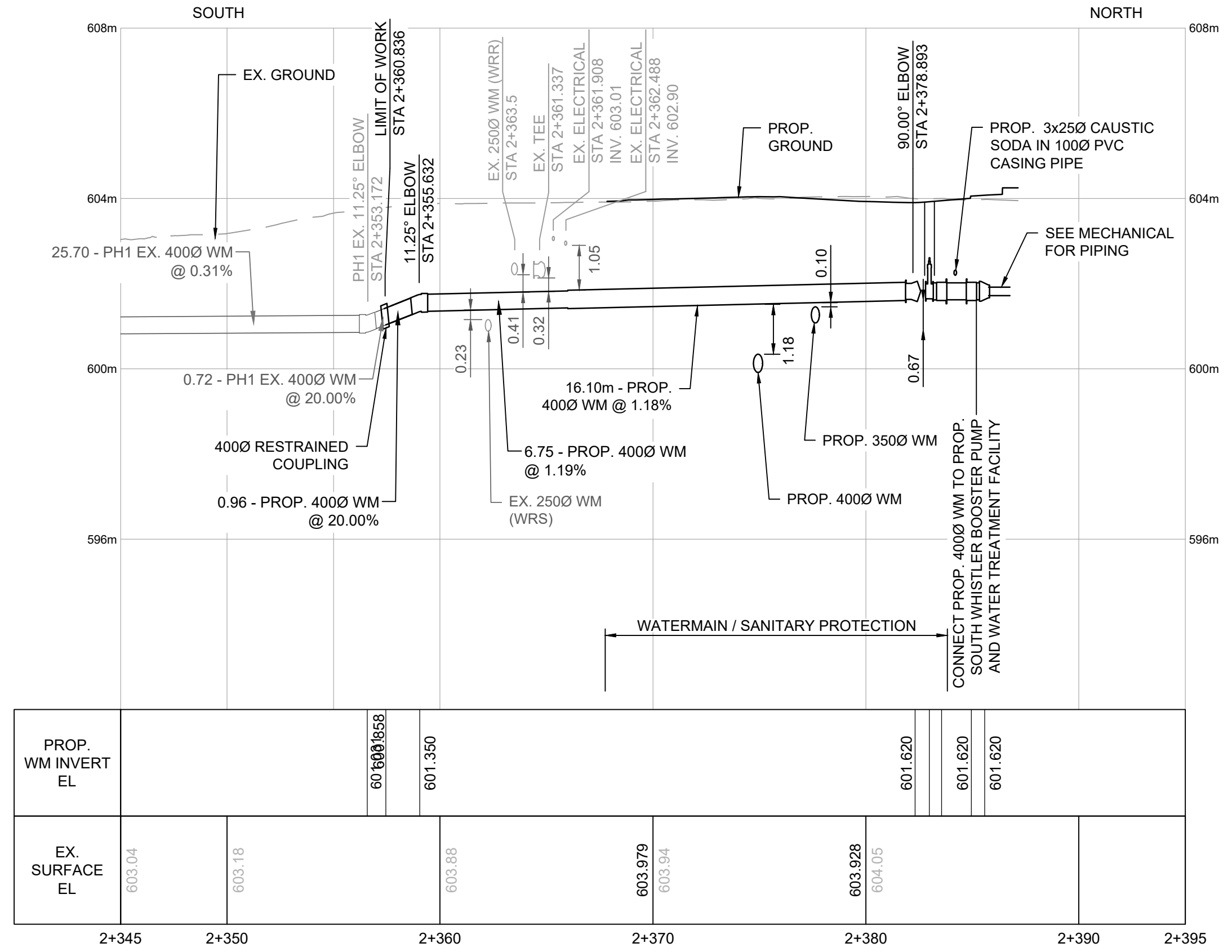
FILENAME	10299470-C01-201-C006.dwg	SHEET	C006
SCALE	1:75		

2023

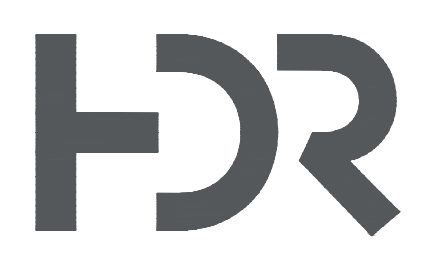


NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.

PLAN
 SCALE 1:200



PROFILE
 SCALE 1:200 HORZ.
 1:100 VERT.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

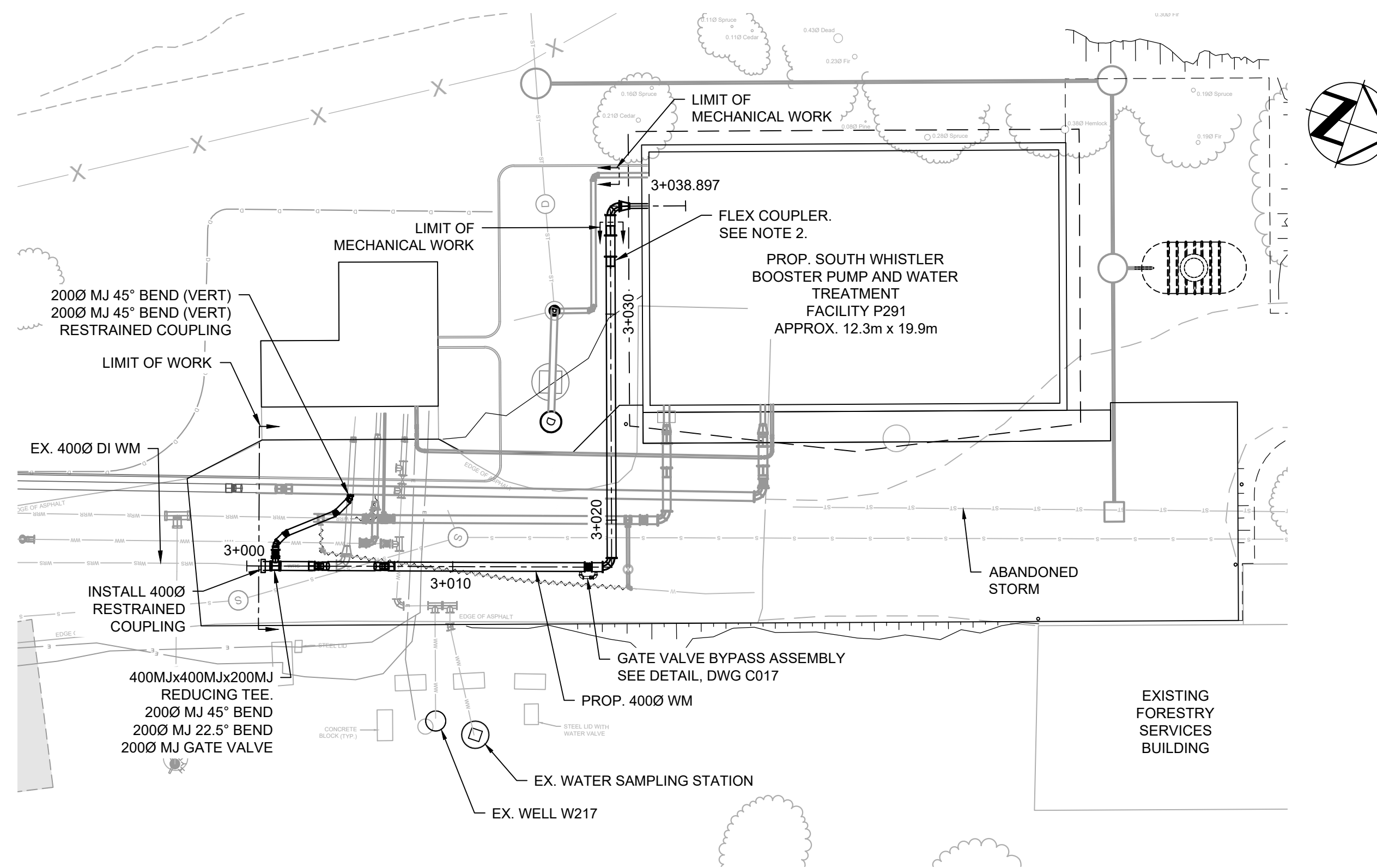
ORIGINAL
 SEALED
 EGBC
 #1001547



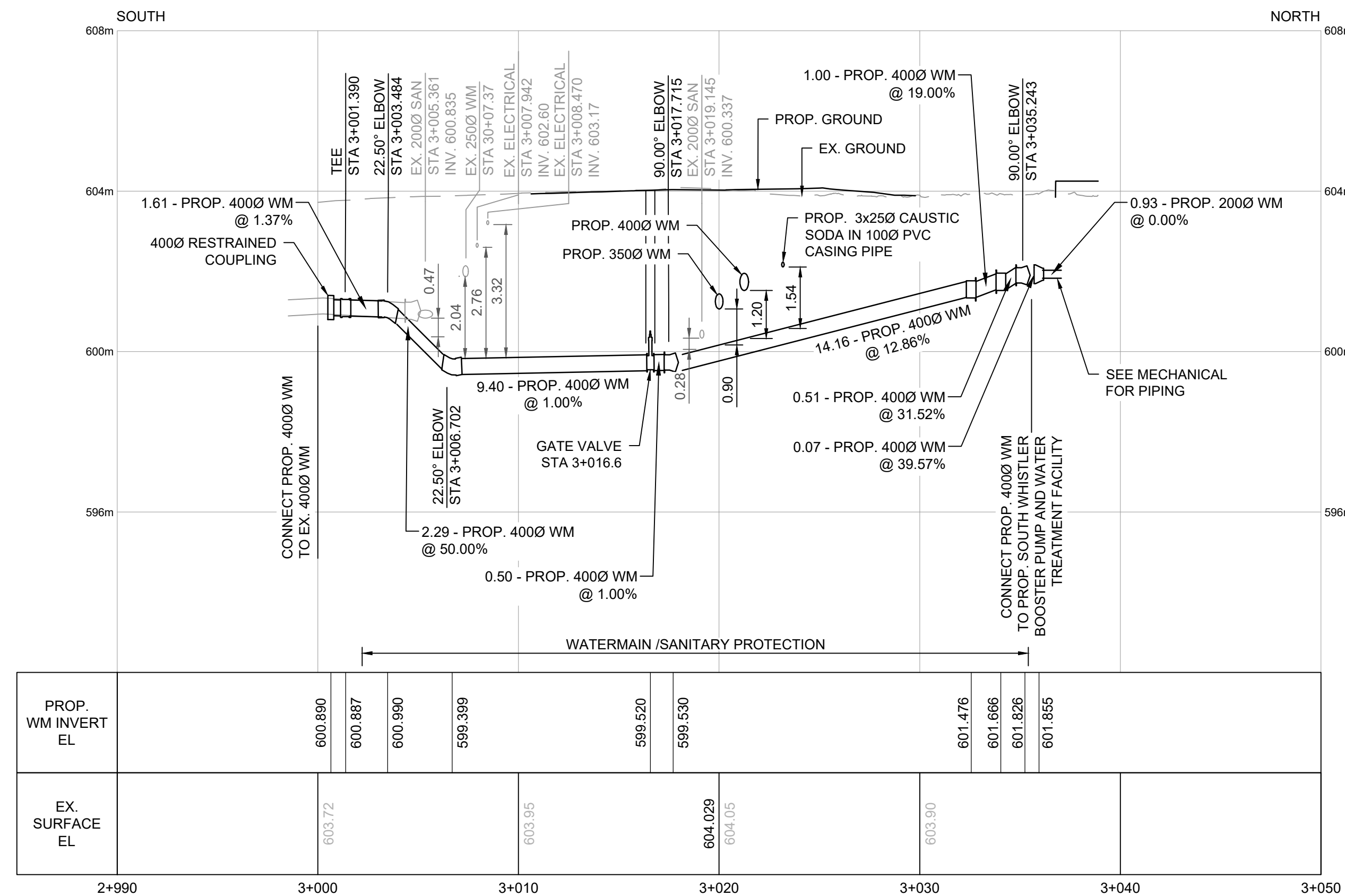
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 VILLAGE WATERMAIN
 PLAN/PROFILE - STA 2+358 TO STA 2+385**

NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.



PLAN
 SCALE 1:200



PROFILE
 SCALE 1:200 HORZ.
 1:100 VERT.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

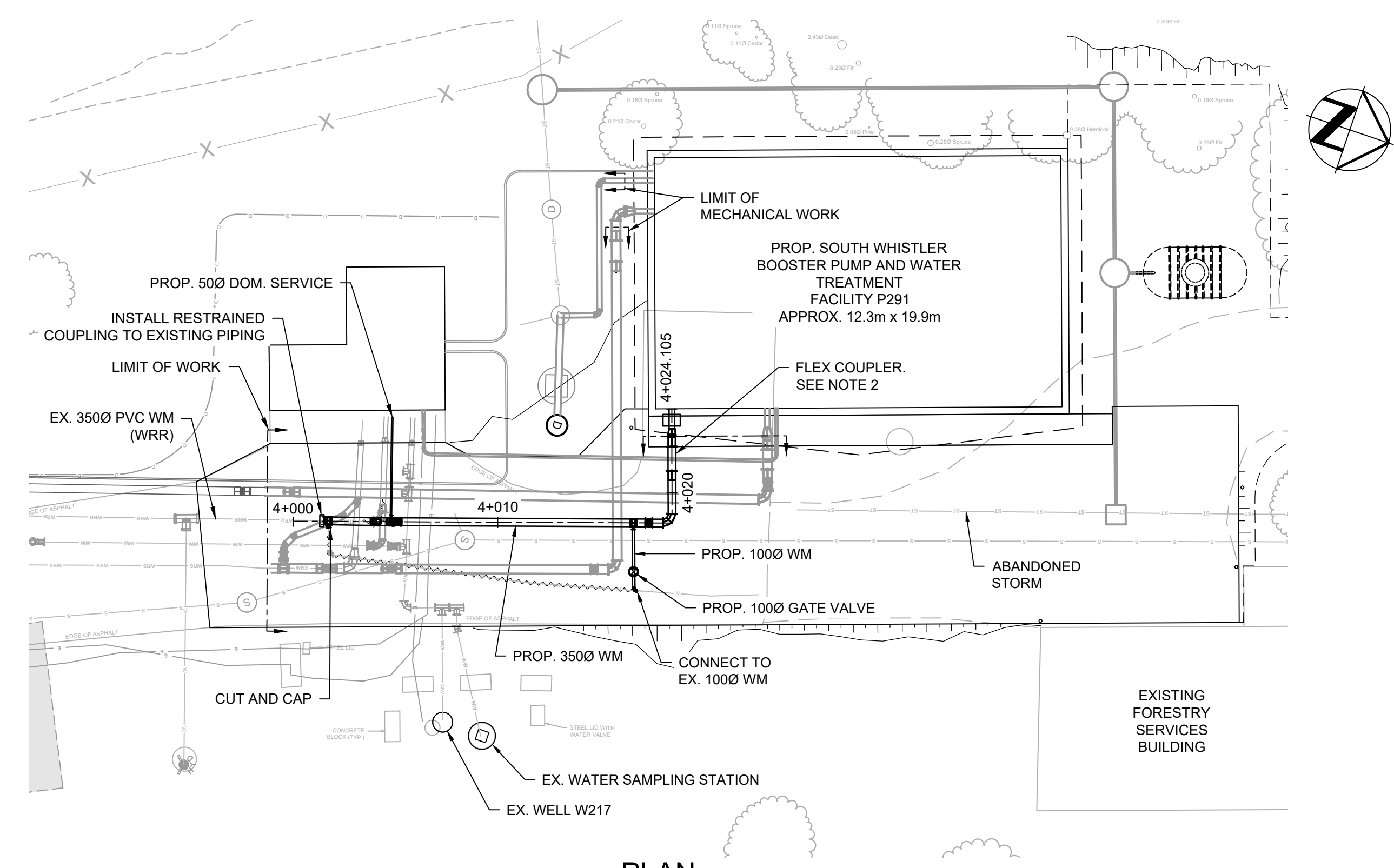
ORIGINAL
 SEALED
 EGBC
 #1001547



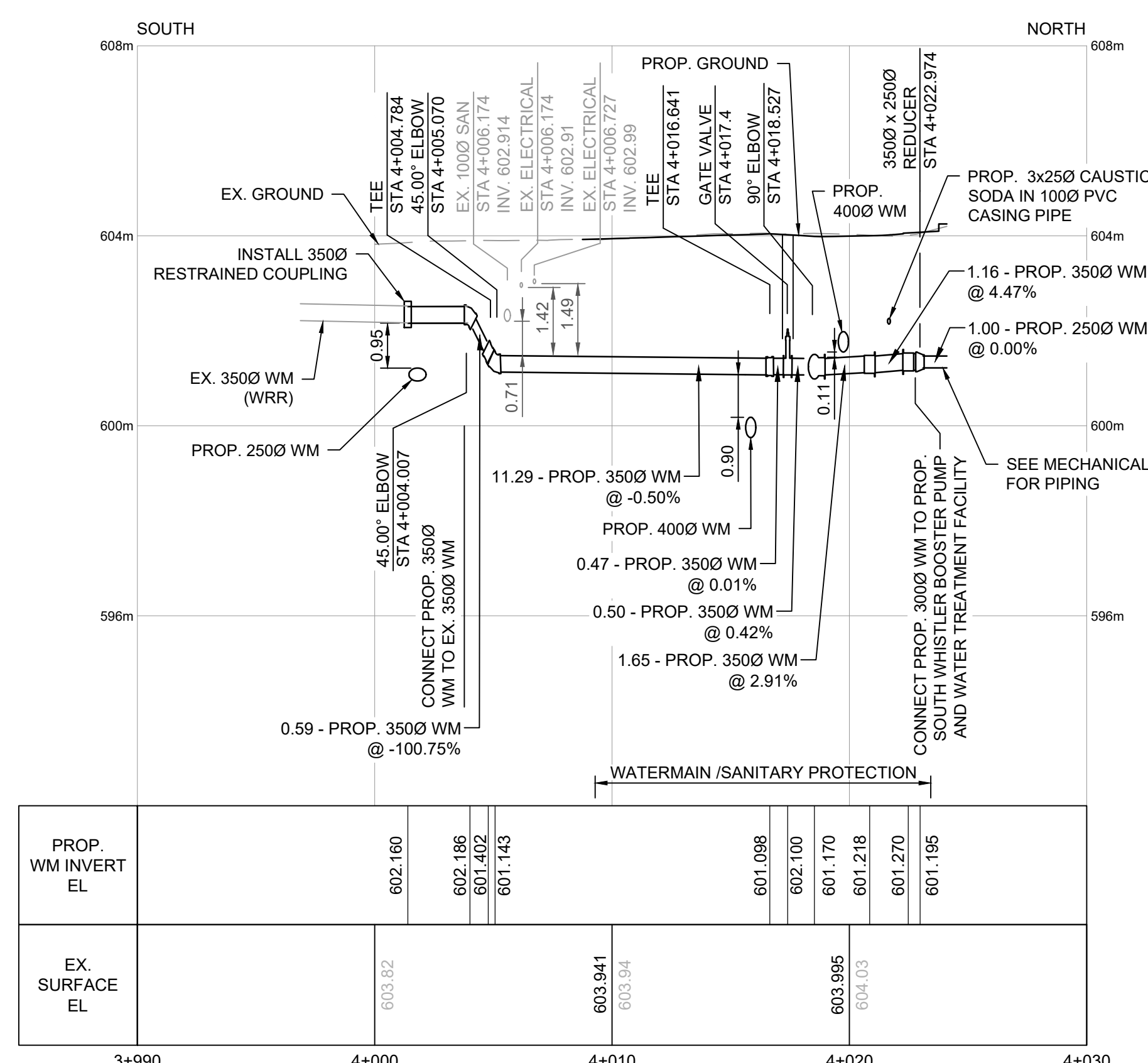
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 WATER RESERVOIR SUPPLY
 PLAN/PROFILE - STA 3+000 TO STA 3+034**

NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.

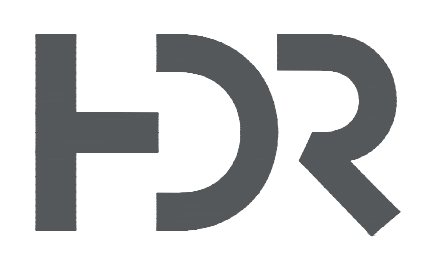


PLAN
 SCALE 1:200



PROFILE
 SCALE 1:200 HORIZ.
 1:100 VERT.

PROP. WM INVERT EL	602.160	602.186	601.402	601.143	601.088	602.100	601.170	601.218	601.270	601.195
EX. SURFACE EL	603.62				603.941	603.94	603.995	604.03		
	3+990	4+000		4+010		4+020		4+030		



PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

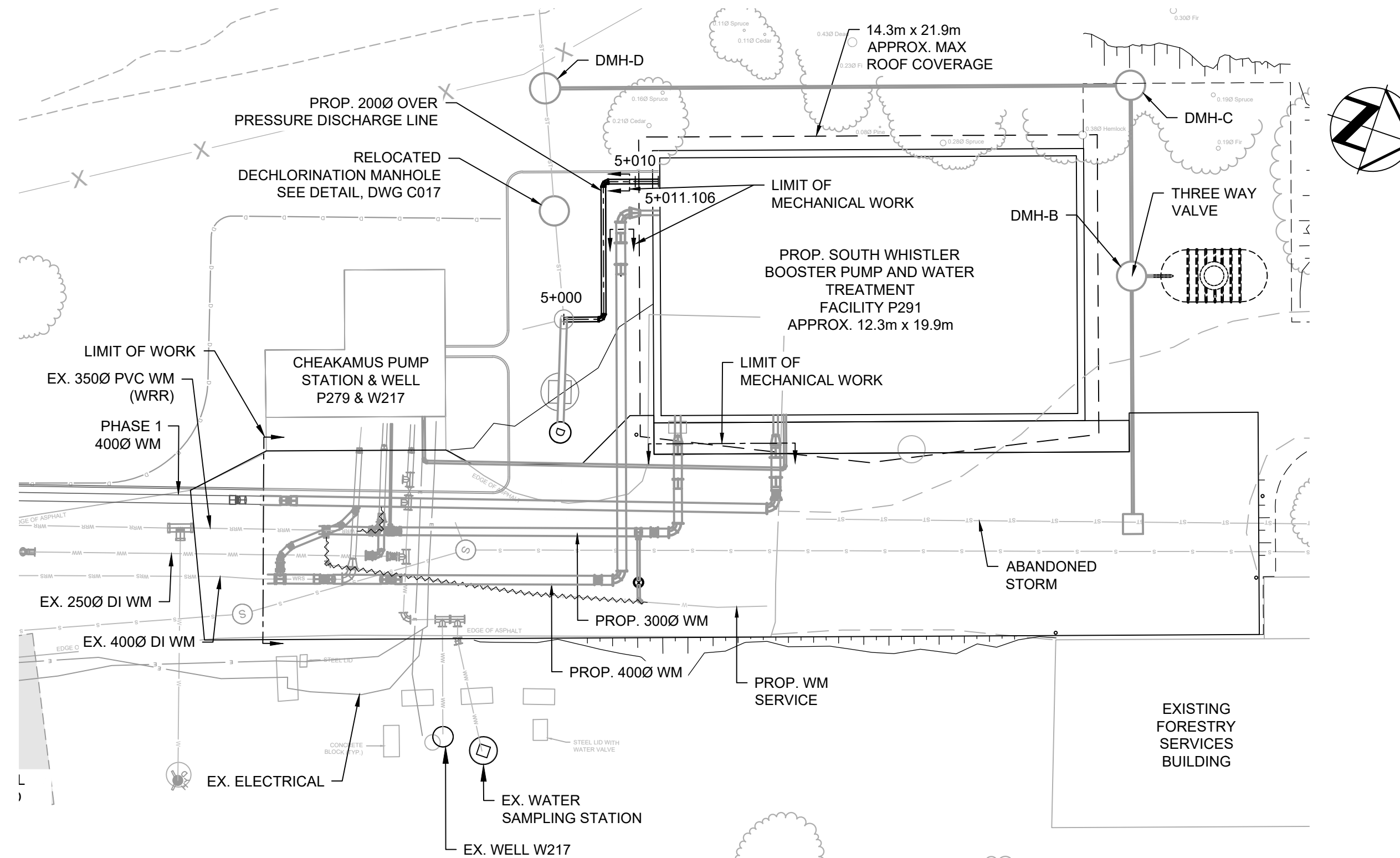
ORIGINAL
 SEALED
 EGBC
 #1001547



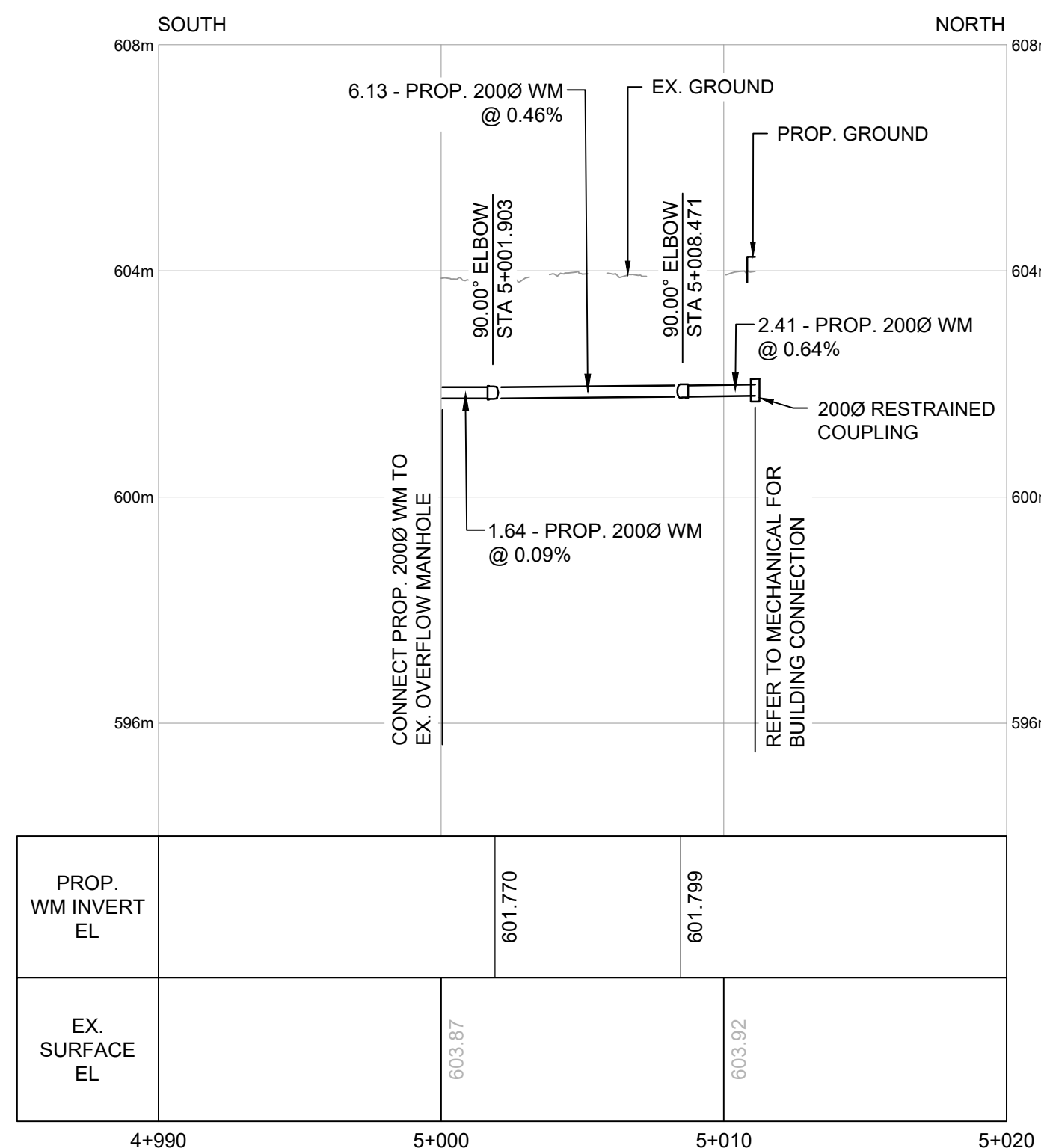
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 WATER RESERVOIR RETURN
 PLAN/PROFILE - STA 4+000 TO STA 4+024**

NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.



PLAN
 SCALE 1:200



PROFILE
 SCALE 1:200 HORZ.
 1:100 VERT.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

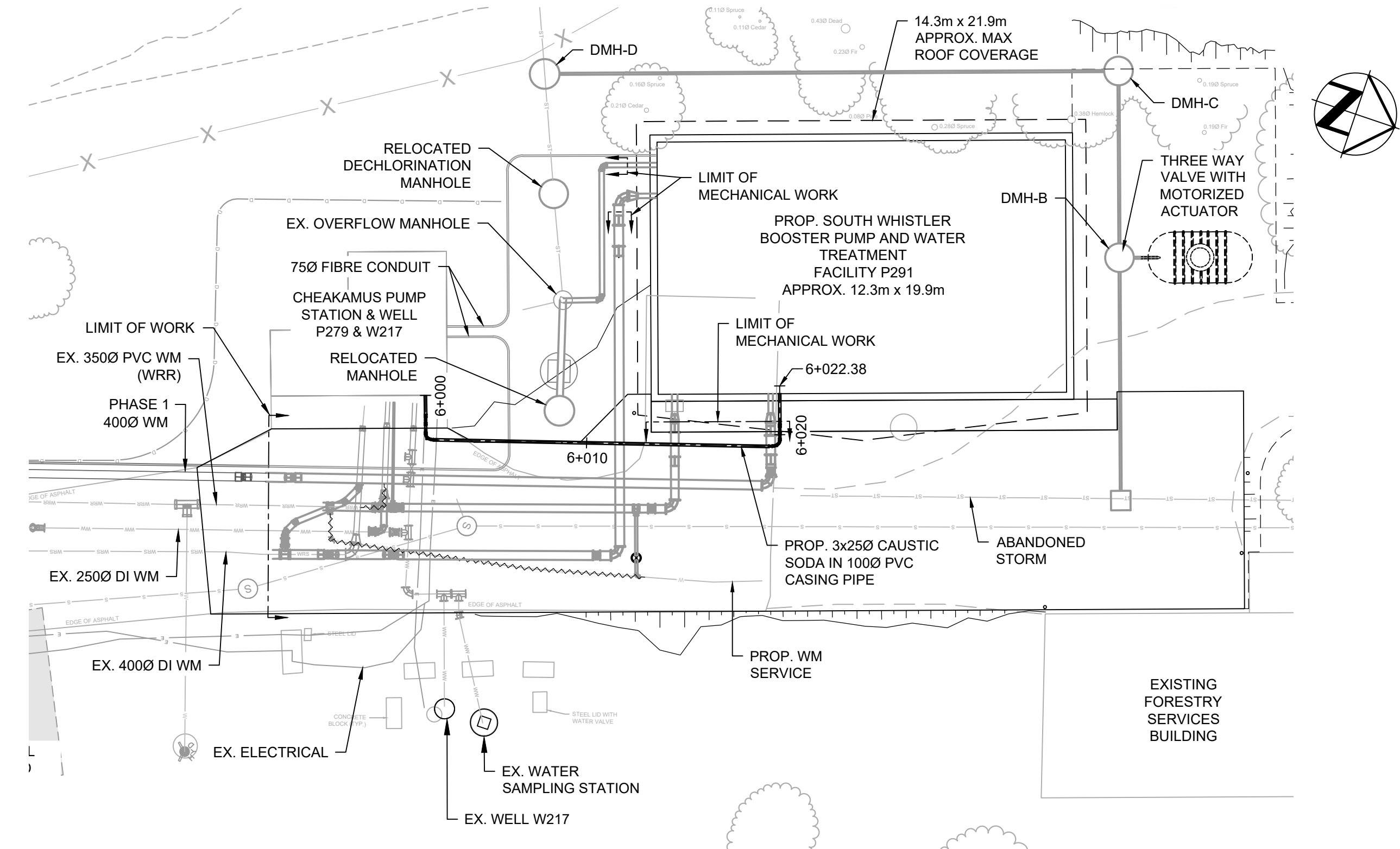
PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
 SEALED
 EGBC
 #1001547



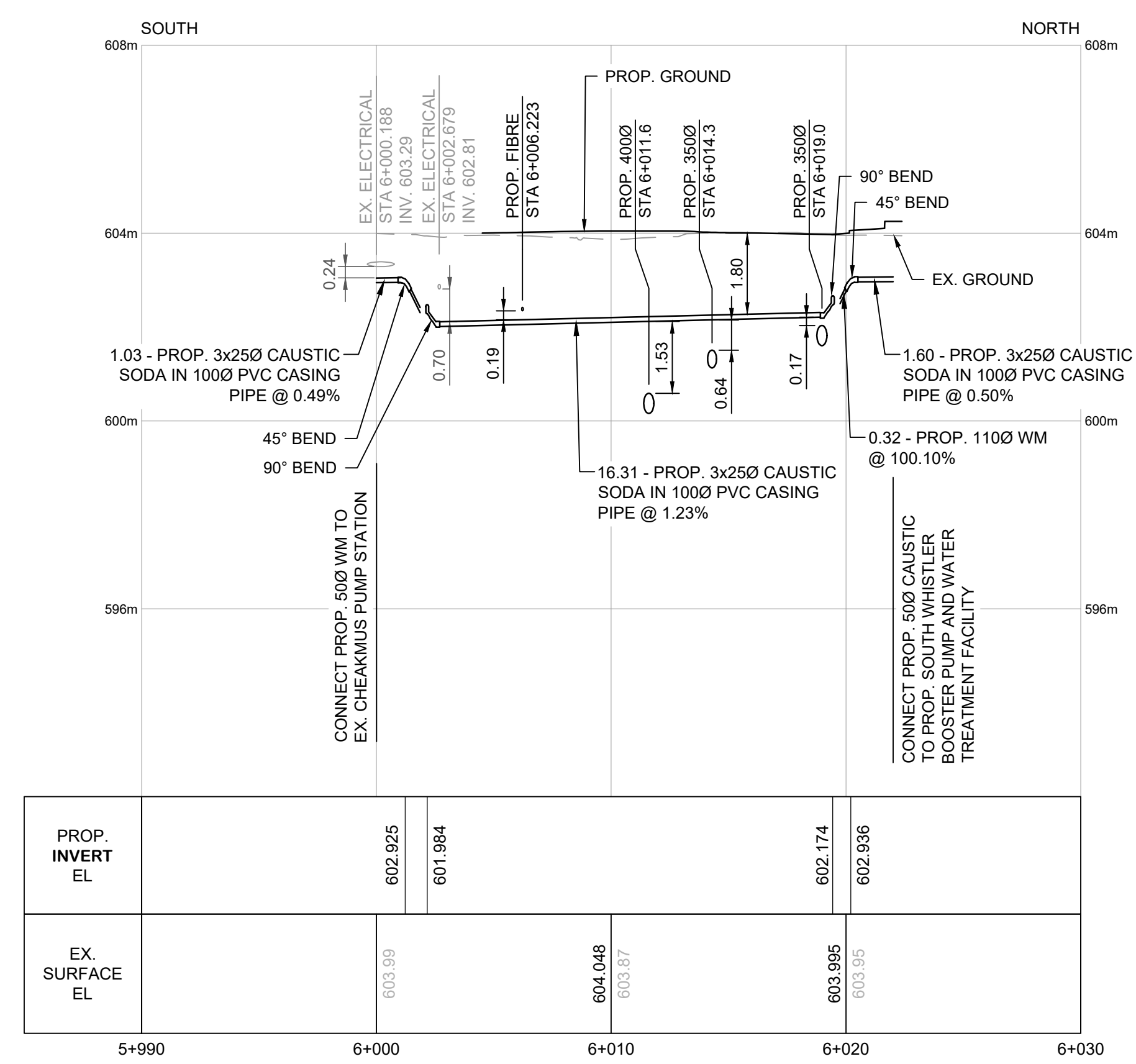
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 OVER PRESSURE DISCHARGE LINE
 PLAN/PROFILE - STA 5+000 TO STA 5+011**



NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.

PLAN
 SCALE 1:200



NOTE:
 1. CASING PIPING TO BE SOCKET WELDED PVC CONDUIT.
 2. ALL BENDS TO BE LONG SWEEP MINIMUM 600mm (24") RADIUS.

PROFILE
 SCALE 1:200 HORZ.
 1:100 VERT.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

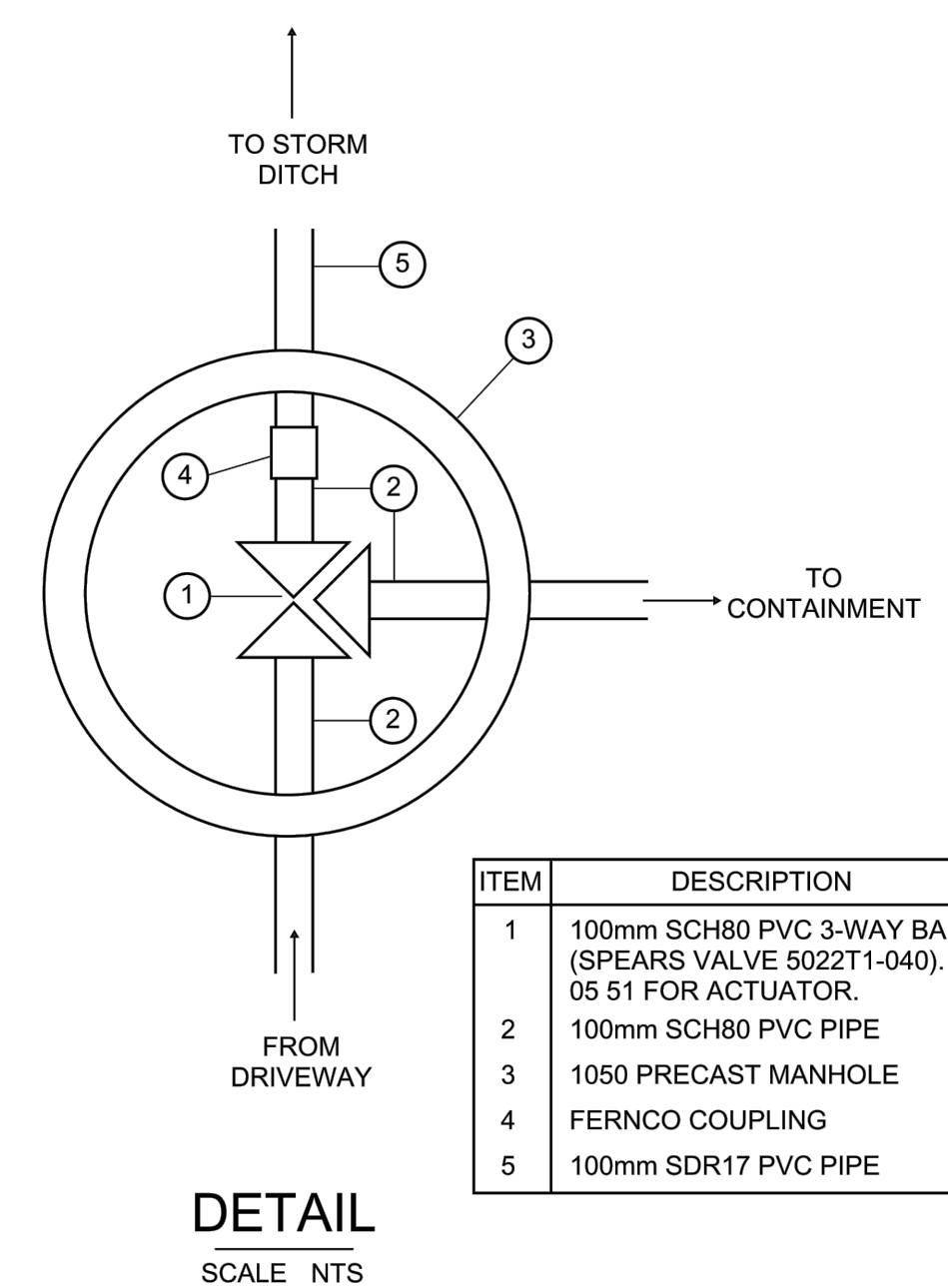
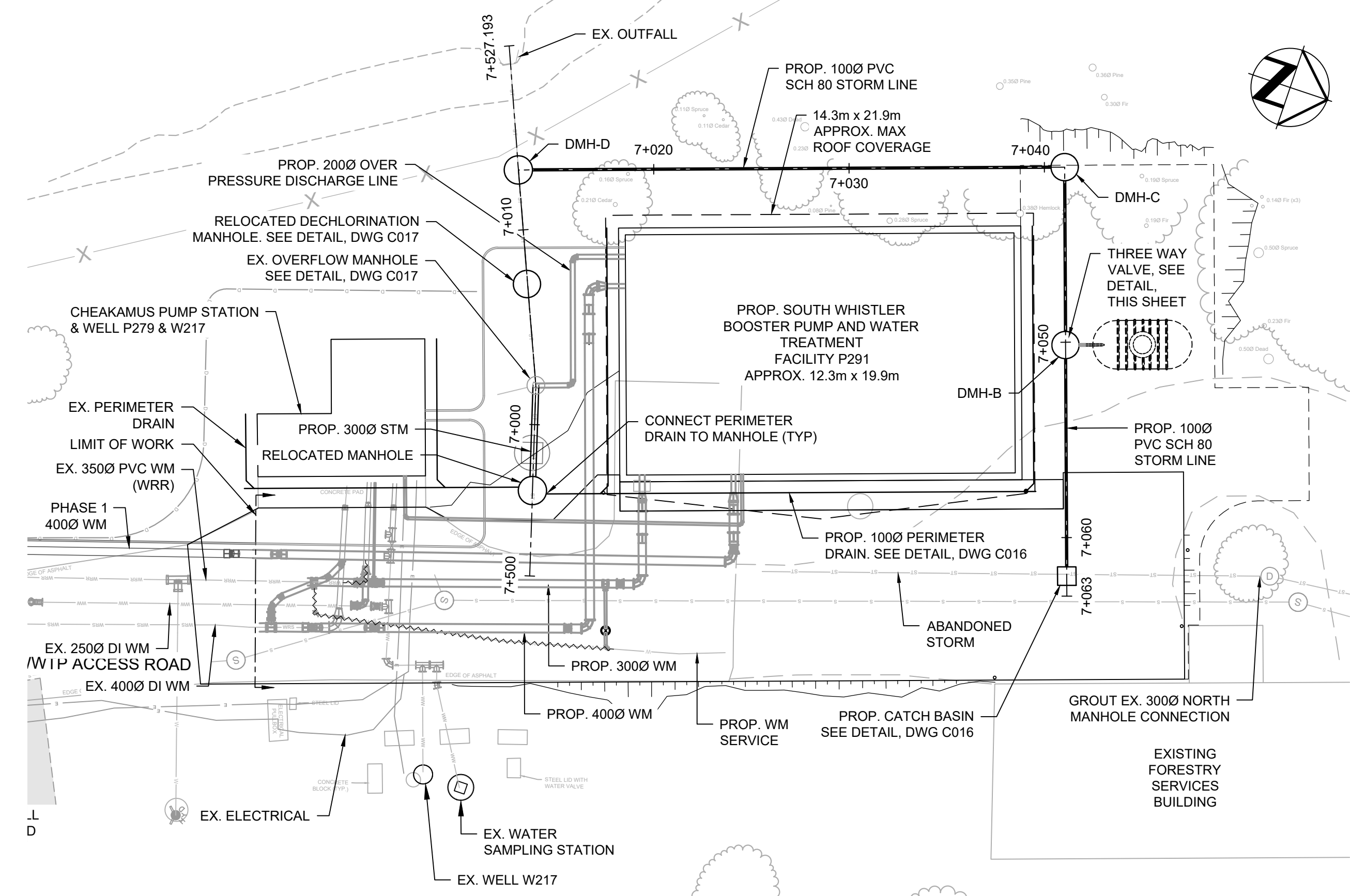
ORIGINAL
 SEALED
 EGBC
 #1001547



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

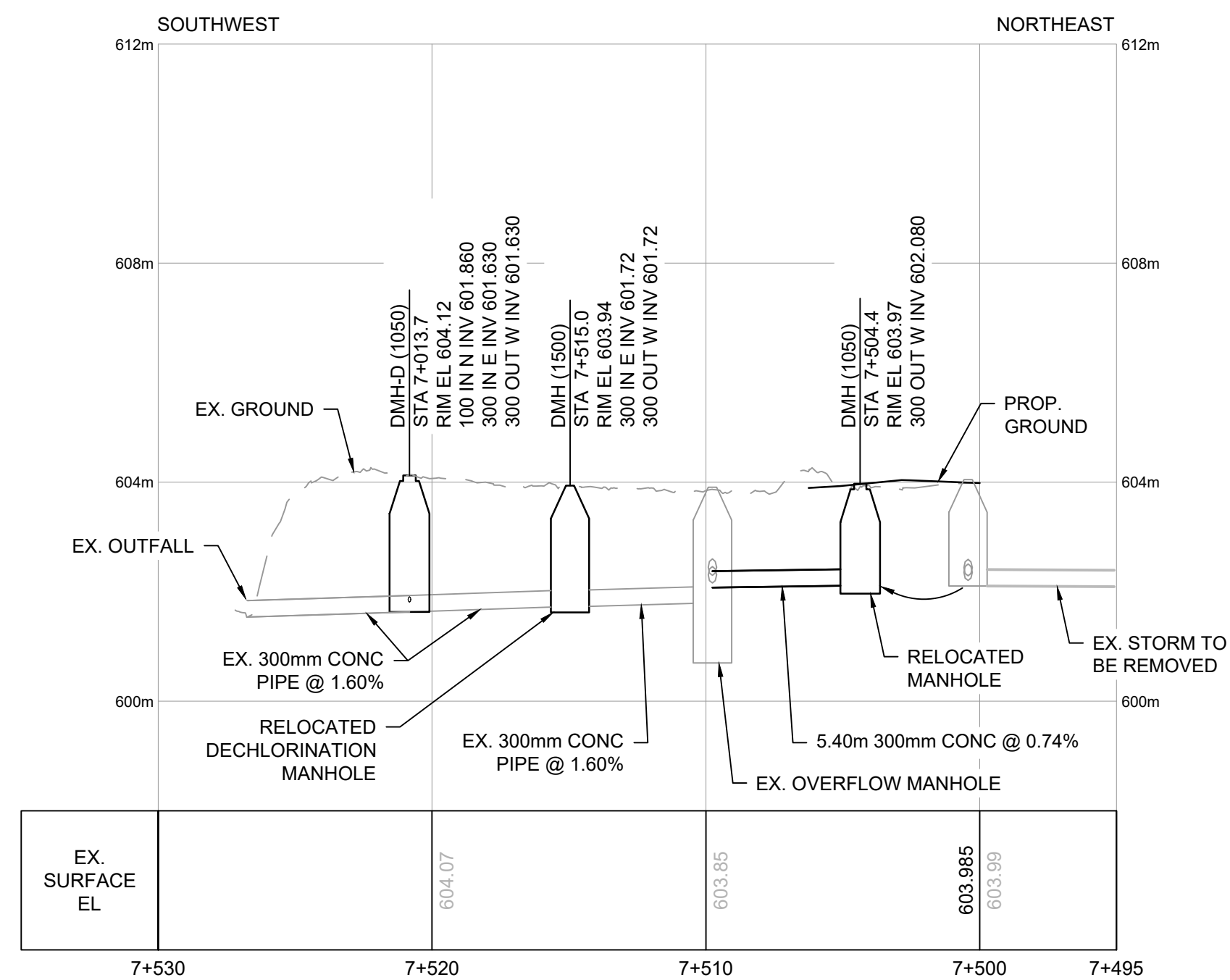
**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 CAUSTIC SODA LINE
 PLAN/PROFILE - STA 6+000 TO STA 6+022**

NOTES:
 1. FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.

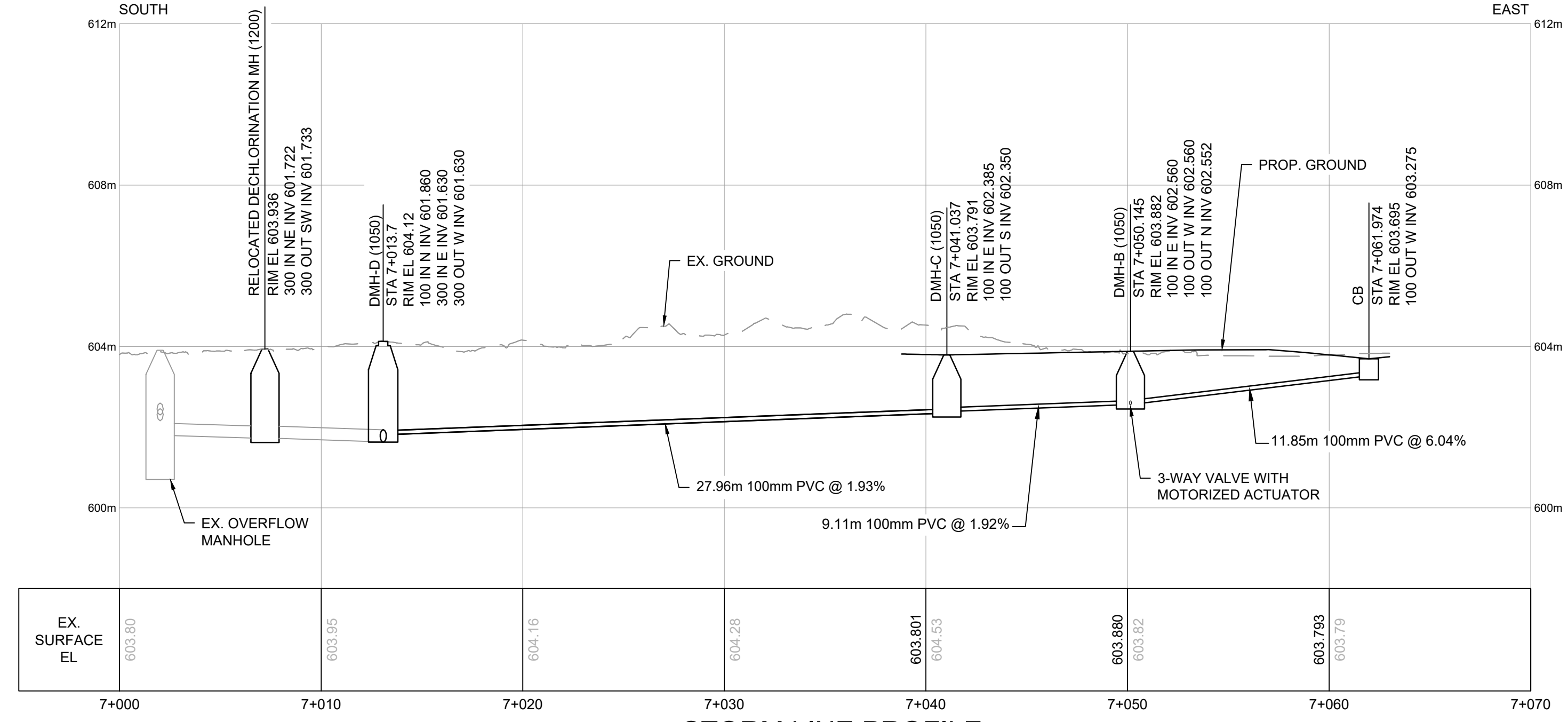


ITEM	DESCRIPTION
1	100mm SCH80 PVC 3-WAY BALL VALVES (SPEARS VALVE 5022T1-040). REFER TO 40 05 51 FOR ACTUATOR.
2	100mm SCH80 PVC PIPE
3	1050 PRECAST MANHOLE
4	FERNCO COUPLING
5	100mm SDR17 PVC PIPE

PLAN
SCALE 1:200



DECHLORINATION LINE PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



STORM LINE PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

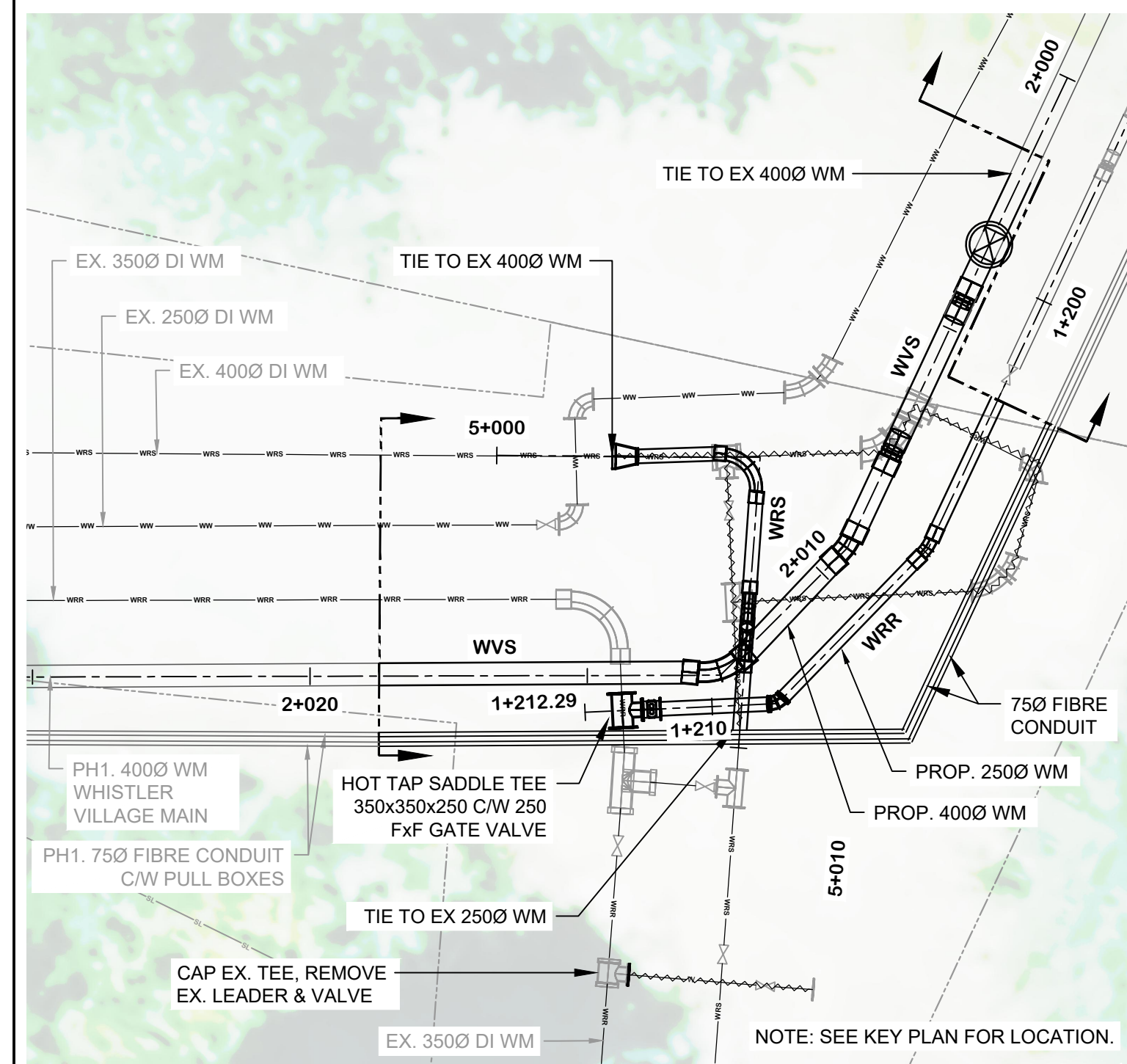
PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547

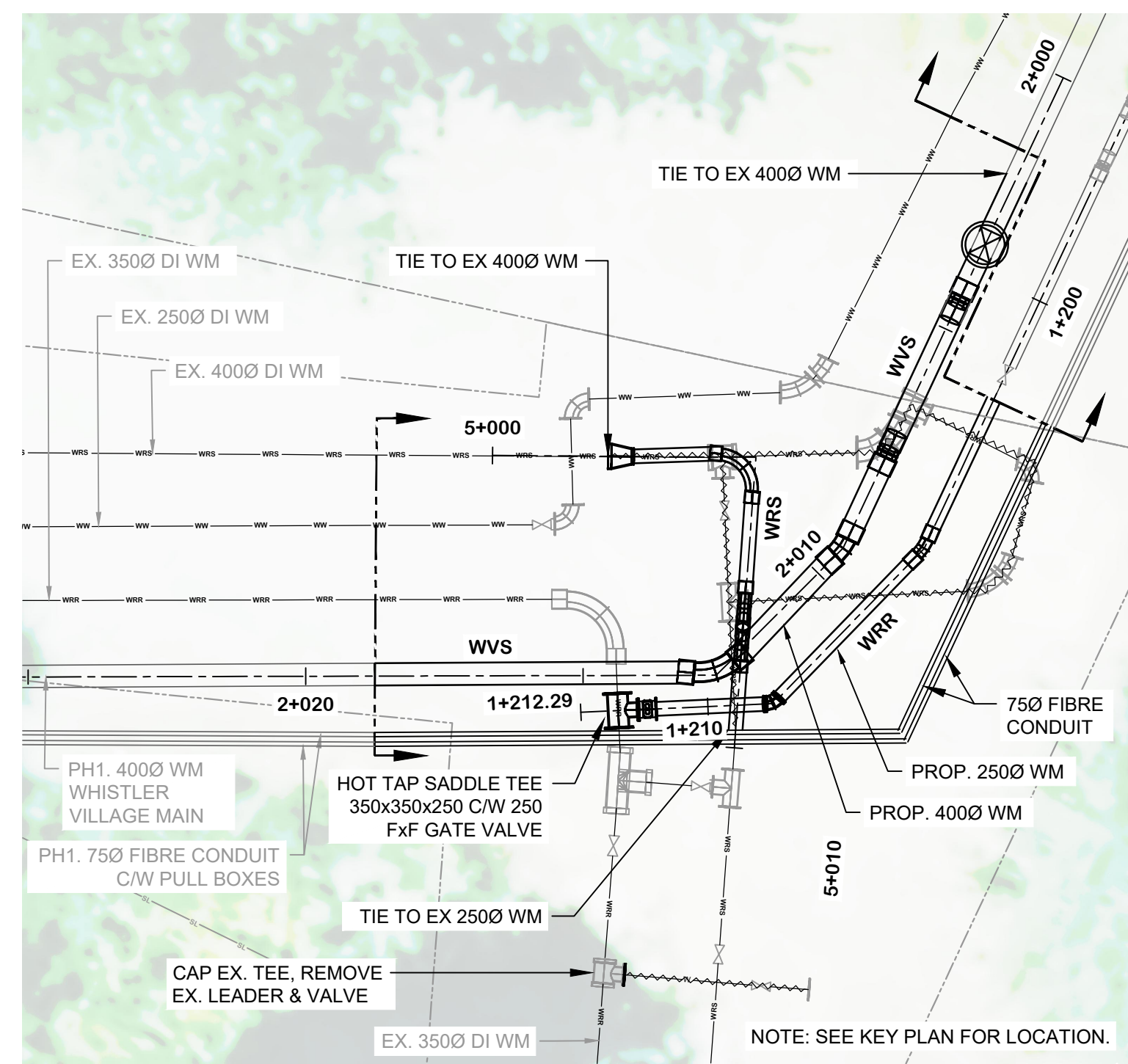


SOUTH WHISTLER WATER SUPPLY PHASE 2

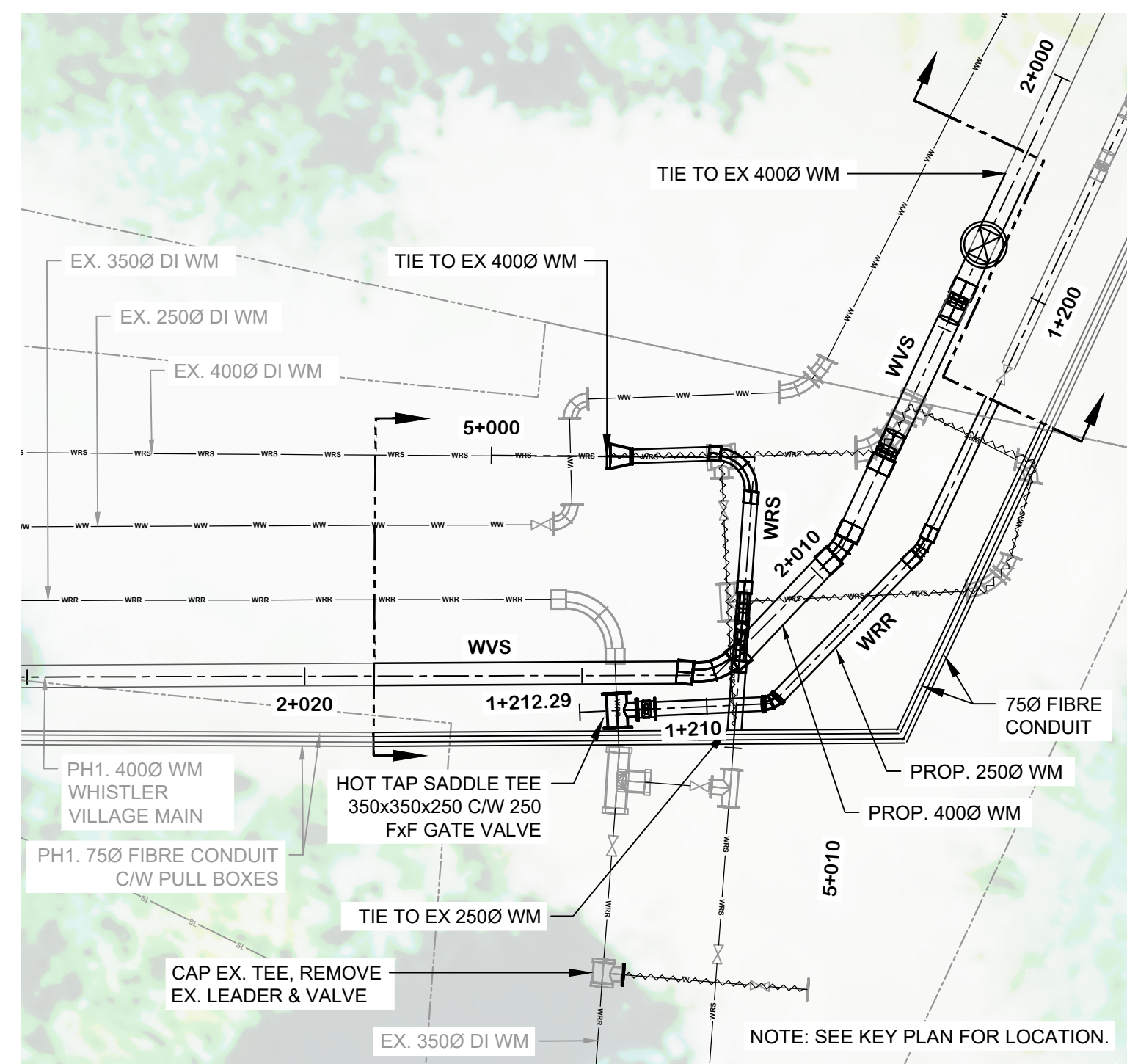
P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY DECHLORINATION & STORM WATER PIPING PLAN/PROFILES



PLAN
SCALE 1:100

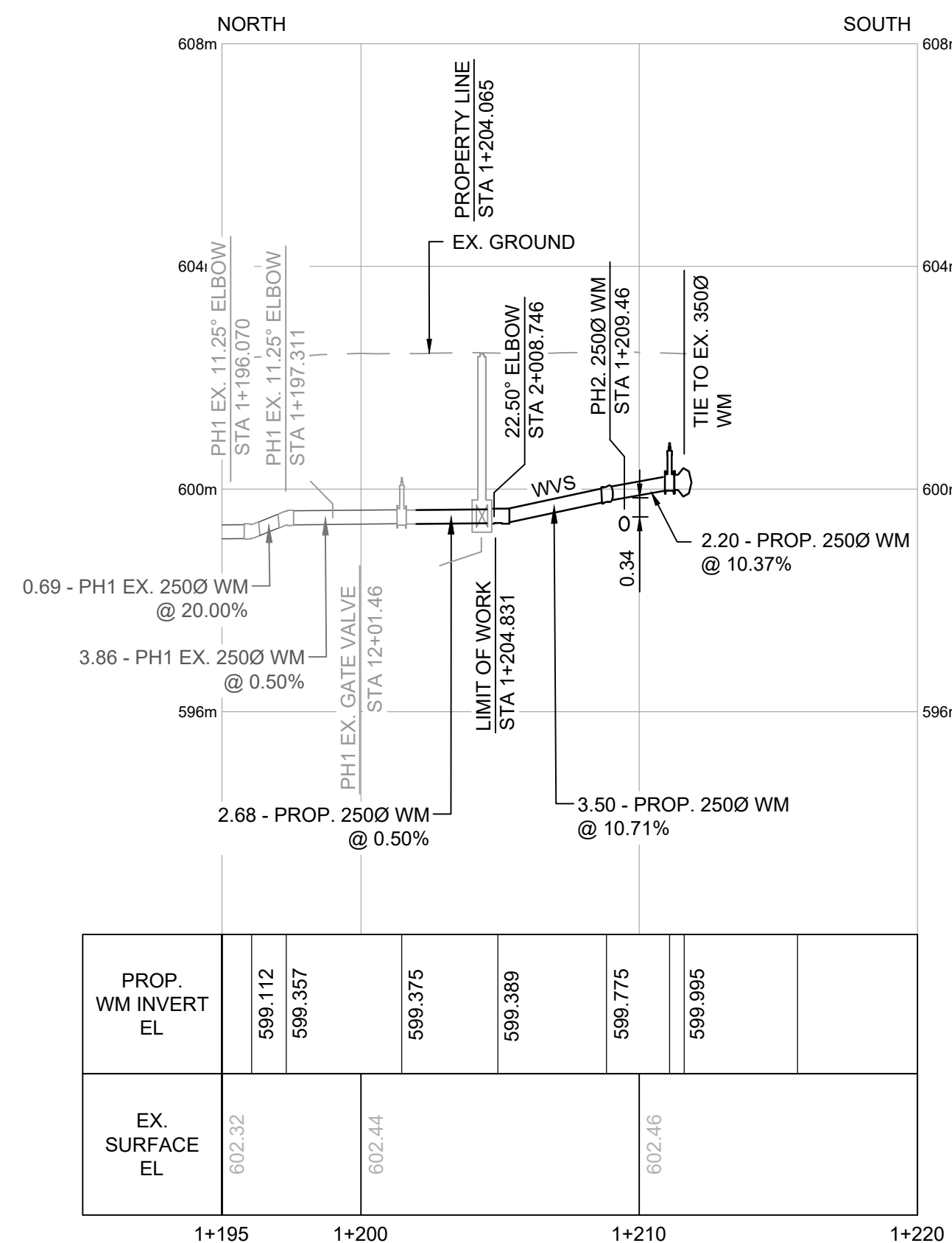


PLAN
SCALE 1:100

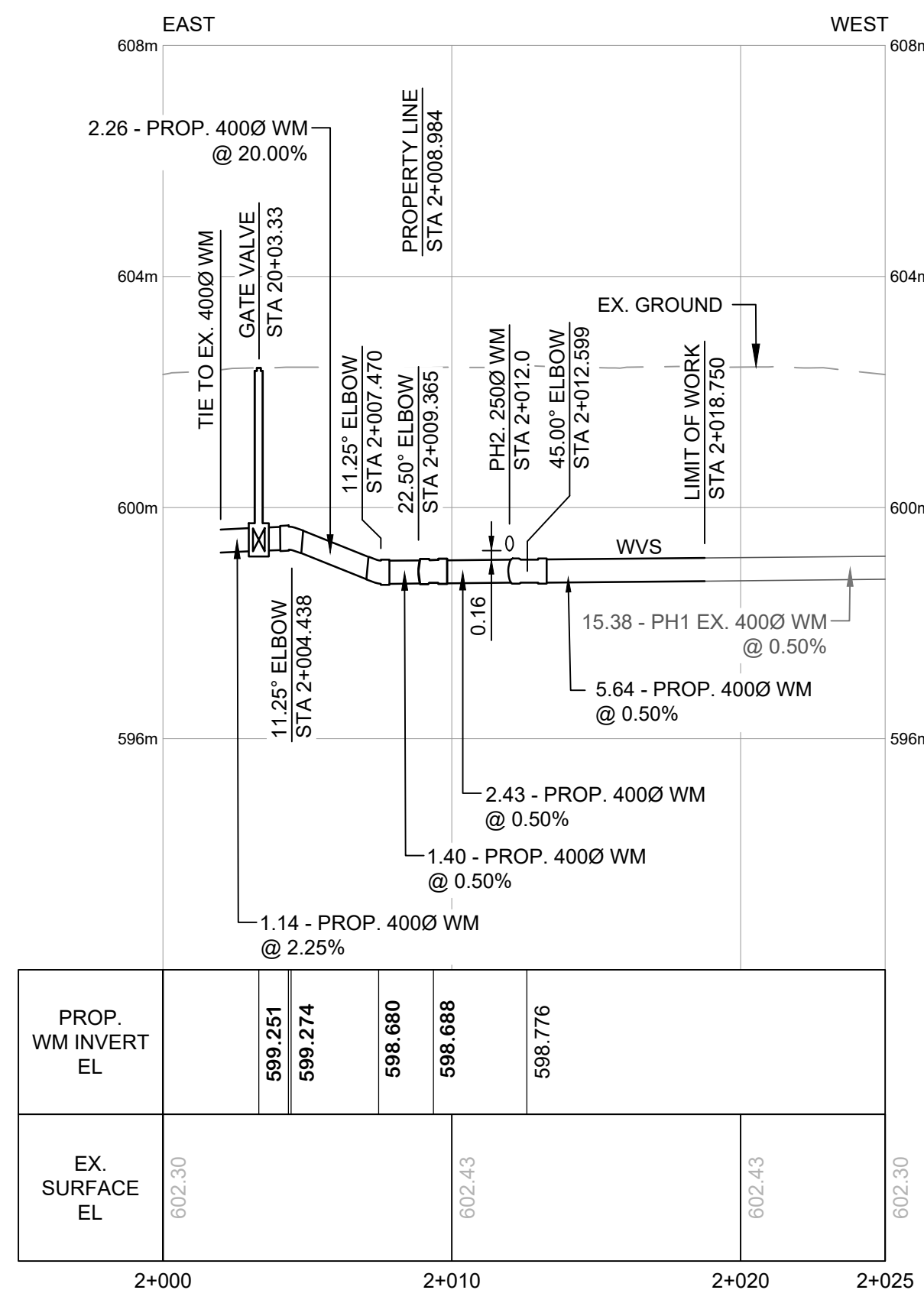


PLAN
SCALE 1:100

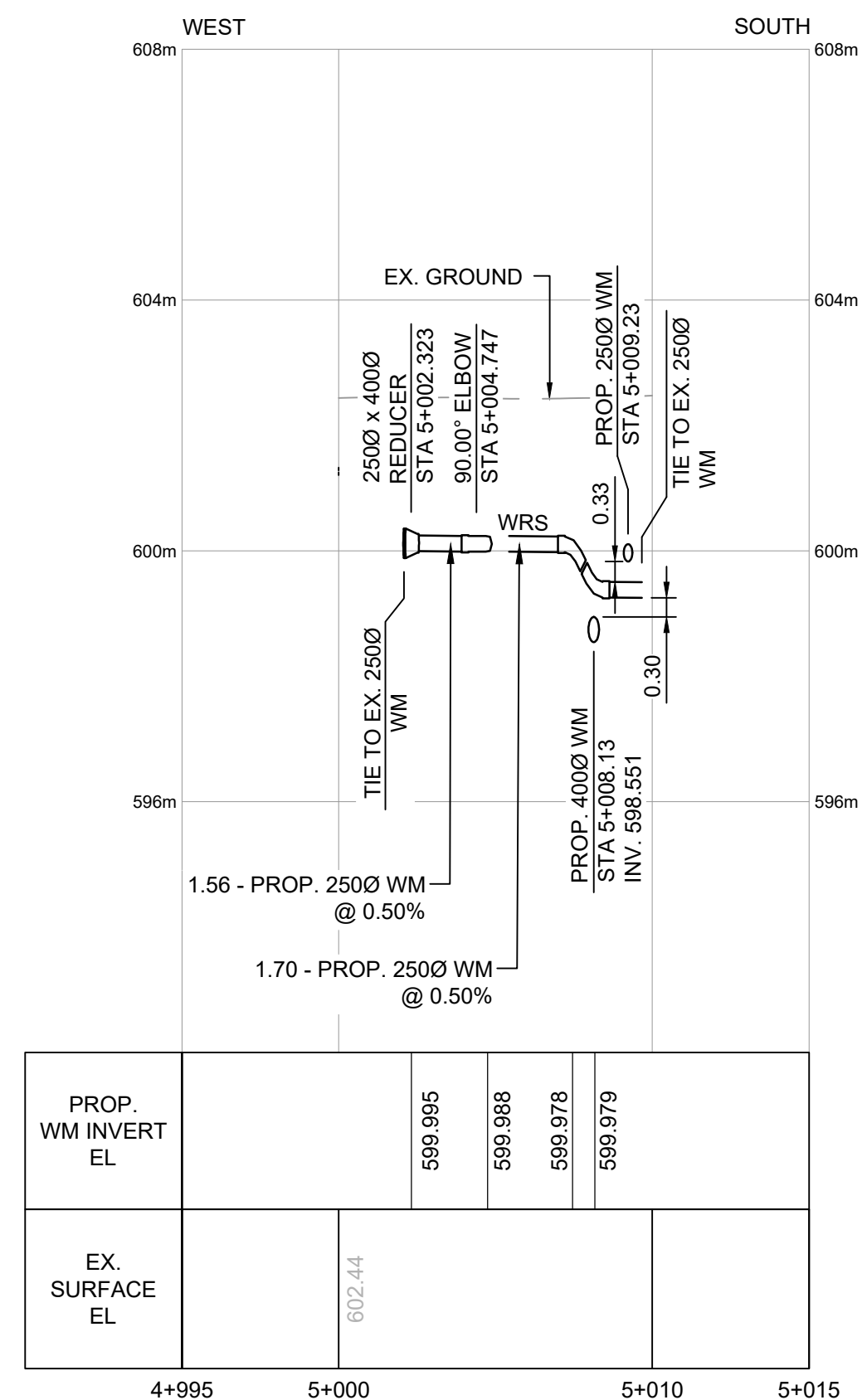
- NOTES:
- FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.



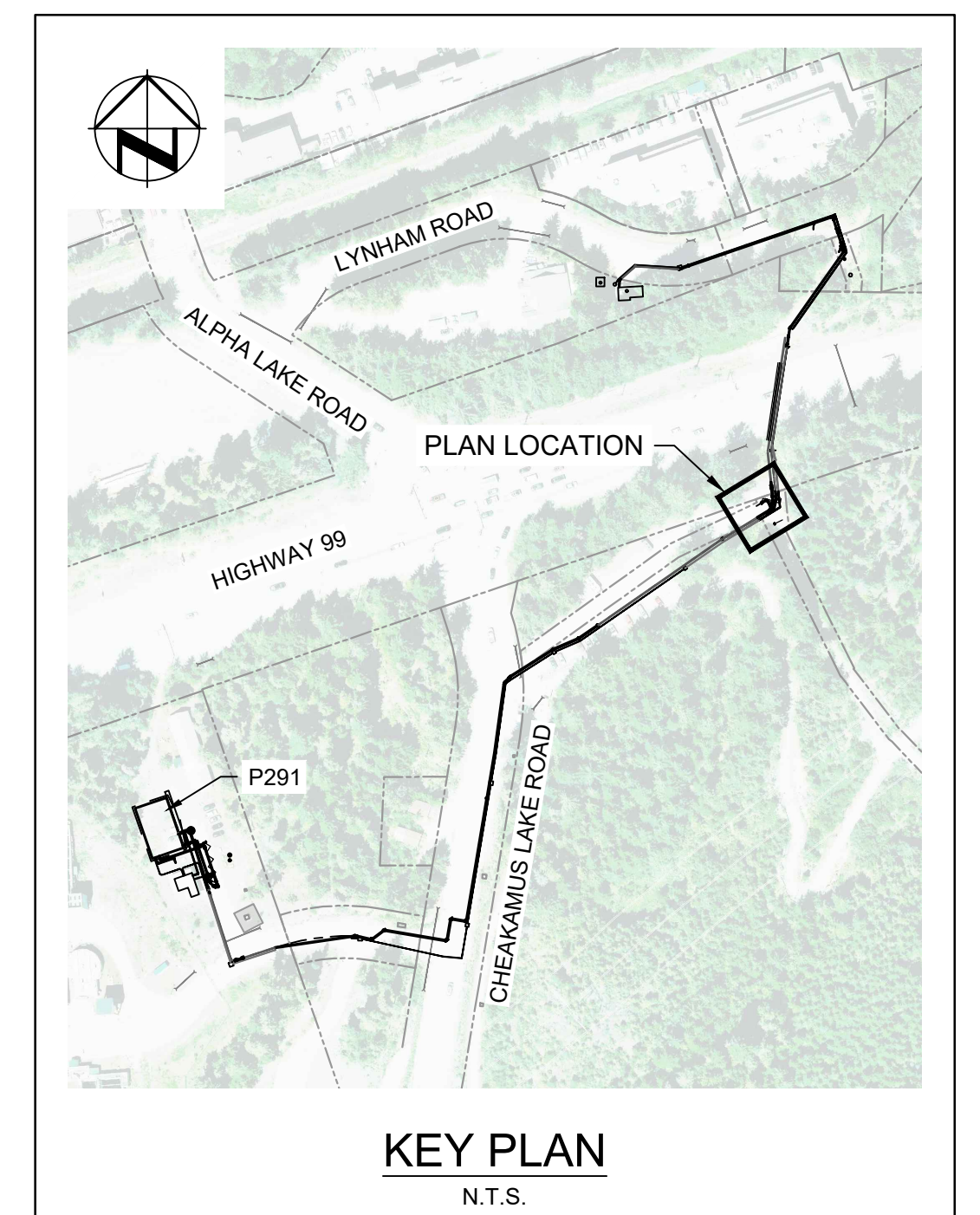
PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



KEY PLAN
N.T.S.



PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

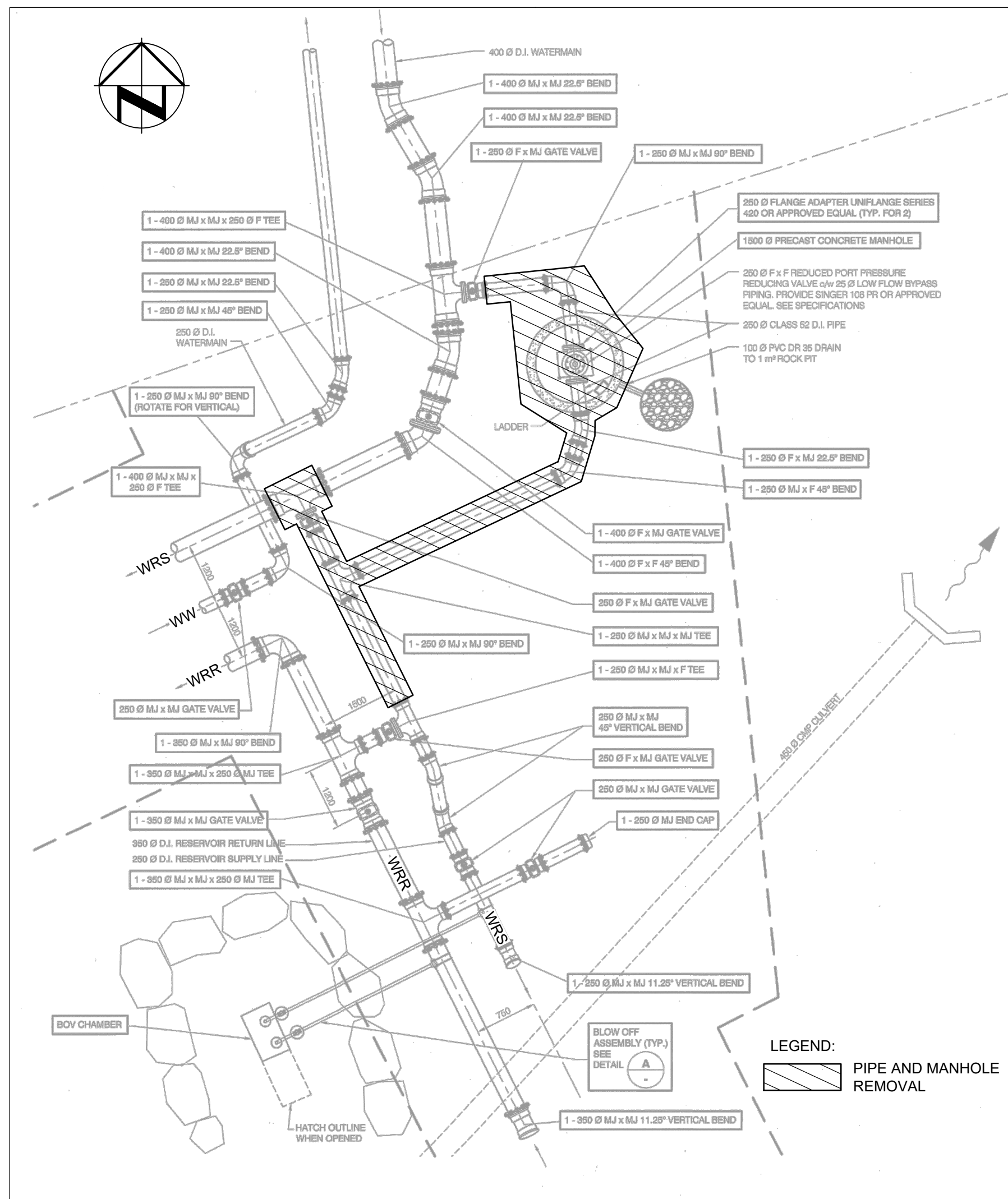
ORIGINAL
SEALED
EGBC
#1001547



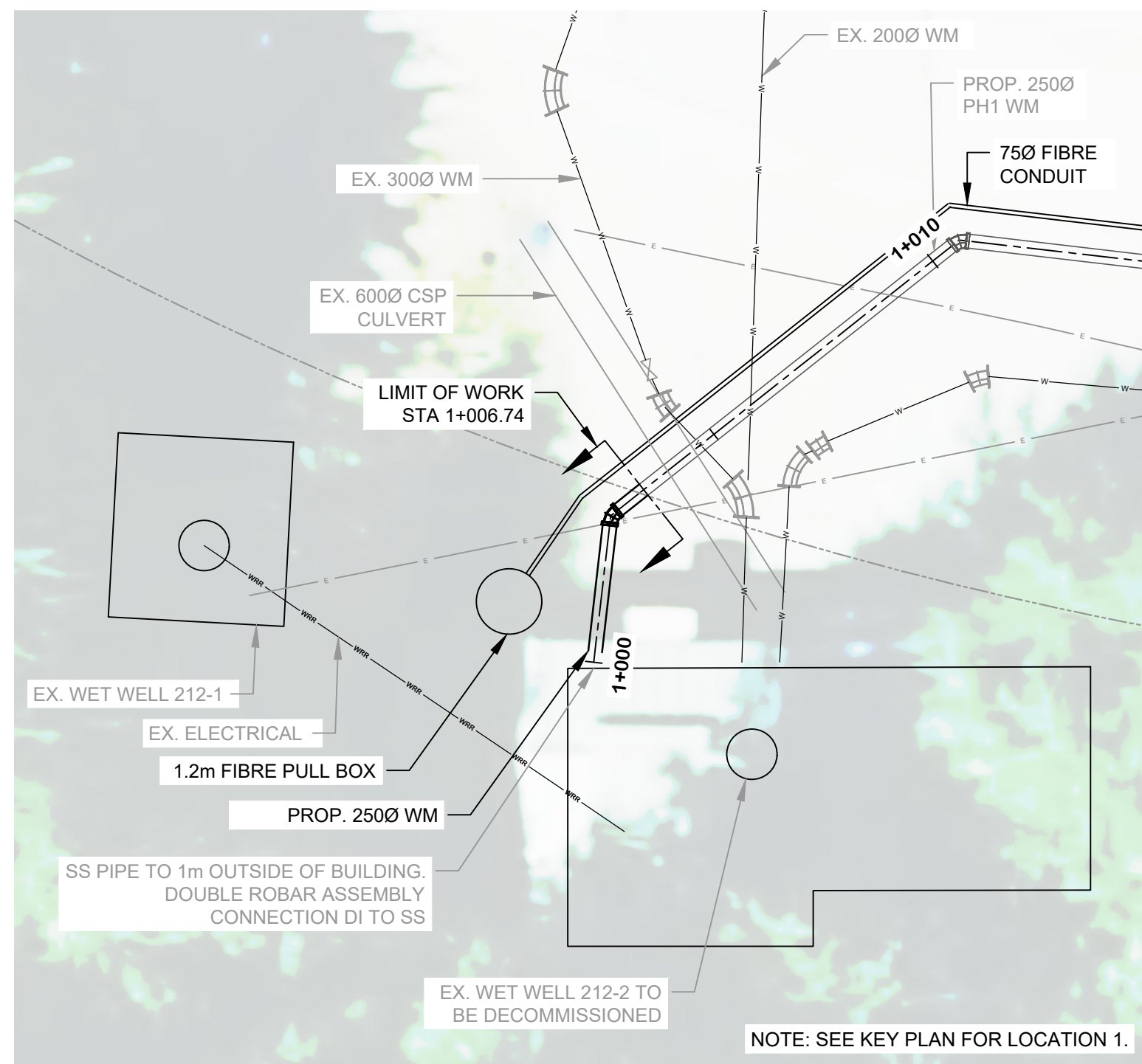
SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PIPE TIE-IN
STAGING DETAILS

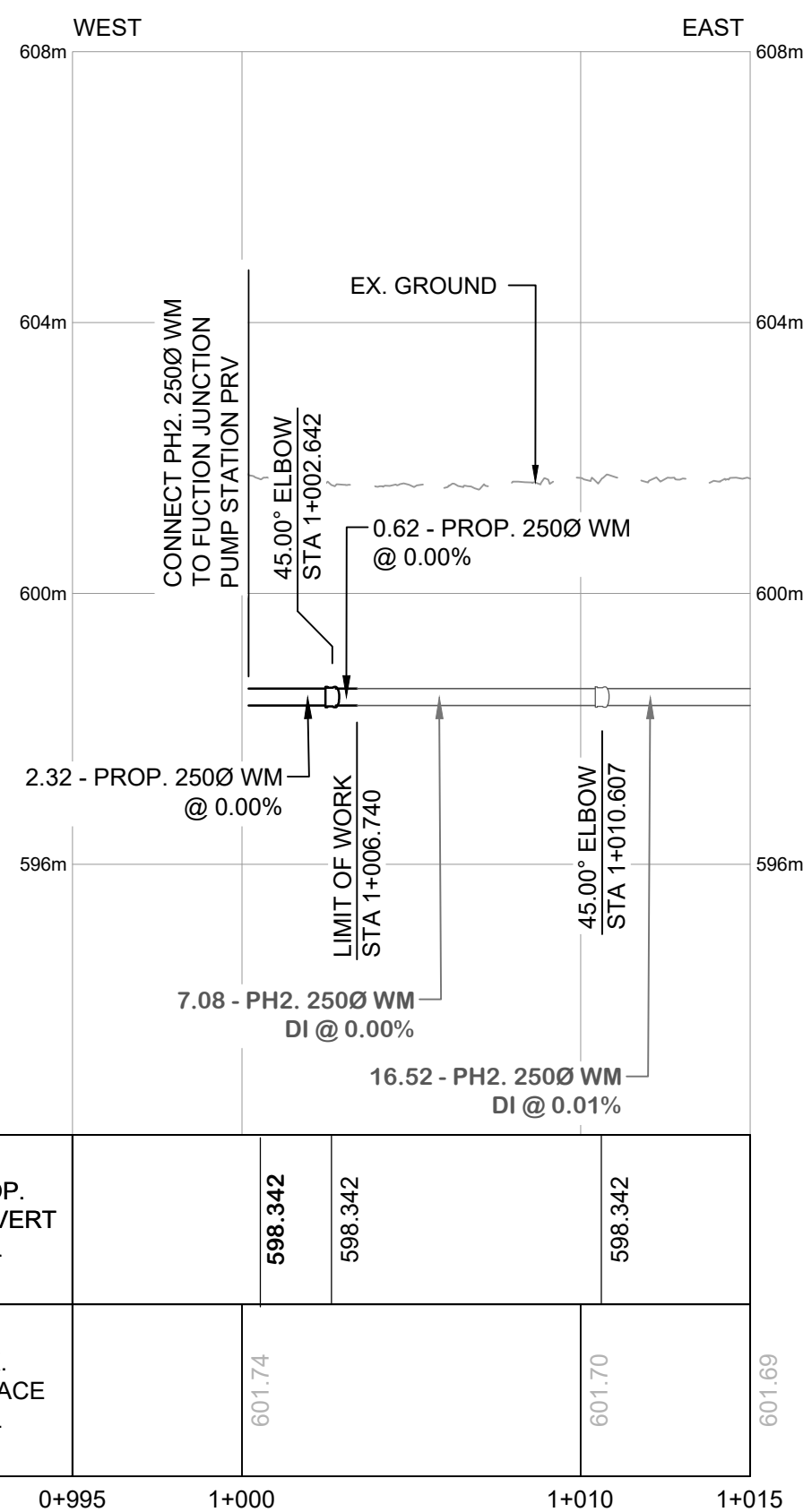
FILENAME	10299470-C01-201-C013.dwg	SHEET	C013
SCALE	H 1:200 V 1:100		



PLAN - REMOVAL PIPING IN INTERPRETIVE FOREST
SCALE N.T.S.



PLAN
SCALE 1:100

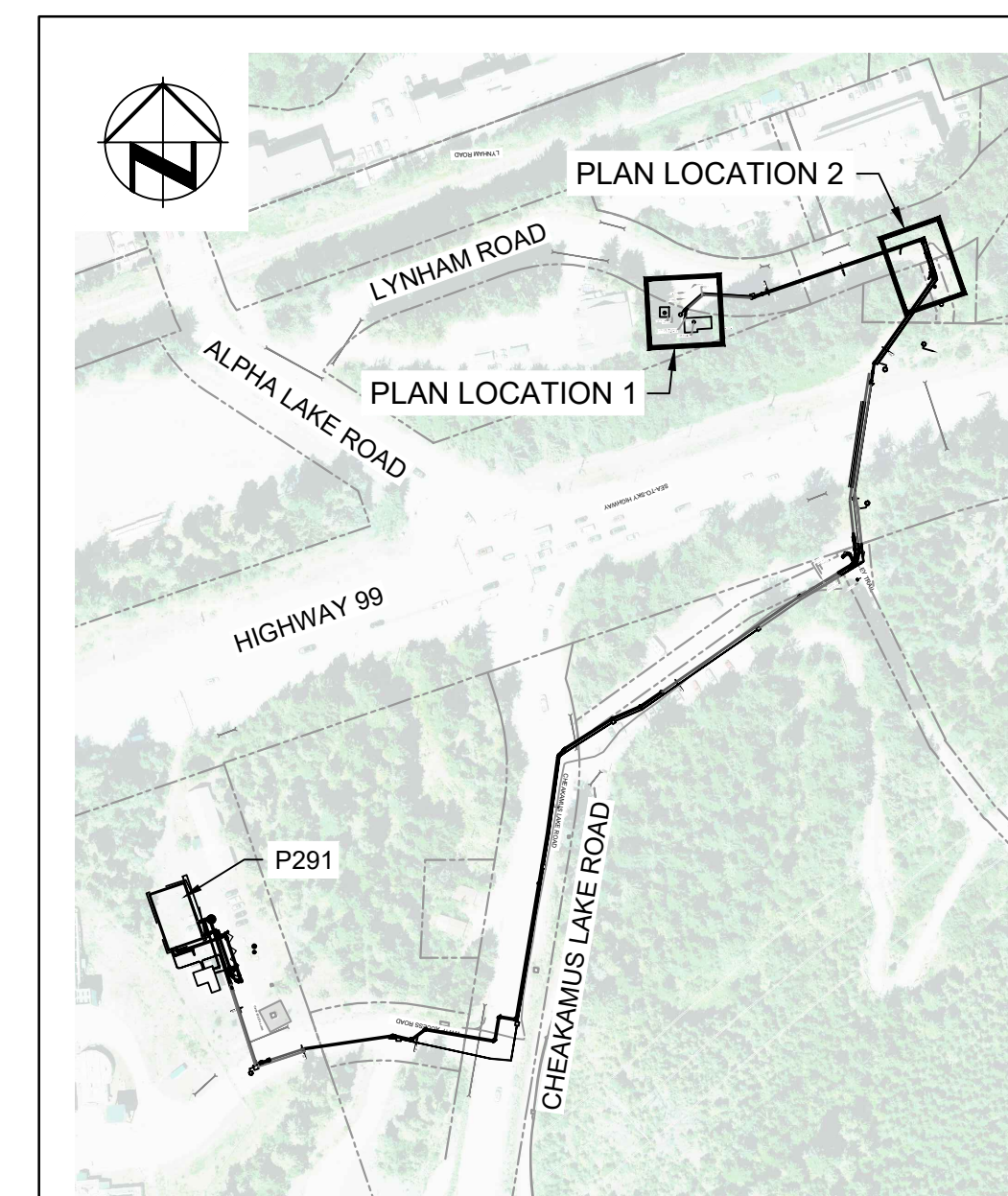


PROFILE
SCALE 1:200 HORZ.
1:100 VERT.



PLAN
SCALE 1:100

- NOTES:**
- FOR PHASE 2 CIVIL LEGEND AND NOTES, SEE DWG. C002.



KEY PLAN
N.T.S.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

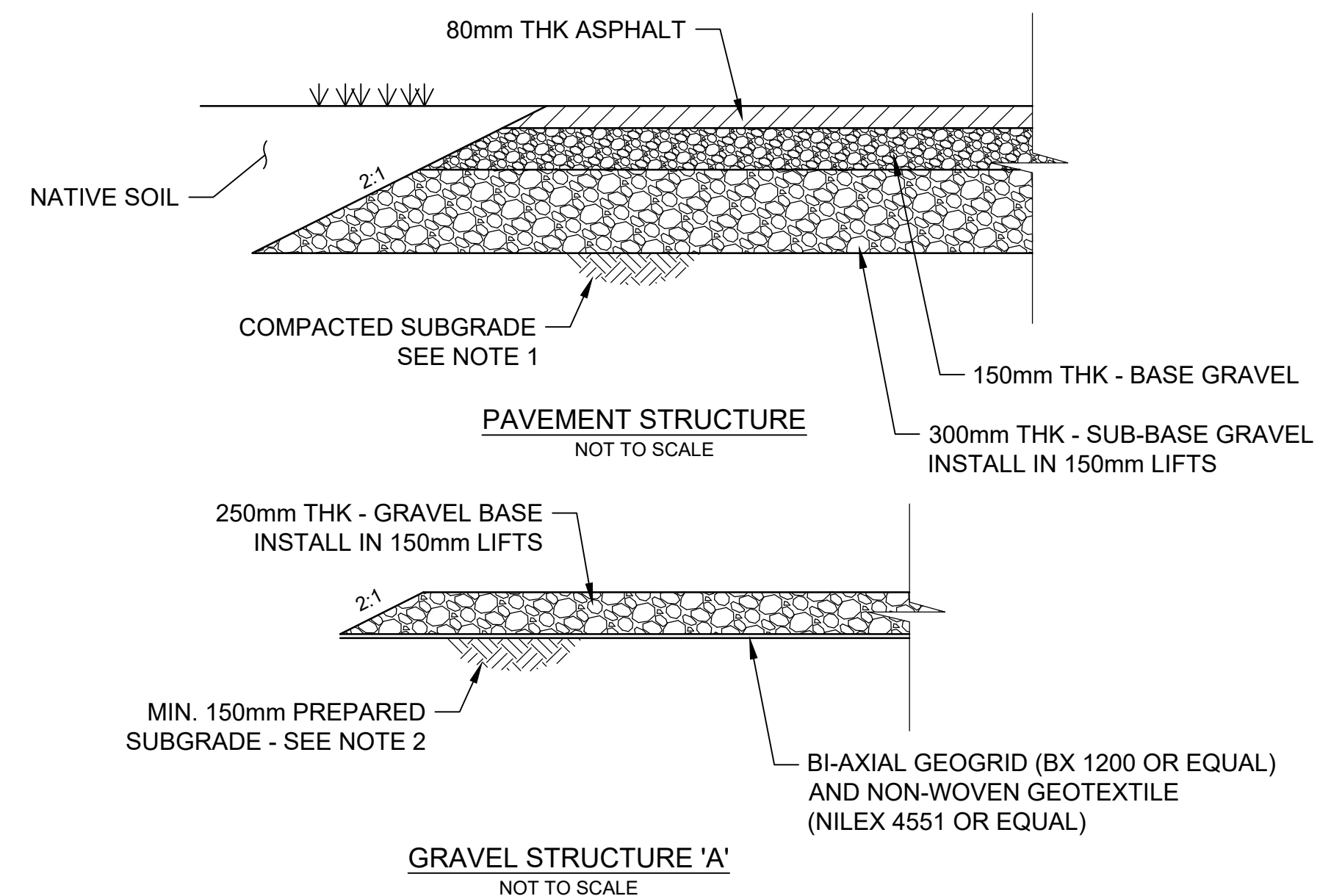
ORIGINAL
SEALED
EGBC
#1001547



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

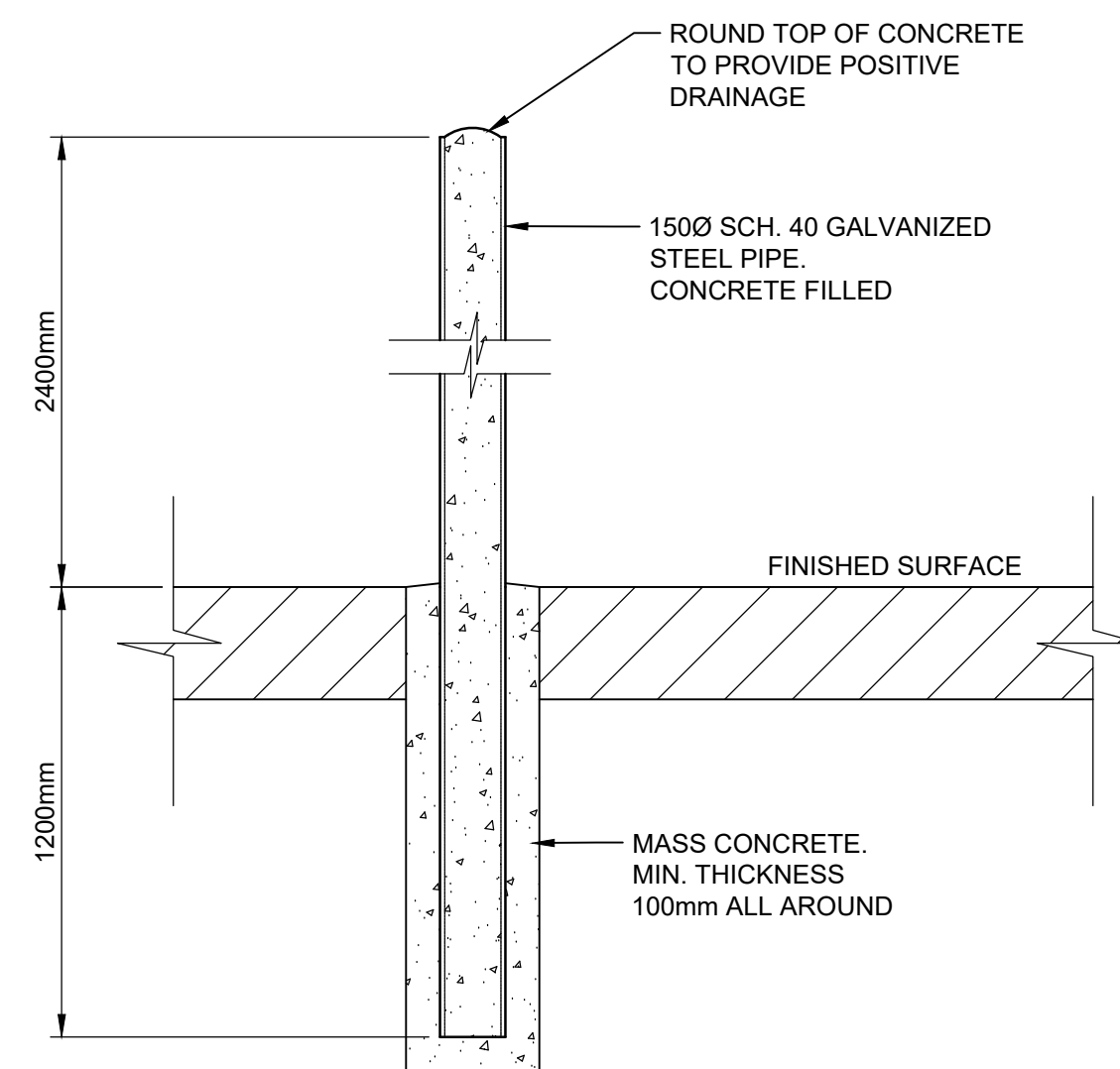
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PIPE TIE-IN TO
FUNCTION JUNCTION PUMP STATION**

2023	0	5m	10m	FILENAME	10299470-C01-201-C013.dwg	SHEET	C014
	0	2.5m	5m	SCALE	AS NOTED		

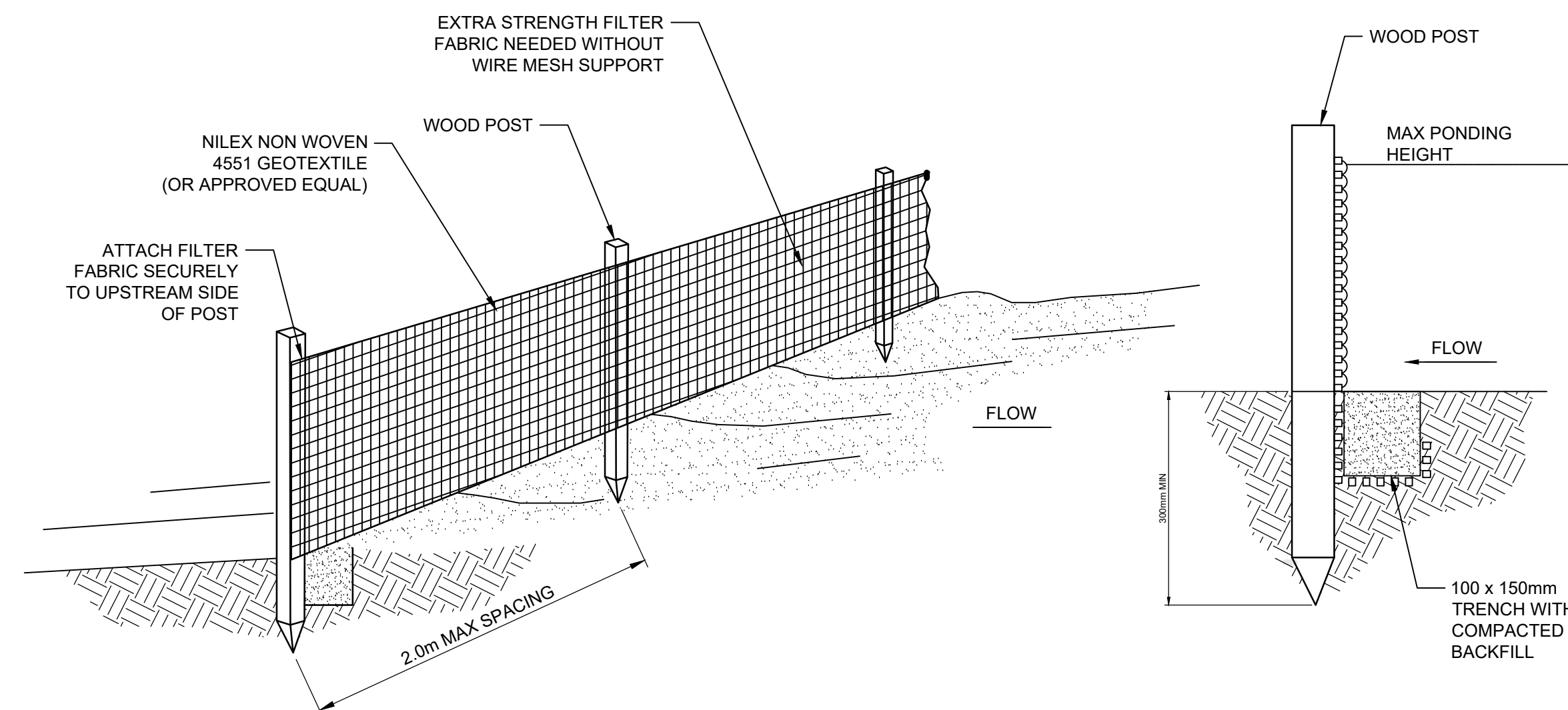
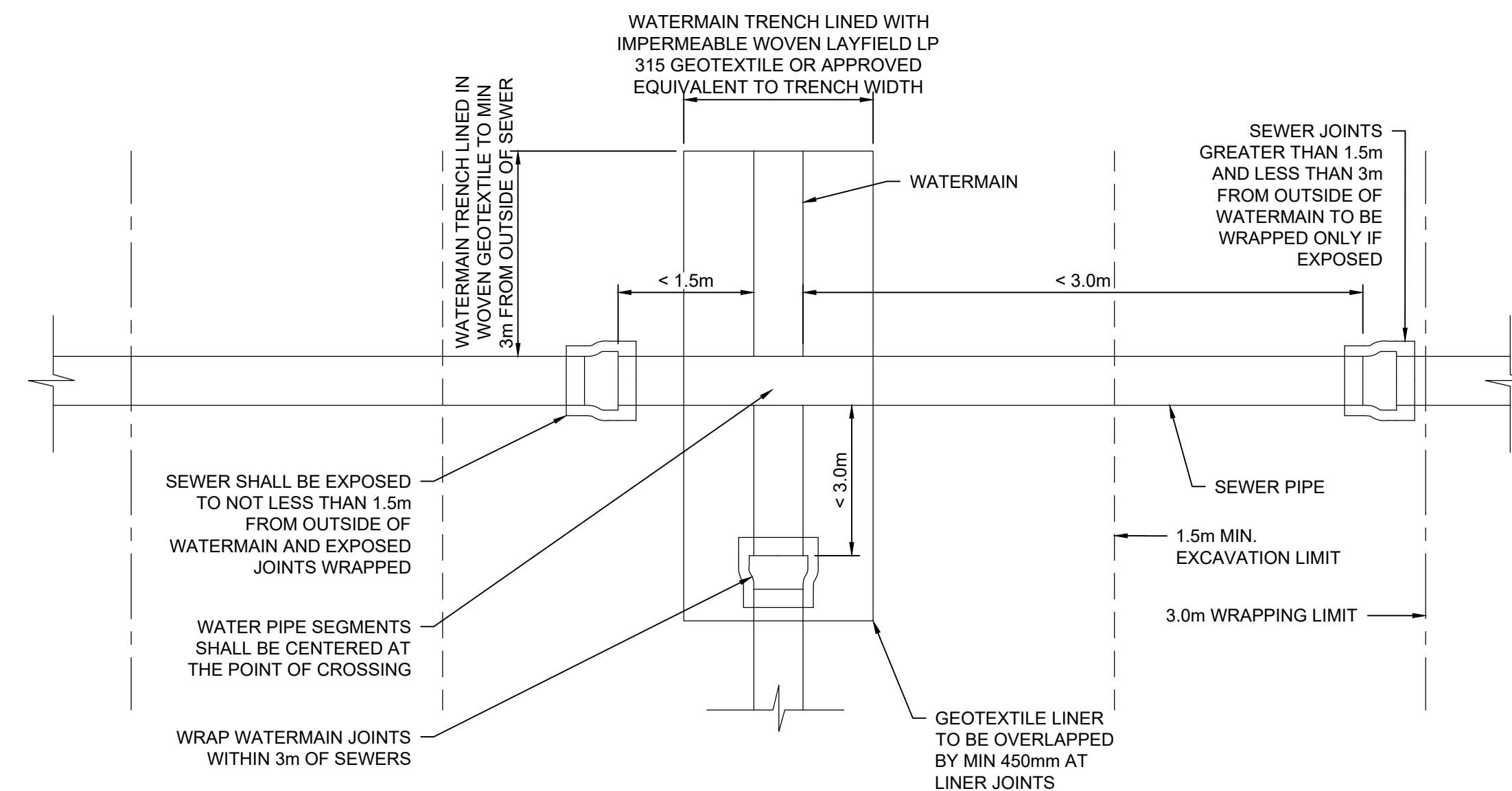


NOTES:

1. ASPHALT STRUCTURE: IN THE PRESENCE OF THE GEOTECH, CONDUCT PROOF ROLLS AND DENSITY TESTING ON SUBGRADE PRIOR TO BASE AND SUBBASE PLACEMENT TO CONFIRM THERE ARE NO SOFT SPOTS OR ANY UNSUITABLE FILL. ADDITIONAL UNDERCUTS OR SUBGRADE REINFORCEMENT TO BE DETERMINED ON-SITE.
2. GRAVEL STRUCTURE: PROOF ROLL INSPECTION SHALL BE CARRIED OUT ON SUBGRADE BEFORE PLACING GRAVEL TO VERIFY THE SUBGRADE STABILITY AND IN THE PRESENCE OF THE GEOTECH. ADDITIONAL UNDERCUTS OR SUBGRADE REINFORCEMENT TO BE DETERMINED ON-SITE.



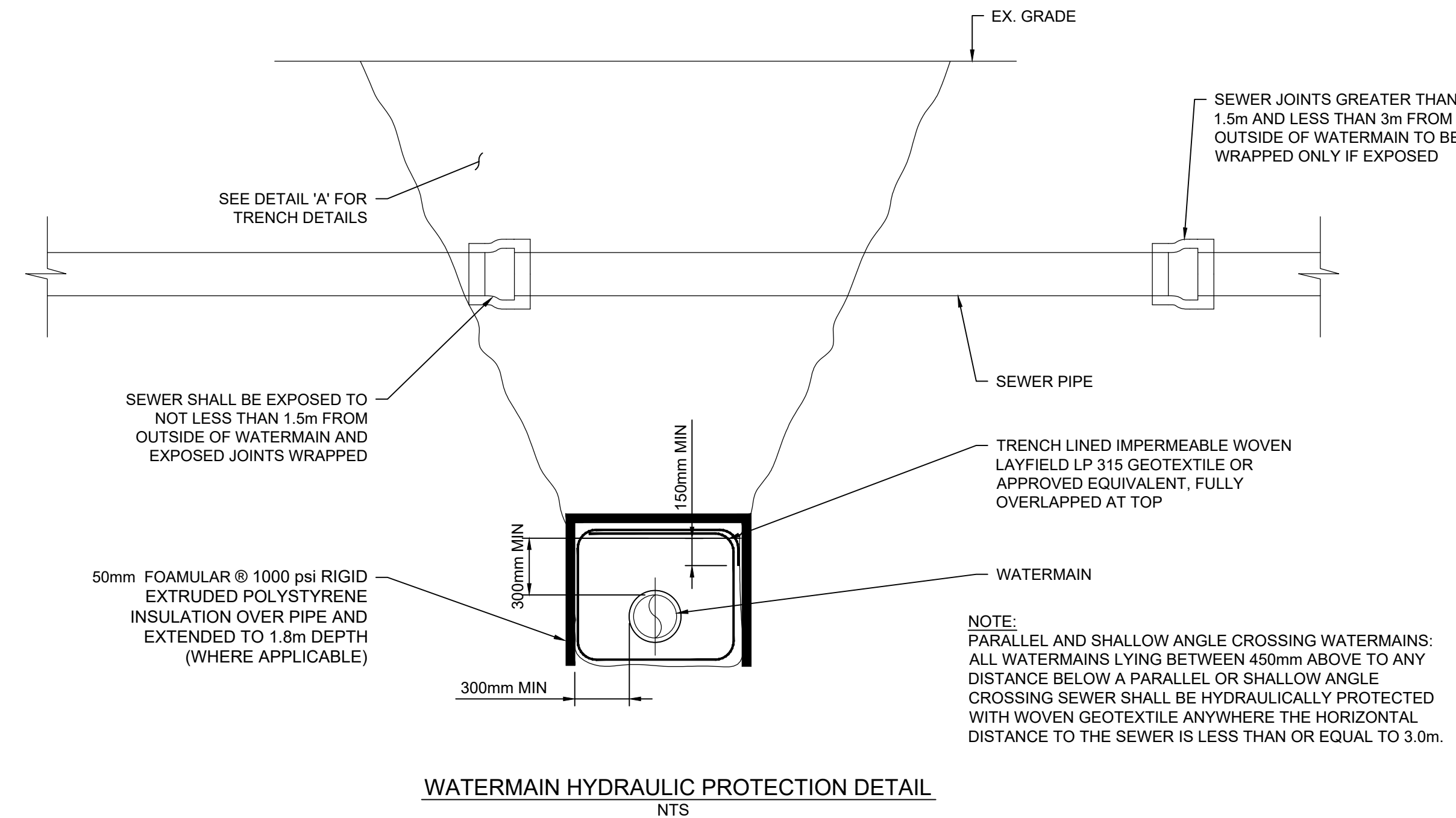
BOLLARD DETAIL
NOT TO SCALE



NOTES:

1. SILT FENCE TO BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY
2. INSPECT AND REPAIR FENCE DAILY AND AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN ACCUMULATED SILT REACHED 200mm.
3. SEDIMENT TO BE RELOCATED AT THE DIRECTION OF SITE ENGINEER.

SILT FENCE
NOT TO SCALE



WATERMAIN HYDRAULIC PROTECTION DETAIL
NTS



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

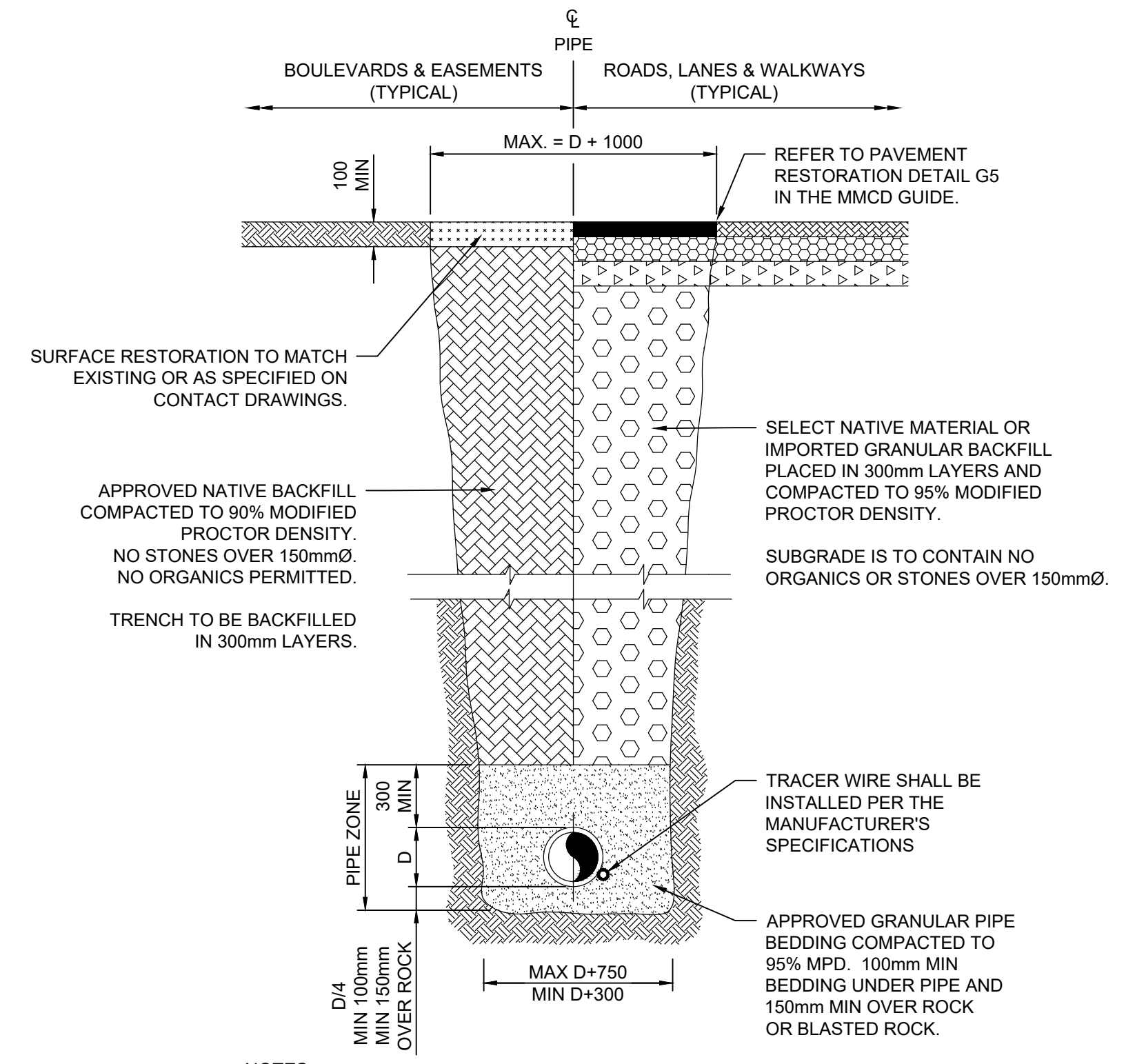


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

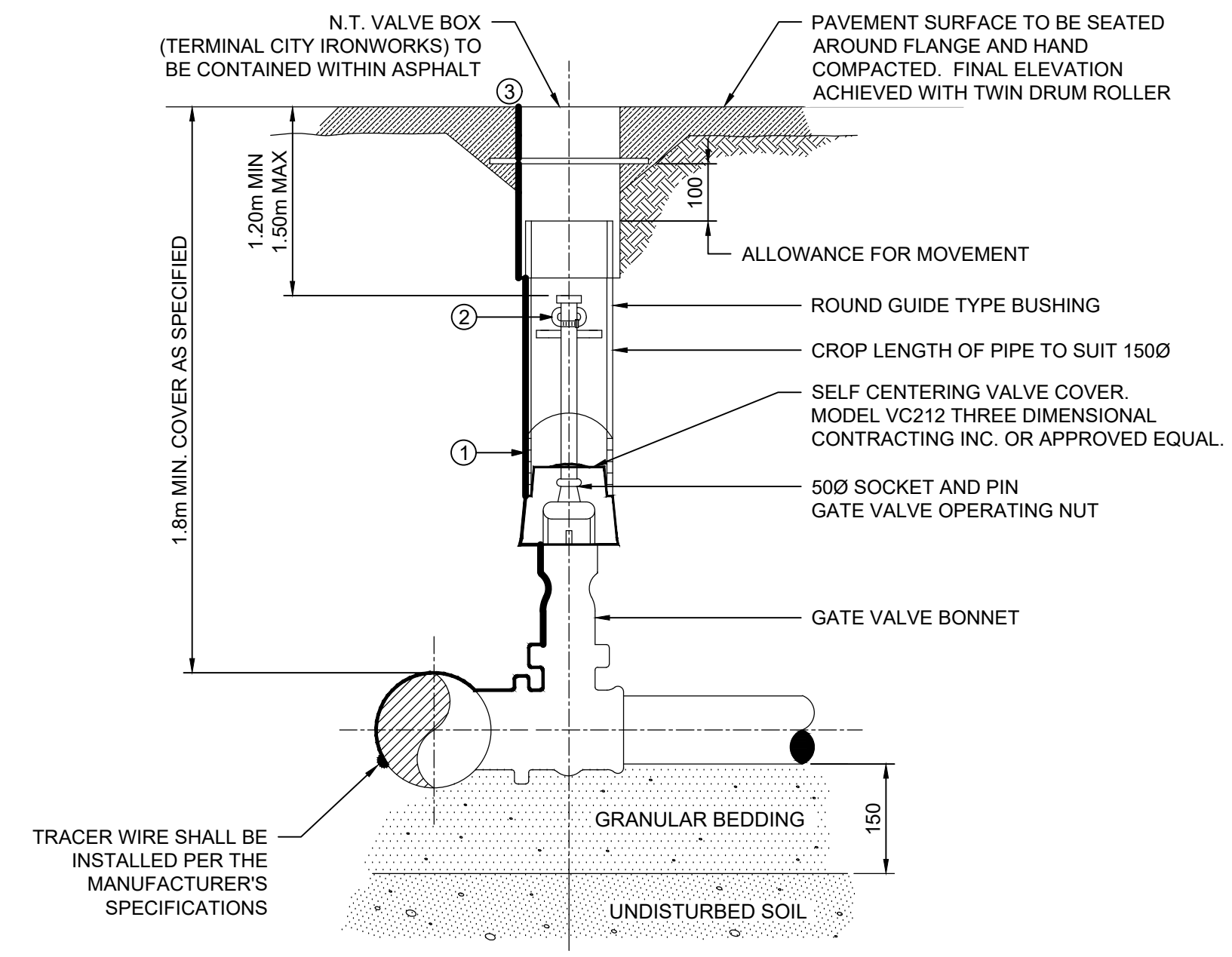
CIVIL DETAILS
SHEET 1

FILENAME | 10299470-C01-201-C015.dwg | SHEET
SCALE | AS NOTED | C015



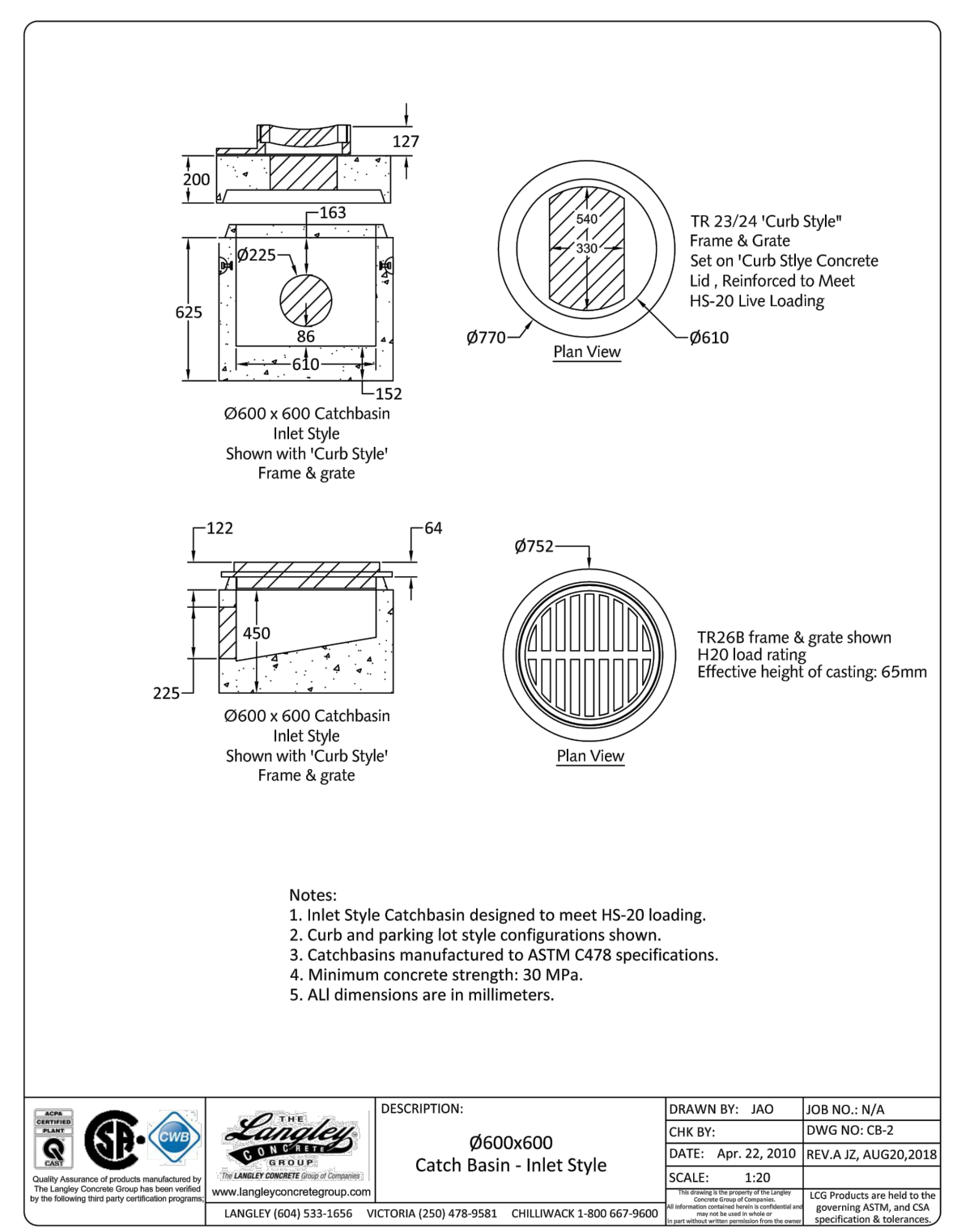
- NOTES:
- "D" = OUTSIDE DIAMETER OF THE PIPE AT ITS LARGEST SECTION.
 - TRENCHING TO COMPLY WITH ALL REQUIREMENTS OF THE WCB.

A TYPICAL TRENCH SECTION
NTS

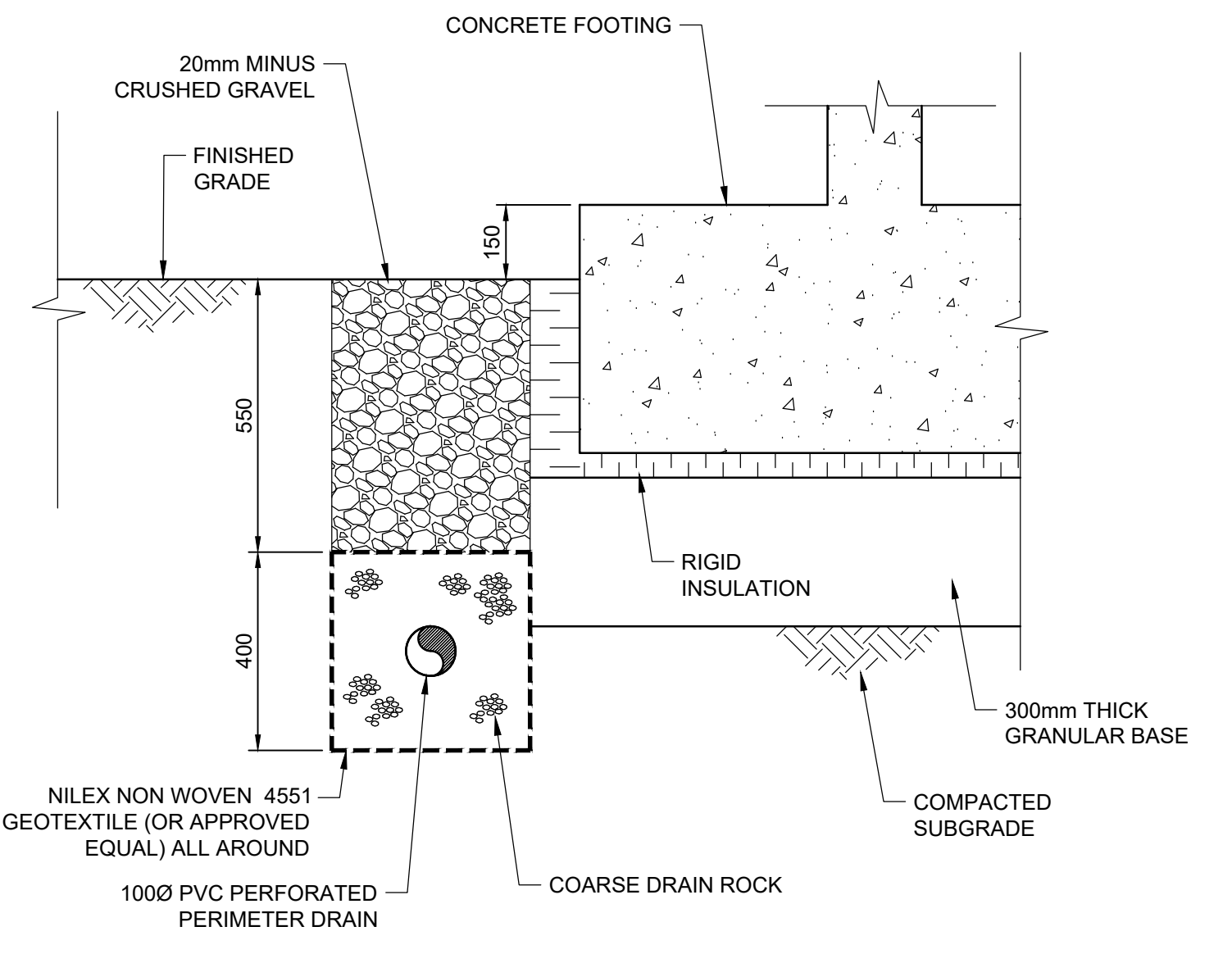


- NOTES:
- FOR TRACER WIRE INSTALLATION: TRACE WIRE SHALL BE #12 AWG COPPER CLAD STEEL, HIGH STRENGTH WITH MINIMUM 450LB BREAK LOAD, WITH MINIMUM 30MIL HDPE INSULATION THICKNESS.
 - TRACER WIRE TO BE GROUNDED TO NELSON BOX USING HOSE CLAMP AND WRAPPED AS NOTED BELOW.
 - ADDITIONAL 300MM OF WIRE TO BE COILED AROUND THE TOP OF THE SERVICE BOX AND END OF WIRE IS TO BE CAPPED WITH MARETTE AND WRAPPED IN ELECTRICAL TAPE.
 - APPLY AN APPROVED CORROSION PROTECTION SYSTEM TO ALL BURIED FERROUS FITTINGS, FLANGES, FASTENERS, ETC. (SUCH AS "DENSO" PETROLATUM TAPE SYSTEM), INCLUDING PASTE, PROFILING MASTIC AND TAPE AS PER MANUFACTURER'S INSTRUCTIONS. OTHER CORROSION PROTECTION SYSTEMS MAY BE USED UPON APPROVAL OF THE RMOW.

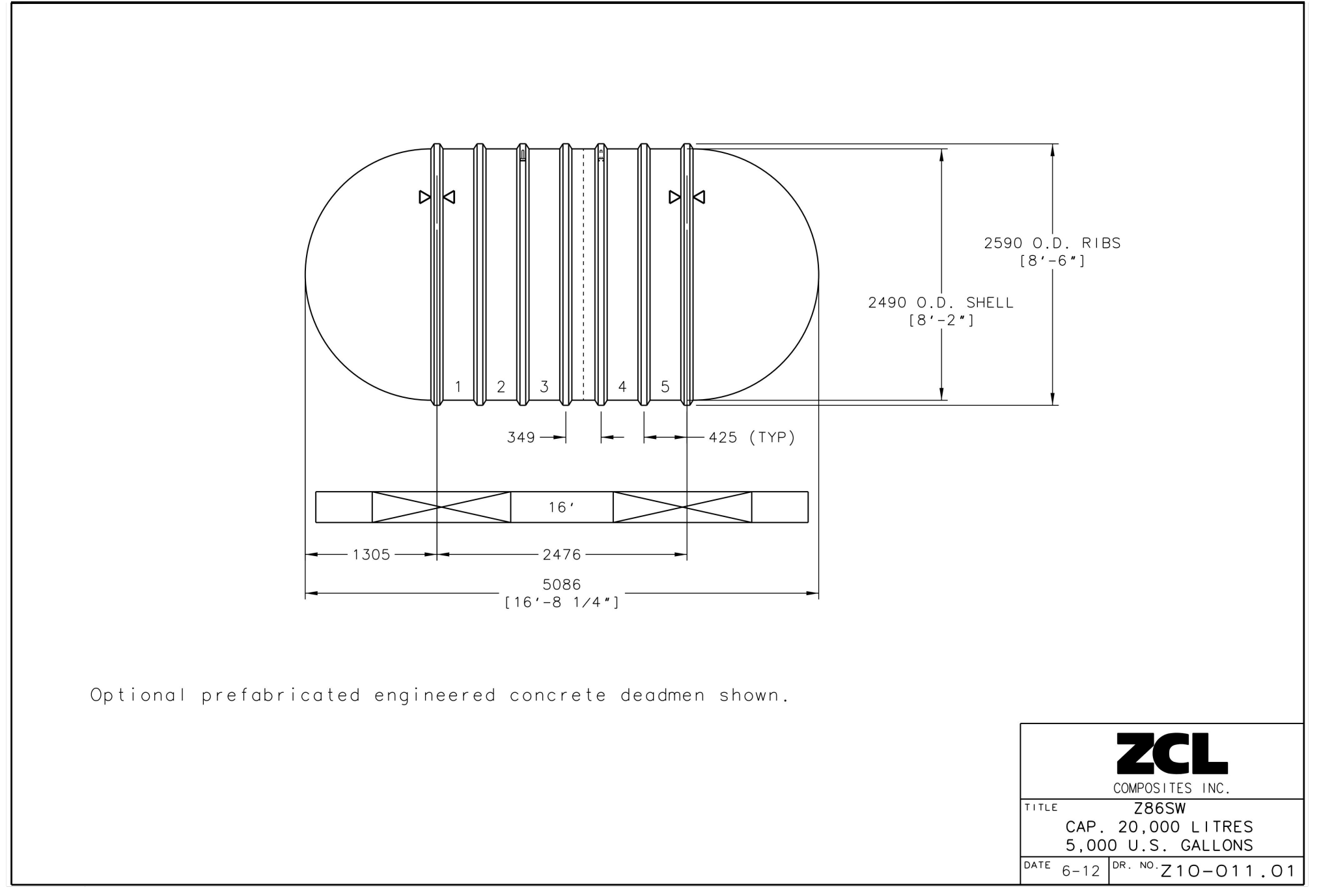
B VALVE BOX ASSEMBLY
NTS



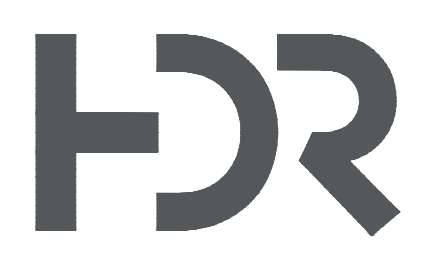
C CATCH BASIN DETAIL
NTS



D PERIMETER DRAIN DETAIL
NTS



E UNDERGROUND CONTAINMENT TANK
NTS



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547

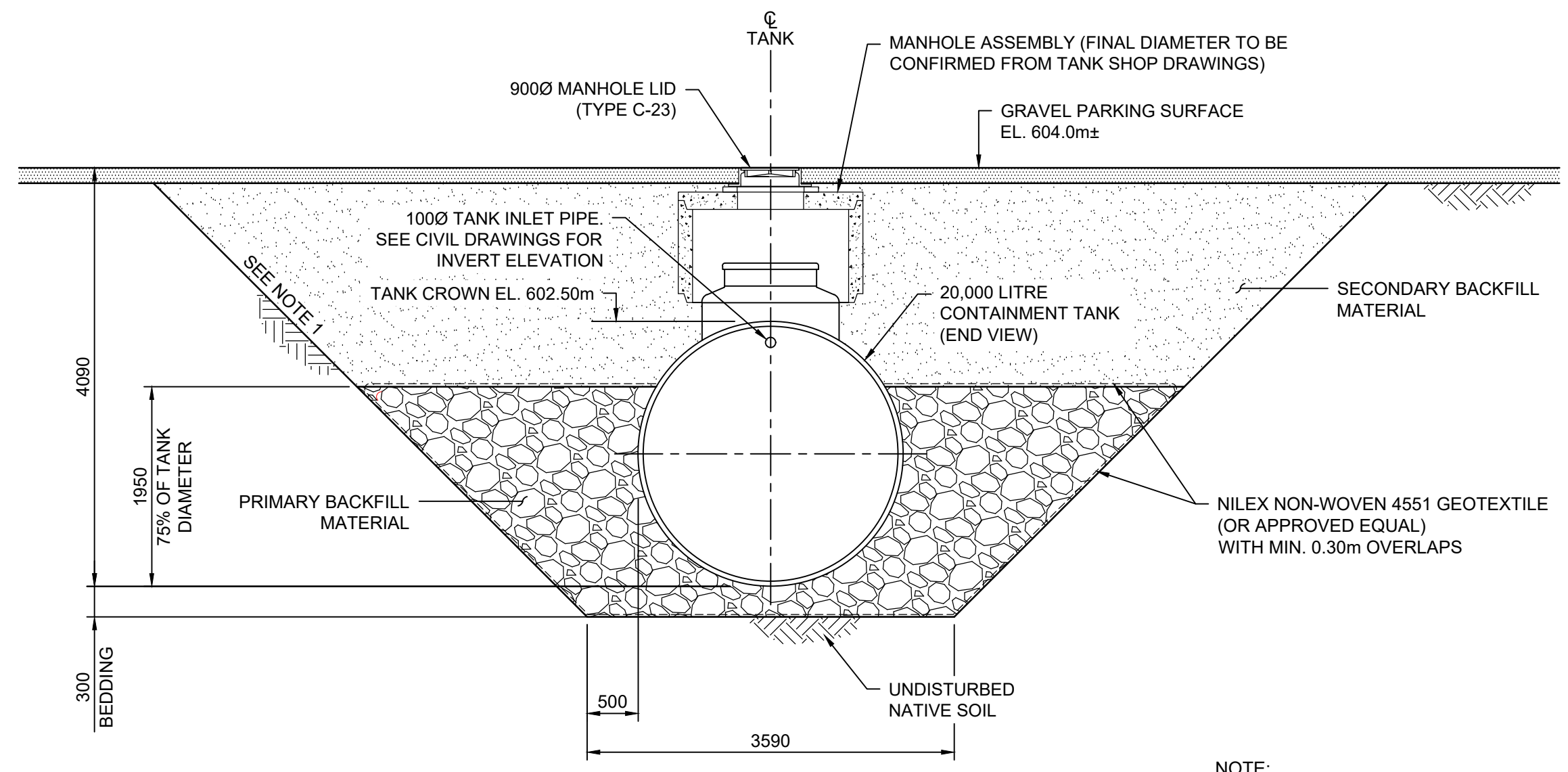


SOUTH WHISTLER WATER SUPPLY PHASE 2

2023

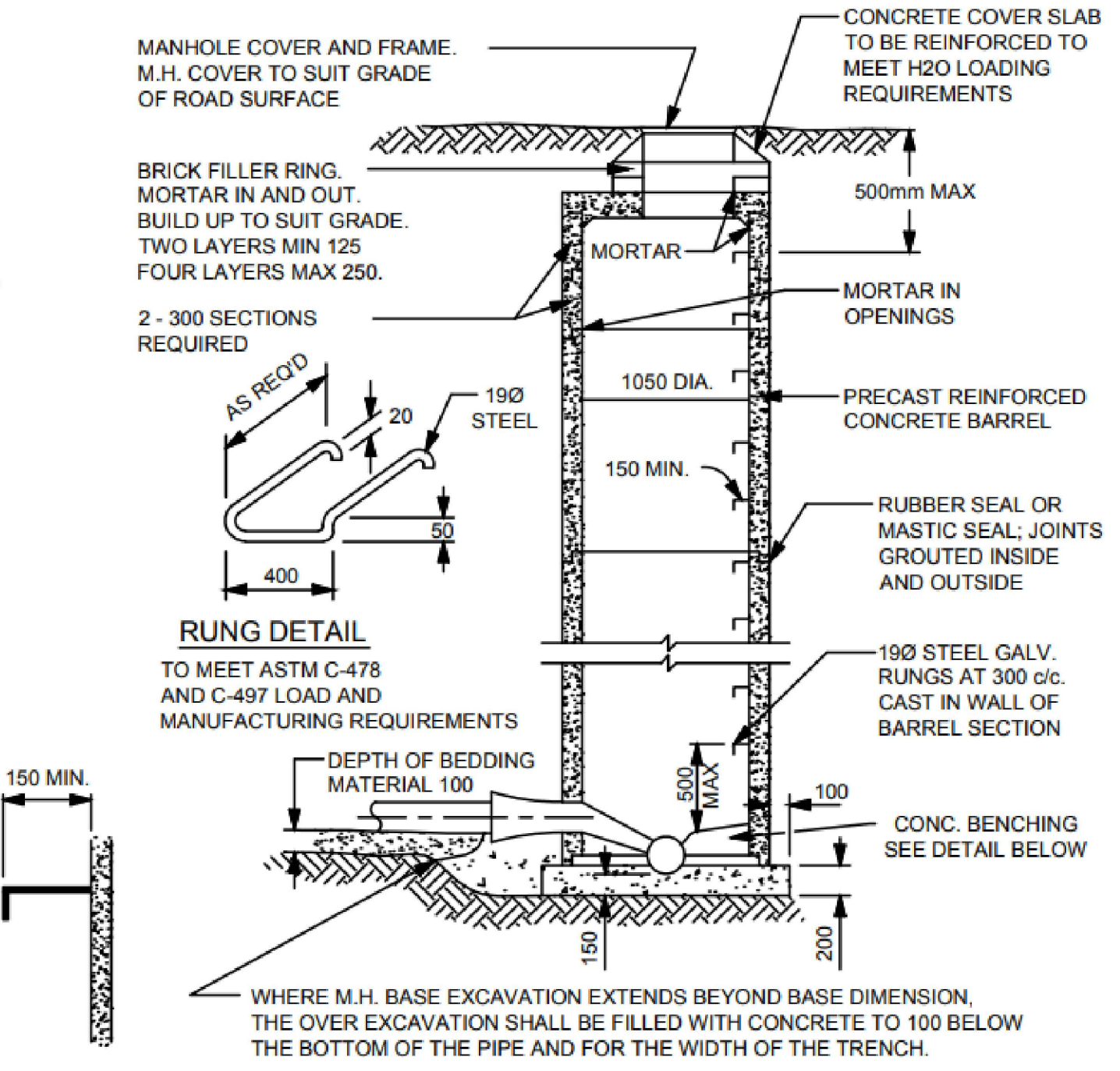
P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY CIVIL DETAILS SHEET 2

FILENAME	10299470-C01-201-C015.dwg	SHEET	C016
SCALE	AS NOTED		



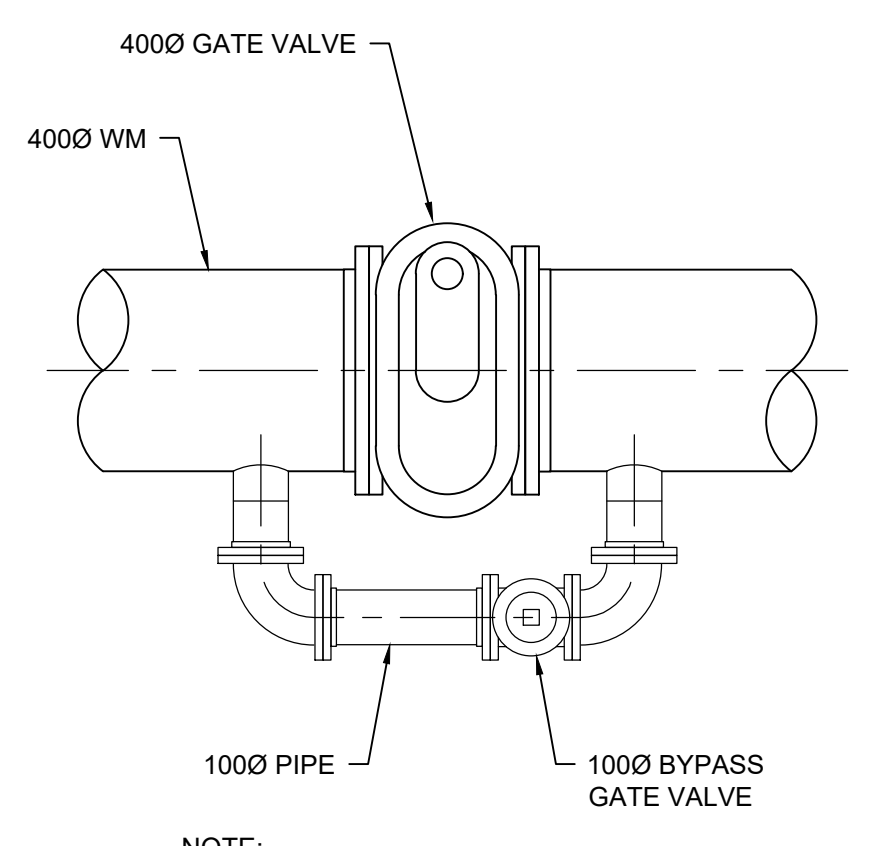
H CONTAINMENT TANK INSTALLATION DETAIL
NTS

NOTE:
1. SIDE SLOPE AS REQUIRED FOR CONSTRUCTION.



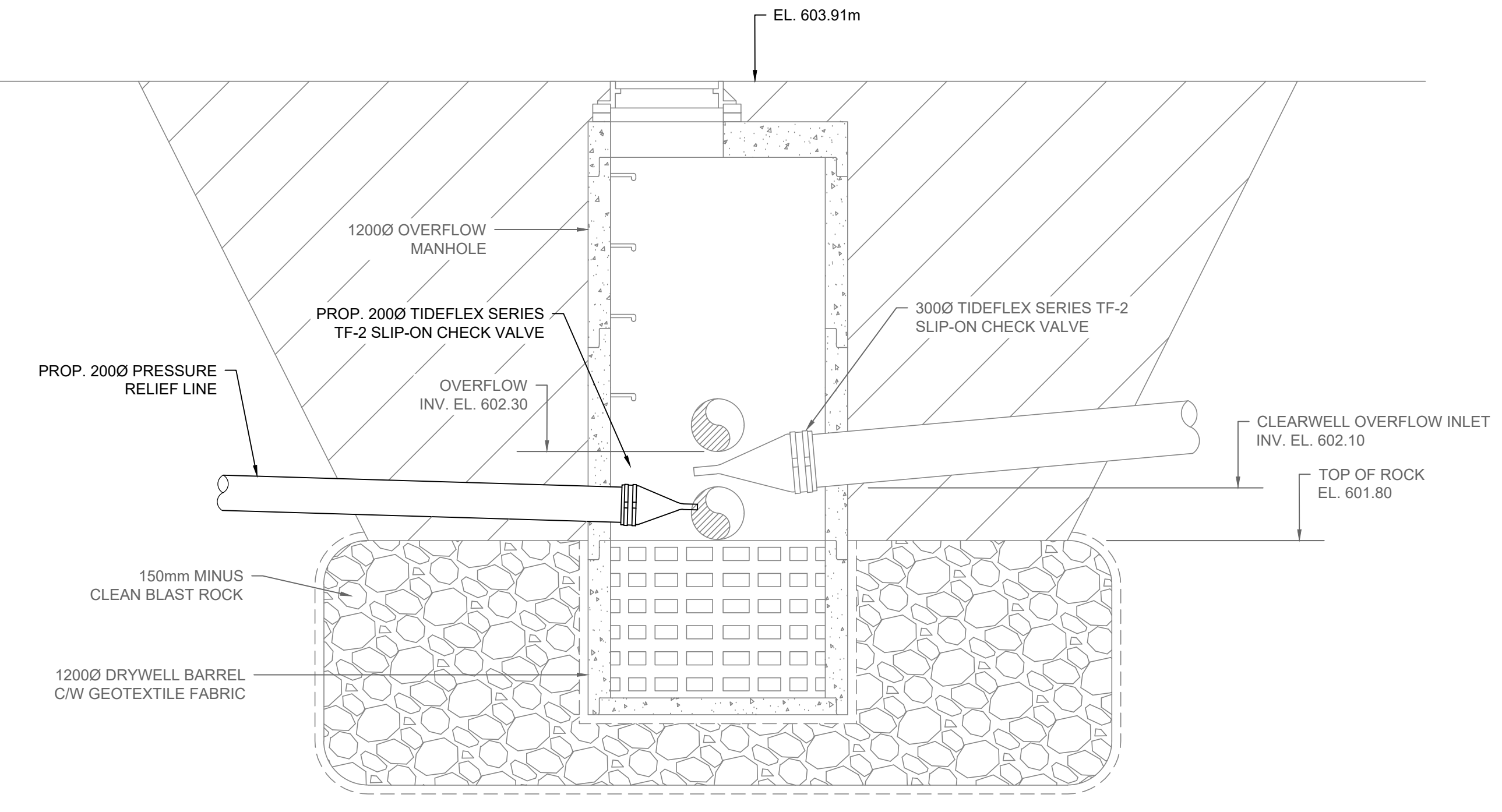
J STANDARD MANHOLE DETAILS
NTS

NOTE:
1. STANDARD DETAIL FOR DMH-B, DMH-C, AND DMH-D.

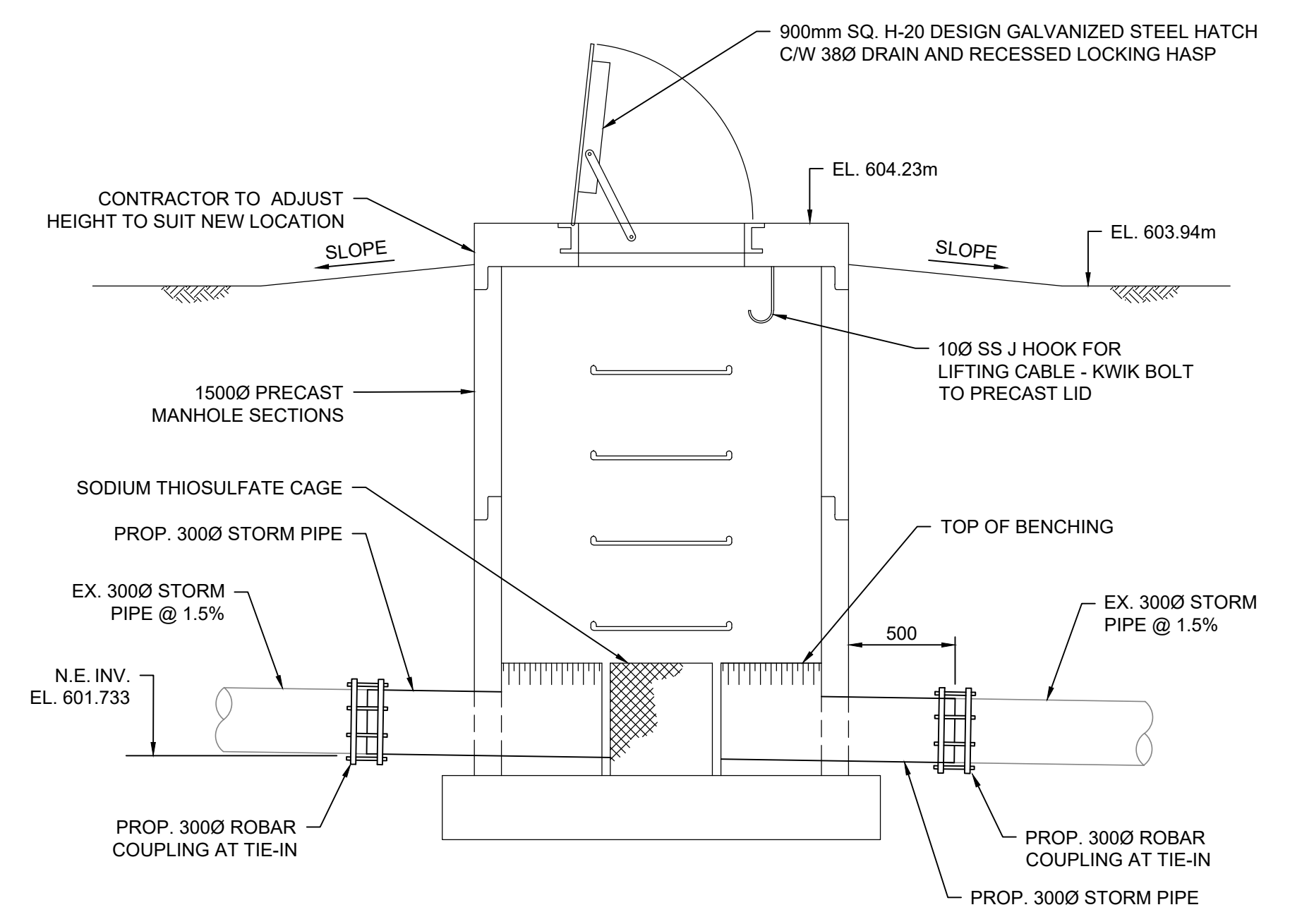


K GATE VALVE BYPASS ASSEMBLY
NTS

NOTE:
1. FOR PIPE SIZES 4000 AND LARGER.



L EXISTING OVERFLOW MANHOLE
NTS



M RELOCATED DECHLORINATION MANHOLE
NTS



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED
EGBC
#1001547

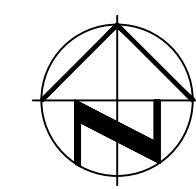


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

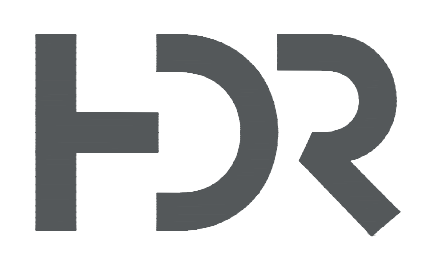
CIVIL DETAILS
SHEET 3

FILENAME	10299470-C01-201-C015.dwg	SHEET
SCALE	AS NOTED	C017



Legal Description:
 Replacement Crown Land Tenure Agreement -
 Standard Lease No. 244659, covering District Lot
 3638, Group 1, New Westminster District, except
 thereout road shown on Survey Plan 7Tube1986
 held on file in the Crown Land Registry, containing
 4.52 hectares (the "Land") for municipal
 wastewater treatment plant and works yard
 purposes.

PLAN
 SCALE 1:200



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
 SEALED
 EGBC
 #1001547



SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

2023

P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 ARCHITECTURAL
 SITE PLAN

FILENAME	10299470-A01-201-A001.dwg	SHEET	A001
SCALE	AS NOTED		

B.C. BUILDING CODE ANALYSIS

RESORT MUNICIPALITY OF WHISTLER - SOUTH WHISTLER PUMP STATION	F-3
MAJOR OCCUPANCY CLASSIFICATION	PART 3
GOVERNING PART OF CODE	600 m
GRADE ELEVATION	1 STOREY
BUILDING HEIGHT	219 m ²
FLOOR AREA	NONE
SPRINKLERS	1
FACING NUMBER OF STREETS	3.2.2.85 GROUP F, DIVISION 3, UP TO 2 STORIES
BASIC CODE CLASSIFICATION	PERMITTED: MAX. 2 STORIES MAXIMUM AREA: 1,600 m ² COMBUSTIBLE OR NON-COMBUSTIBLE LOAD BEARING WALLS: FIRE RESISTANT RATING GREATER THAN 45 MIN, OR NON-COMBUSTIBLE DESIGNED: 1 STOREY, 219 m ²
3.1.10.2. FIREWALLS	2-HOUR REQUIRED BETWEEN ROOMS
3.1.17.1. OCCUPANT LOAD (3.1.17.1 C)	OPERATIONS STAFF = 1 TOTAL = 1
3.2.3. SPACIAL SEPARATION	CONFORM TO TABLE 3.2.3.1 B
NORTH	> 10.0 m TO ADJACENCY OR PROPERTY LINE
L:H	5:1
EXPOSED AREA	80 m ²
MATERIALS	COMBUSTIBLE OR NON-COMBUSTIBLE
PERMISSIBLE UNPROTECTED OPENINGS	100%
SOUTH	> 10.0 m TO ADJACENCY OR PROPERTY LINE
L:H	5:1
EXPOSED AREA	80 m ²
MATERIALS	COMBUSTIBLE OR NON-COMBUSTIBLE
PERMISSIBLE UNPROTECTED OPENINGS	100%
EAST	> 8.0 m TO ADJACENCY OR PROPERTY LINE
L:H	3:1
EXPOSED AREA	48 m ²
MATERIALS	COMBUSTIBLE OR NON-COMBUSTIBLE
PERMISSIBLE UNPROTECTED OPENINGS	100%
WEST	> 8.0 m TO ADJACENCY OR PROPERTY LINE
L:H	3:1
EXPOSED AREA	48 m ²
MATERIALS	COMBUSTIBLE OR NON-COMBUSTIBLE
PERMISSIBLE UNPROTECTED OPENINGS	100%
3.2.3.6. COMBUSTIBLE PROJECTION	PERMITTED: > 1.2 m TO PROPERTY LINE; > 2.4 m TO ADJACENT BUILDING
3.2.3.7. CONSTRUCTION OF EXPOSED BUILDING FACE TABLE 3.2.3.7	45-MIN COMBUSTIBLE OR NON-COMBUSTIBLE; COMBUSTIBLE OR NON-COMBUSTIBLE CLADDING
3.2.4.1. FIRE ALARM REQUIRED	NO
3.2.4.4. 2-STAGE FIRE ALARM SYSTEM REQUIRED	NO
3.2.4.7. SIGNAL TO FIRE DEPARTMENT REQUIRED	NO
3.2.4.9. ANNUNCIATOR PANEL REQUIRED	NO
3.2.4.16. CENTRAL MONITORING REQUIRED	NO
3.2.4.20. VISUAL SIGNALS REQUIRED	NO
3.2.4.21. SMOKE ALARMS REQUIRED	NO
3.2.5.7. WATER SUPPLY	YES
3.2.5.8. STANDPIPE REQUIRED	NO
3.2.5.16. PORTABLE FIRE EXTINGUISHERS	YES
3.2.7.3. EMERGENCY LIGHTING REQUIRED	YES
3.2.7.8. EMERGENCY POWER FOR FIRE ALARMS	NO
3.2.7.9. EMERGENCY GENERATOR REQUIRED	NO
3.3.1.5. EGRESS DOORWAYS (TABLE 3.3.1.5 A)	2 PER ROOM; OCCUPANCY: < 60; AREA < 200 m ² (TABLE 3.3.1.5 A); EGRESS DISTANCE = 16 m
3.3.1.11. DOOR SWING	DIRECTION OF TRAVEL FOR EXITS
3.3.6. DESIGN OF HAZARDOUS AREAS	SODIUM HYDROXIDE (TDG CLASS 8 PACKING GROUP III) CALCIUM HYPOCHLORITE (TDG CLASS 5.1 PACKING GROUP II) SODIUM CHLORIDE (NOT REGULATED) STORAGE DESIGN: 25,000 L SODIUM HYDROXIDE 500 kg CALCIUM HYPOCHLORITE
3.3.6.2. STORAGE OF DANGEROUS GOODS	2-HOUR FIRE RATING REQUIRED IN CHEMICAL ROOM
3.4.2. NUMBER AND LOCATION OF EXITS FROM FLOOR AREAS	2 EXITS REQUIRED (3.3.1.5) 30 m MAXIMUM TRAVEL DISTANCE DESIGN: 16 m PROVIDED
3.4.2.5. LOCATION OF EXITS	1,100 mm (TABLE 3.4.3.2 A) AT EVERY EXIT
3.4.3.2. EXIT WIDTH	
3.4.5. EXIT SIGNS	
3.7. HEALTH REQUIREMENTS	
3.7.2.2. WATER CLOSETS	NOT PROVIDED. THE BUILDING SHARES THE PROPERTY WITH THE RMOW WWTP WHERE FULL WASHROOMS ARE PROVIDED.
3.7.2.10. ACCESSIBLE WASHROOMS	NOT REQUIRED (NATURE OF WORK NOT SUITABLE)
3.8. BUILDING REQUIREMENTS FOR PERSONS WITH DISABILITIES	
3.8.2.3. SPECIFIC REQUIREMENTS	NOT REQUIRED
3.8.2.38. INDUSTRIAL OCCUPANCIES	NO PUBLIC ACCESS, ACCESS NOT REQUIRED

B.C. FIRE CODE ANALYSIS

RESORT MUNICIPALITY OF WHISTLER - SOUTH WHISTLER PUMP STATION	F-3
MAJOR OCCUPANCY CLASSIFICATION	PART 3
GOVERNING PART OF CODE	600 m
GRADE ELEVATION	1 STOREY
BUILDING HEIGHT	219 m ²
FLOOR AREA	NONE
SPRINKLERS	1
FACING NUMBER OF STREETS	SODIUM HYDROXIDE (TDG CLASS 8 PACKING GROUP III) CALCIUM HYPOCHLORITE (TDG CLASS 5.1 PACKING GROUP II) SODIUM CHLORIDE (NOT REGULATED)
3.2.7. INDOOR STORAGE OF DANGEROUS GOODS	STORAGE DESIGN: 25,000 L SODIUM HYDROXIDE 500 kg CALCIUM HYPOCHLORITE HAZARDOUS AREA DESIGN REQUIRED DESIGN OF HAZARDOUS AREA REQUIRED IF STORAGE EXCEEDS: MAXIMUM PERMITTED SODIUM HYDROXIDE STORAGE: 2,000 L (BCFC TABLE 3.2.7.1) MAXIMUM PERMITTED CALCIUM HYPOCHLORITE STORAGE: 250 kg
3.2.7.2. IGNITION SOURCES	NON-FLAMMABLE
3.2.7.3. AMBIENT CONDITIONS	REQUIRED: ROOM TO BE COOL AND DRY (NOTE: SODIUM HYDROXIDE TO BE MAINTAINED AT 25°C TO PREVENT FREEZING)
3.2.7.5. STORAGE ARRANGEMENT	MAXIMUM HEIGHT: SODIUM HYDROXIDE: 4.5 m (UNPROTECTED) CALCIUM HYPOCHLORITE: 2.4 m (UNPROTECTED) MINIMUM WALL CLEARANCE: > 0.4 m REQUIRED
3.2.7.6. SEPARATION OF OTHER DANGEROUS GOODS	1.0 m REQUIRED (TABLE 3.2.7.6) CLASS 5.1 AND 8 (BASE - SODIUM HYDROXIDE PH = 14) IMPERVIOUS AND NON-COMBUSTIBLE REQUIRED
3.2.7.8. FLOORING MATERIAL	REQUIRED
3.2.7.10. SMOKE VENTING	SECONDARY CONTAINMENT REQUIRED 110% CAPACITY REQUIRED FOR ONE TANK (13,200 L) (4.3.7.3(1)) 13,595 L PROVIDED
3.2.7.11. SPILL CONTROL	ACCESS REQUIRED ON 2 SIDES
3.2.7.12. FIRE DEPARTMENT ACCESS	REQUIRED
3.2.7.13. LABELS	REQUIRED ON BUILDING EXTERIOR IN ACCORDANCE WITH TC SOR/2008-34 SODIUM HYDROXIDE: UN1824 CALCIUM HYPOCHLORITE: UN2880
3.2.7.14. PLACARDS	

FINISH SCHEDULE

W1 EXTERIOR WALL HARDIBOARD MAGNOLIA SERIES CHISELED GREEN	
W3 EXTERIOR METAL CLAD WALL VICWEST WEATHER XL COLOURS CHARCOAL 56072	
R1 EXTERIOR ROOF VICWEST WEATHER XL COLOURS CHARCOAL 56072	
HORIZONTAL PERIMETER TRIM VENTED SOFFIT HARDIBOARD TRIM RUSTIC GRAIN KHAKI BROWN	



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

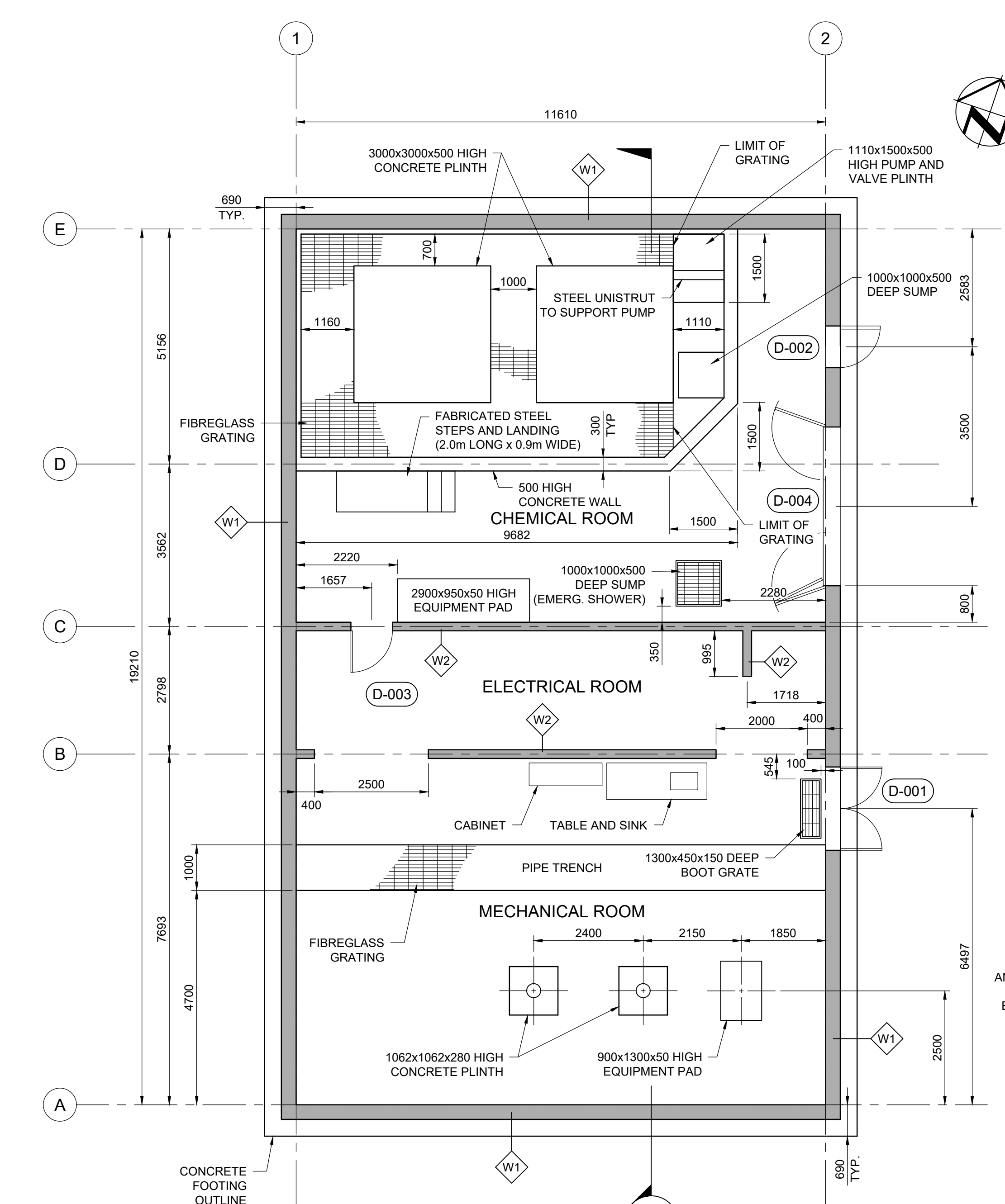


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

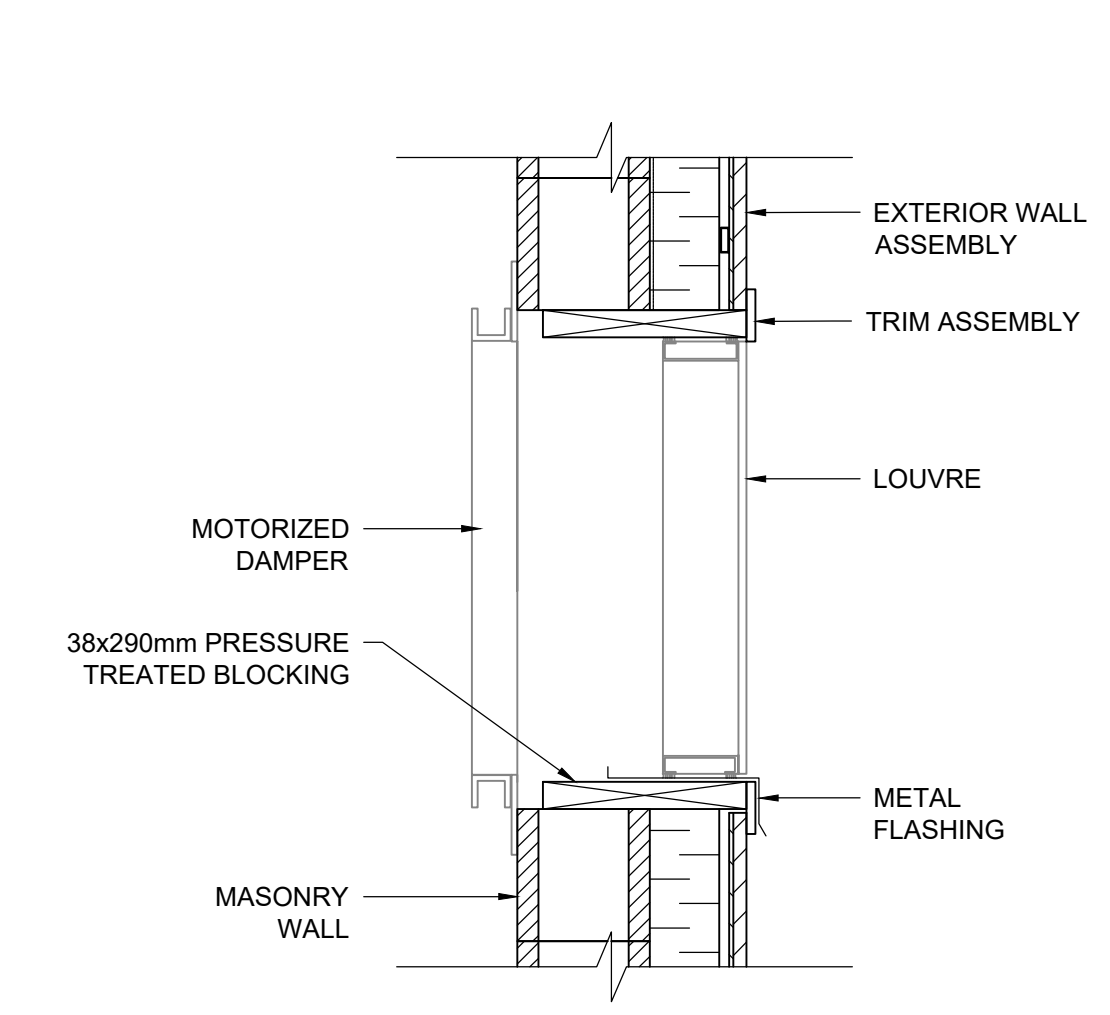
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

CODE REVIEW

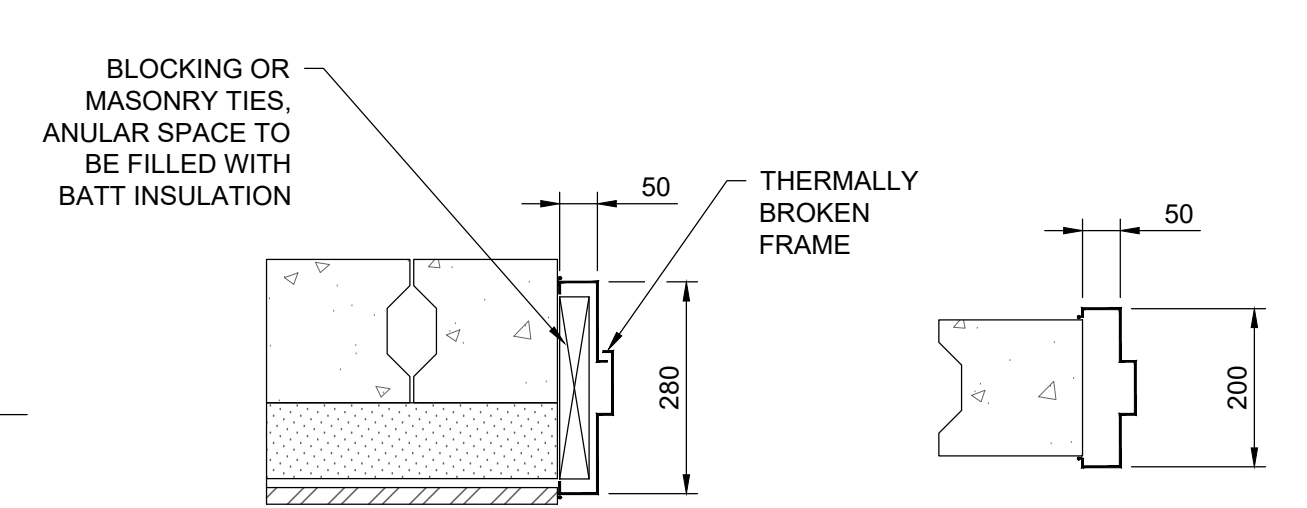
FILENAME	10299470-A01-201-A002.dwg	SHEET	A002
SCALE	N.T.S.		



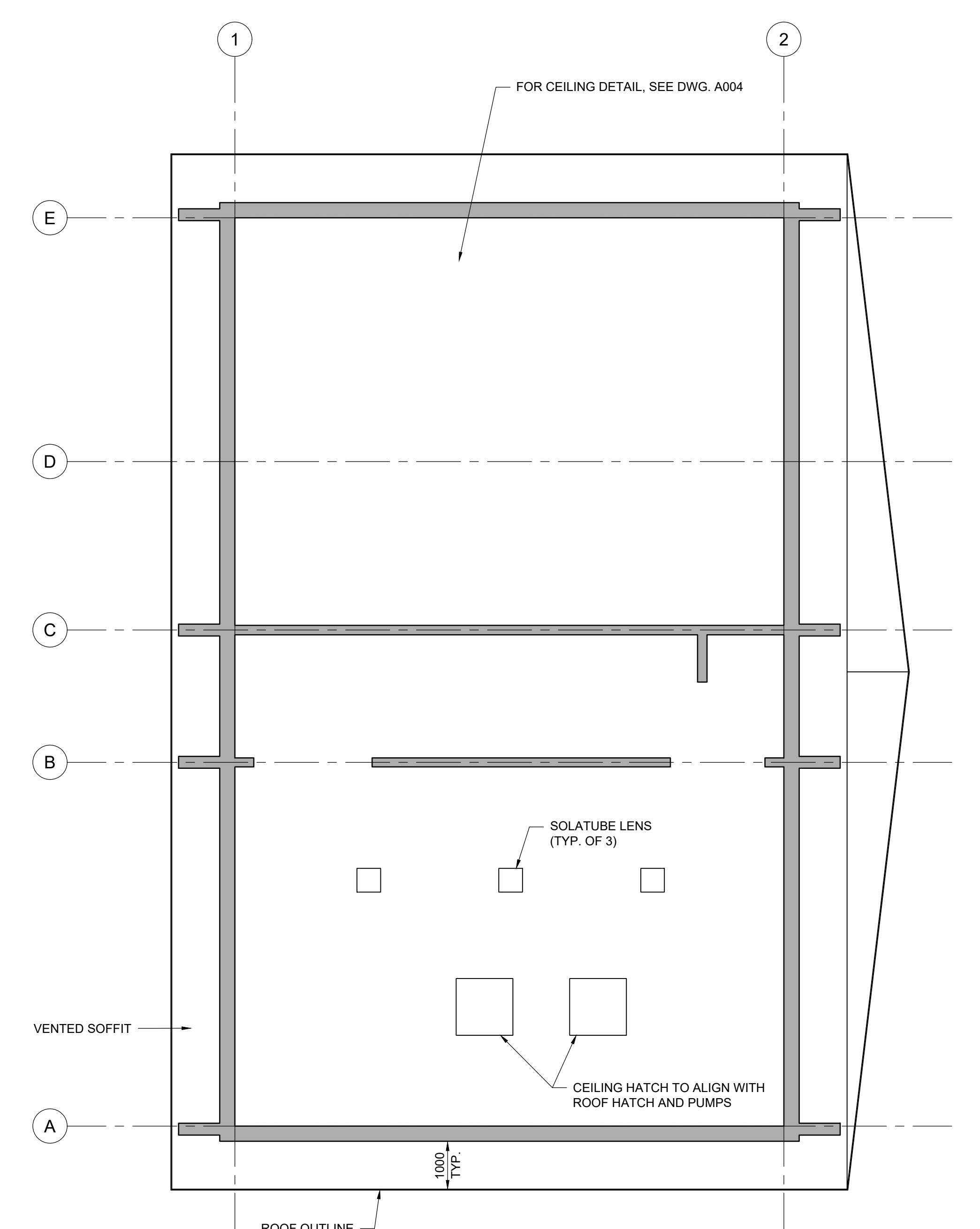
PLAN
SCALE 1:75



HVAC LOUVRE
TYPICAL DETAIL
SCALE NTS



FRAME TYPE
SCALE NTS



REFLECTED CEILING PLAN
SCALE 1:75

ROOM FINISH SCHEDULE											
ROOM NAME	FLOOR			WALLS				CEILING		HEIGHT AFF (mm)	REMARKS
	MATERIAL	FINISH	BASE	NORTH WALL	SOUTH WALL	EAST WALL	WEST WALL	MATERIAL	FINISH		
CHEMICAL ROOM	CONC	EPOXY	ECB	PT	PT	PT	PT	GWB	PT	4,000	2-HOUR FIRE RATING
ELECTRICAL ROOM	CONC	EPOXY	ECB	PT	PT	-	-	GWB	PT	4,000	
MECHANICAL ROOM	CONC	EPOXY	ECB	PT	PT	PT	PT	GWB	PT	4,000	

CONC = CONCRETE PT = PAINT EPOXY = 2-PART EPOXY ECB = EPOXY COVE BASE GWB = GYPSUM WALLBOARD AFF = ABOVE FINISHED FLOOR

DOOR SCHEDULE																
DOOR NUMBER	DOOR TYPE	ROOM NAME	DOOR INFORMATION					FRAME INFORMATION				FIRE RATING	HARDWARE GROUP	REMARKS		
			WIDTH (mm)	HEIGHT (mm)	THICKNESS (mm)	MATERIAL	FINISH	GLASS	FRAME TYPE	DETAIL						
D-001	D1	PUMP ROOM ENTRANCE	1,827	2,121	45	METAL	PT		A			METAL	PT	HW-2A / HW-2B	INSULATED	
D-002	D2	CHEMICAL ROOM ENTRANCE	914	2,121	45	METAL	PT		A			METAL	PT	HW-2A / HW-2B	INSULATED	
D-003	D3	PUMP / CHEMICAL ROOM	914	2,121	45	METAL	PT		B			METAL	PT	HW-1	STANDARD	
D-004	D4	ROLL-UP DOOR	3,480	3,480	50	METAL	PT					METAL	PT	BY DOOR MANF.	INSULATED FOLDING DOOR	

PT = PAINT



PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

0	2023-09-19	ISSUED FOR TENDER
ISSUE	DATE	DESCRIPTION

ORIGINAL SEALED EGBC #1001547



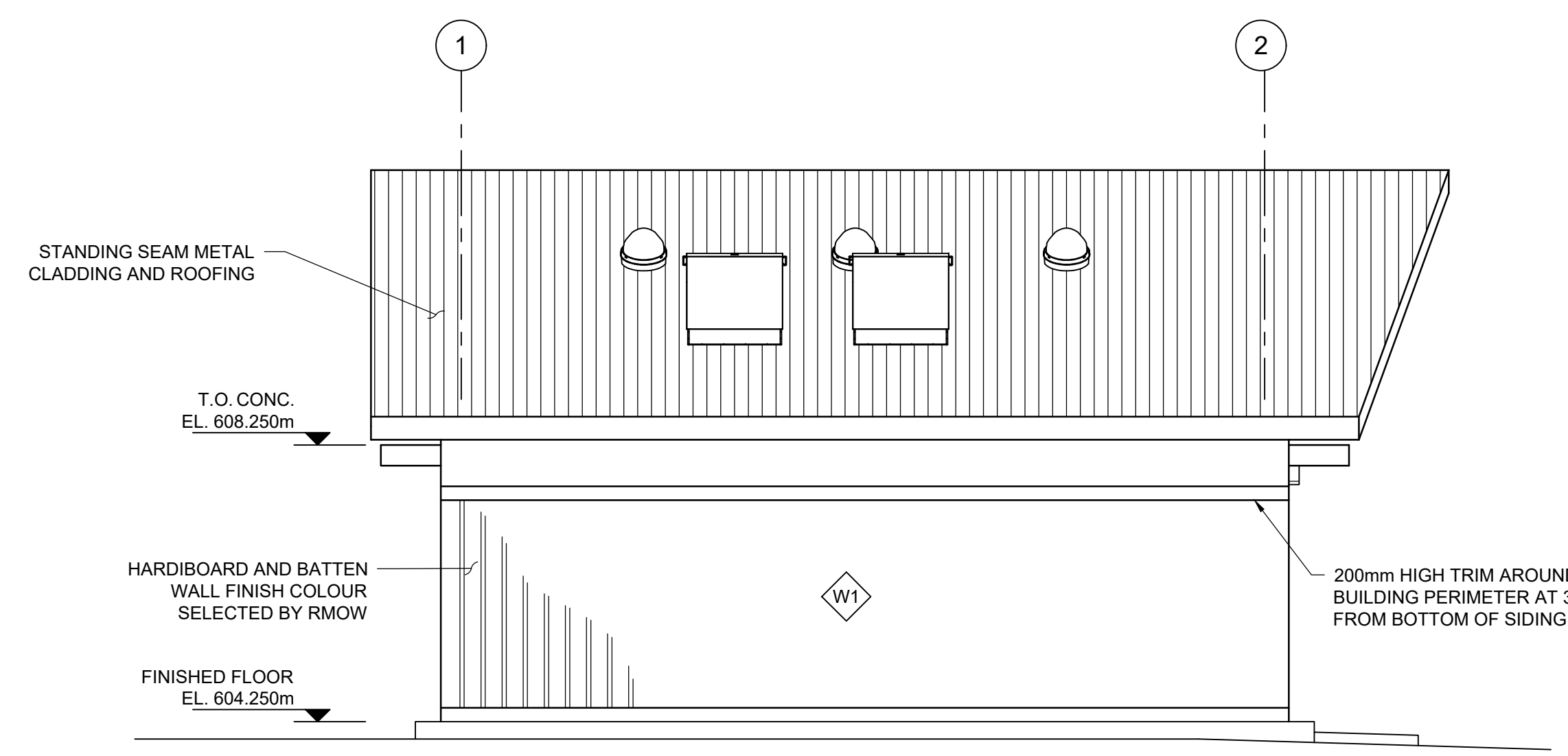
SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY

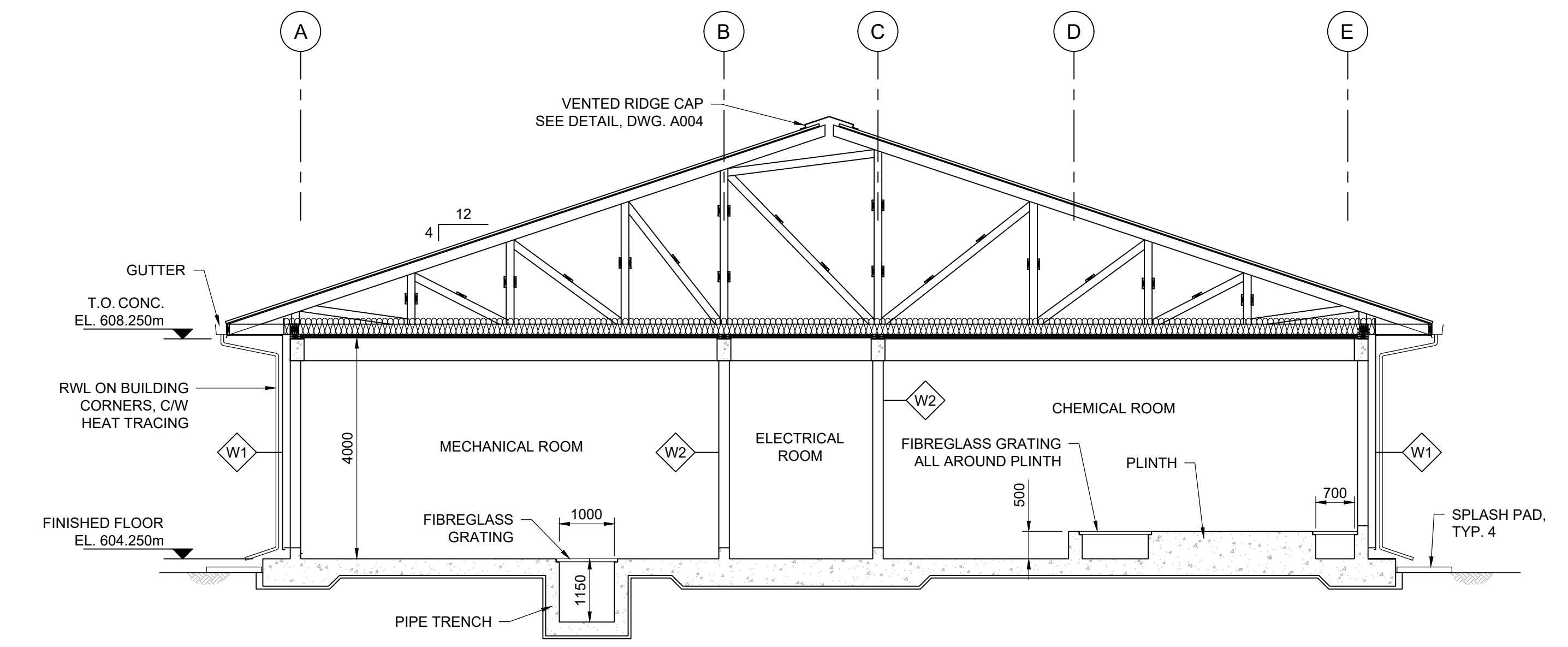
BUILDING LAYOUT

FILENAME | 10299470-A01-201-A003.dwg SHEET
SCALE | AS NOTED | A003

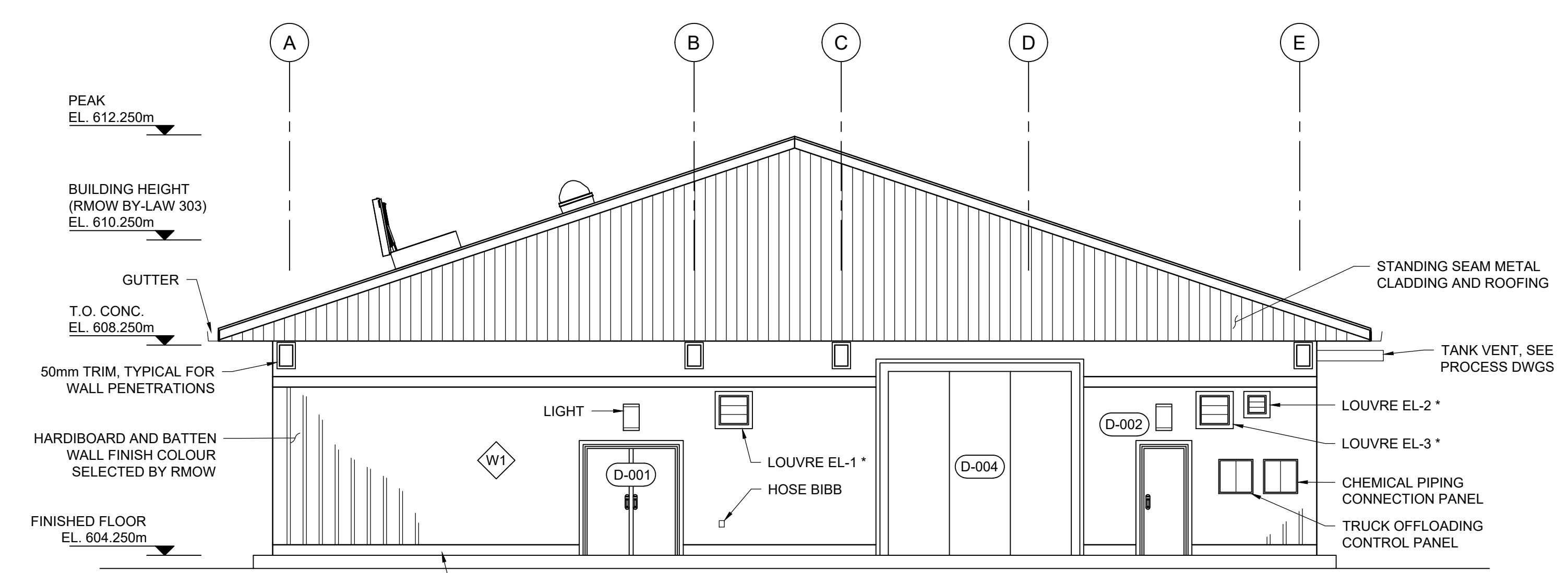
1 2 3 4 5 6 7 8



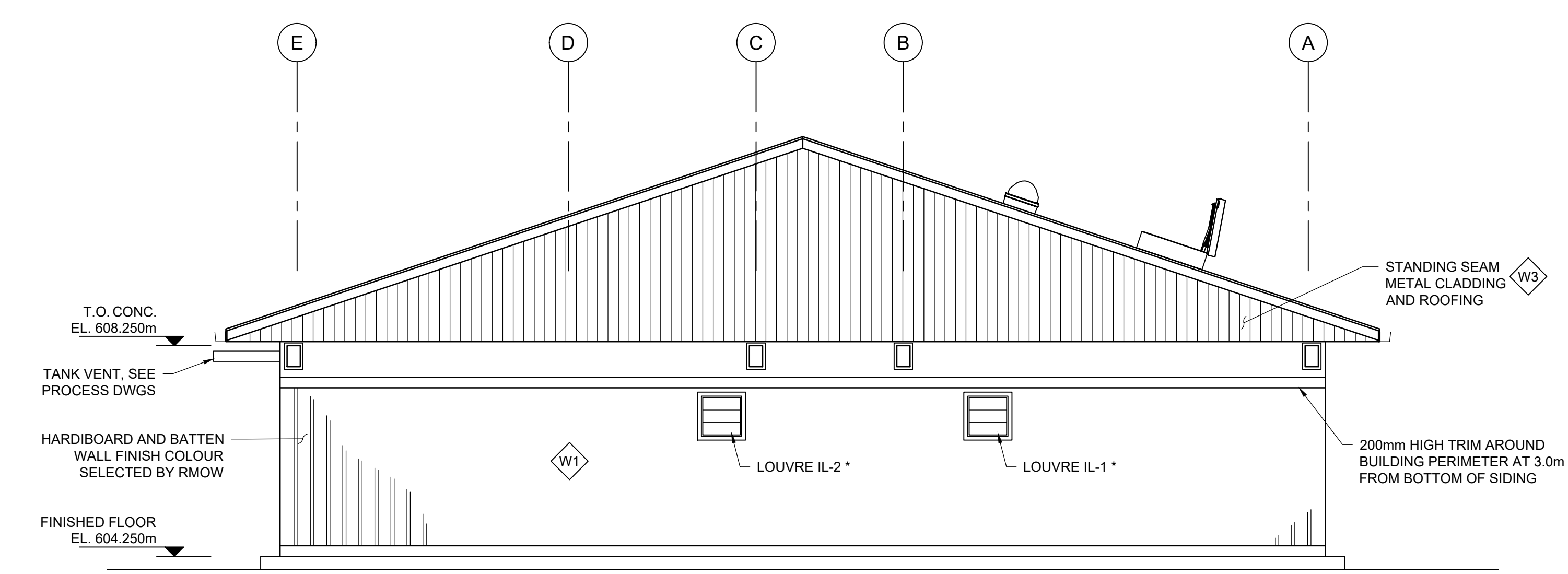
SOUTH ELEVATION
SCALE 1:75



SECTION A
SCALE 1:75
A003



EAST ELEVATION
SCALE 1:75



WEST ELEVATION
SCALE 1:75



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED
EGBC
#1001547

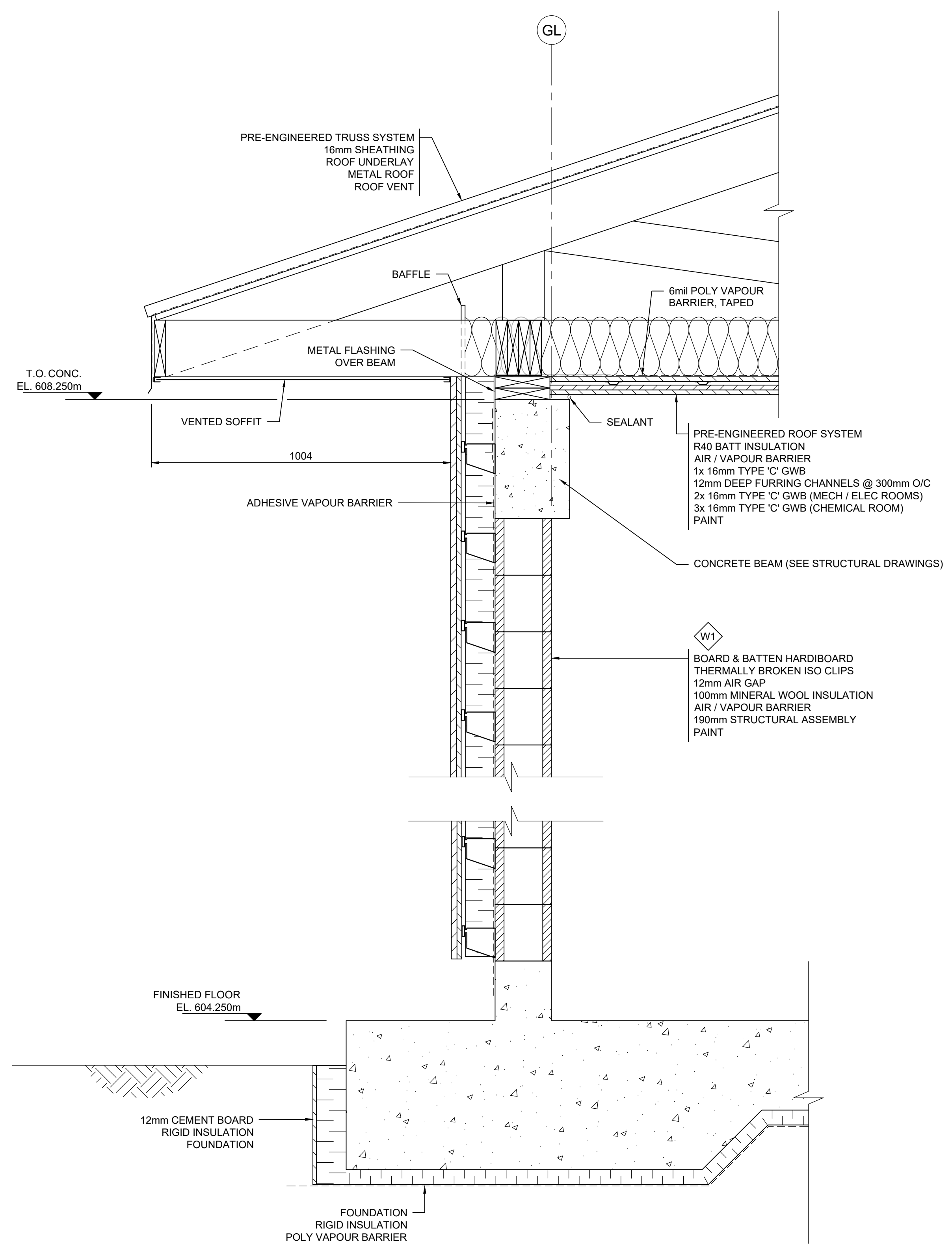


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

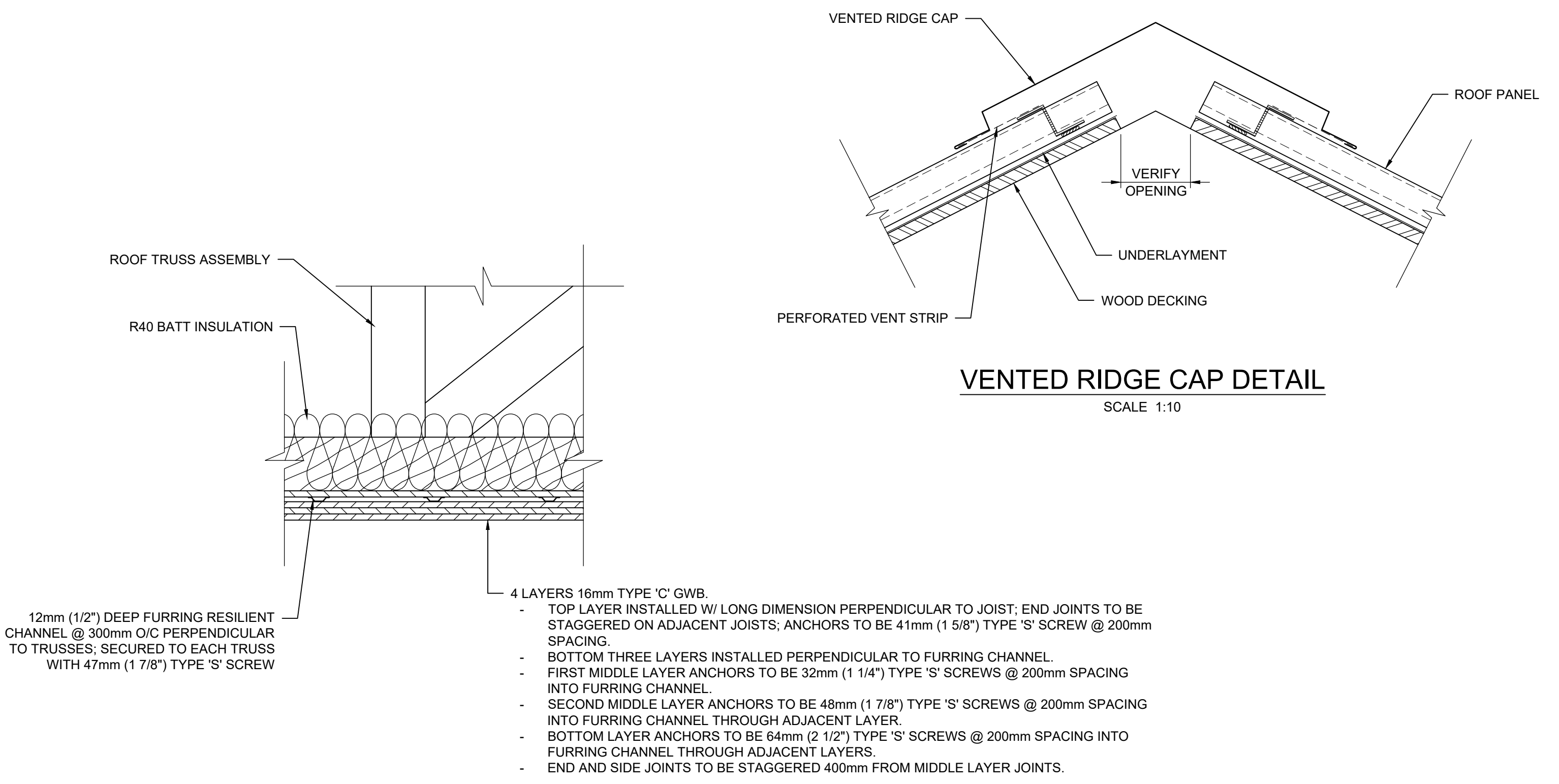
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**
BUILDING ELEVATIONS & SECTION

FILENAME	10299470-A01-201-A004.dwg	SHEET
SCALE	AS NOTED	A004

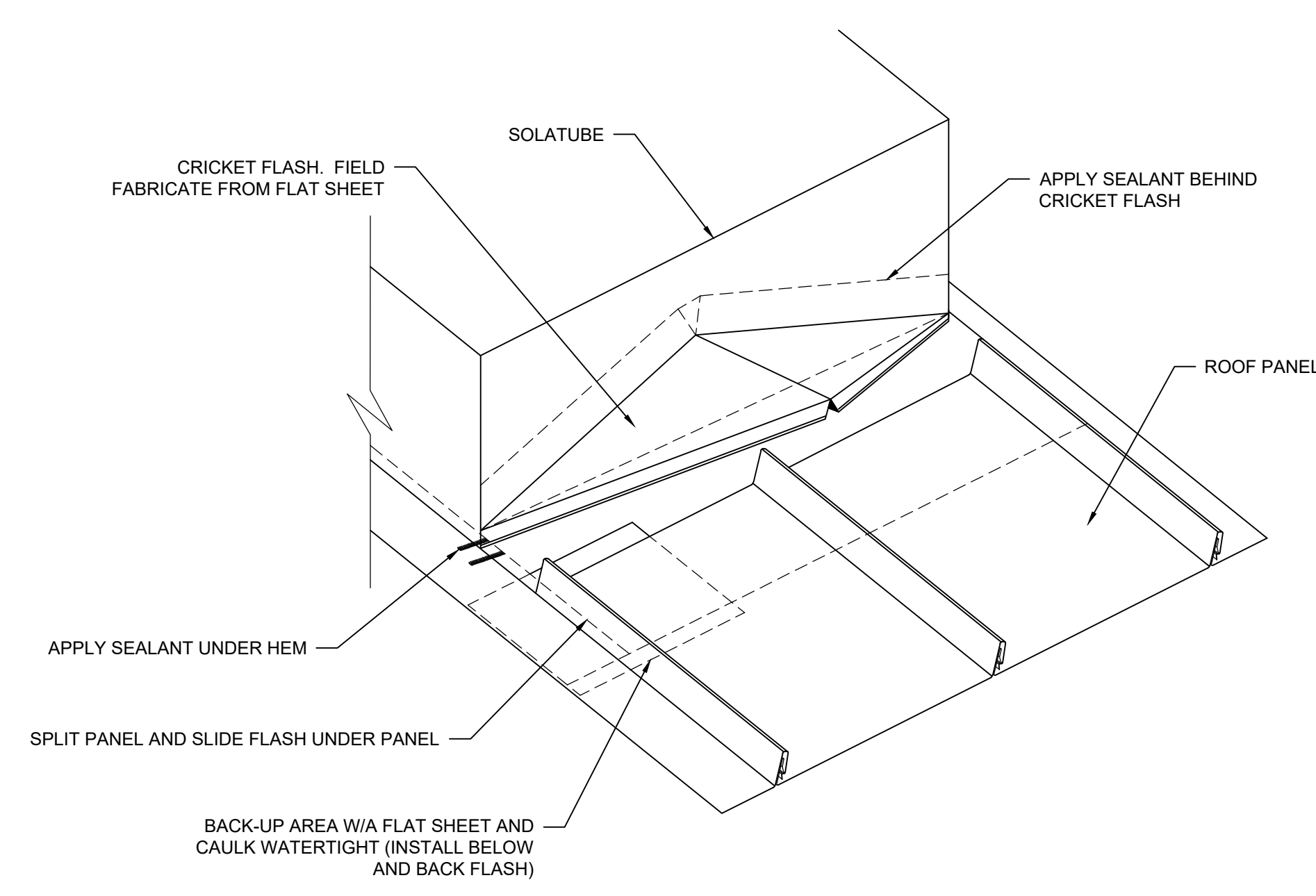
2023



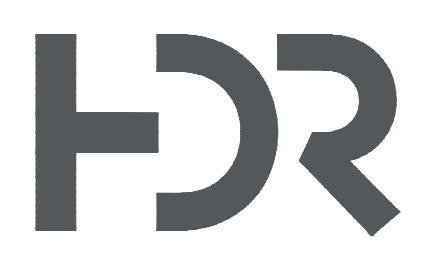
TYPICAL EXTERIOR WALL SECTION
SCALE 1:10



TWO-HOUR CEILING ASSEMBLY IN CHEMICAL ROOM
SCALE 1:10



CRICKET FLASHING BEHIND SOLATUBE DETAIL
SCALE 1:10



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

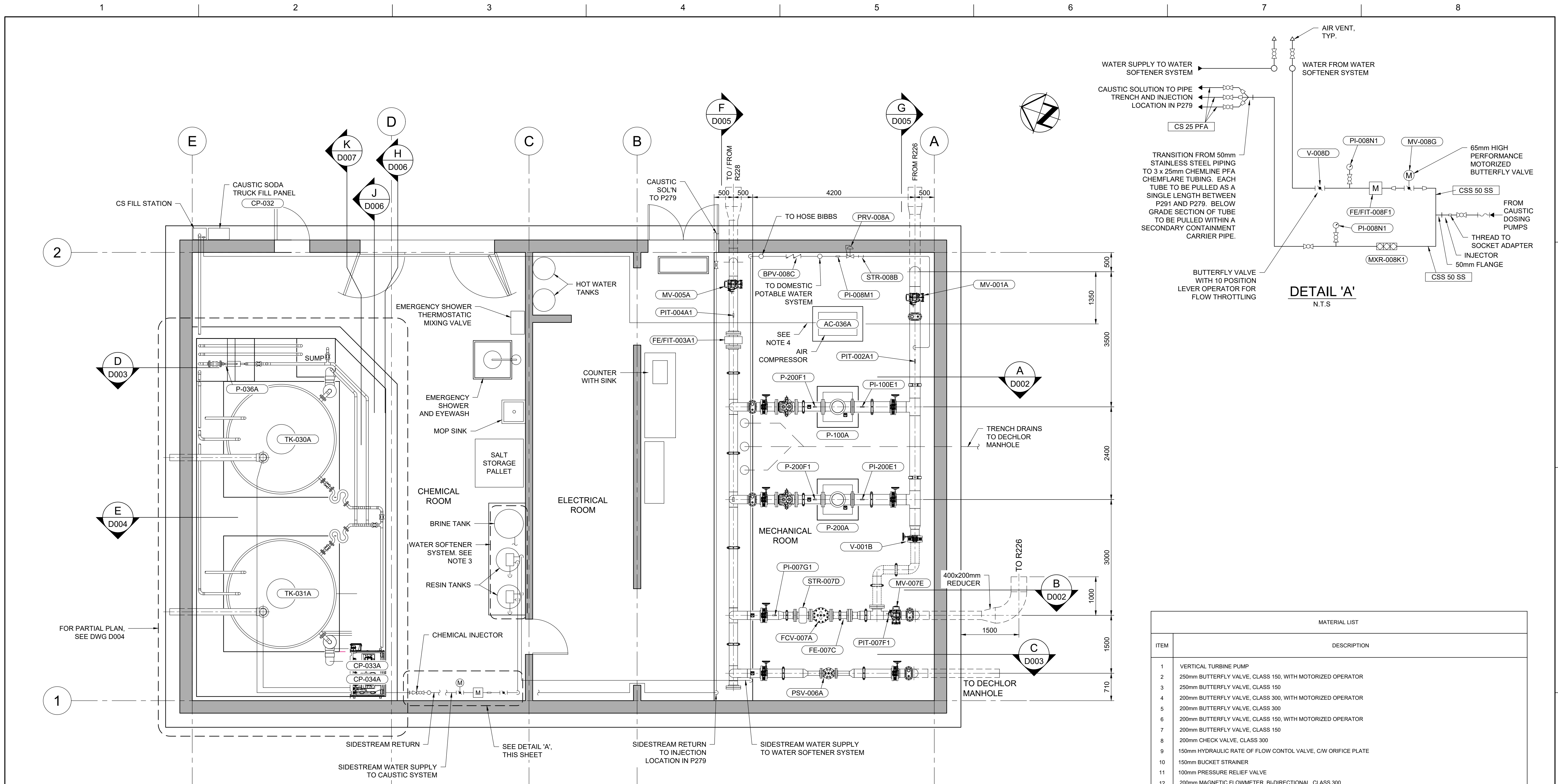


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

ARCHITECTURAL DETAILS - SHEET 1

FILENAME	10299470-A01-201-A005.dwg	SHEET	A005
SCALE	AS NOTED		



MATERIAL LIST	
ITEM	DESCRIPTION
1	VERTICAL TURBINE PUMP
2	250mm BUTTERFLY VALVE, CLASS 150, WITH MOTORIZED OPERATOR
3	250mm BUTTERFLY VALVE, CLASS 150
4	200mm BUTTERFLY VALVE, CLASS 300, WITH MOTORIZED OPERATOR
5	200mm BUTTERFLY VALVE, CLASS 300
6	200mm BUTTERFLY VALVE, CLASS 150, WITH MOTORIZED OPERATOR
7	200mm BUTTERFLY VALVE, CLASS 150
8	200mm CHECK VALVE, CLASS 300
9	150mm HYDRAULIC RATE OF FLOW CONTROL VALVE, CW ORIFICE PLATE
10	150mm BUCKET STRAINER
11	100mm PRESSURE RELIEF VALVE
12	200mm MAGNETIC FLOWMETER, BI-DIRECTIONAL, CLASS 300
13	25mm COMBINATION AIR VALVE, 300 PSI CWP, CW ISOLATING BALL VALVE AND STAINLESS STEEL SCHEDULE 40 NIPPLES
14	25mm AIR RELEASE VALVE, 300 PSI CWP, CW ISOLATING BALL VALVE AND STAINLESS STEEL SCHEDULE 40 NIPPLES
15	15mm AIR RELEASE VALVE, FOR PUMP INLET BARREL VENTING
16	250mm VICTAULIC NO. 07 COUPLING
17	200mm VICTAULIC NO. 07 COUPLING
18	150mm VICTAULIC NO. 07 COUPLING
19	25mm BALL VALVE DRAIN
20	PRESSURE GAUGE ASSEMBLY
21	PRESSURE GAUGE AND TRANSMITTER ASSEMBLY
22	200mm BLIND FLANGE, CLASS 150

- NOTES:**
- SINGLE LINE SIDESTREAM AND POTABLE WATER PIPING IS NOT DRAWN TO SCALE. PIPING TO BE FIELD ROUTED BY CONTRACTOR.
 - SEE P&ID FOR PIPING AND VALVE REQUIREMENTS FOR SIZES 50mm AND SMALLER WATER SUPPLY PIPING AND VALVE REQUIREMENTS.
 - WATER SOFTENER SYSTEM INCLUDES ONE BRINE TANK, TWO RESIN TANKS, AND IS TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS. VESSELS TO BE SPACED WITH 300mm SEPARATION. RESIN TANK DRAINS ARE TO EACH BE PIPED TO ADJACENT FUNNEL FLOOR DRAINS. SEE MECHANICAL DRAWINGS FOR FLOOR DRAIN REQUIREMENTS. BRINE TANK TO BE PIPED TO EACH RESIN TANK. REFER TO P&ID DRAWINGS FOR ISOLATION VALVE REQUIREMENTS. PROVIDE BALL VALVE AIR VENTS AT HIGH POINTS.
 - COMPRESSED AIR LINE TO BE FIELD ROUTED TO THE CS FILL STATION PANEL USING SWAGELOK TUBING AND FITTINGS. PROVIDE 15mm QUICK CONNECTING FITTING IN THE EXTERIOR CS FILL STATION PANEL.

PLAN
SCALE 1:50



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

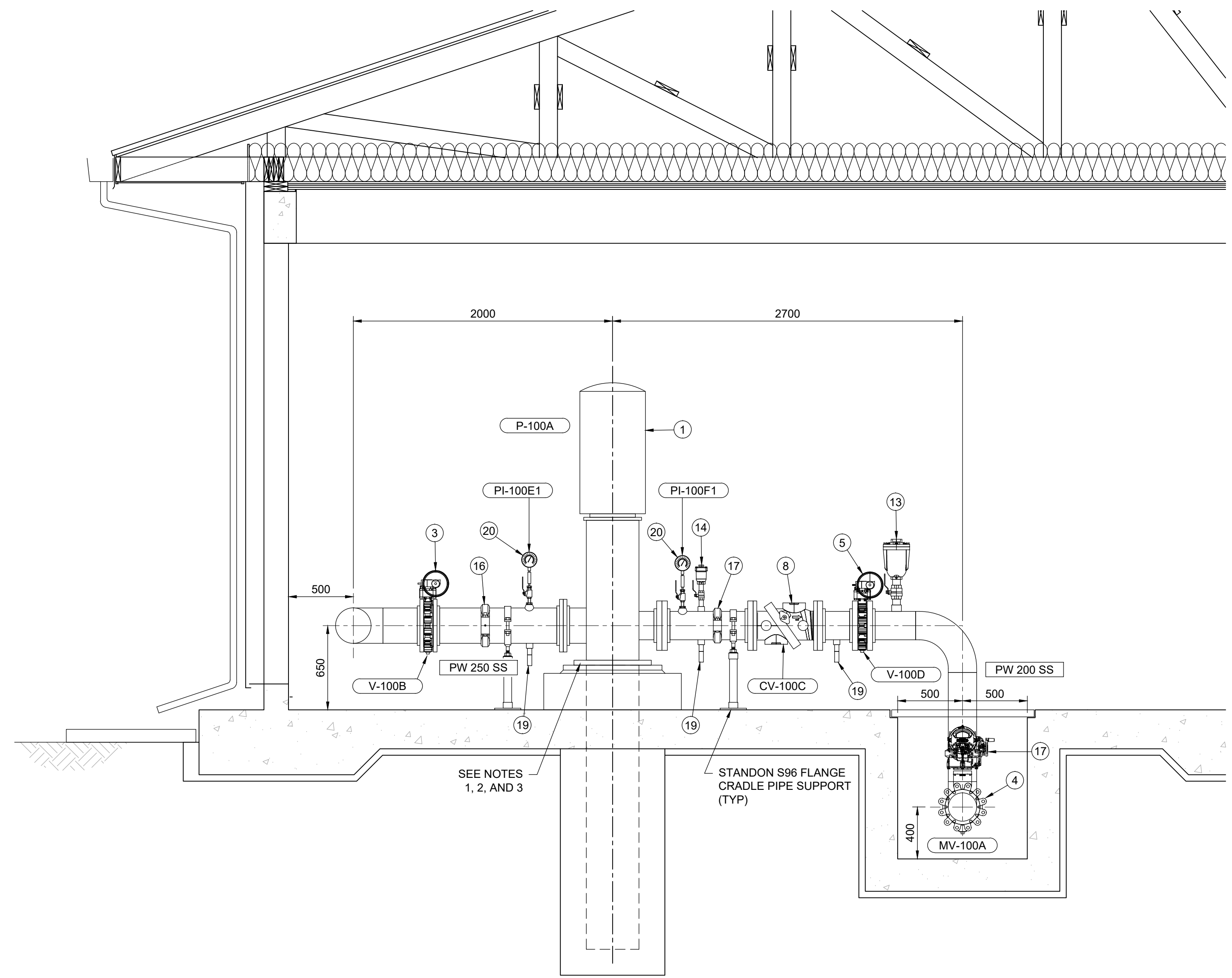
ORIGINAL
SEALED
EGBC
#1001547



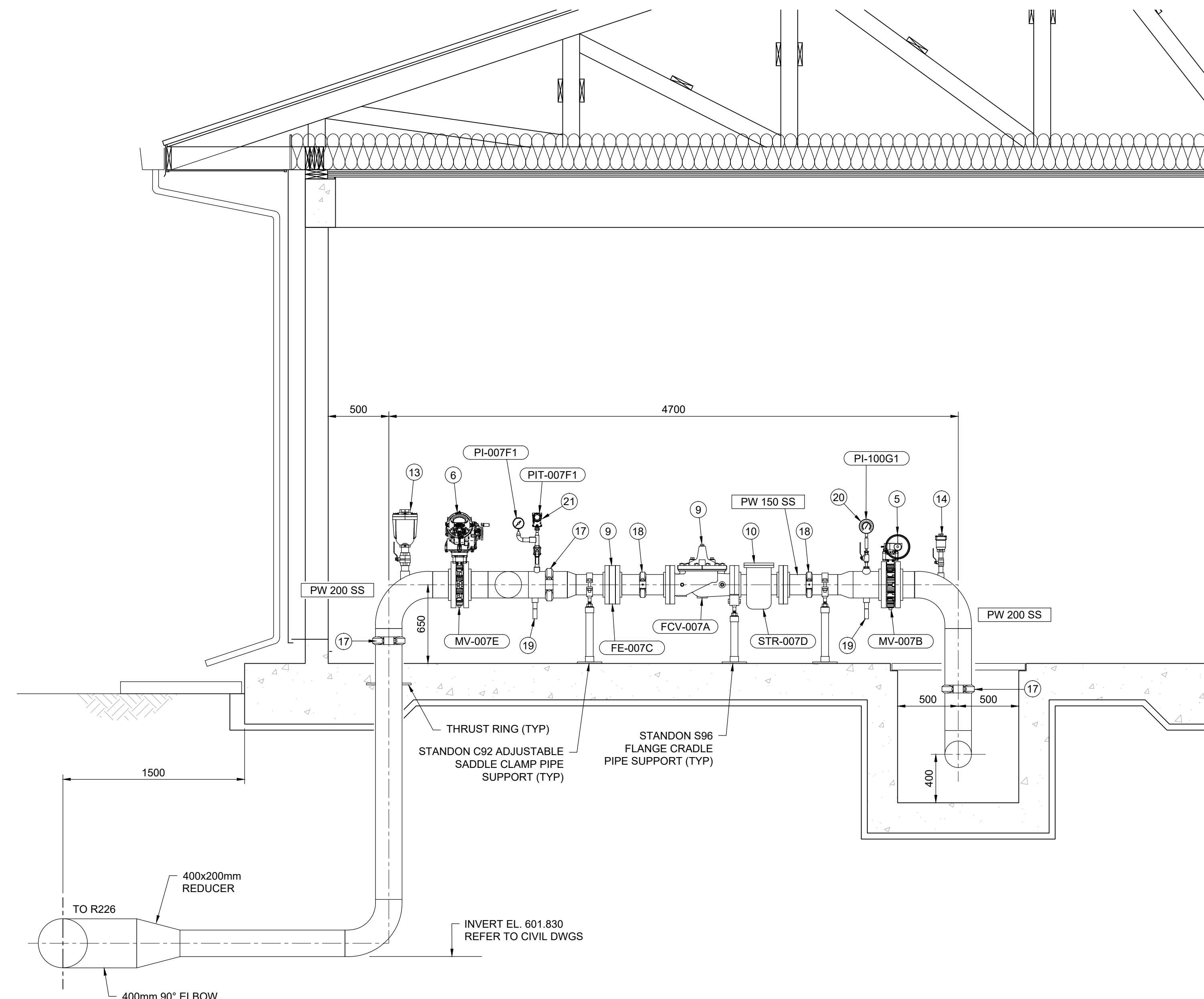
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PROCESS GENERAL ARRANGEMENT**

FILENAME	10299470-D01-201-D001.dwg	SHEET	D001
SCALE	AS NOTED		



SECTION A
SCALE 1:25
D001



SECTION B
SCALE 1:25
D001

- NOTES:**
- PUMP HEAD DRAIN TO BE PIPED TO ADJACENT FLOOR DRAIN USING 1/2" STAINLESS STEEL TUBING AND FITTINGS. TUBE AND FITTINGS SHALL BE 300 SERIES STAINLESS STEEL.
 - PUMP MECHANICAL SEAL TO BE PLAN 13 INSTALLATION. 1/2" TUBE SHALL BE INSTALLED FROM THE MECHANICAL SEAL FLUSH OUTLET TO A RETURN PORT ON THE PUMP DISCHARGE HEAD BASE. TUBE AND FITTINGS SHALL BE 300 SERIES STAINLESS STEEL.
 - A 1/2" PUMP INLET BARREL AIR RELEASE VALVE SHALL BE INSTALLED ON PORT ON THE PUMP DISCHARGE HEAD BASE. AIR VALVE INLET TO INCLUDE SCHEDULE 40S STAINLESS STEEL PIPE AND ISOLATION BALL VALVE. AIR VALVE VENT TO BE PIPED TO ADJACENT FLOOR DRAIN USING 1/2" STAINLESS STEEL TUBING AND FITTINGS. TUBE AND FITTINGS SHALL BE 300 SERIES STAINLESS STEEL.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED
EGBC
#1001547

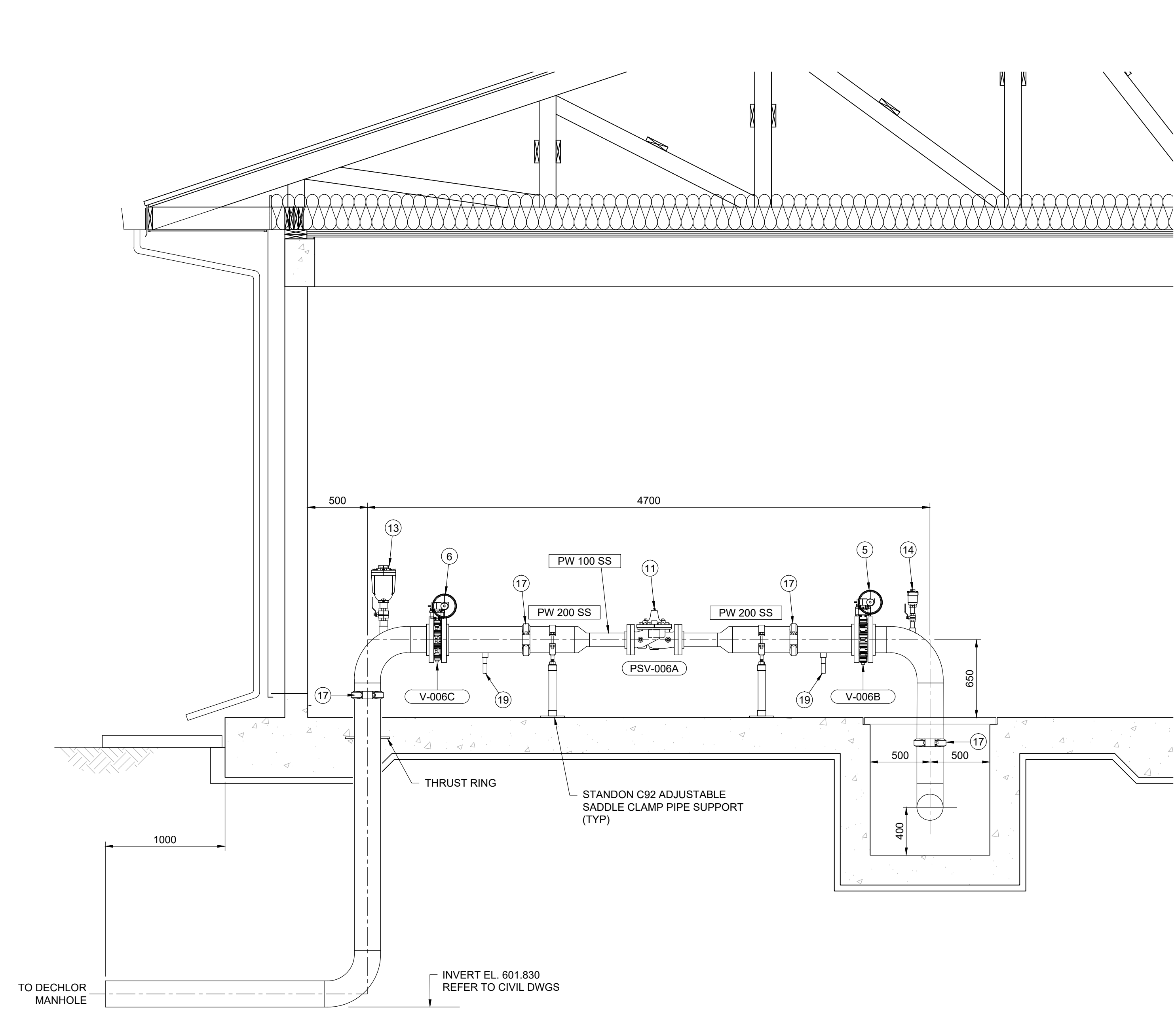


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

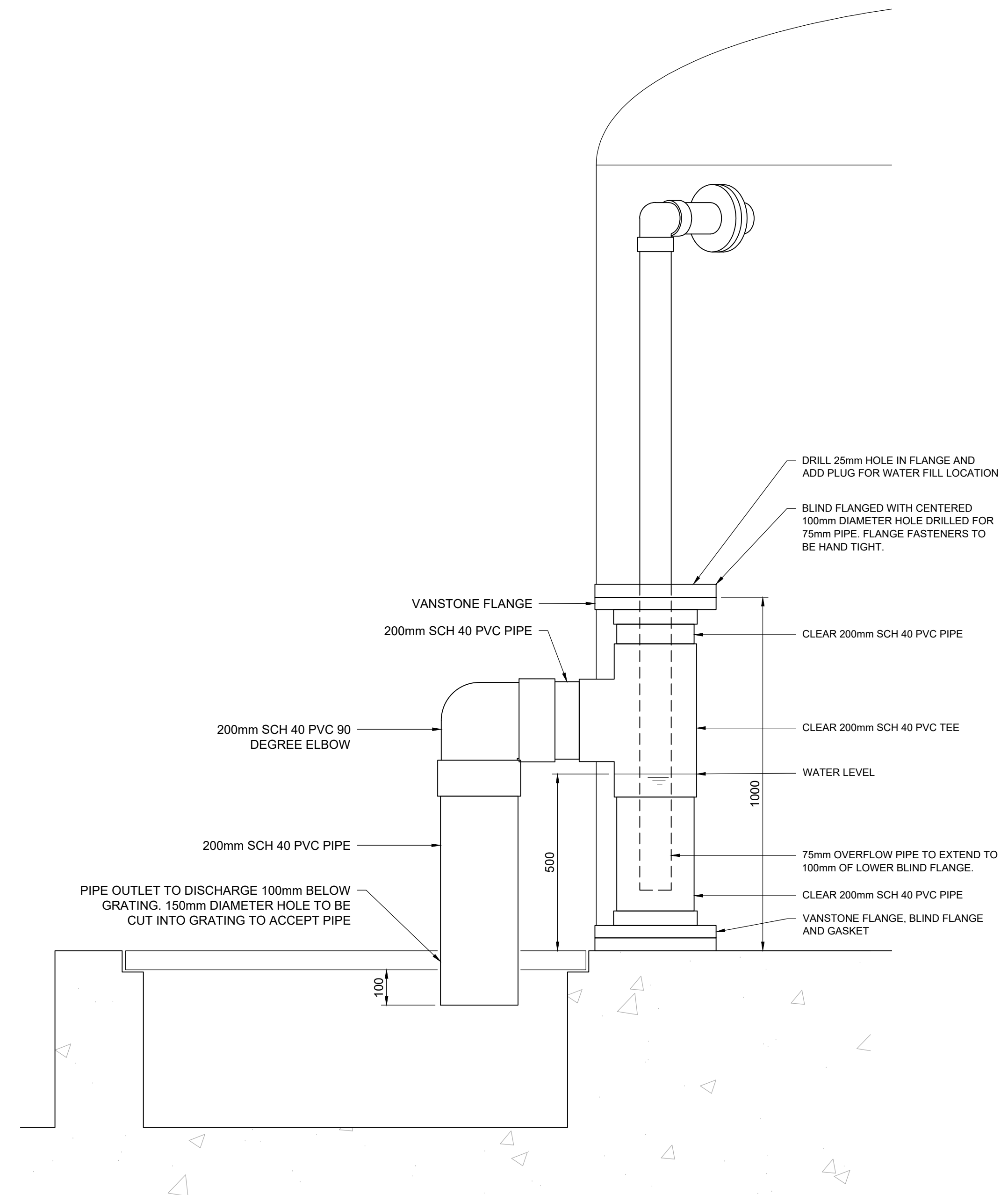
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

PROCESS SECTIONS - SHEET 1

FILENAME	10299470-D01-201-D001.dwg	SHEET	D002
SCALE	AS NOTED		

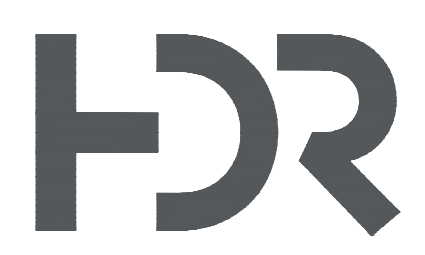


SECTION C
SCALE 1:25



DETAIL 'A'
SCALE 1:10

- NOTE:
1. DETAIL SHOWING VAPOUR SCRUBBER. SOCKET WELDED PVC ASSEMBLY TO HOLD WATER AS SHOWN TO PREVENT ODOURS WITHIN THE CAUSTIC STORAGE TANK FROM ENTERING THE ROOM.
 2. TWO VAPOUR SCRUBBERS REQUIRED.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



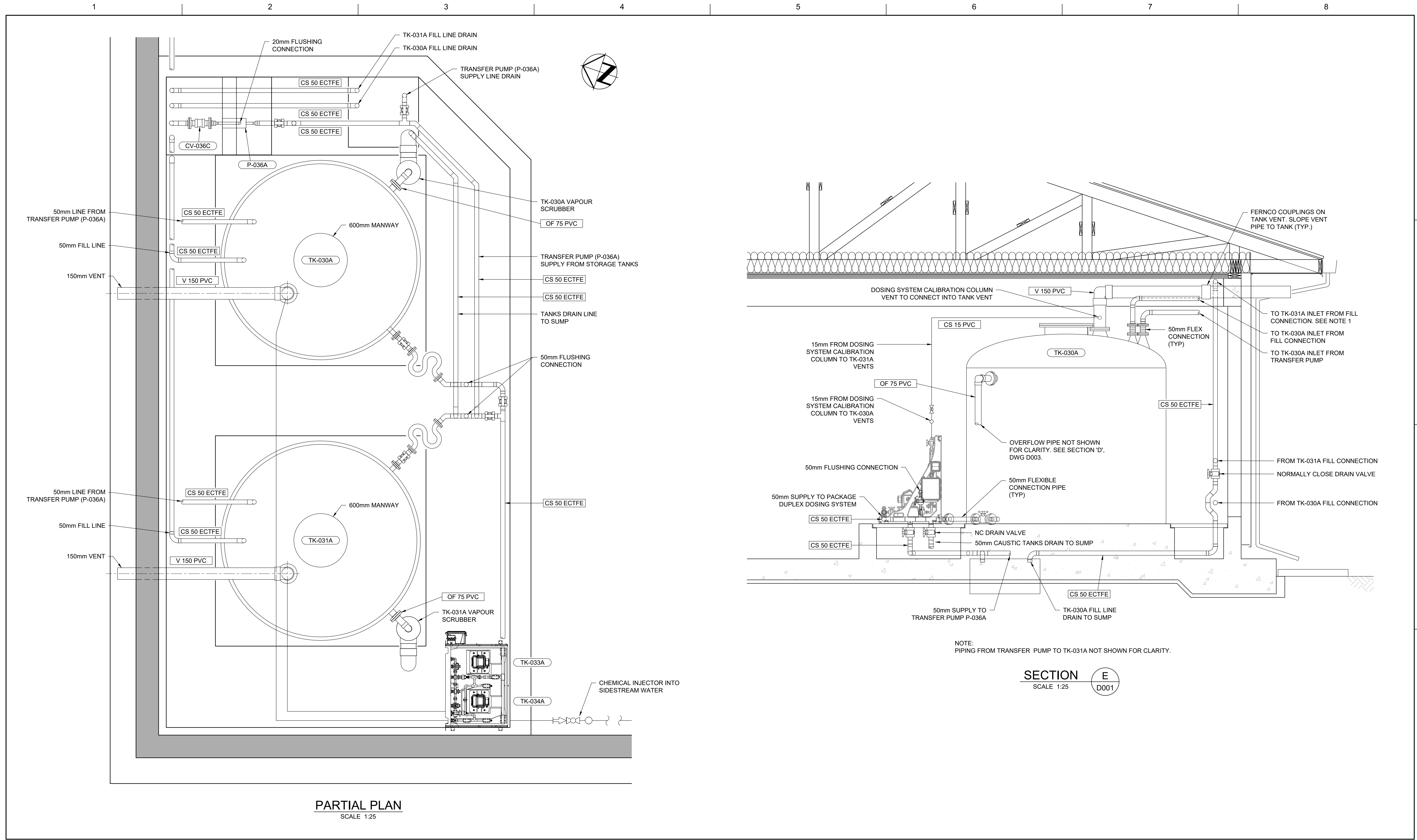
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

2023

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

PROCESS SECTIONS - SHEET 2

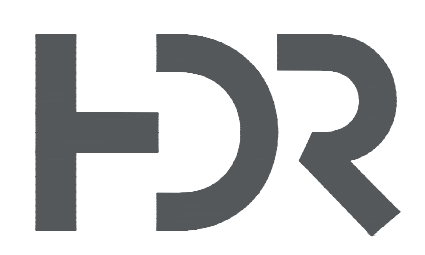
FILENAME	10299470-D01-201-D001.dwg	SHEET	D003
SCALE	AS NOTED		



PARTIAL PLAN
SCALE 1:25

SECTION E
SCALE 1:25
D001

NOTE:
PIPING FROM TRANSFER PUMP TO TK-031A NOT SHOWN FOR CLARITY.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

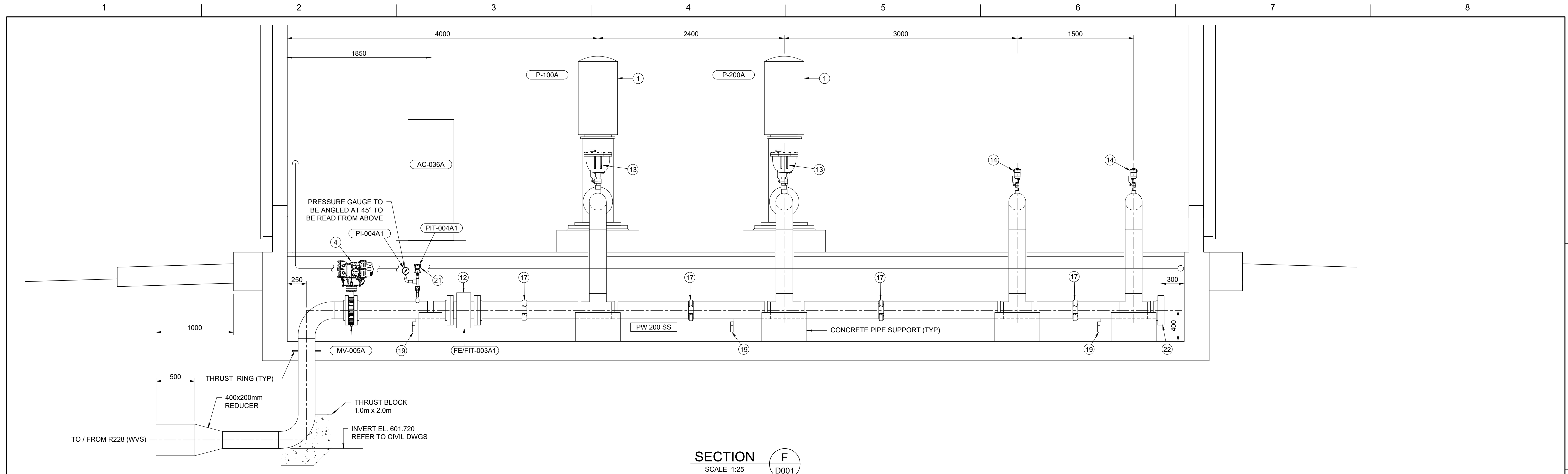


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

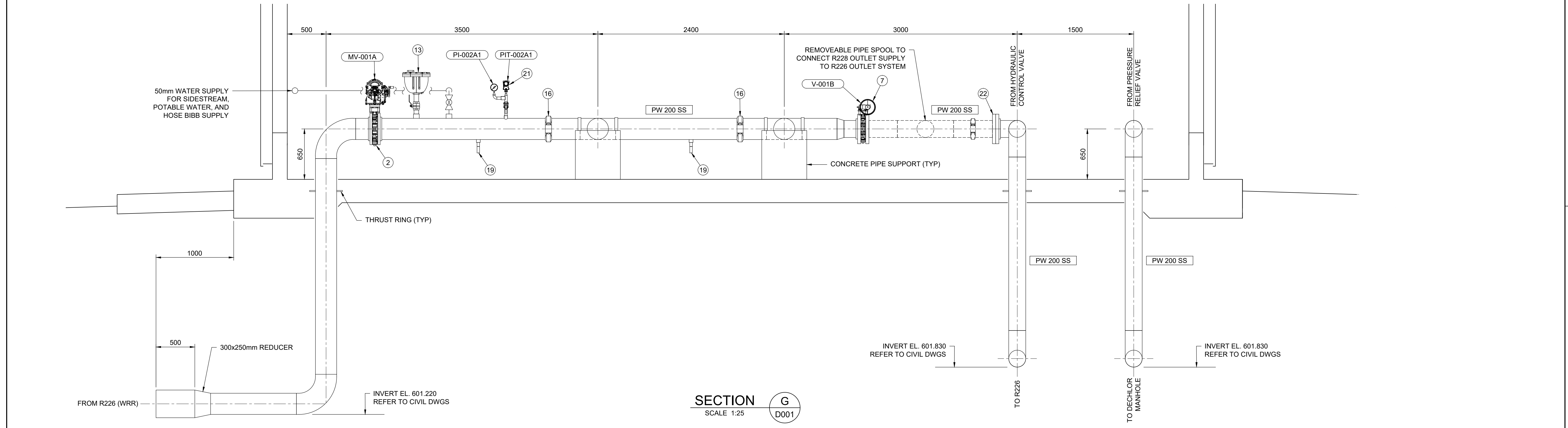
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

PROCESS SECTIONS - SHEET 3

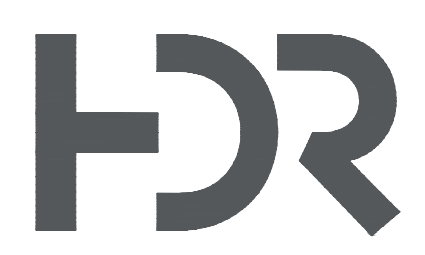
FILENAME	10299470-D01-201-D001.dwg	SHEET	D004
SCALE	AS NOTED		



SECTION F
SCALE 1:25
D001



SECTION G
SCALE 1:25
D001



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

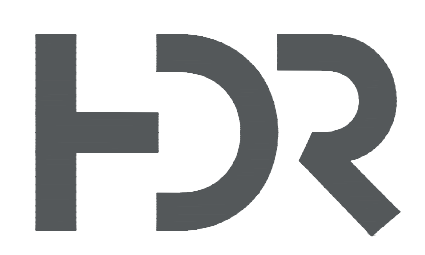
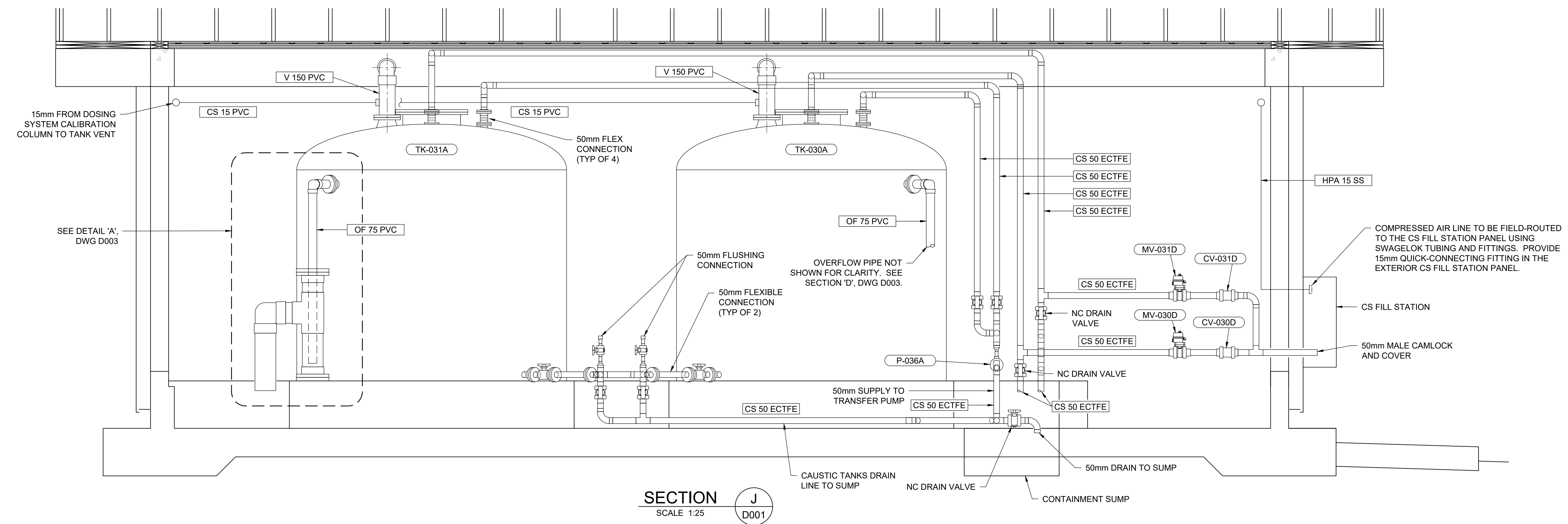
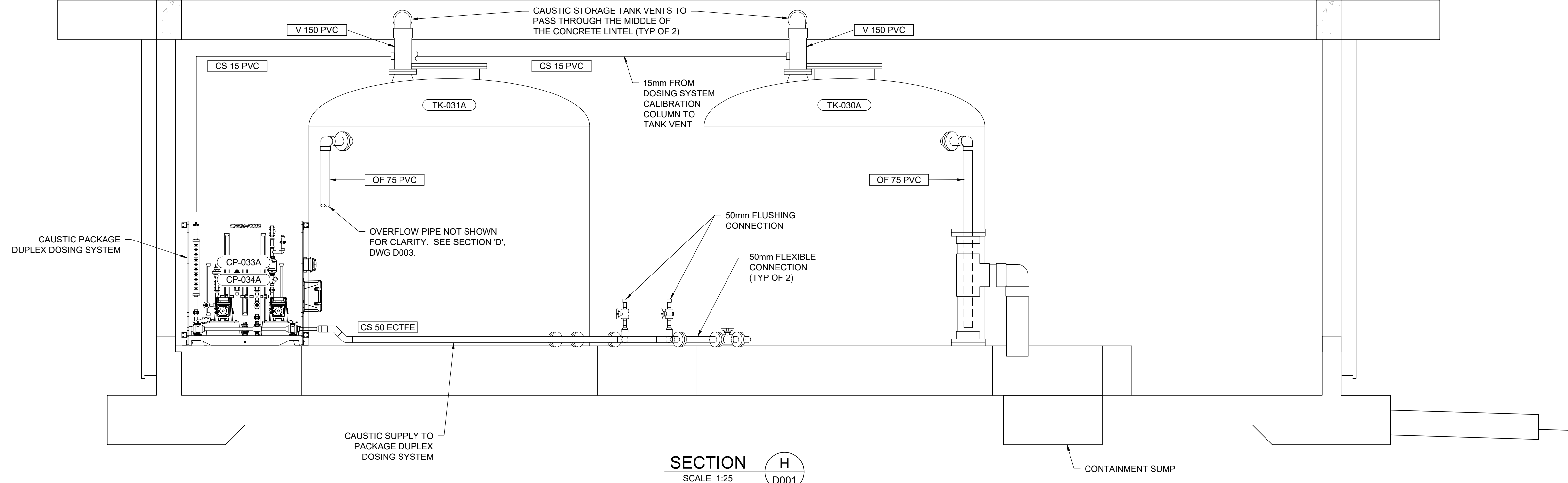


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

PROCESS SECTIONS - SHEET 4

FILENAME	10299470-D01-201-D001.dwg	SHEET	D005
SCALE	AS NOTED		



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

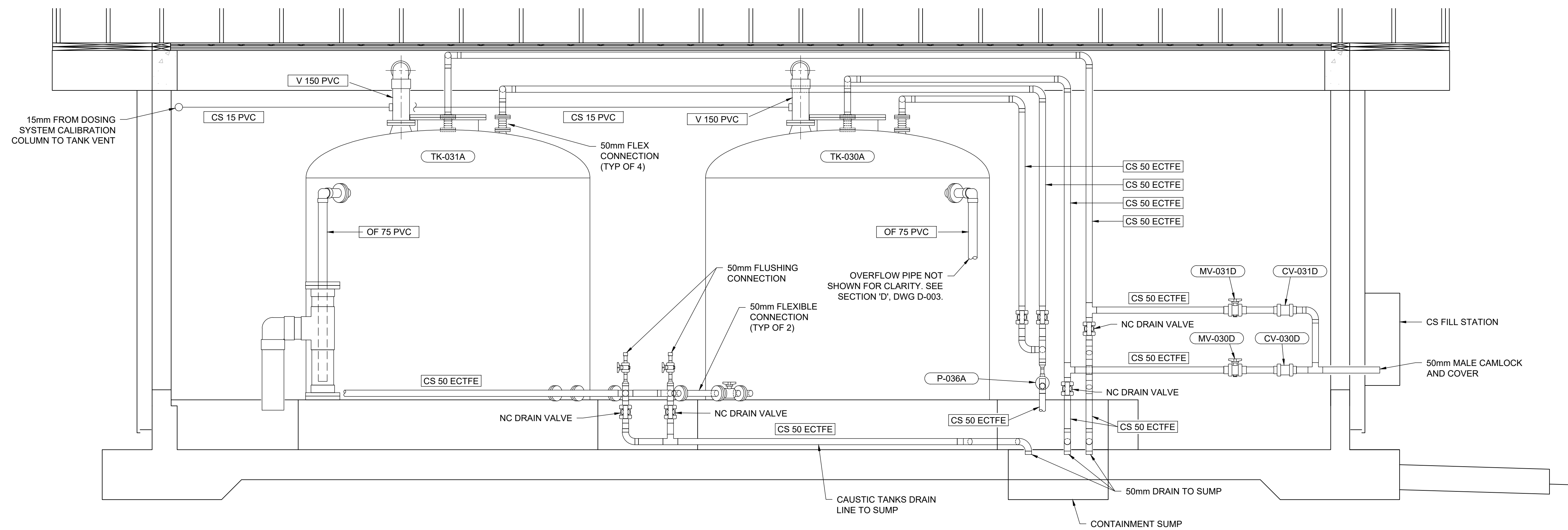
ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

PROCESS SECTIONS - SHEET 5



SECTION K
SCALE 1:25



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

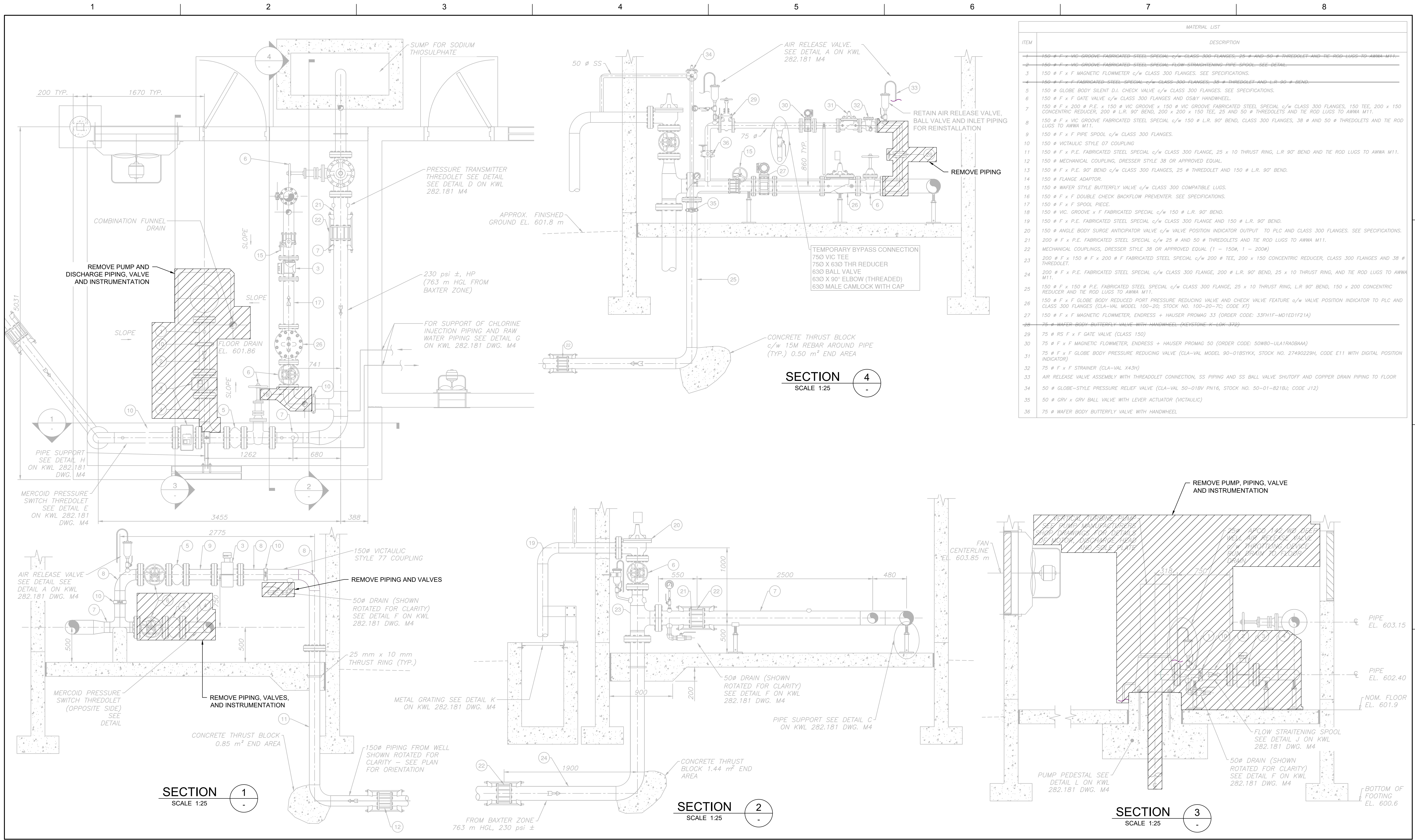
PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PROCESS SECTIONS - SHEET 6



ITEM	DESCRIPTION
1	150 # F x VIC GROOVE FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGES, 25 # AND 50 # THREDOLET AND TIE ROD LUGS TO AWMA M11.
2	150 # F x VIC GROOVE FABRICATED STEEL SPECIAL FLOW STRAIGHTENING PIPE SPOOL. SEE DETAIL.
3	150 # F x F MAGNETIC FLOWMETER c/w CLASS 300 FLANGES. SEE SPECIFICATIONS.
4	150 # F x F FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGES, 38 # THREDOLET AND L.R. 90 # BEND.
5	150 # GLOBE BODY SILENT D.I. CHECK VALVE c/w CLASS 300 FLANGES. SEE SPECIFICATIONS.
6	150 # F x F GATE VALVE c/w CLASS 300 FLANGES AND OS&Y HANDWHEEL.
7	150 # F x 200 # P.E. x 150 # VIC GROOVE x 150 # VIC GROOVE FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGES, 150 TEE, 200 x 150 CONCENTRIC REDUCER, 200 # L.R. 90° BEND, 200 x 200 x 150 TEE, 25 AND 50 # THREDOLETS AND TIE ROD LUGS TO AWMA M11.
8	150 # F x VIC GROOVE FABRICATED STEEL SPECIAL c/w 150 # L.R. 90° BEND, CLASS 300 FLANGES, 38 # AND 50 # THREDOLETS AND TIE ROD LUGS TO AWMA M11.
9	150 # F x F PIPE SPOOL c/w CLASS 300 FLANGES.
10	150 # VICTAULIC STYLE 07 COUPLING
11	150 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 25 x 10 THRUST RING, L.R. 90° BEND AND TIE ROD LUGS TO AWMA M11.
12	150 # MECHANICAL COUPLING, DRESSER STYLE 38 OR APPROVED EQUAL.
13	150 # F x P.E. 90° BEND c/w CLASS 300 FLANGES, 25 # THREDOLET AND 150 # L.R. 90° BEND.
14	150 # FLANGE ADAPTOR.
15	150 # WAFER STYLE BUTTERFLY VALVE c/w CLASS 300 COMPATIBLE LUGS.
16	150 # F x F DOUBLE CHECK BACKFLOW PREVENTER. SEE SPECIFICATIONS.
17	150 # F x F SPOOL PIECE.
18	150 # VIC. GROOVE x F FABRICATED SPECIAL c/w 150 # L.R. 90° BEND.
19	150 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE AND 150 # L.R. 90° BEND.
20	150 # ANGLE BODY SURGE ANTICIPATOR VALVE c/w VALVE POSITION INDICATOR OUTPUT TO PLC AND CLASS 300 FLANGES. SEE SPECIFICATIONS.
21	200 # F x P.E. FABRICATED STEEL SPECIAL c/w 25 # AND 50 # THREDOLETS AND TIE ROD LUGS TO AWMA M11.
22	MECHANICAL COUPLINGS, DRESSER STYLE 38 OR APPROVED EQUAL (1 - 150#, 1 - 200#)
23	200 # F x 150 # F x 200 # F FABRICATED STEEL SPECIAL c/w 200 # TEE, 200 x 150 CONCENTRIC REDUCER, CLASS 300 FLANGES AND 38 # THREDOLET.
24	200 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 200 # L.R. 90° BEND, 25 x 10 THRUST RING, AND TIE ROD LUGS TO AWMA M11.
25	150 # F x 150 # P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 25 x 10 THRUST RING, L.R. 90° BEND, 150 x 200 CONCENTRIC REDUCER AND TIE ROD LUGS TO AWMA M11.
26	150 # F x F GLOBE BODY REDUCED PORT PRESSURE REDUCING VALVE AND CHECK VALVE FEATURE c/w VALVE POSITION INDICATOR TO PLC AND CLASS 300 FLANGES (CLA-VAL MODEL 100-20-7C; STOCK NO. 100-20-7C; CODE XT)
27	150 # F x F MAGNETIC FLOWMETER, ENDRESS + HAUSER PROMAG 33 (ORDER CODE: 33FH1F-MD1ED1F21A)
28	75 # WAFER BODY BUTTERFLY VALVE WITH HANDWHEEL (KEYSTONE K-LOK 372)
29	75 # RS F x F GATE VALVE (CLASS 150)
30	75 # F x F MAGNETIC FLOWMETER, ENDRESS + HAUSER PROMAG 50 (ORDER CODE: 50WB0-UL1RABAAA)
31	75 # F x F GLOBE BODY PRESSURE REDUCING VALVE (CLA-VAL MODEL 90-01BSYX, STOCK NO. 27490229H, CODE E11 WITH DIGITAL POSITION INDICATOR)
32	75 # F x F STRAINER (CLA-VAL X43H)
33	AIR RELEASE VALVE ASSEMBLY WITH THREDOLET CONNECTION, SS PIPING AND SS BALL VALVE SHUTOFF AND COPPER DRAIN PIPING TO FLOOR
34	50 # GLOBE-STYLE PRESSURE RELIEF VALVE (CLA-VAL 50-01BV N16, STOCK NO. 50-01-821B; CODE J12)
35	50 # GRV x GRV BALL VALVE WITH LEVER ACTUATOR (VICTAULIC)
36	75 # WAFER BODY BUTTERFLY VALVE WITH HANDWHEEL.

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



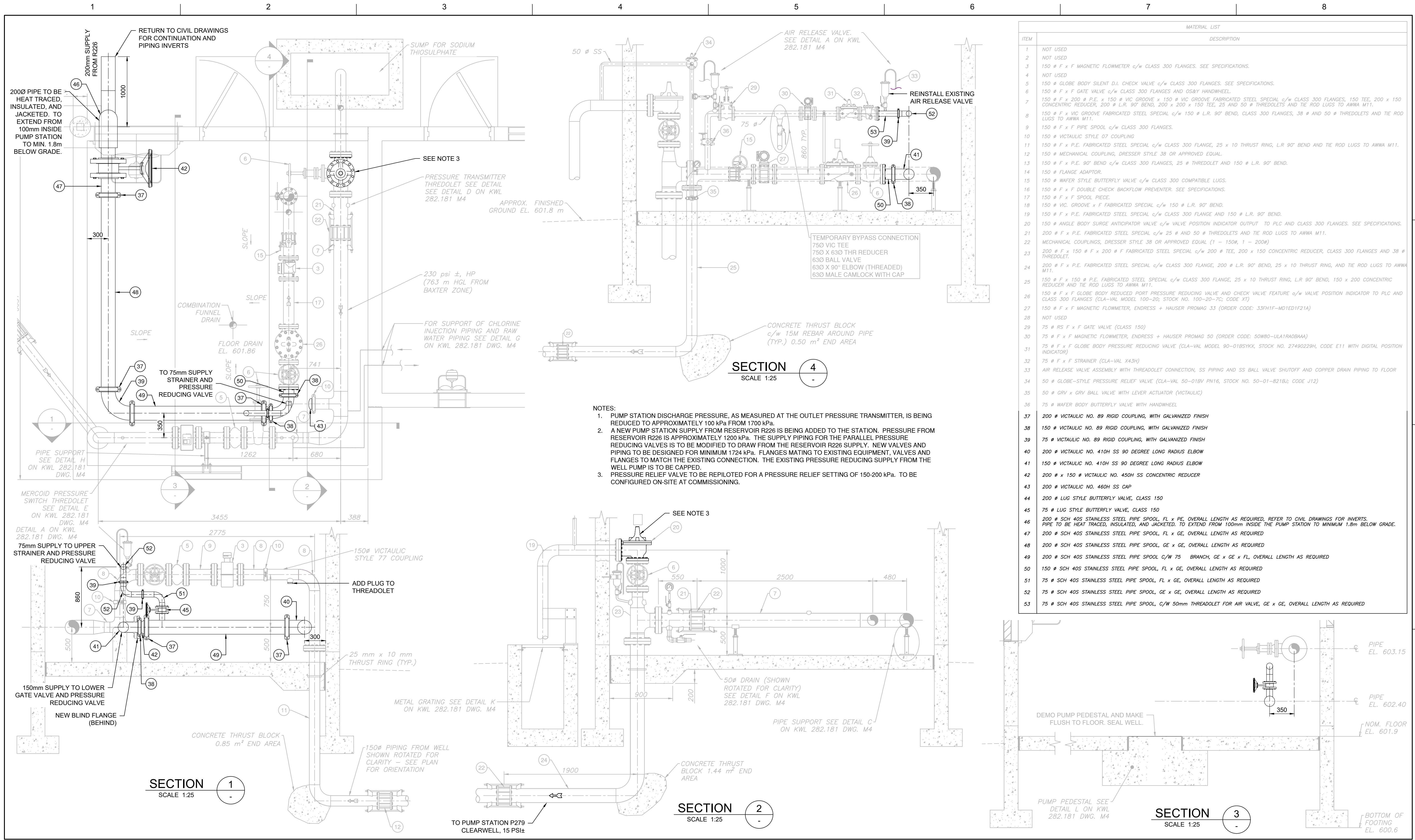
SOUTH WHISTLER WATER SUPPLY PHASE 2

W212 - PUMP STATION MODIFICATIONS

PUMP AND VALVE STATION PLAN AND SECTION REMOVALS

FILENAME	10299470-D01-201-D008.dwg	SHEET
SCALE	AS NOTED	D008

2023



ITEM	DESCRIPTION
1	NOT USED
2	NOT USED
3	150 # F x F MAGNETIC FLOWMETER c/w CLASS 300 FLANGES. SEE SPECIFICATIONS.
4	NOT USED
5	150 # GLOBE BODY SILENT D.I. CHECK VALVE c/w CLASS 300 FLANGES. SEE SPECIFICATIONS.
6	150 # F x F GATE VALVE c/w CLASS 300 FLANGES AND OS&Y HANDWHEEL.
7	150 # F x 200 # P.E. x 150 # VIC GROOVE x 150 # VIC GROOVE FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGES, 150 TEE, 200 x 150 CONCENTRIC REDUCER, 200 # L.R. 90° BEND, 200 x 200 x 150 TEE, 25 AND 50 # THREDOLETS AND TIE ROD LUGS TO AWWA M11.
8	150 # F x VIC GROOVE FABRICATED STEEL SPECIAL c/w 150 # L.R. 90° BEND, CLASS 300 FLANGES, 38 # AND 50 # THREDOLETS AND TIE ROD LUGS TO AWWA M11.
9	150 # F x F PIPE SPOOL c/w CLASS 300 FLANGES.
10	150 # VICTAULIC STYLE 07 COUPLING
11	150 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 25 x 10 THRUST RING, L.R. 90° BEND AND TIE ROD LUGS TO AWWA M11.
12	150 # MECHANICAL COUPLING, DRESSER STYLE 38 OR APPROVED EQUAL.
13	150 # F x P.E. 90° BEND c/w CLASS 300 FLANGES, 25 # THREDOLET AND 150 # L.R. 90° BEND.
14	150 # FLANGE ADAPTOR.
15	150 # WAFER STYLE BUTTERFLY VALVE c/w CLASS 300 COMPATIBLE LUGS.
16	150 # F x F DOUBLE CHECK BACKFLOW PREVENTER. SEE SPECIFICATIONS.
17	150 # F x F SPOOL PIECE.
18	150 # VIC. GROOVE x F FABRICATED SPECIAL c/w 150 # L.R. 90° BEND.
19	150 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE AND 150 # L.R. 90° BEND.
20	150 # ANGLE BODY SURGE ANTICIPATOR VALVE c/w VALVE POSITION INDICATOR OUTPUT TO PLC AND CLASS 300 FLANGES. SEE SPECIFICATIONS.
21	200 # F x P.E. FABRICATED STEEL SPECIAL c/w 25 # AND 50 # THREDOLETS AND TIE ROD LUGS TO AWWA M11.
22	MECHANICAL COUPLINGS, DRESSER STYLE 38 OR APPROVED EQUAL (1 - 150#, 1 - 200#)
23	200 # F x 150 # F x 200 # F FABRICATED STEEL SPECIAL c/w 200 # TEE, 200 x 150 CONCENTRIC REDUCER, CLASS 300 FLANGES AND 38 # THREDOLET.
24	200 # F x P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 200 # L.R. 90° BEND, 25 x 10 THRUST RING, AND TIE ROD LUGS TO AWWA M11.
25	150 # F x 150 # P.E. FABRICATED STEEL SPECIAL c/w CLASS 300 FLANGE, 25 x 10 THRUST RING, L.R. 90° BEND, 150 x 200 CONCENTRIC REDUCER AND TIE ROD LUGS TO AWWA M11.
26	150 # F x F GLOBE BODY REDUCED PORT PRESSURE REDUCING VALVE AND CHECK VALVE FEATURE c/w VALVE POSITION INDICATOR TO PLC AND CLASS 300 FLANGES (CLA-VAL MODEL 100-20; STOCK NO. 100-20-7C; CODE XT)
27	150 # F x F MAGNETIC FLOWMETER, ENDRESS + HAUSER PROMAG 33 (ORDER CODE: 33FH1F-MD1ED1F21A)
28	NOT USED
29	75 # RS F x F GATE VALVE (CLASS 150)
30	75 # F x F MAGNETIC FLOWMETER, ENDRESS + HAUSER PROMAG 50 (ORDER CODE: 50WB0-UL1RA0BA00A)
31	75 # F x F GLOBE BODY PRESSURE REDUCING VALVE (CLA-VAL MODEL 90-01BSYX, STOCK NO. 27490229H, CODE E11 WITH DIGITAL POSITION INDICATOR)
32	75 # F x F STRAINER (CLA-VAL X43H)
33	AIR RELEASE VALVE ASSEMBLY WITH THREDOLET CONNECTION, SS PIPING AND SS BALL VALVE SHUTOFF AND COPPER DRAIN PIPING TO FLOOR
34	50 # GLOBE-STYLE PRESSURE RELIEF VALVE (CLA-VAL 50-01BV FN16, STOCK NO. 50-01-821B; CODE J12)
35	50 # GRV x GRV BALL VALVE WITH LEVER ACTUATOR (VICTAULIC)
36	75 # WAFER BODY BUTTERFLY VALVE WITH HANDWHEEL
37	200 # VICTAULIC NO. 89 RIGID COUPLING, WITH GALVANIZED FINISH
38	150 # VICTAULIC NO. 89 RIGID COUPLING, WITH GALVANIZED FINISH
39	75 # VICTAULIC NO. 89 RIGID COUPLING, WITH GALVANIZED FINISH
40	200 # VICTAULIC NO. 410H SS 90 DEGREE LONG RADIUS ELBOW
41	150 # VICTAULIC NO. 410H SS 90 DEGREE LONG RADIUS ELBOW
42	200 # x 150 # VICTAULIC NO. 450H SS CONCENTRIC REDUCER
43	200 # VICTAULIC NO. 460H SS CAP
44	200 # LUG STYLE BUTTERFLY VALVE, CLASS 150
45	75 # LUG STYLE BUTTERFLY VALVE, CLASS 150
46	200 # SCH 40S STAINLESS STEEL PIPE SPOOL, FL x PE, OVERALL LENGTH AS REQUIRED, REFER TO CIVIL DRAWINGS FOR INVERTS. PIPE TO BE HEAT TRACED, INSULATED, AND JACKETED. TO EXTEND FROM 100mm INSIDE THE PUMP STATION TO MINIMUM 1.8m BELOW GRADE.
47	200 # SCH 40S STAINLESS STEEL PIPE SPOOL, FL x GE, OVERALL LENGTH AS REQUIRED
48	200 # SCH 40S STAINLESS STEEL PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED
49	200 # SCH 40S STAINLESS STEEL PIPE SPOOL C/W 75 BRANCH, GE x GE x FL, OVERALL LENGTH AS REQUIRED
50	150 # SCH 40S STAINLESS STEEL PIPE SPOOL, FL x GE, OVERALL LENGTH AS REQUIRED
51	75 # SCH 40S STAINLESS STEEL PIPE SPOOL, FL x GE, OVERALL LENGTH AS REQUIRED
52	75 # SCH 40S STAINLESS STEEL PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED
53	75 # SCH 40S STAINLESS STEEL PIPE SPOOL, C/W 50mm THREDOLET FOR AIR VALVE, GE x GE, OVERALL LENGTH AS REQUIRED

- NOTES:
- PUMP STATION DISCHARGE PRESSURE, AS MEASURED AT THE OUTLET PRESSURE TRANSMITTER, IS BEING REDUCED TO APPROXIMATELY 100 kPa FROM 1700 kPa.
 - A NEW PUMP STATION SUPPLY FROM RESERVOIR R226 IS BEING ADDED TO THE STATION. PRESSURE FROM RESERVOIR R226 IS APPROXIMATELY 1200 kPa. THE SUPPLY PIPING FOR THE PARALLEL PRESSURE REDUCING VALVES IS TO BE MODIFIED TO DRAW FROM THE RESERVOIR R226 SUPPLY. NEW VALVES AND PIPING TO BE DESIGNED FOR MINIMUM 1724 kPa. FLANGES MATING TO EXISTING EQUIPMENT, VALVES AND FLANGES TO MATCH THE EXISTING CONNECTION. THE EXISTING PRESSURE REDUCING SUPPLY FROM THE WELL PUMP IS TO BE CAPPED.
 - PRESSURE RELIEF VALVE TO BE REPILOTTED FOR A PRESSURE RELIEF SETTING OF 150-200 kPa. TO BE CONFIGURED ON-SITE AT COMMISSIONING.

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



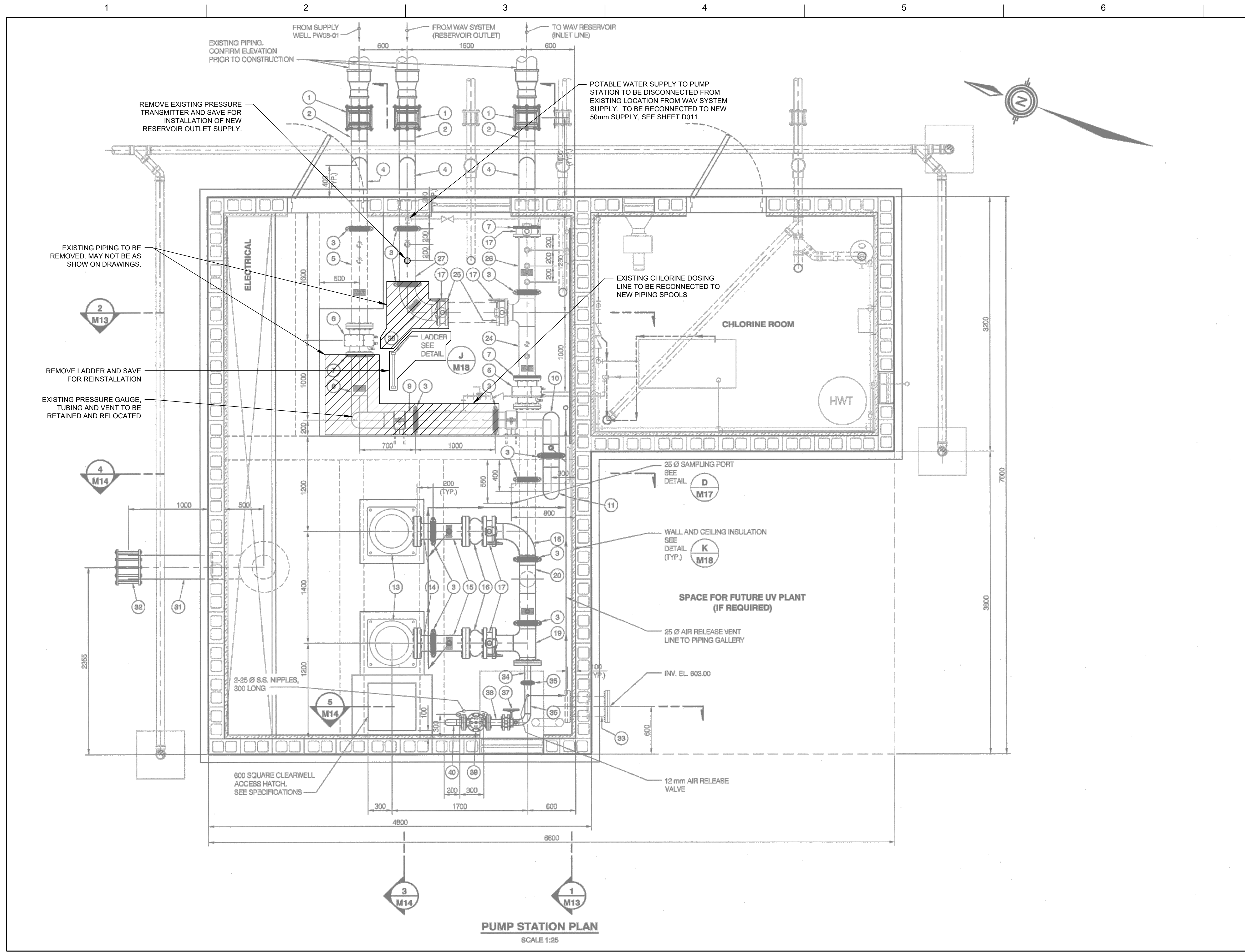
SOUTH WHISTLER WATER SUPPLY PHASE 2

W212 - PUMP STATION MODIFICATIONS

PUMP AND VALVE STATION PLAN AND SECTION

FILENAME	10299470-D01-201-D008.dwg	SHEET	D009
SCALE	AS NOTED		

2023



MATERIAL LIST		
ITEM	QTY.	DESCRIPTION
1.	3	200 Ø EBAA IRON 3800 SERIES RESTRAINED MECHANICAL COUPLING.
2.	3	200 Ø P.E. x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
3.	16	200 Ø VICTUALIC STYLE 07 RIGID COUPLING.
4.	3	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND AND LEAKAGE RING.
5.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS.
6.	2	200 Ø F x F FLOWMETER. SEE SPECIFICATIONS.
7.	3	200 Ø VICTUALIC STYLE 741 FLANGE ADAPTER.
8.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-200 Ø L.R. 90° BENDS AND 25 Ø THREDOLET.
9.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 3-25 Ø THREDOLETS AND PLUGS.
10.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-200 Ø L.R. 90° BENDS AND 25 Ø THREDOLET.
11.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
12.	1	200 Ø DIFFUSER FITTING.
13.	2	VERTICAL TURBINE PUMPING UNIT. SEE SPECIFICATIONS.
14.	2	200 Ø F x VIC STD. SCH. STEEL SPOOL PIECE c/w 200 Ø 300# FLANGE. LENGTH TO SUIT.
15.	2	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 25 Ø THREDOLET AND 200 Ø 300# FLANGE.
16.	2	200 Ø F x F GLOBE STYLE SILENT CHECK VALVE (300# FLANGES), SEE SPECIFICATIONS.
17.	5	200 Ø LUG STYLE BUTTERFLY VALVE (300# FLANGES), SEE SPECIFICATIONS.
18.	1	200 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø 300# FLANGE, 200 Ø L.R. 90° BEND AND 25 Ø THREDOLET.
19.	1	200 Ø F x F x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø 300# FLANGE, 200 Ø TEE AND 200 Ø BLIND FLANGE DRILLED AND TAPPED FOR 75 Ø THREADED PIPE.
20.	1	200 Ø VIC x VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø TEE.
21.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.
22.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
23.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.
24.	1	200 Ø VIC x F x VIC STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS, 200 Ø TEE AND 200 Ø W.N. FLANGE.
25.	2	200 Ø BLIND FLANGE.
26.	1	200 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 3-25 Ø THREDOLETS.
27.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS.
28.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND AND 200 Ø W.N. FLANGE.
29.	1	300 Ø P.E. x VIC STD. SCH. STEEL SPECIAL.
30.	1	300 Ø VICTUALIC STYLE 07 RIGID COUPLING.
31.	1	300 Ø F x P.E. STD. SCH. STEEL SPECIAL c/w 300 Ø L.R. 90° BEND AND 25 x 10 LEAKAGE RING.
32.	1	300 Ø STEEL TO DR35 PVC TRANSITION COUPLING.
33.	1	250 Ø F x F STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING AND 2-250 Ø BLIND FLANGES.
34.	1	75 Ø THD x VIC STD. SCH. STEEL SPECIAL.
35.	2	75 Ø VICTUALIC STYLE 07 RIGID COUPLING.
36.	1	75 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 75 Ø L.R. 90° BEND, 12 Ø THREDOLET AND 75 Ø S.O. FLANGE.
37.	1	75 Ø LUG STYLE BUTTERFLY VALVE. SEE SPECIFICATIONS.
38.	1	75 Ø F x F STD. SCH. STEEL SPOOL PIECE. LENGTH TO SUIT.
39.	1	75 Ø F x F SURGE ANTICIPATOR VALVE. SEE SPECIFICATIONS.
40.	1	75 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 75 Ø L.R. 90° BEND.
41.	1	75 Ø VIC x P.E. STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.

PUMP STATION PLAN
SCALE 1:25

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

0	2023-09-19	ISSUED FOR TENDER
ISSUE	DATE	DESCRIPTION

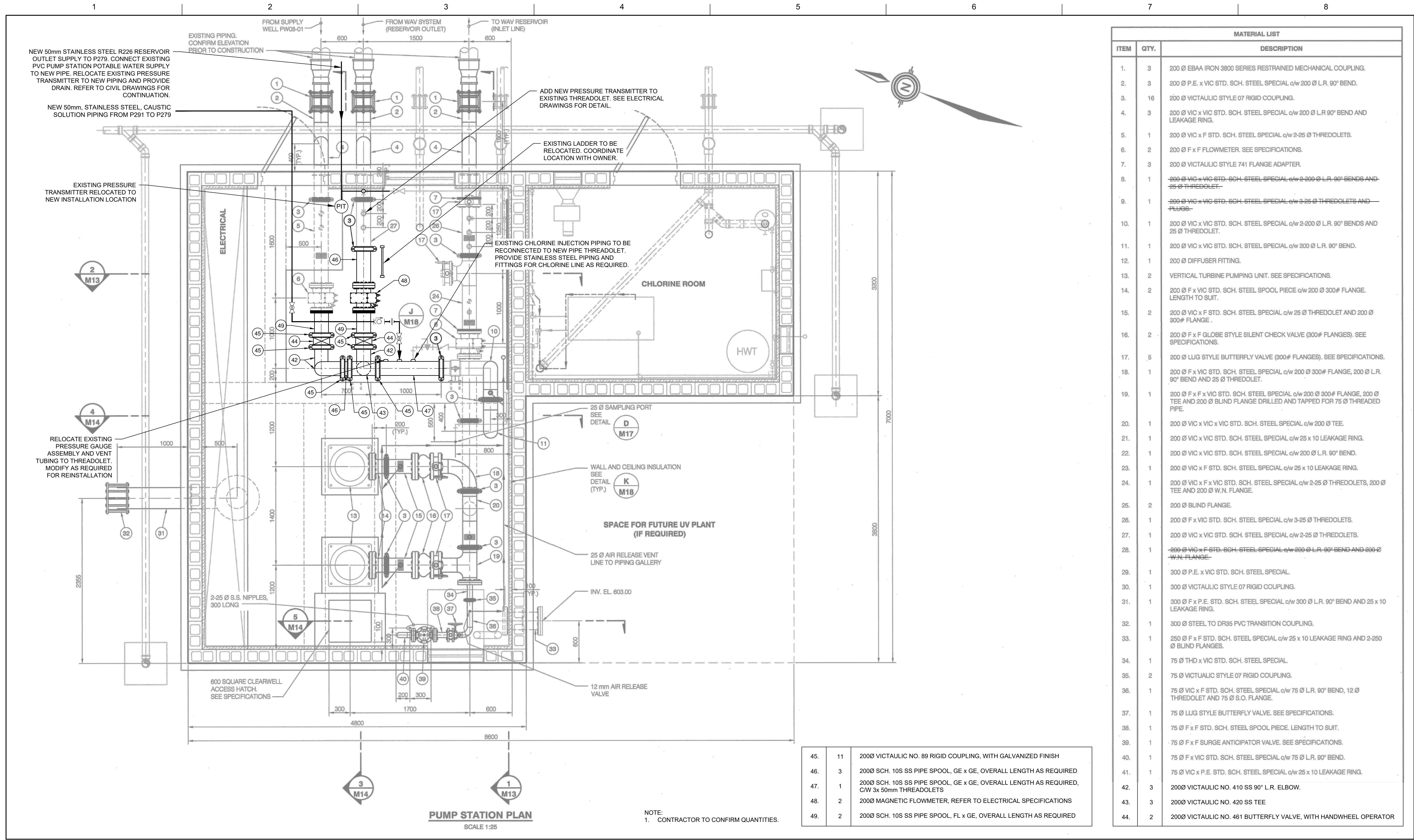
ORIGINAL SEALED EGBC #1001547



SOUTH WHISTLER WATER SUPPLY PHASE 2

P279 - PUMP STATION MODIFICATIONS
PIPING PLAN REMOVALS AND MATERIAL LIST

FILENAME	10299470-D01-201-D010.dwg	SHEET	D010
SCALE	AS NOTED		



MATERIAL LIST		
ITEM	QTY.	DESCRIPTION
1.	3	200 Ø EBAA IRON 3800 SERIES RESTRAINED MECHANICAL COUPLING.
2.	3	200 Ø P.E. x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
3.	16	200 Ø VICTAULIC STYLE 07 RIGID COUPLING.
4.	3	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND AND LEAKAGE RING.
5.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS.
6.	2	200 Ø F x F FLOWMETER. SEE SPECIFICATIONS.
7.	3	200 Ø VICTAULIC STYLE 741 FLANGE ADAPTER.
8.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-200 Ø L.R. 90° BENDS AND 25 Ø THREDOLET.
9.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 3-25 Ø THREDOLETS AND PLUGS.
10.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-200 Ø L.R. 90° BENDS AND 25 Ø THREDOLET.
11.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
12.	1	200 Ø DIFFUSER FITTING.
13.	2	VERTICAL TURBINE PUMPING UNIT. SEE SPECIFICATIONS.
14.	2	200 Ø F x VIC STD. SCH. STEEL SPOOL PIECE c/w 200 Ø 300# FLANGE. LENGTH TO SUIT.
15.	2	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 25 Ø THREDOLET AND 200 Ø 300# FLANGE.
16.	2	200 Ø F x F GLOBE STYLE SILENT CHECK VALVE (300# FLANGES). SEE SPECIFICATIONS.
17.	5	200 Ø LUG STYLE BUTTERFLY VALVE (300# FLANGES). SEE SPECIFICATIONS.
18.	1	200 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø 300# FLANGE, 200 Ø L.R. 90° BEND AND 25 Ø THREDOLET.
19.	1	200 Ø F x F VIC STD. SCH. STEEL SPECIAL c/w 200 Ø 300# FLANGE, 200 Ø TEE AND 200 Ø BLIND FLANGE DRILLED AND TAPPED FOR 75 Ø THREADED PIPE.
20.	1	200 Ø VIC x VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø TEE.
21.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.
22.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND.
23.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.
24.	1	200 Ø VIC x F x VIC STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS, 200 Ø TEE AND 200 Ø W.N. FLANGE.
25.	2	200 Ø BLIND FLANGE.
26.	1	200 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 3-25 Ø THREDOLETS.
27.	1	200 Ø VIC x VIC STD. SCH. STEEL SPECIAL c/w 2-25 Ø THREDOLETS.
28.	1	200 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 200 Ø L.R. 90° BEND AND 200 Ø W.N. FLANGE.
29.	1	300 Ø P.E. x VIC STD. SCH. STEEL SPECIAL.
30.	1	300 Ø VICTAULIC STYLE 07 RIGID COUPLING.
31.	1	300 Ø F x P.E. STD. SCH. STEEL SPECIAL c/w 300 Ø L.R. 90° BEND AND 25 x 10 LEAKAGE RING.
32.	1	300 Ø STEEL TO DR35 PVC TRANSITION COUPLING.
33.	1	250 Ø F x F STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING AND 2-250 Ø BLIND FLANGES.
34.	1	75 Ø THD x VIC STD. SCH. STEEL SPECIAL.
35.	2	75 Ø VICTAULIC STYLE 07 RIGID COUPLING.
36.	1	75 Ø VIC x F STD. SCH. STEEL SPECIAL c/w 75 Ø L.R. 90° BEND, 12 Ø THREDOLET AND 75 Ø S.O. FLANGE.
37.	1	75 Ø LUG STYLE BUTTERFLY VALVE. SEE SPECIFICATIONS.
38.	1	75 Ø F x F STD. SCH. STEEL SPOOL PIECE. LENGTH TO SUIT.
39.	1	75 Ø F x F SURGE ANTICIPATOR VALVE. SEE SPECIFICATIONS.
40.	1	75 Ø F x VIC STD. SCH. STEEL SPECIAL c/w 75 Ø L.R. 90° BEND.
41.	1	75 Ø VIC x P.E. STD. SCH. STEEL SPECIAL c/w 25 x 10 LEAKAGE RING.
42.	3	200Ø VICTAULIC NO. 410 SS 90° L.R. ELBOW.
43.	3	200Ø VICTAULIC NO. 420 SS TEE
44.	2	200Ø VICTAULIC NO. 461 BUTTERFLY VALVE, WITH HANDWHEEL OPERATOR
45.	11	200Ø VICTAULIC NO. 89 RIGID COUPLING, WITH GALVANIZED FINISH
46.	3	200Ø SCH. 10S SS PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED
47.	1	200Ø SCH. 10S SS PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED, CW 3x 50mm THREDOLETS
48.	2	200Ø MAGNETIC FLOWMETER, REFER TO ELECTRICAL SPECIFICATIONS
49.	2	200Ø SCH. 10S SS PIPE SPOOL, FL x GE, OVERALL LENGTH AS REQUIRED

45.	11	200Ø VICTAULIC NO. 89 RIGID COUPLING, WITH GALVANIZED FINISH
46.	3	200Ø SCH. 10S SS PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED
47.	1	200Ø SCH. 10S SS PIPE SPOOL, GE x GE, OVERALL LENGTH AS REQUIRED, CW 3x 50mm THREDOLETS
48.	2	200Ø MAGNETIC FLOWMETER, REFER TO ELECTRICAL SPECIFICATIONS
49.	2	200Ø SCH. 10S SS PIPE SPOOL, FL x GE, OVERALL LENGTH AS REQUIRED

NOTE:
1. CONTRACTOR TO CONFIRM QUANTITIES.

PUMP STATION PLAN
SCALE 1:25

ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ORIGINAL SEALED EGBC #1001547

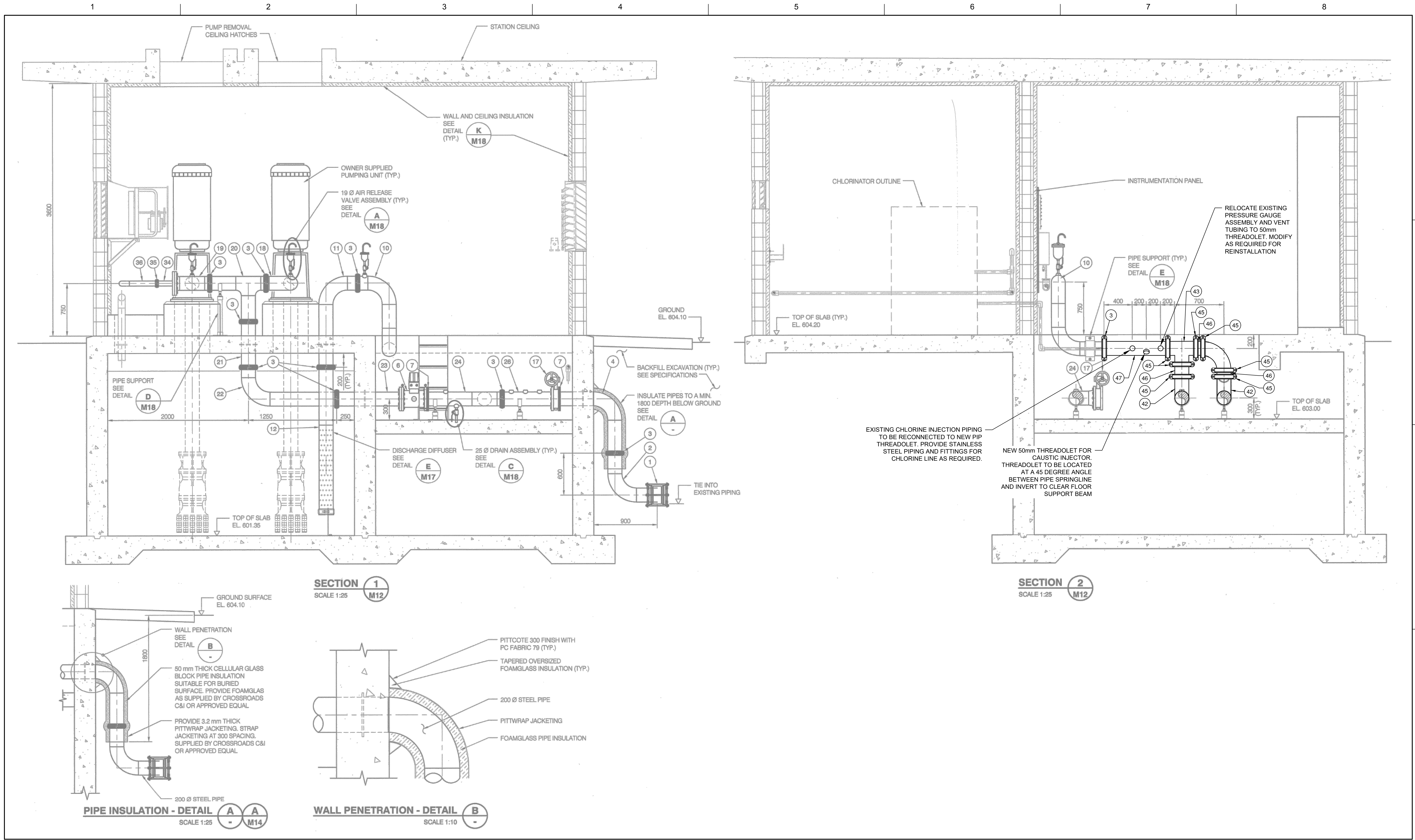


SOUTH WHISTLER WATER SUPPLY PHASE 2

P279 - PUMP STATION MODIFICATIONS

PIPING PLAN AND MATERIAL LIST

FILENAME	10299470-D01-201-D010.dwg	SHEET
SCALE	AS NOTED	D011



RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

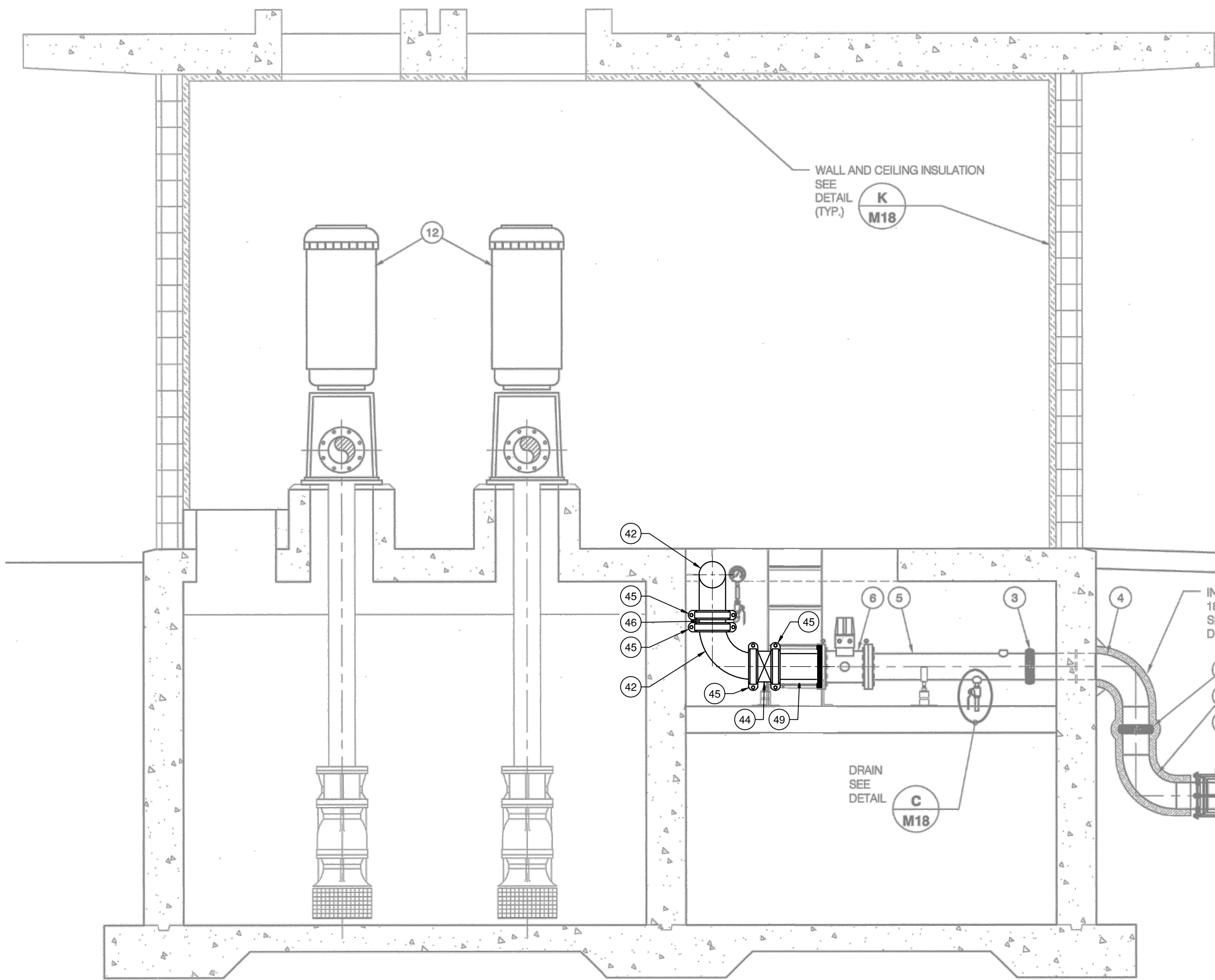
ORIGINAL SEALED EGBC #1001547



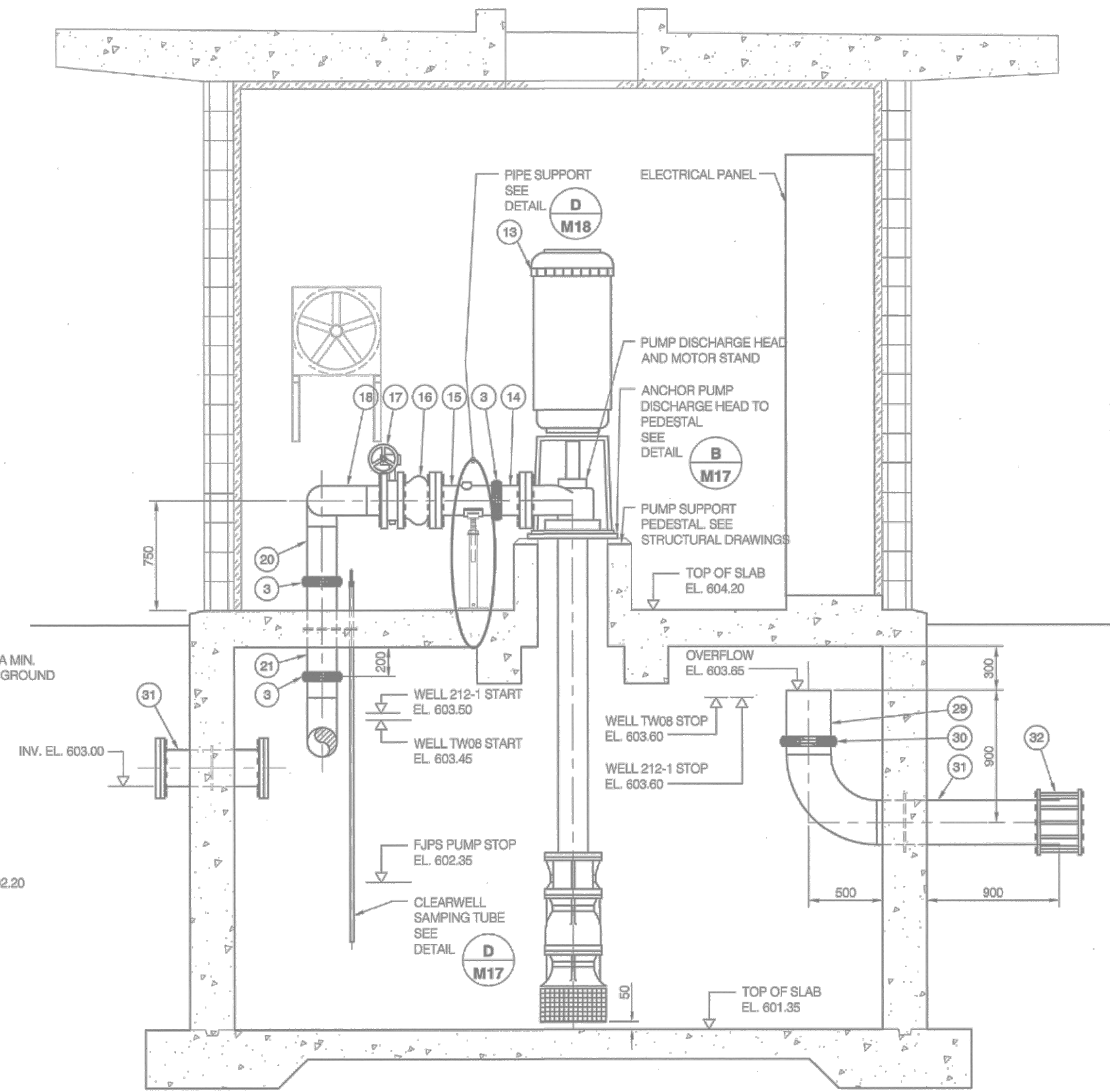
SOUTH WHISTLER WATER SUPPLY PHASE 2

P279 - PUMP STATION MODIFICATIONS
PIPING SECTIONS - SHEET 1 OF 2

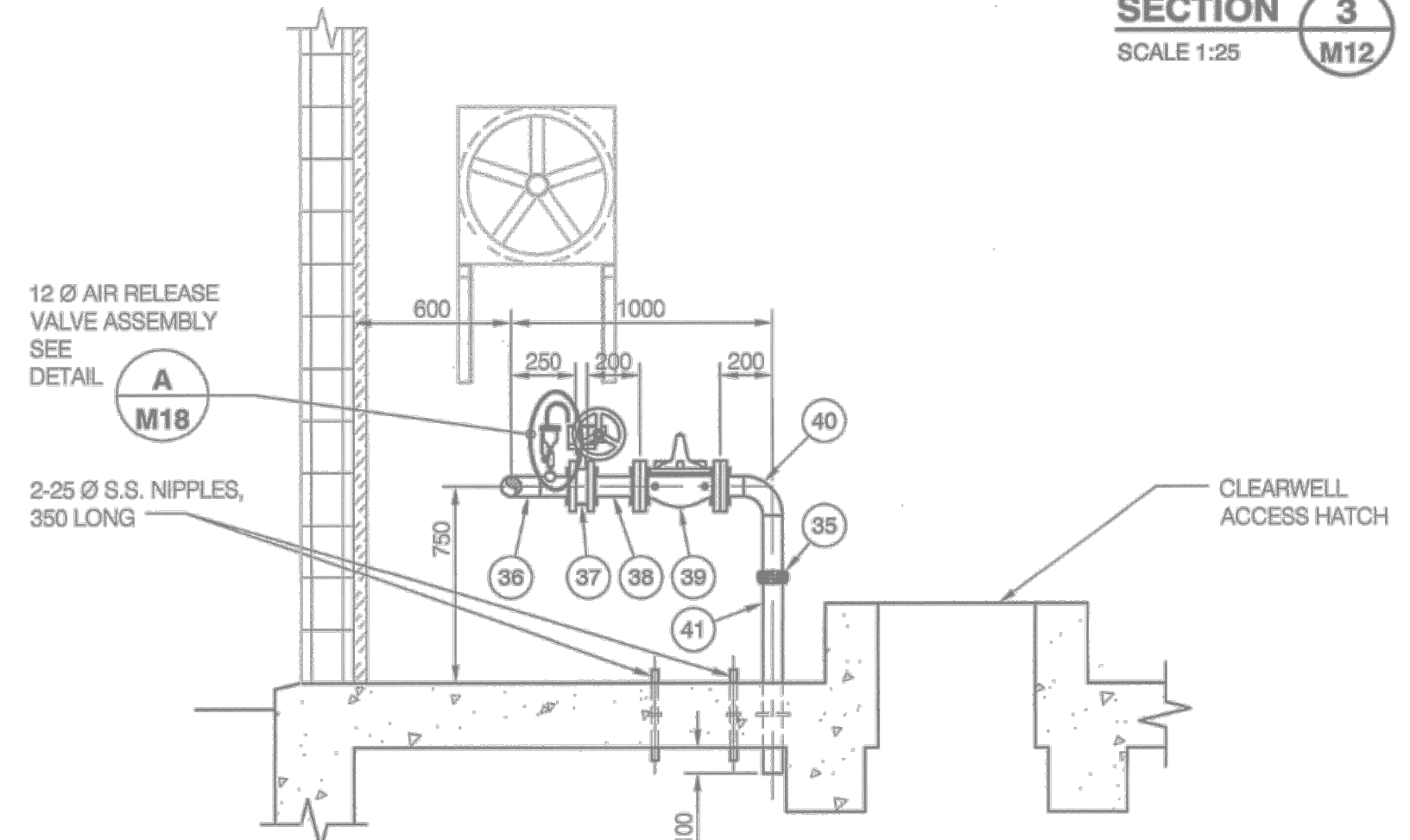
FILENAME | 10299470-D01-201-D010.dwg | SHEET
SCALE | AS NOTED | D012



SECTION 3
SCALE 1:25
M12



SECTION 4
SCALE 1:25
M12



SECTION 5
SCALE 1:25
M12

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



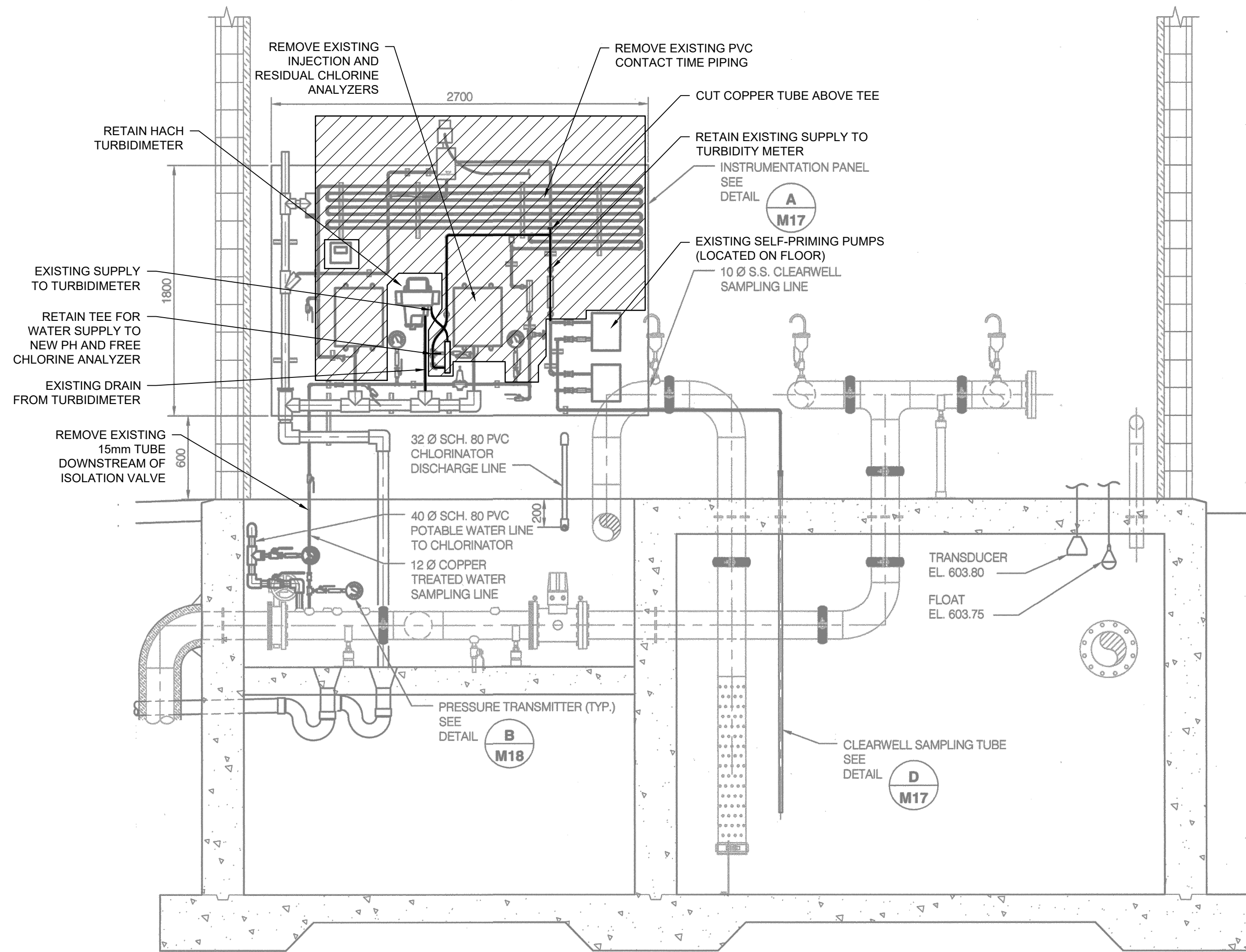
SOUTH WHISTLER WATER SUPPLY PHASE 2

2023

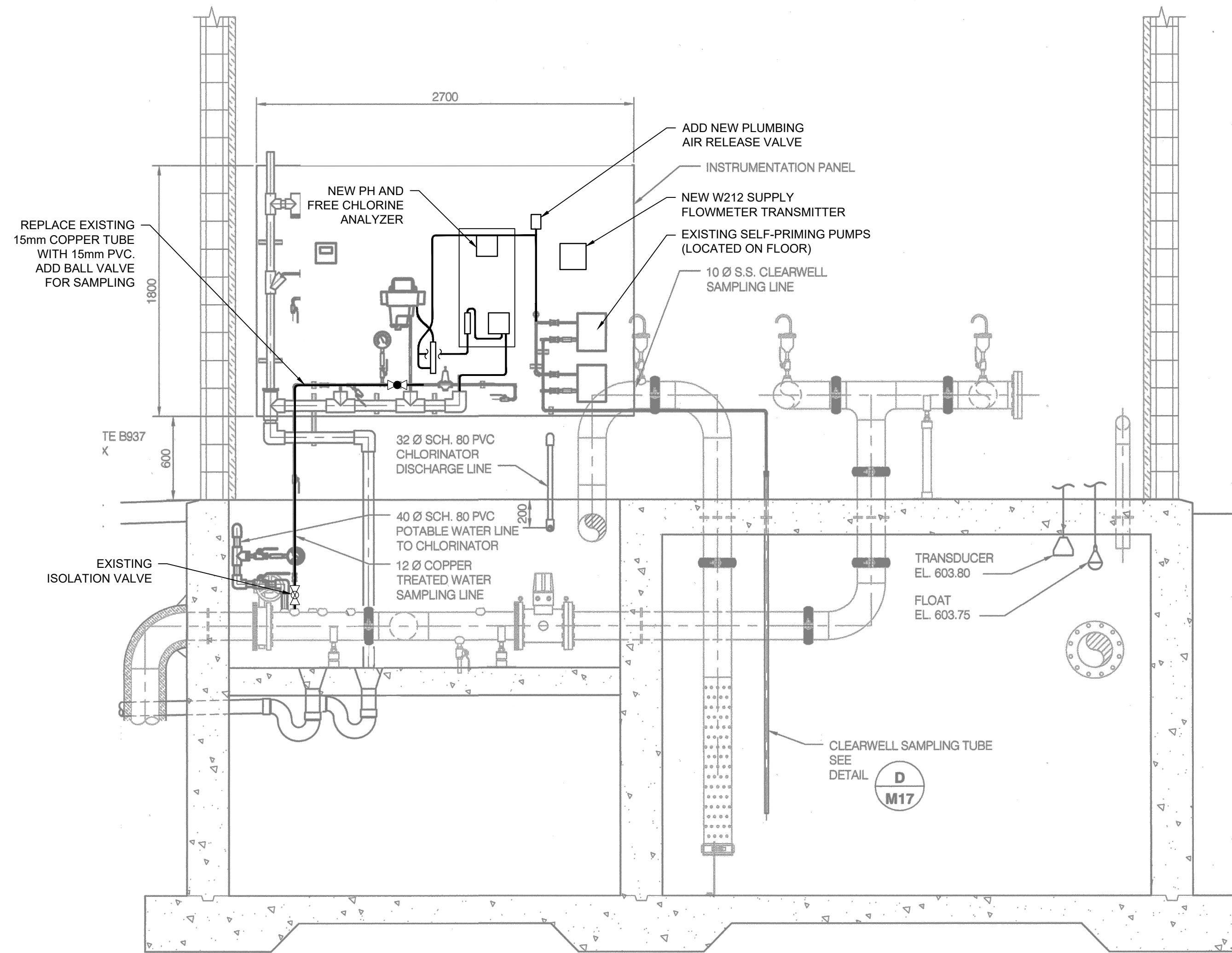
P279 - PUMP STATION MODIFICATIONS

PIPING SECTIONS - SHEET 2 OF 2

FILENAME	10299470-D01-201-0010.dwg	SHEET
SCALE	AS NOTED	D013



DETAIL - REMOVALS 1
SCALE 1:25



DETAIL - NEW ANALYZER 2
SCALE 1:25

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



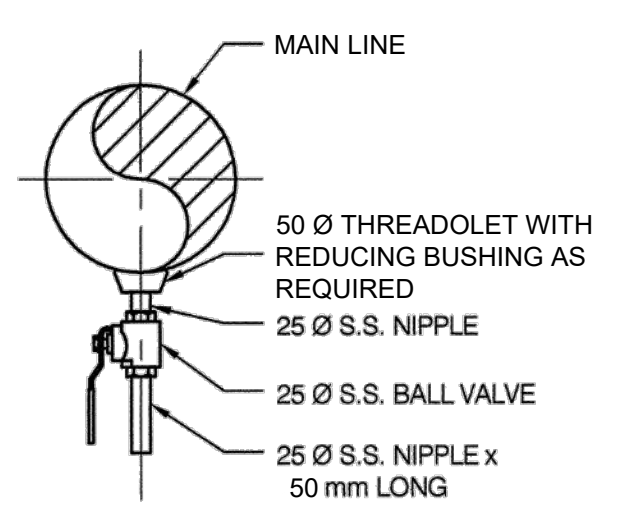
SOUTH WHISTLER WATER SUPPLY PHASE 2

2023

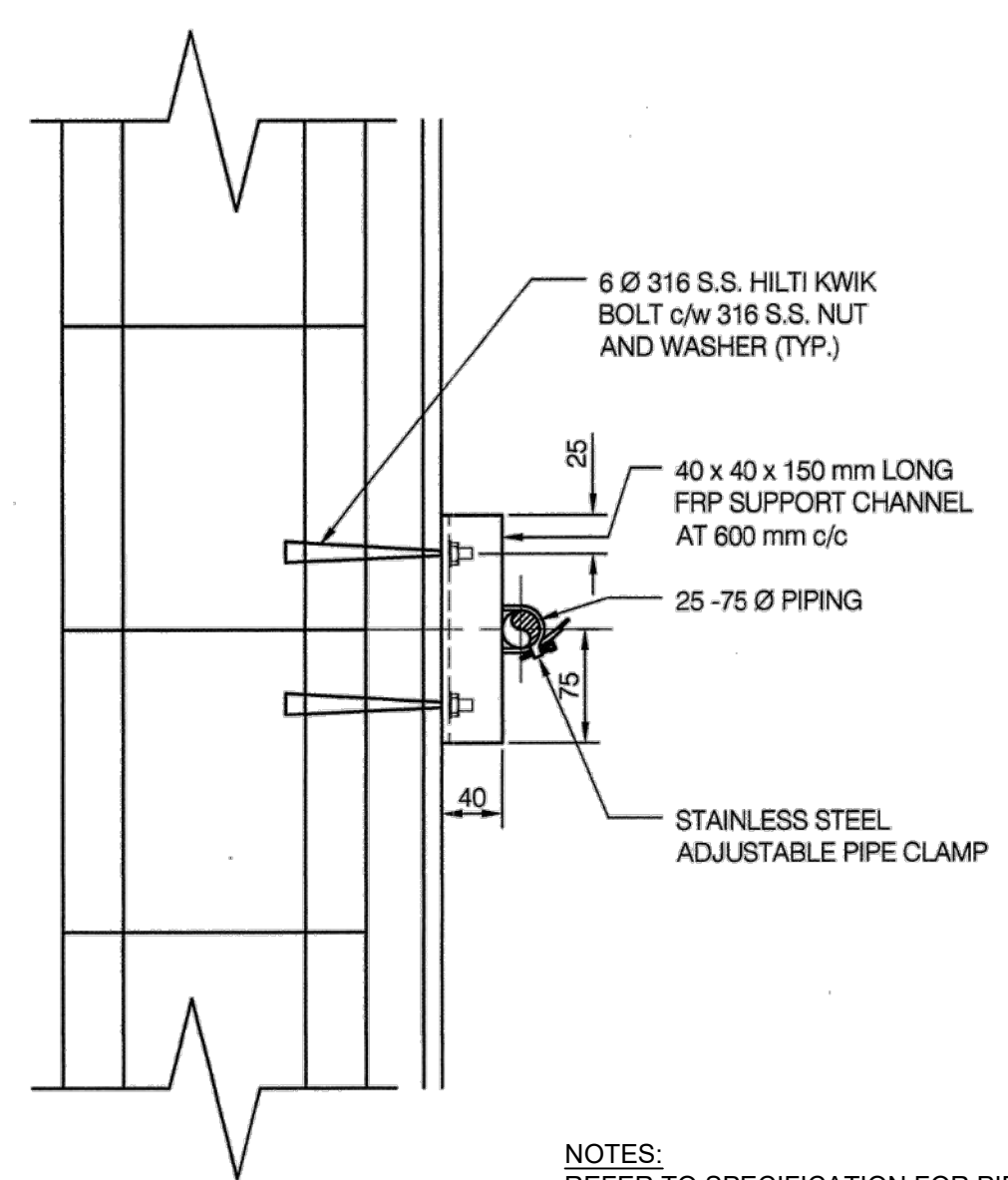
P279 - PUMP STATION MODIFICATIONS

ANALYZER REMOVAL & REPLACEMENT

FILENAME	SCALE	SHEET
10299470-D01-201-D010.dwg	AS NOTED	D014

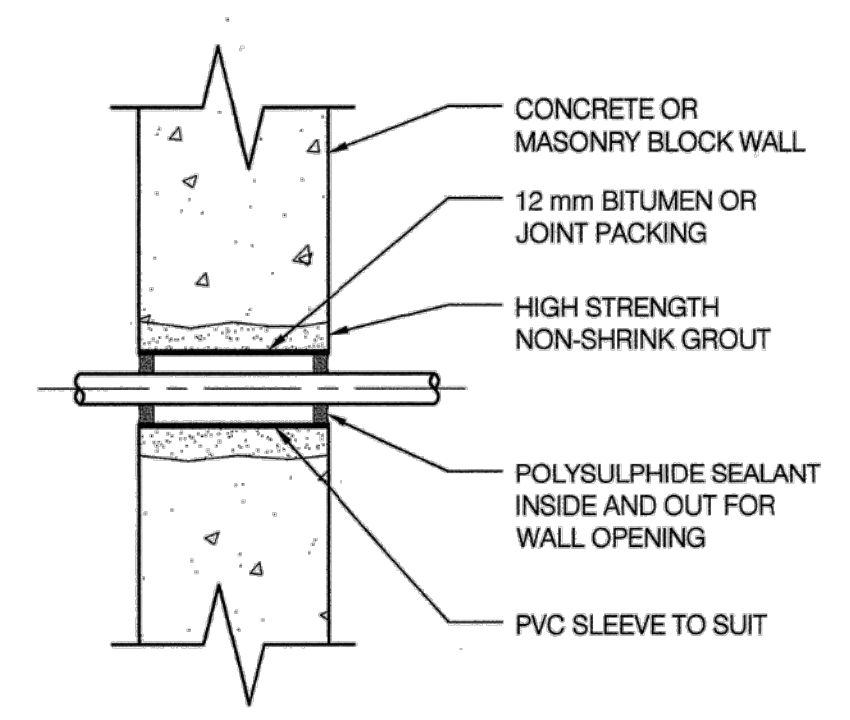


DRAIN ASSEMBLY - DETAIL
SCALE NTS

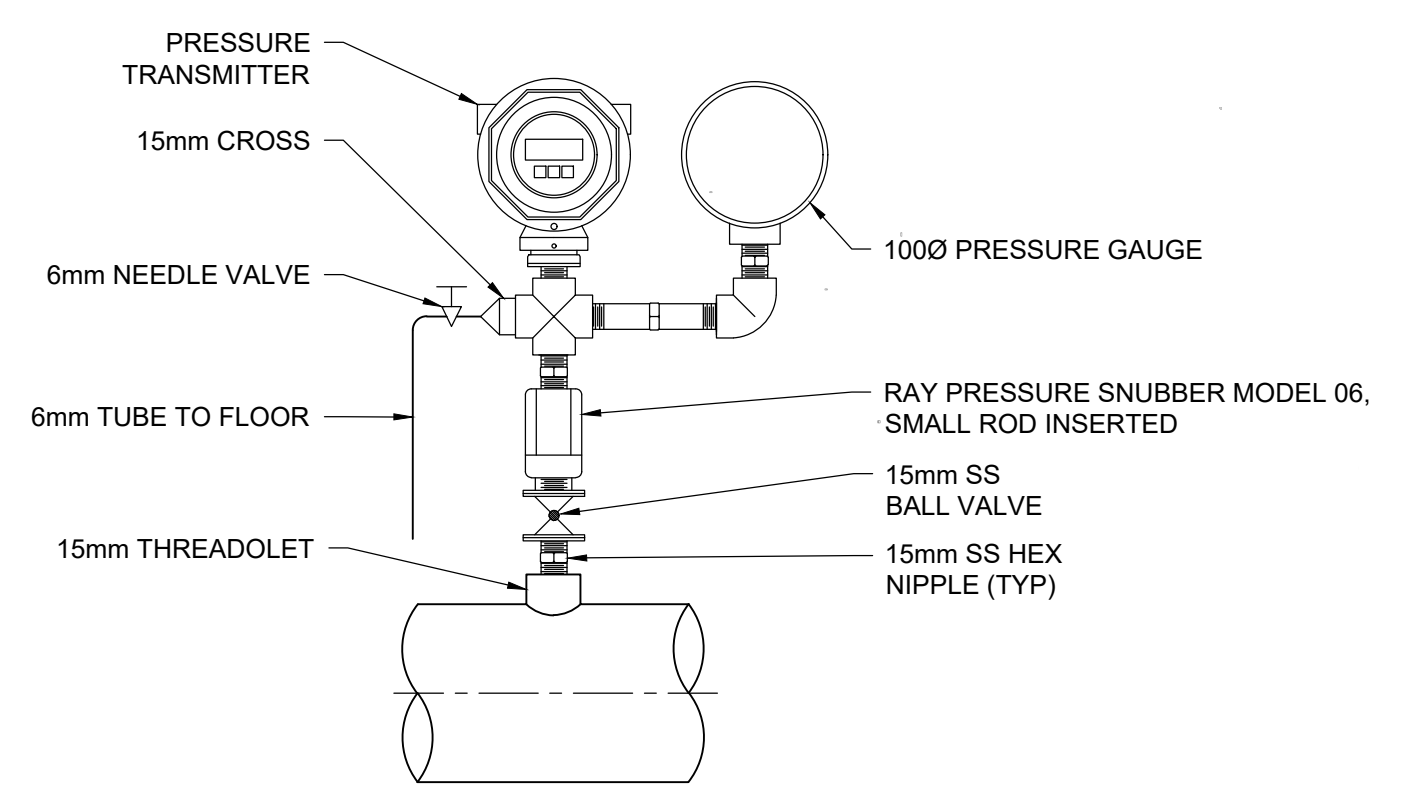


PIPE SUPPORT - DETAIL
SCALE NTS

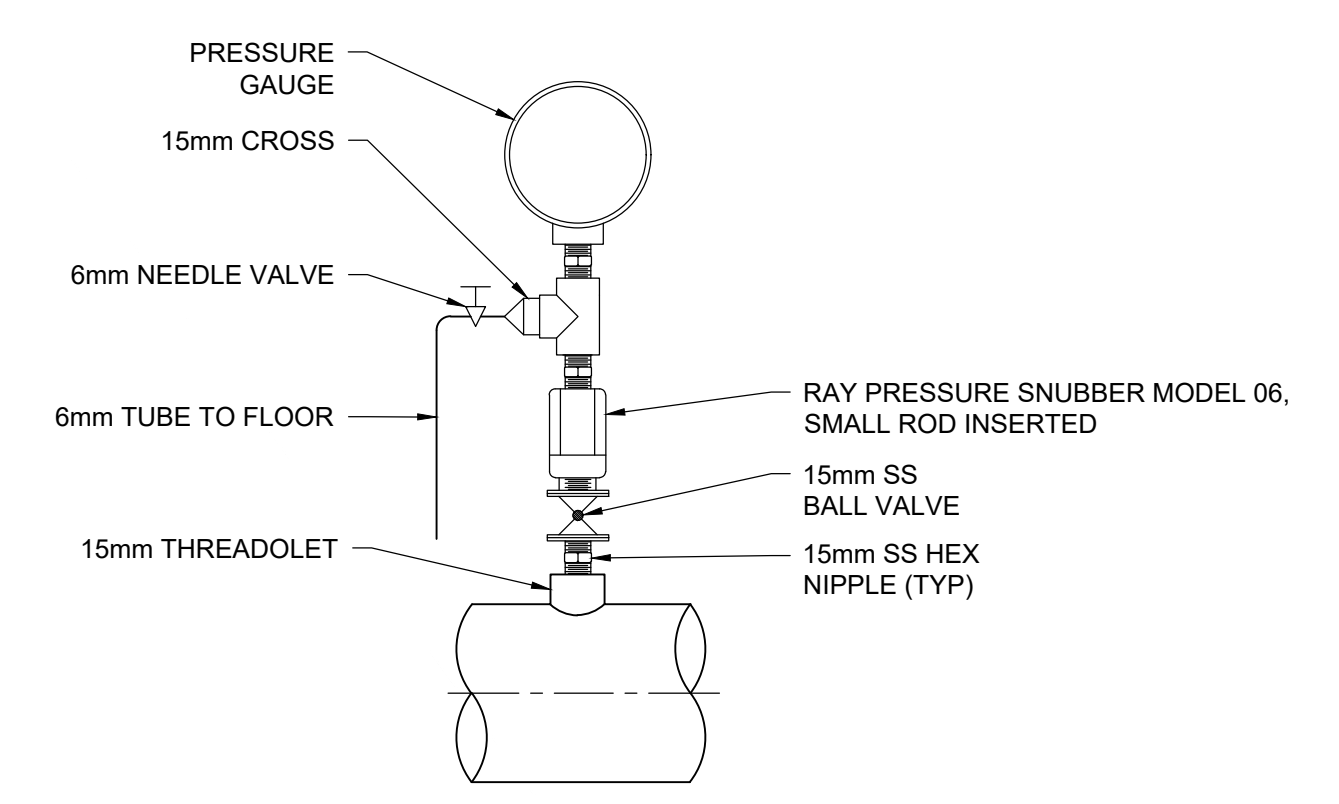
NOTES:
REFER TO SPECIFICATION FOR PIPE SUPPORT REQUIREMENTS.



WALL PENETRATION - DETAIL
SCALE NTS

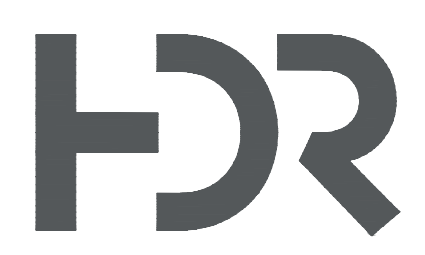


PRESSURE TRANSMITTER / GAUGE ASSEMBLY DETAIL
SCALE NTS



PRESSURE GAUGE ASSEMBLY DETAIL
SCALE NTS

RECORD DRAWING INFORMATION PROVIDED BY THE RMOW. CONTRACTOR TO CONFIRM INFORMATION PRIOR TO MAKING ADDITIONS OR MODIFICATIONS TO EXISTING SYSTEMS.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



SOUTH WHISTLER WATER SUPPLY PHASE 2

2023

P279 - PUMP STATION MODIFICATIONS

STANDARD DETAILS

FILENAME	10299470-D01-201-D010.dwg
SCALE	AS NOTED

SHEET D015

GENERAL NOTES:

- ALL DIMENSIONS, ELEVATIONS AND SLOPES SHALL BE CHECKED AND VERIFIED WITH THE DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO COMMENCING MATERIAL FABRICATION AND CONSTRUCTION. DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
- DIMENSIONS MARKED "REF." HAVE BEEN TAKEN FROM EXISTING DRAWINGS AND ARE ONLY TO BE USED FOR REFERENCE PURPOSES.
- DESIGN AND CONSTRUCT IN ACCORDANCE WITH THE BRITISH COLUMBIA BUILDING CODE 2018.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF NECESSARY SHORING, BRACING AND FORMWORK.
- PROVIDE ADEQUATE WEATHER PROTECTION DURING CONSTRUCTION PERIOD TO PREVENT DAMAGE TO STRUCTURE.
- IF ANY UNSOUND STRUCTURAL CONDITIONS ARE OBSERVED OR CREATED DURING CONSTRUCTION OR THE EXISTING CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS, REPORT THEM IMMEDIATELY TO THE DESIGN ENGINEER.
- CONFIRM THE LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO COMMENCING SITE WORK
- UNLESS OTHERWISE SHOWN ON DRAWINGS, EXISTING STRUCTURE, PIPING AND SERVICES SHALL BE PROTECTED AGAINST ANY DAMAGE AND DISRUPTION DURING DEMOLITION AND CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURE SHALL BE REPAIRED, REPLACED AND/OR RECONSTRUCTED TO ITS ORIGINAL CONDITION AT CONTRACTORS COST.
- CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS OF WorkSafeBC.
- CONTRACTOR SHALL COORDINATE THE WORK WITH EXISTING FACILITIES AND OPERATIONS AND MAINTENANCE STAFF TO MINIMIZE DISRUPTION TO EXISTING SERVICES. UTILITY CLEARANCE IS THE CONTRACTOR'S RESPONSIBILITY.
- ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION" SHALL BE USED FOR CONSTRUCTION.
- FOR LOCATION OF PIPING, FLOOR DRAINS, ELECTRICAL/INSTRUMENTATION CONDUIT, REFER TO THE MECHANICAL, VENTILATION, ELECTRICAL AND INSTRUMENTATION DRAWINGS TO COORDINATE THIS PART OF THE WORK
- FOR DETAILS OF NEW FOUNDATION DRAINS IF NEEDED, REFER TO GEOTECHNICAL REPORT.

DESIGN DATA:

CLIMATIC DATA FOR DESIGN IS BASED ON RESORT MUNICIPALITY OF WHISTLER

- DESIGN HOURLY WIND PRESSURE:
 - 1/10 = (0.25) KPa
 - 1/50 = (0.32) KPa
 - Iw = 1.25 POST DISASTER ROOF UPLIFT; 1.2 KPa
- DESIGN SEISMIC DATA (LATITUDE 50 5' 6.85" LONGITUDE 123 2' 15.79")
 - SOIL TYPE: C _ Very dense Soil & Soft Rock
 - Fa = 1.00 Sa (0.20) = 0.644
 - Fv = 1.00 Sa (0.50) = 0.500
 - PGA = 0.276 Sa (1.0) = 0.305
 - PGV = 0.333 Sa (2.0) = 0.194
 - Sa (5.0) = 0.0656 Sa (10.0) = 0.0308
 - IE = 1.5
- DESIGN SNOW LOAD DATA (Z = 604 m): Is = 1.25 - POST DISASTER
 - Ss = (8.7) KPa Sr = (0.9) KPa
 - ROOF SPECIFIED SNOW LOAD = 9.8 KPa
- DESIGN OCCUPANCY LIVE LOAD: 4.8 KPa
- DESIGN TRUCK LOADING WHERE APPLICABLE: CL-625 TRUCK AS PER CAN/CSA S6-06 (R2012) CANADIAN HIGHWAY BRIDGE DESIGN CODE

CAST-IN-PLACE CONCRETE

- CONTRACTOR TO STRICTLY FOLLOW ALL RECOMMENDATIONS OF THE LATEST CSA STANDARDS A23.1-xx AND A23.2-xx. CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION, TEST METHODS AND STANDARD PRACTICES FOR CONCRETE, INCLUDING BUT NOT LIMITED TO TOLERANCES, REINFORCEMENT DETAILING, CONCRETE CASTING AND CURING, CONCRETE MIXES AND TRIAL MIXES, COLD AND HOT WEATHER CONCRETING CRITERIA OR ANY OTHER PRACTICE NEITHER ADDRESSED IN THESE NOTES NOR ON OTHER CONTRACT DOCUMENTS.
- ALL COMPONENTS OF CONCRETE TO BE ANSI NSF61 COMPLIANT.
- CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 20mm(3/4") DIAMETER.
- SLUMP SHALL BE LIMITED TO:
 - 65mm(2 1/2") FOR SLABS AND FOOTING
 - 90mm(3 1/2") FOR WALLS.
- ALL CEMENT SHALL BE TYPE 10
- COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS U.N.O., (MINIMUM CEMENT CONTENT 335 Kg./M3)

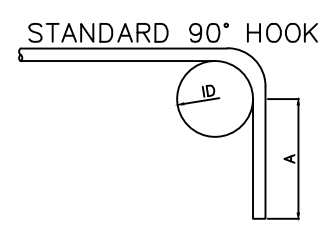
LOCATION	STRENGTH	MAX. AGG. SIZE (mm)	EXPOSURE CLASS	WATERPROOFING ADMIXTURE	FLY ASH CONTENT %
ROOF SLAB AND BEAMS	35 MPa	20	C-1	KIM-HS	20-25
WALLS AND COLUMNS	35 MPa	20	C-1		30-35
FOUNDATION	35 MPa	20	C-1		30-35
LEAN CONCRETE	15 MPa	20	C-1		15 MIN.

- REINFORCING SHALL CONFORM TO CSA G30.12-M92 REINFORCING BARS SHALL BE 400MPa(58 KSI) GRADE NEW DEFORMED BARS, FREE OF DIRT, OIL, OR LOOSE SCALE. REINFORCING SHALL BE TIED SECURELY PRIOR TO PLACING CONCRETE.
- WELDED WIRE FABRIC SHALL CONFORM TO CSA STANDARD G30.5-M1983 (R1991), WELDED STEEL STANDARD G30.5-M1983(R1991), WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT. WIRE FABRIC FOR CONCRETE REINFORCEMENT.
- UNLESS NOTED OTHERWISE, USE CLASS 'B' TENSION SPLICE FOR ALL REINFORCING BARS AND 90° STANDARD HOOK AT THE END OF LONGITUDINAL BARS:

NORMAL DEFORMED BARS

f _c = 30 MPa f _y = 400 MPa	BAR SIZE	MINIMUM STRAIGHT EMBEDMENT DEVELOPMENT LENGTHS (mm)		MINIMUM TENSION EMBEDMENT WITH STANDARD END HOOKS (mm)	ID (mm)	A (mm)
		COMPRESSION				
		TENSION	TENSION			
	10M	200	300	200	60	177
	15M	280	450	200	90	252
	20M	340	600	220	100	304
	25M	440	1000	450	150	403

f _c = 30 MPa f _y = 400 MPa	BAR SIZE	LAP SPLICE LENGTHS(mm)	
		TENSION	COMPRESSION
		10M	400
15M	600	450	
20M	800	600	
25M	1200	750	



- CHAMFER ALL EXPOSED EDGES 19mm (3/4") U.N.O.
- ALL CONCRETE SHALL BE CONSOLIDATED WITH THE USE OF INTERNAL, MECHANICAL VIBRATORS.
- CONCRETE COVER TO REINFORCING SHALL BE AS FOLLOWS U.N.O.:

CONDITION:	SPECIFIED COVER (mm)
A. CONCRETE CAST AGAINST GROUND	75
B. CONCRETE EXPOSED TO EARTH, LIQUIDS OR WEATHER	
i.) 20M BARS OR LARGER	50
ii.) 10M AND 15M BARS	40
C. CONCRETE SLABS OR WALLS NOT EXPOSED TO EARTH, LIQUIDS OR WEATHER	20
D. CONCRETE BEAMS OR COLUMNS	50
- PROVIDE SUFFICIENT CHAIRS AND SUPPORT BARS TO MAINTAIN CONCRETE COVER AS SPECIFIED
- REINFORCEMENT SPACING SHOWN IS CENTER TO CENTER OF BAR, PLACE REINFORCING BARS SYMMETRICALLY IN SPANS UNO.
- BAR NOTATION GIVES THE FOLLOWING INFORMATION IN THIS ORDER: NUMBER OF BARS (IF QUOTED) BAR SIZE, BAR LENGTH (IF QUOTED), BAR SPACING AND PLACEMENT INFORMATION (IF QUOTED) FOR EXAMPLE 6-15 M @ 150 TOP OR 6-15 M 4000 @ 150 TOP.
- SLAB ON GRADE SHALL BE SAWCUT TO A DEPTH OF 25mm AS SHOWN ON PLAN WITHIN 24 HOURS OF POURING. SLAB AT COLUMNS SHALL BE SAWCUT IN 1.0m x 1.0m DIAMOND PATTERN LINING UP WITH THE GRID. ADJACENT POURS SHALL BE KEYS.
- CONFIRM WITH THE ENGINEER THE LOCATION OF ALL CONSTRUCTION JOINTS PRIOR TO CONSTRUCTION.
- NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS PRIOR TO ANY CONCRETE POUR.
- TAKE THREE TEST CYLINDERS FOR EVERY 75 CU METERS OR LESS OF CONCRETE POURED. MINIMUM ONE SET OF THREE CYLINDERS FOR EACH POUR.

REINFORCEMENT:

- REINFORCING STEEL SHALL CONFORM TO CSA G30.18-09 "CARBON STEEL BARS FOR CONCRETE REINFORCEMENT", GRADE 400W.
- REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH CSA A23.1-09.
- PROVIDE CLEAR CONCRETE COVER TO REBAR AS FOLLOWS (UNO):

SURFACES POURED AGAINST GROUND	75mm
ALL FORMED SURFACES EXPOSED TO GROUND OR WEATHER OR SEWER CONDITIONS OR CHLORIDE EXPOSURES	60mm
FORMED SURFACES NOT EXPOSED TO GROUND OR WEATHER OR SEWER CONDITIONS OR CHLORIDE EXPOSURES:	
BEAMS (TO STIRRUPS)	40mm
COLUMNS (TO TIES)	40mm
COLUMNS (TOP & BOTTOM)	40mm
WALLS	40mm

- FOR DEFORMED REINFORCING BARS WITH f_y=400 MPa REBAR SPLICE LENGTHS (mm) UNO

BAR SIZE	COMPRESSIVE SPLICES	TENSION SPLICE (CLASS B) FOR CONC. STRENGTH			
		25 MPa	30 MPa	35 MPa	40 MPa
10M	350	400(500)	350(450)	350(450)	300(400)
15M	500	600(750)	550(700)	500(650)	450(600)
20M	600	700(1000)	700(900)	650(850)	600(800)
25M	750	1200(1550)	1100(1400)	1000(1300)	950(1250)
30M	900	1450(1850)	1300(1700)	1200(1550)	1150(1450)

TOP BAR SPLICE LENGTHS ARE DENOTED IN BRACKETS AND SHOULD BE USED WHEN HORIZONTAL SPLICE BARS ARE PLACED WITH MORE THAN 300mm OF CONCRETE POURED BELOW THE BAR.

REBAR EMBEDMENT LENGTHS (mm) UNO

BAR SIZE	COMPRESSION EMBEDMENT FOR CONC. STRENGTH	TENSION EMBEDMENT FOR CONCRETE STRENGTH			
		25 MPa	30 MPa	35 MPa	40 MPa
10M	250	200	300(400)	300(350)	300(300)
15M	350	300	450(600)	400(550)	350(450)
20M	400	350	600(750)	550(700)	500(600)
25M	500	450	900(1200)	850(1100)	800(1000)
30M	600	550	1100(1450)	1000(1300)	950(1150)

TOP BAR EMBEDMENT AND DEVELOPMENT LENGTHS ARE DENOTED IN BRACKETS AND SHOULD BE USED WHEN HORIZONTAL BARS ARE PLACED WITH MORE THAN 300mm OF CONCRETE POURED BELOW THE BAR.

- MINIMUM REINFORCING AROUND OPENINGS LARGER THAN 300mm: 2-15M EACH SIDE OF OPENING, EXTENDED 600mm PAST CORNERS.
- PROVIDE SUFFICIENT CHAIRS AND SUPPORT BARS TO MAINTAIN CONCRETE COVER AS SPECIFIED.
- REINFORCEMENT SPACING SHOWN ON ALL DRAWINGS IS CENTER TO CENTER OF BAR. PLACE REINFORCING BARS SYMMETRICALLY OVER SUPPORTS
- BEFORE PLACING CONCRETE, ENSURE THAT THE REINFORCING STEEL AND FORMS ARE CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER FOREIGN MATERIAL WHICH COULD REDUCE THE BOND BETWEEN THE REINFORCING STEEL AND THE CONCRETE.
- DOWELS SHALL BE PLACED AND SECURED TO MATCH VERTICAL BAR SPACING BEFORE CONCRETE IS POURED.
- WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

FOUNDATION EXCAVATION AND BACKFILL:

- FOUNDATION DESIGN, EXCAVATION, BACKFILL AND COMPACTION ARE BASED ON THE GEOTECHNICAL REPORT PREPARED BY FRONTERA GEOTECHNICAL, FILE NO.: 1956, DATE: FEBRUARY 10, 2023.
- REFER TO THE GEOTECHNICAL REPORT FOR STAGES OF FIELD REVIEW BY GEOTECHNICAL ENGINEER.
- ALL FOUNDATIONS TO BE FOUNDED AT THE ELEVATIONS AND LOCATIONS SHOWN ON THE DRAWINGS. FOUNDATION SHOULD BE LOCATED ON UNDISTURBED SOIL OR ON COMPACTED STRUCTURAL FILL AS PER THE GEOTECHNICAL REPORT.
- FOUNDATIONS SUPPORTED DIRECTLY ON ENGINEERED FILL CAN BE DESIGNED FOR A SERVICEABILITY LIMIT STATE (SLS) BEARING PRESSURE OF 150 KPA AND ULTIMATE LIMIT STATE (ULS) OF 300 KPA.
- FOUNDATIONS SUPPORTED DIRECTLY ON COMPETENT BEDROCK CAN BE DESIGNED FOR A SERVICEABILITY LIMIT STATE (SLS) OF 500 KPA AND A FACTORED ULTIMATE LIMIT STATE (ULS) OF 1 MPA.
- DE-WATER TO CONTROL GROUNDWATER AS WELL AS SURFACE RUNOFF DURING CONSTRUCTION.
- PROVIDE ALL NECESSARY SHORING, BRACING OR UNDERPINNING TO EXISTING STRUCTURES, SERVICE UTILITIES AND SOIL CUTS TO ENSURE SAFETY AND STRUCTURAL INTEGRITY DURING EXCAVATION.
- BACKFILL AROUND PERIMETER WALL WITH STRUCTURAL FILL ONLY AFTER ONE (1) WEEK MINIMUM CURING OF CONCRETE. DO NOT BACKFILL UNTIL FLOOR/ROOF SLAB IS IN PLACE.

DOWELING AND ANCHORING INTO EXISTING CONCRETE:

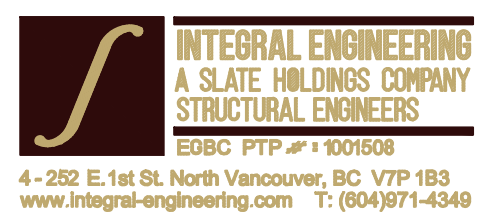
- WHEN INSTALLING REBAR DOWELS OR DRILLED ANCHORS INTO EXISTING REINFORCED CONCRETE, USE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS. EXISTING REINFORCEMENT TO BE CAREFULLY LOCATED PRIOR TO DRILLING. WHEN REINFORCING STEEL IS ENCOUNTERED, SHIFT THE DOWEL OR ANCHOR AS REQUIRED TO AVOID IT, AND REPAIR ALL NON-USED HOLES WITH APPROVED EPOXY BONDING AGENT OR CEMENTITIOUS GROUT.
- ALL CONCRETE DOWELS SHALL CONFORM TO CSA G30.18-09, 'CARBON STEEL BARS FOR CONCRETE REINFORCEMENT', GRADE 400W.
- DOWELS SHALL BE INSTALLED INTO SOUND CONCRETE, USING THE HILTI HIT HY 200 SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DOWEL EMBEDMENT LENGTH AS SHOWN ON DRAWINGS.
- THE CONTRACTOR SHALL RETAIN A HILT REPRESENTATIVE TO PROVIDE ONSITE ANCHOR INSTALLATION TRAINING FOR ALL THE HILTI PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT THE CONTRACTOR'S PERSONNEL ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

WOOD

- FRAMING METHODS AND PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF NBCC 2020 AND CANADIAN WOOD COUNCIL.
- ALL CONCRETE AND WOOD CONTACTS SHALL BE DAMP PROOFED WITH AN APPROVED SILL GASKET OR 6 MIL POLY.
- EXPOSED LUMBER SHALL BE PRESSURE TREATED OR OTHERWISE PROTECTED WITH AN APPROVED PRESERVATIVE.
- ALL TIMBER SHALL CONFORM TO CSA STANDARDS. SAWN LUMBER, PLANKS, AND LIGHT FRAMING TO BE GRADE No.1/No.2 OR BETTER.
- ROOF AND FLOOR SHEATHING TO BE DOUGLAS FIR PLYWOOD OR CANADIAN SOUTHWEST PLYWOOD CONFORMING TO CSA STANDARD 0121 AND 0151 OR O.S.B. CONFORMING TO CSA STANDARD 0437.0.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING.
- CAULK AROUND ALL EXTERIOR OPENINGS.
- FABRICATED WOOD TRUSSES, TO BE DESIGNED AND FABRICATED IN ACCORDANCE WITH LATEST CANADIAN STANDARDS. SUBMIT SEALED SHOP DRAWINGS TO ENGINEER FOR REVIEW. TRUSS MANUFACTURER TO SPECIFY ALL FRAMING, HOLD DOWN ANCHORS AND PROVIDE MINIMUM BEARING DISTANCES.
- ALL TRUSSES, TO BE ATTACHED WITH TOP PLATE OF ALL WALLS WITH HURRICANE ANCHORS AS MANUFACTURED BY CANADA SCAFFOLD AND CONSTRUCTION SUPPLIES CO. OR EQUIVALENT AS APPROVED BY THE ENGINEER.
- THE ROOF TRUSSES MANUFACTURER MUST FOLLOW THE GUIDELINES OF "NATIONAL QUALITY STANDARD FOR METAL PLATE CONNECTED WOOD TRUSSES REV. JUNE 4, 2013 PUBLISHED BY THE CANADIAN WOOD TRUSS ASSOCIATION"
- ALL BLOCKING AND FIRE STOPS TO SATISFY THE REQUIREMENT OF RMOW, OR NATIONAL CODES, WHICHEVER IS STRINGENT.

GRATING AND STAIR TREADS NOTES:

- ALL GRATING AND STAIR TREADS SHALL BE FIBERGLASS TYPE DURADEK SERIES 1600 WITH 38mm DEEP BEARING BARS AND CROSS RODS AT 150mm SPACING AS MANUFACTURED BY STRONGWELL-CHATFIELD DIVISION OR APPROVED EQUAL.
- ALL GRATING AND STAIR TREADS SHALL BE GRAY IN COLOR WITH A NON-SKID BONDED GRIT TOP SURFACE.
- HOLD DOWN CLAMPS FOR ALL GRATING PANELS AND STAIR TREADS SHALL BE TYPE 316L STAINLESS STEEL SADDLE CLIPS c/w 6mm HEX BOLT, NUT AND WASHER OR FRP APPROVED EQUAL.
- MAXIMUM HOLD DOWN CLAMPS SPACING SHALL BE 750mm c/c WITH A MINIMUM OF 4 EACH PER PANEL. FOR GRATING PANEL WITH CUT-OUT FOR EQUIPMENT, OR CANTILEVER OF PANEL IS REQUIRED, MAXIMUM HOLD DOWN CLAMPS SPACING SHALL BE 450mm c/c.
- ALL CUT AND MACHINED EDGES, HOLES AND ABRASIONS SHALL BE SEALED WITH A RESIN COMPATIBLE WITH THE RESIN MATRIX USED IN THE BEARING BARS AND CROSS RODS.



ISSUE	DATE	DESCRIPTION
1	2023-09-20	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED



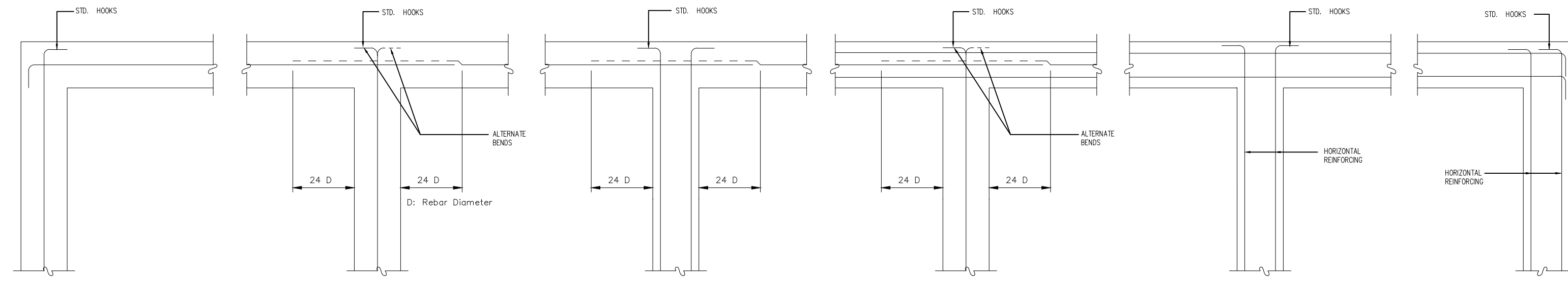
SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY

GENERAL NOTES 1

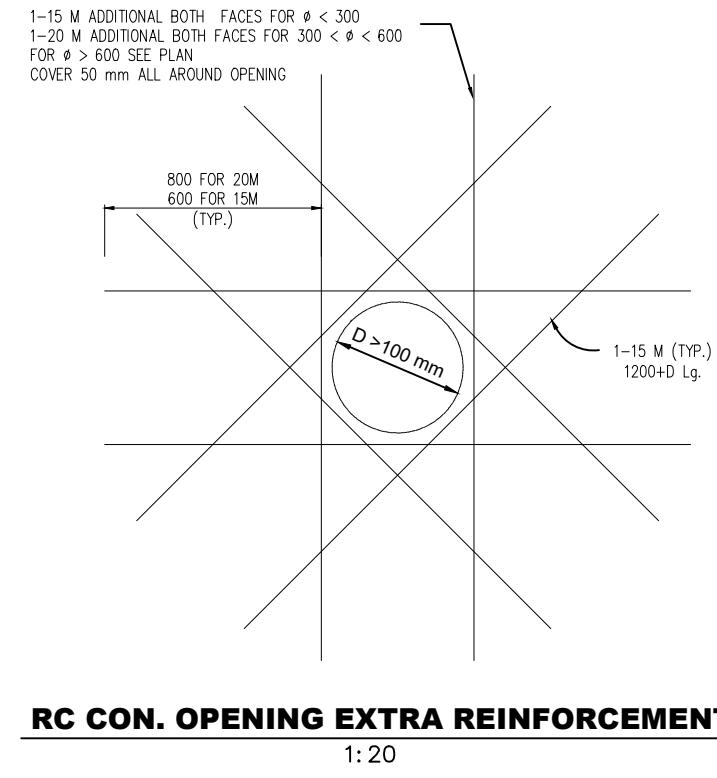
FILENAME	10299470-S001-006.dwg
SCALE	AS NOTED

SHEET S001

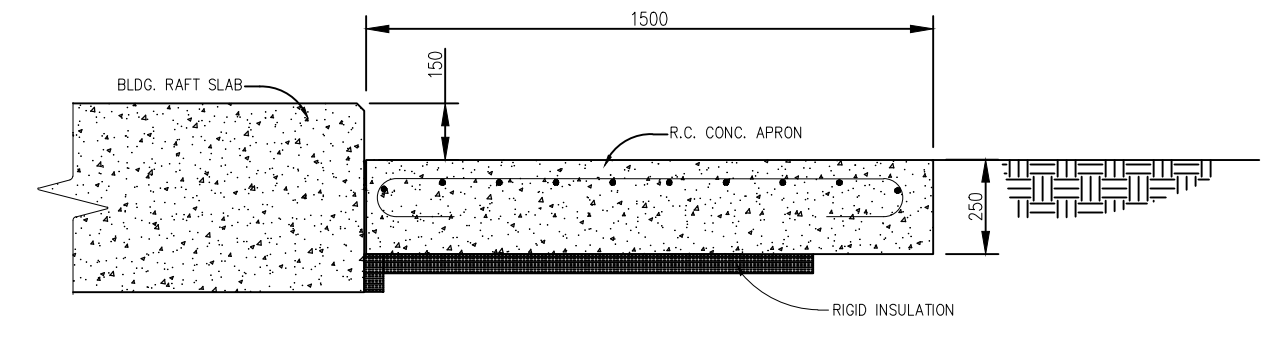


TYPICAL HORIZONTAL SECTIONS (PLAN) SHOWING REINFORCING FOR CONCRETE BEAM, SLAB AND WALL INTERSECTIONS AT ENDS
1:20

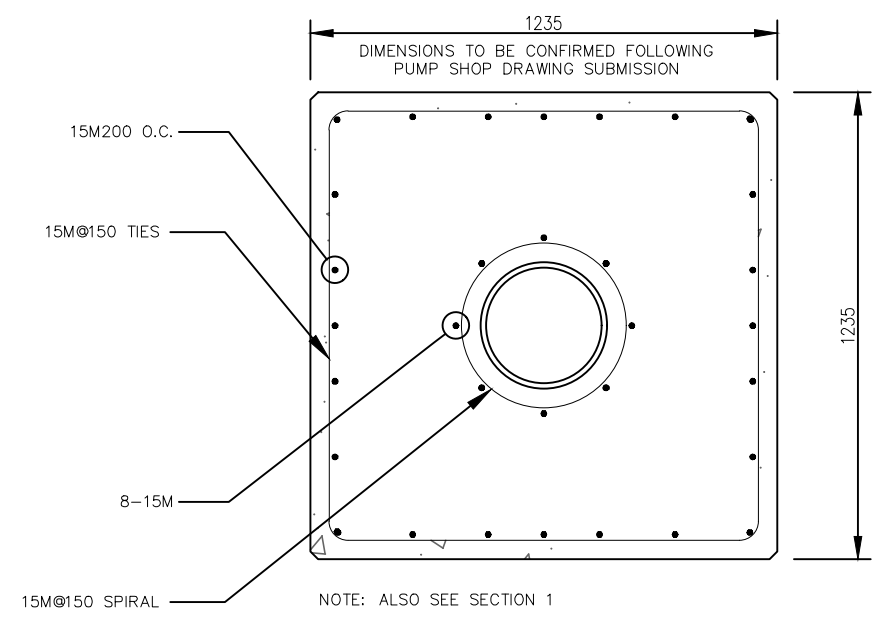
NOTE: WHERE DETAIL(S) SHOWN ON THE DRAWINGS DIFFER FROM THE DETAILS SHOWN ON THIS SHEET, THEN THE DRAWING HAS PRIORITY.



RC CON. OPENING EXTRA REINFORCEMENT
1:20



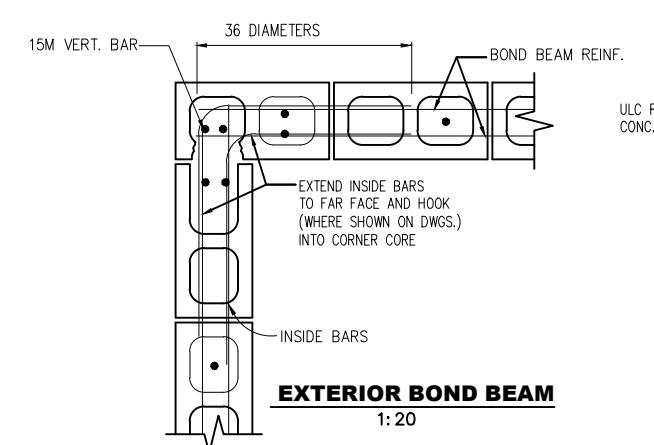
APRON DETAILS
1:20



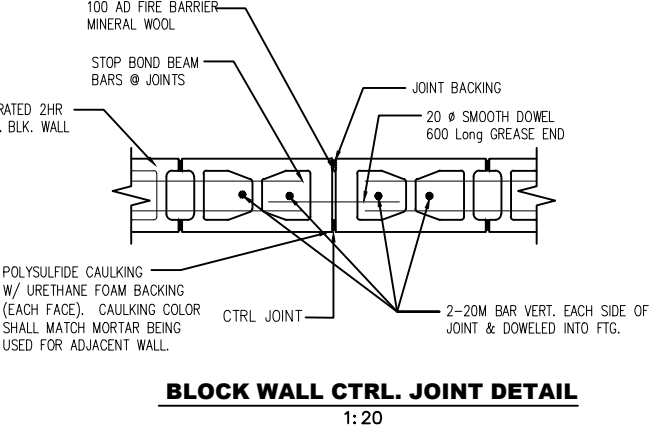
PUMP CAN REINFORCEMENT DETAILS
1:20

NOTES:
1. LINTEL IS REQUIRED FOR TOP OF OPENING. SEE LINTEL DETAILS.
2. PROVIDE VERTICAL REINFORCING FOR BOTH SIDES OF OPENING IN WALL AND EACH CORNER OF WALLS.
3. PROVIDE BOND BEAM ABOVE AND BELOW OPENINGS IN WALL AND EXTEND BOND BEAM 800 mm BEYOND EDGES.
4. TIE ALL BLOCKS WITH GROUT.
5. TYPE "S" MORTAR TO BE USED FOR ALL JOINTS.

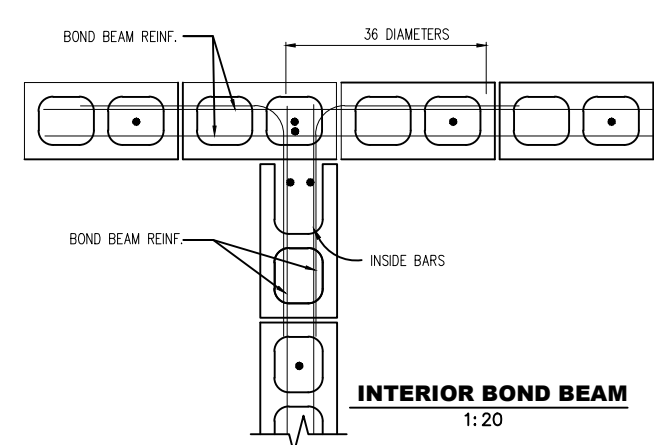
TYPICAL MASONRY WALL ANCHORING TO CONCRETE AT BASE STANDARD MASONRY BLOCKS
1:20



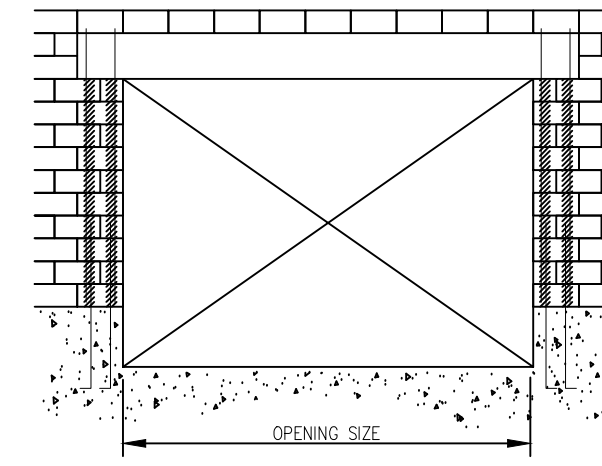
EXTERIOR BOND BEAM
1:20



BLOCK WALL CTRL. JOINT DETAIL
1:20



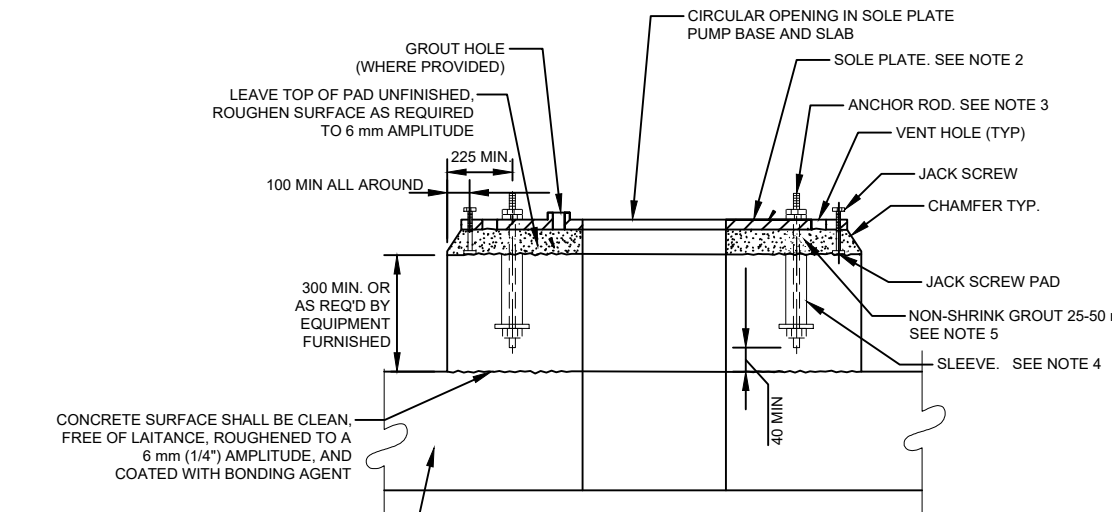
INTERIOR BOND BEAM
1:20



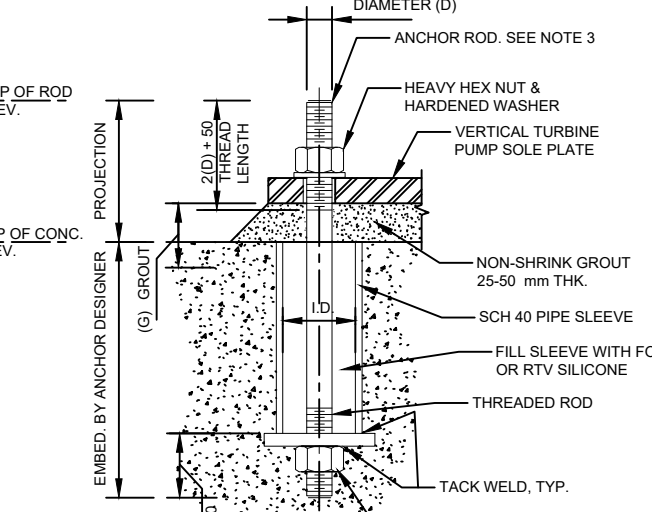
OPENING SIZE	H	BOTTOM REIN.	TOP REIN.	STRIPS	BEARING
1600 TO 2400	400	2-25 M	2-15 M	10 M @ 300 C/C	200
2400 TO 3000	400	3-20 M	2-15 M	10 M @ 300 C/C	400
3000 TO 3600	400	2-25 M	2-15 M	10 M @ 300 C/C	400
3600 TO 4200	600	2-25 M + 1-20 M	2-15 M	10 M @ 250 C/C	400
4200 TO 4800	600	2-25 M + 2-20 M	2-20 M	10 M @ 250 C/C	400

NOTES:
1. LINTEL IS REQUIRED FOR TOP OF OPENING. SEE LINTEL DETAILS.
2. PROVIDE VERTICAL REINFORCING FOR BOTH SIDES OF OPENING IN WALL AND EACH CORNER OF WALLS.
3. PROVIDE BOND BEAM ABOVE AND BELOW OPENINGS IN WALL AND EXTEND BOND BEAM 800 mm BEYOND EDGES.
4. EXTEND LINTEL & REINFORCING 600mm AT EACH END.
5. COMPRESSIVE STRENGTH OF BLOCK FILLING TO BE 30 MPa.
6. TYPE "S" MORTAR TO BE USED FOR ALL JOINTS.
7. FOR BOTTOM REINFORCING USE BAR SPACER WHEN 3 OR 4 BARS REQUIRED.

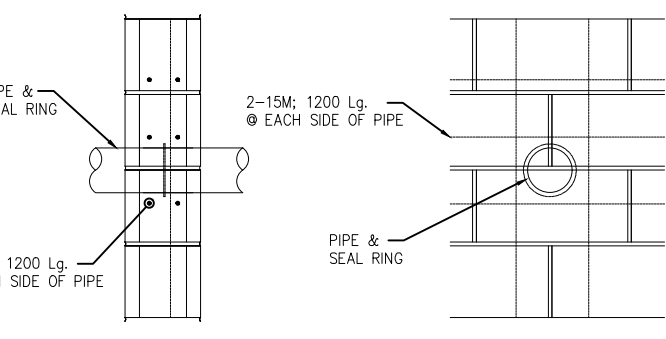
POURED CONCRETE LINTEL IN BLOCK WALL



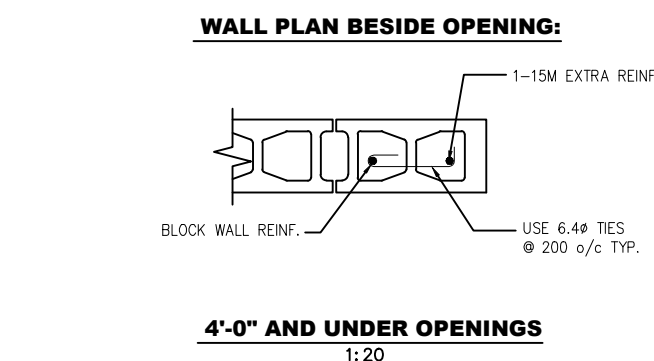
CONCRETE EQUIPMENT PAD
1:20



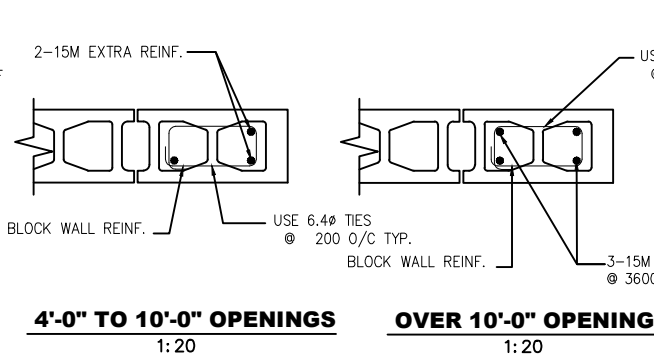
POST TENSIONED ANCHOR ROD
1:20



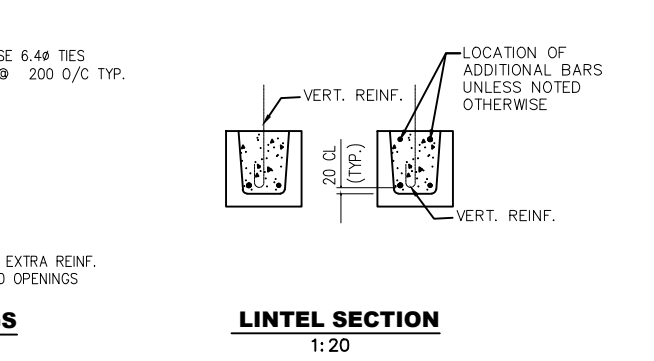
MASONRY WALL PIPE PENETRATION DETAIL
1:20



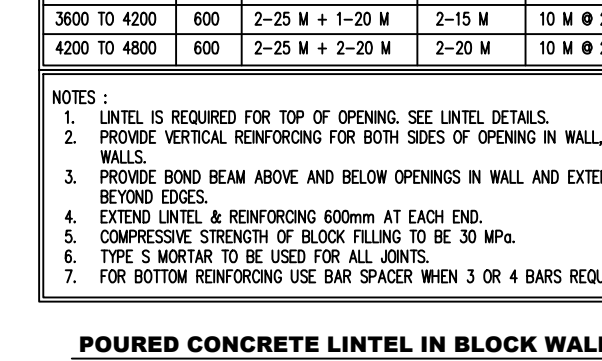
WALL PLAN BESIDE OPENING
1:20



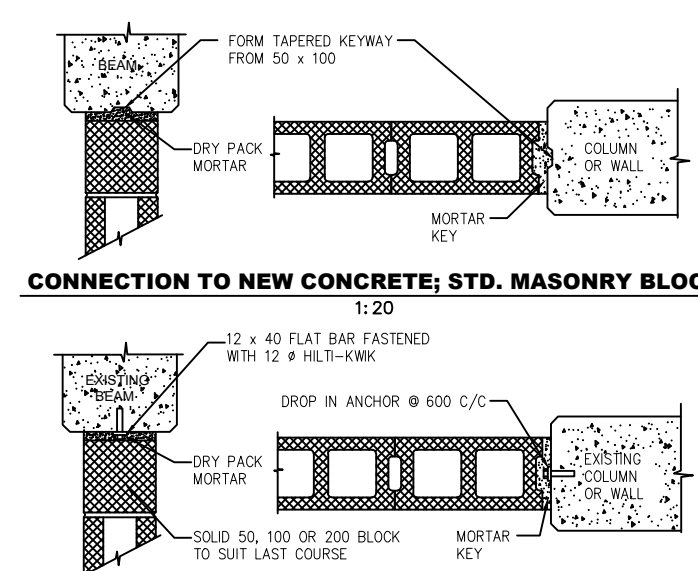
4'-0" AND UNDER OPENINGS
1:20



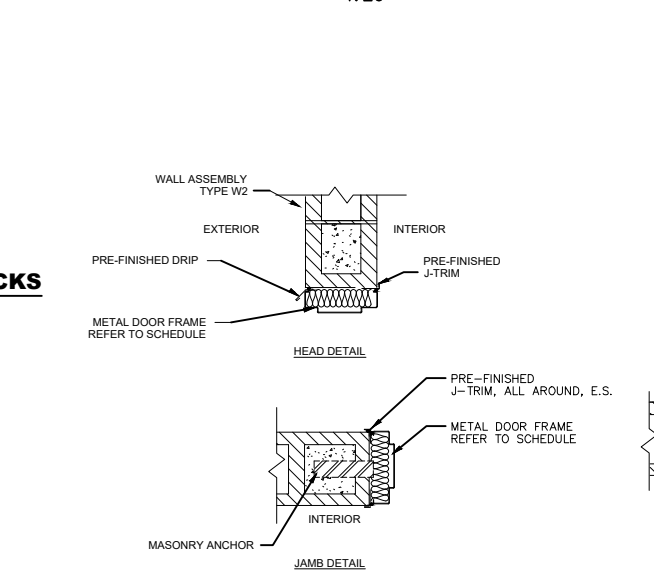
4'-0" TO 10'-0" OPENINGS
1:20



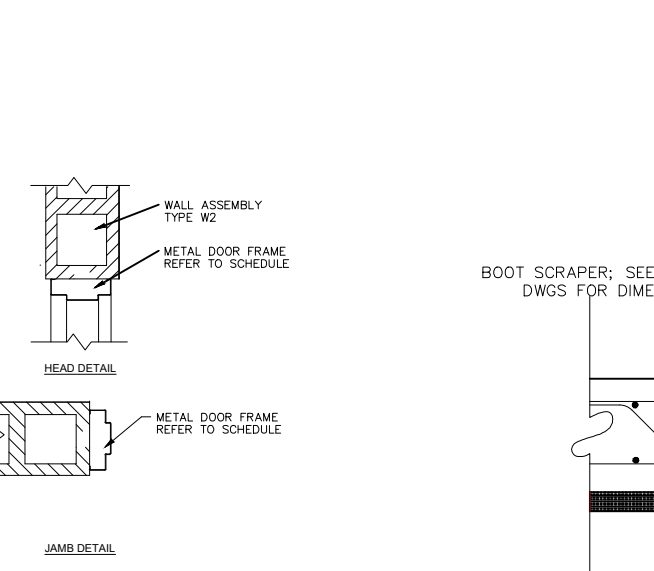
LINTEL SECTION
1:20



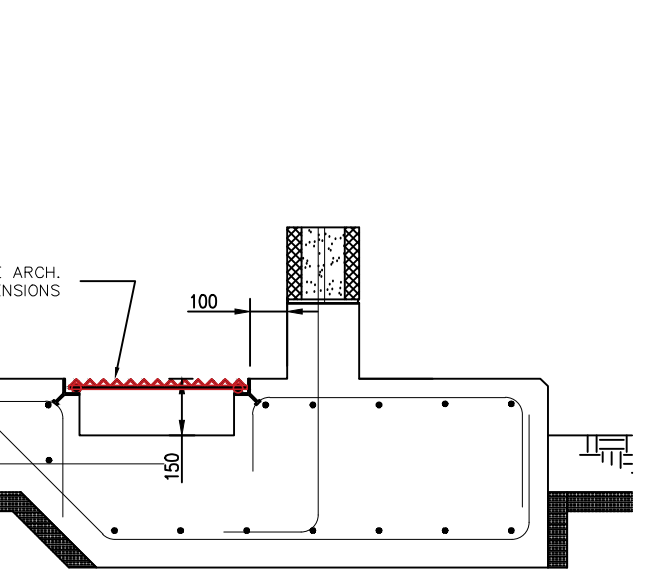
CONNECTION TO NEW CONCRETE; STD. MASONRY BLOCKS
1:20



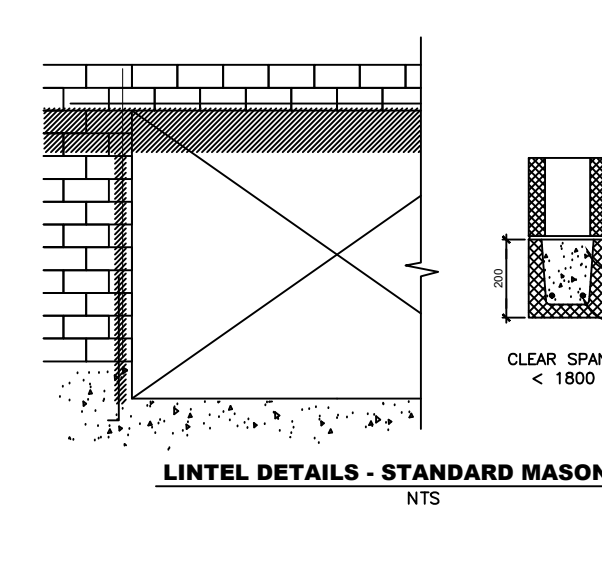
CONNECTION TO EXIST. CONCRETE; STD. MASONRY BLOCKS
1:20



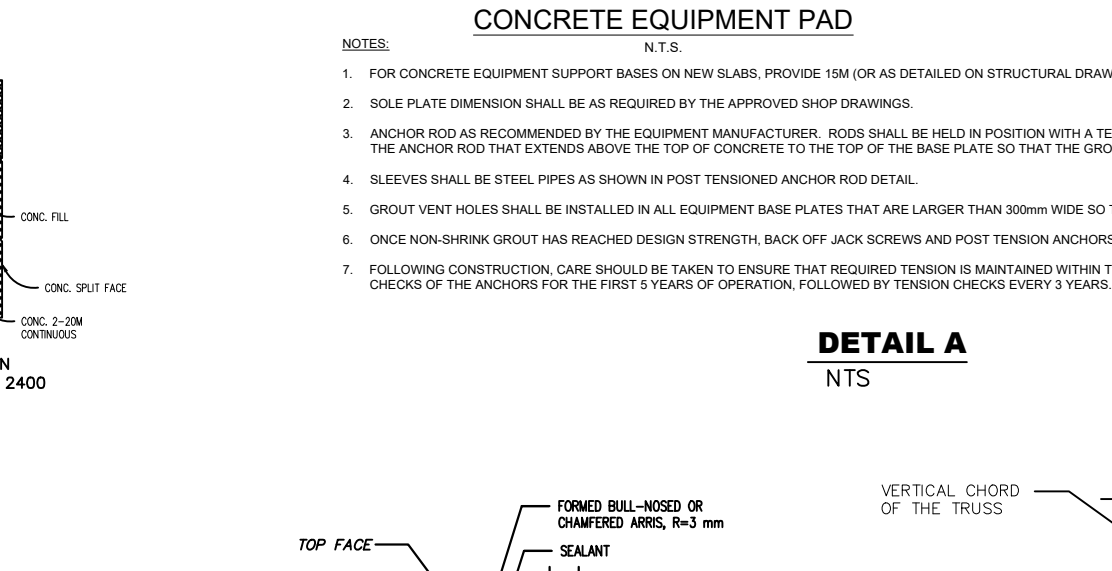
STD. DET. @ EXT. WALL
1:20



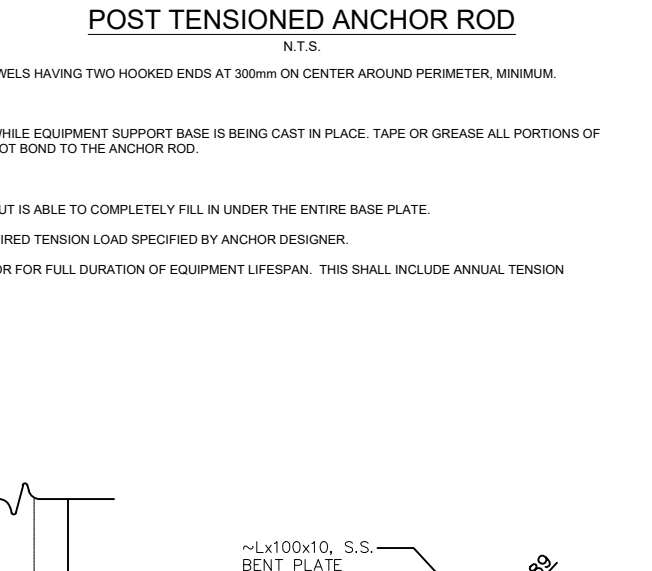
STD. DET. @ INT. WALL
1:20



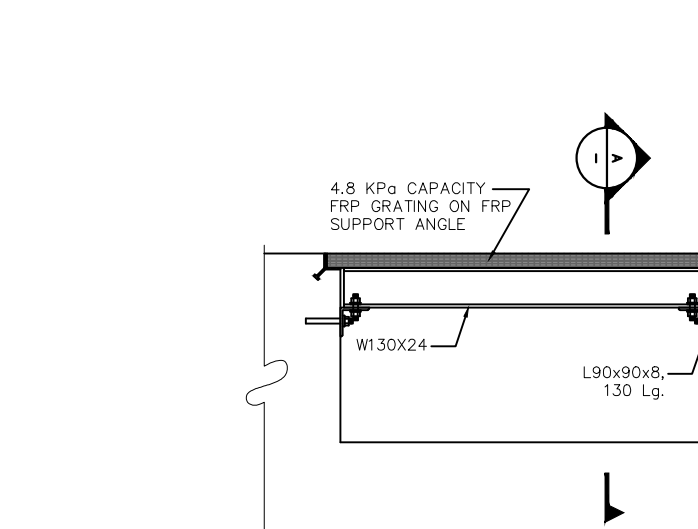
SLAB RECESS FOR BOOT GRATE
1:20



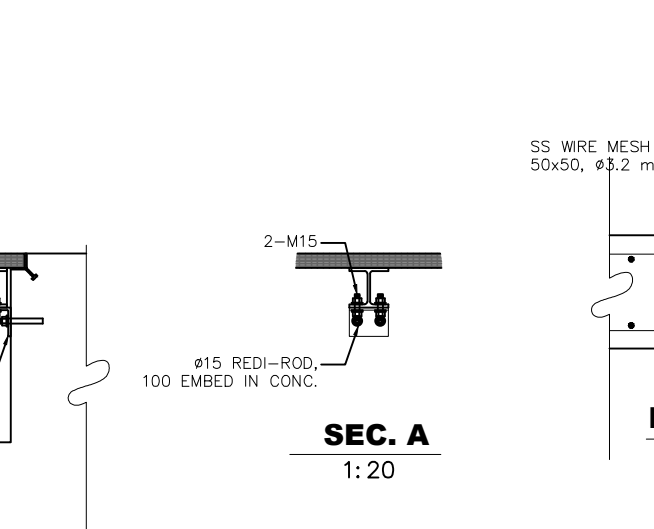
DETAIL A
NTS



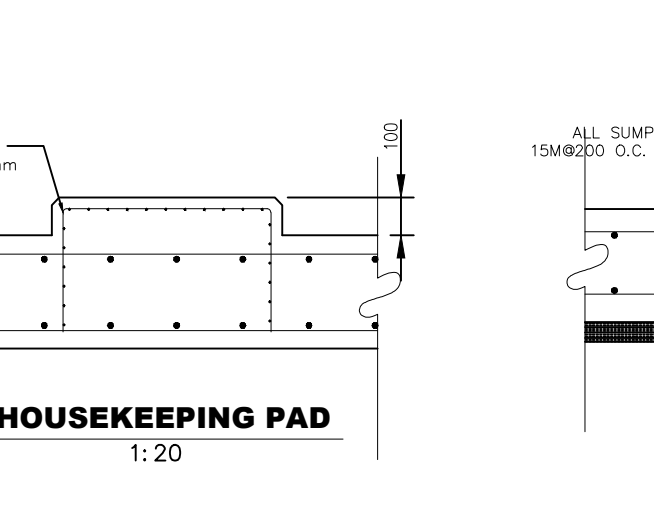
SEC. B
1:10



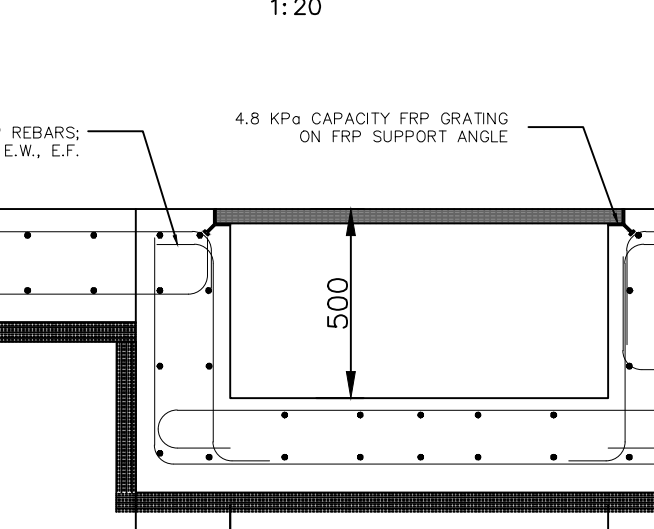
DITCH/CHANNEL GRATING
1:20



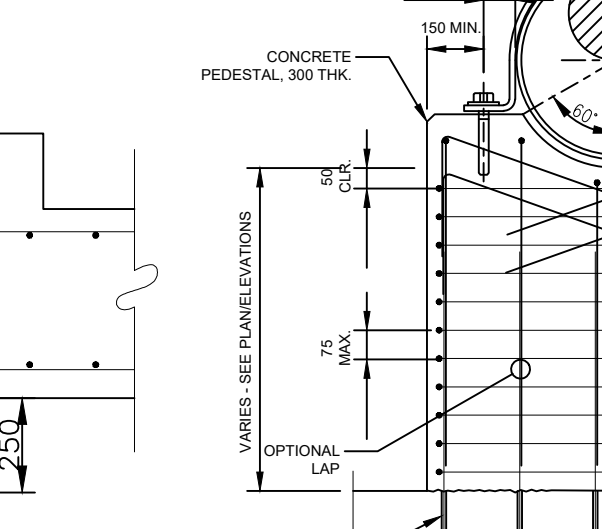
HOUSEKEEPING PAD
1:20



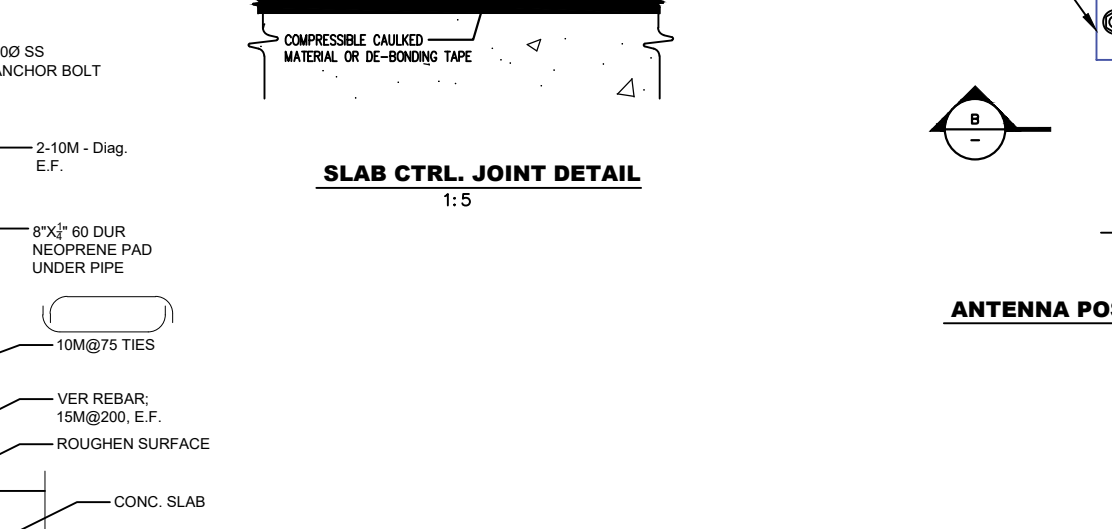
SUMP REINF. DETAILS
1:20



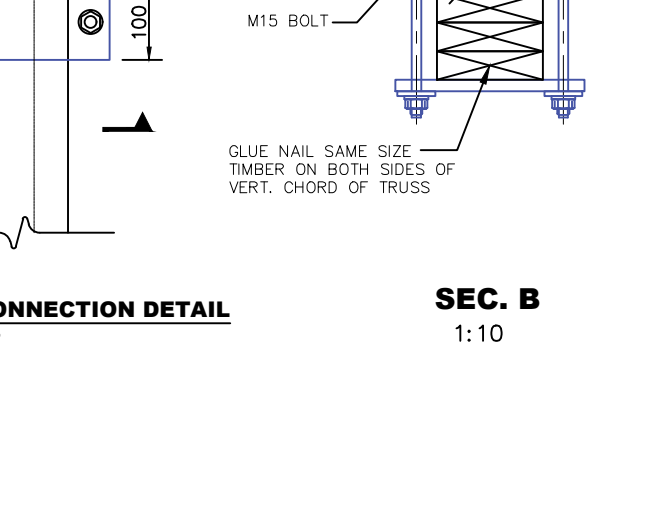
PUMP SUPPORT PEDESTAL
1:20



SLAB CTRL. JOINT DETAIL
1:5



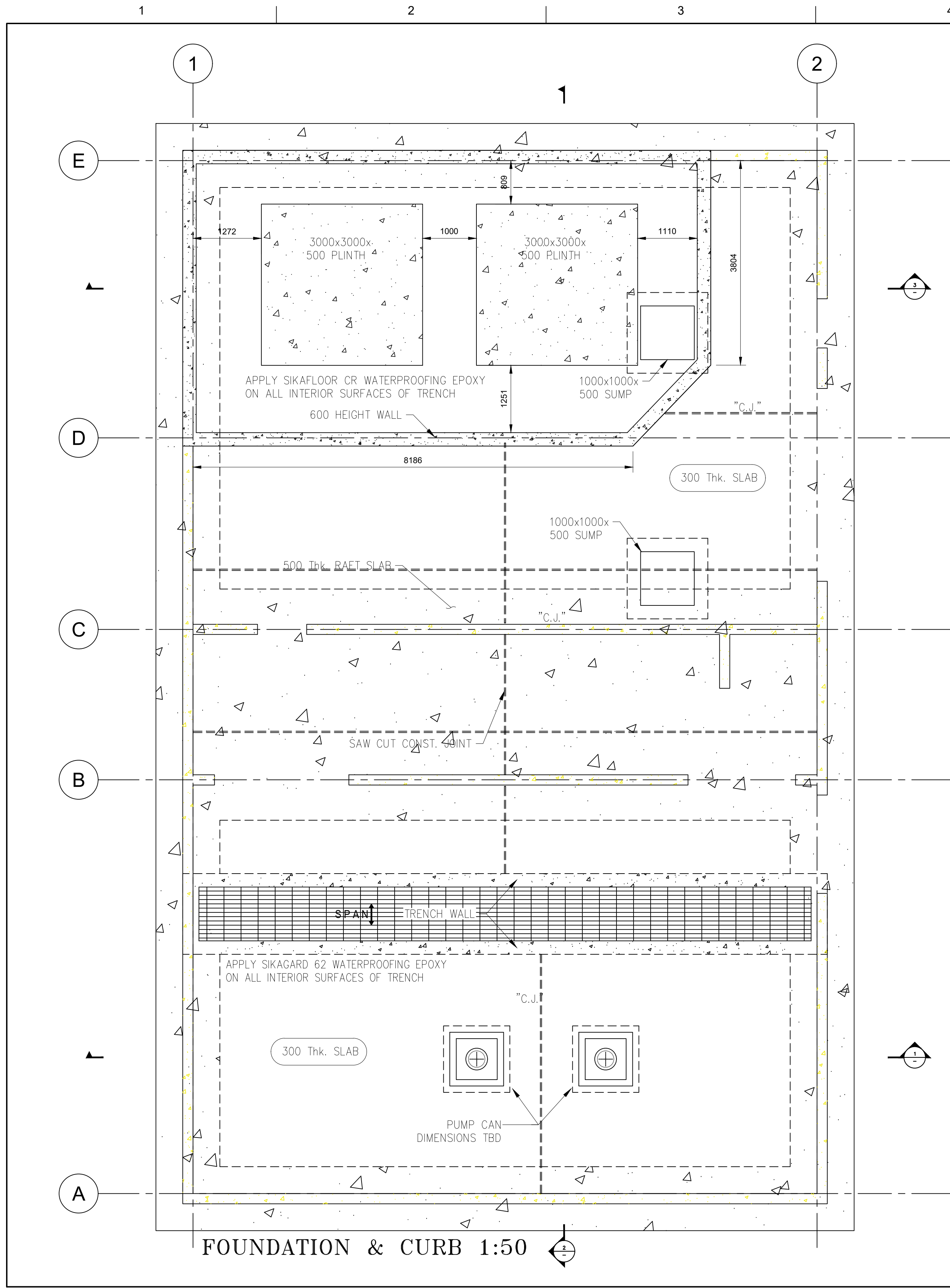
ANTENNA POST CONNECTION DETAIL
1:10



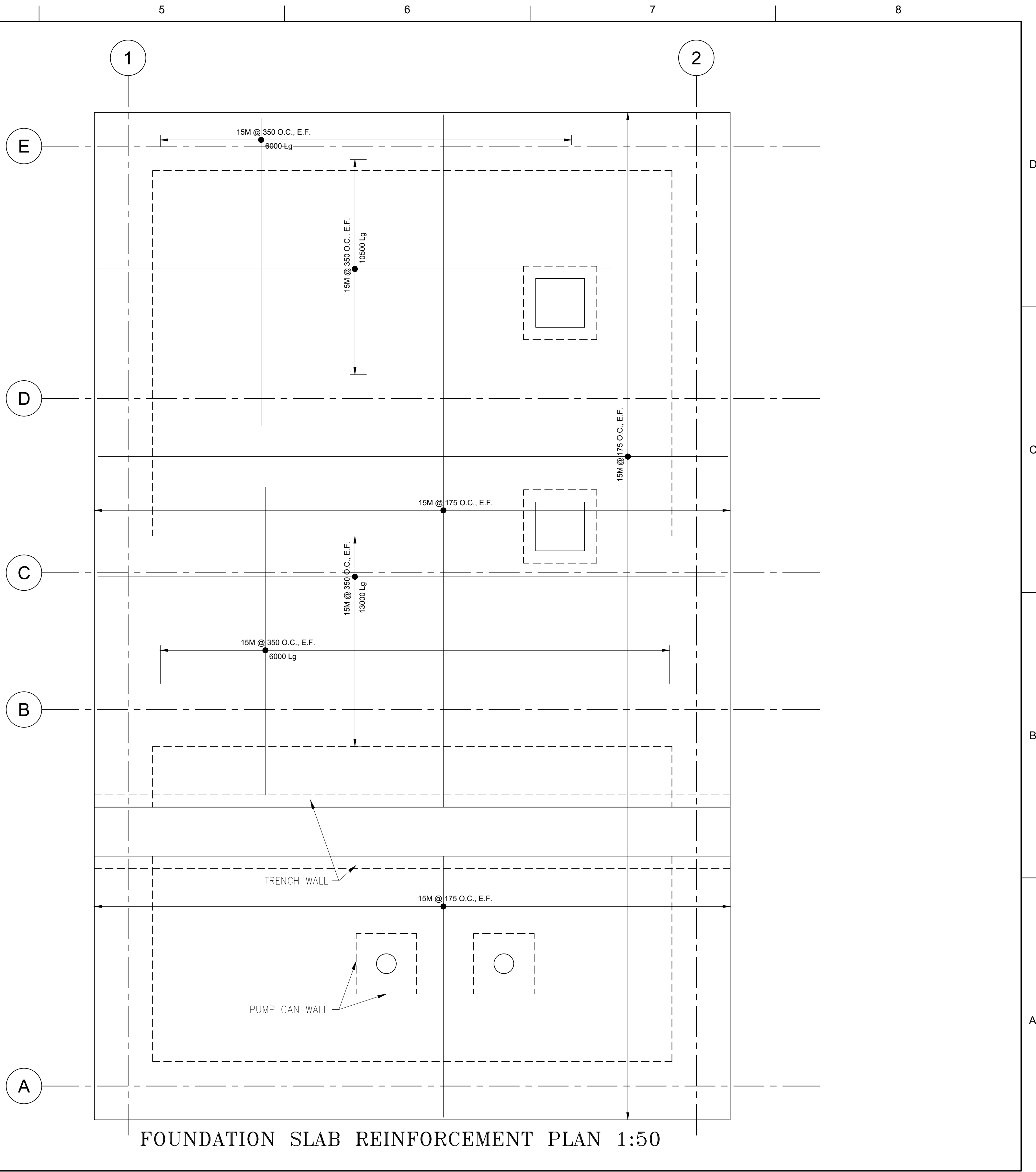
SEC. B
1:10

ISSUE	DATE	DESCRIPTION
1	2023-09-20	ISSUED FOR TENDER

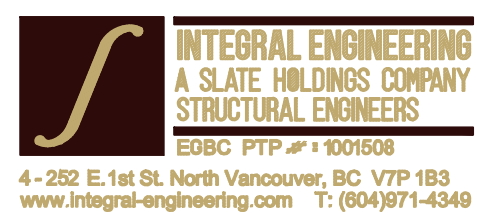
PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307



FOUNDATION & CURB 1:50



FOUNDATION SLAB REINFORCEMENT PLAN 1:50



PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

1	2023-09-20	ISSUED FOR TENDER
ISSUE	DATE	DESCRIPTION

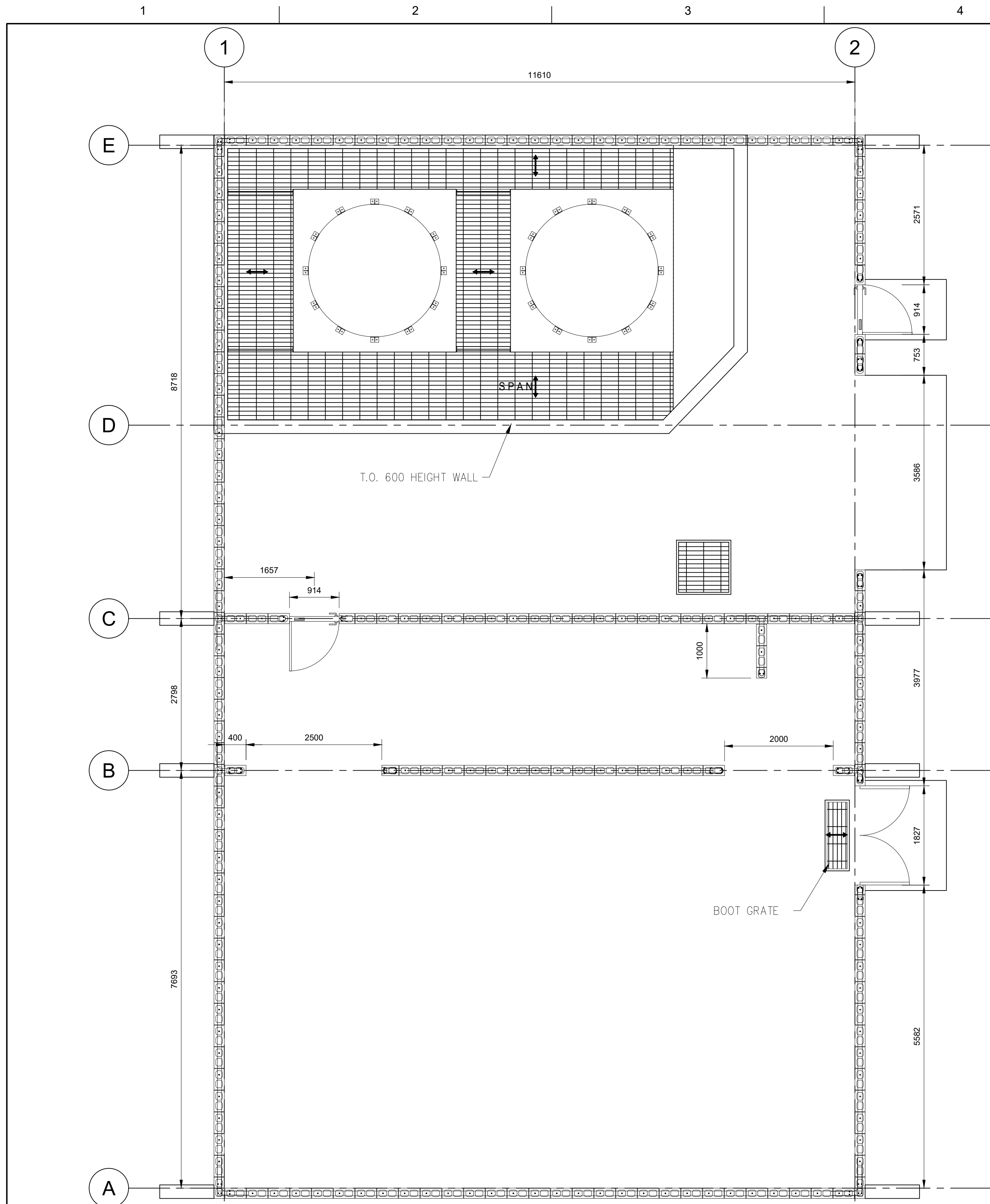
ORIGINAL SEALED



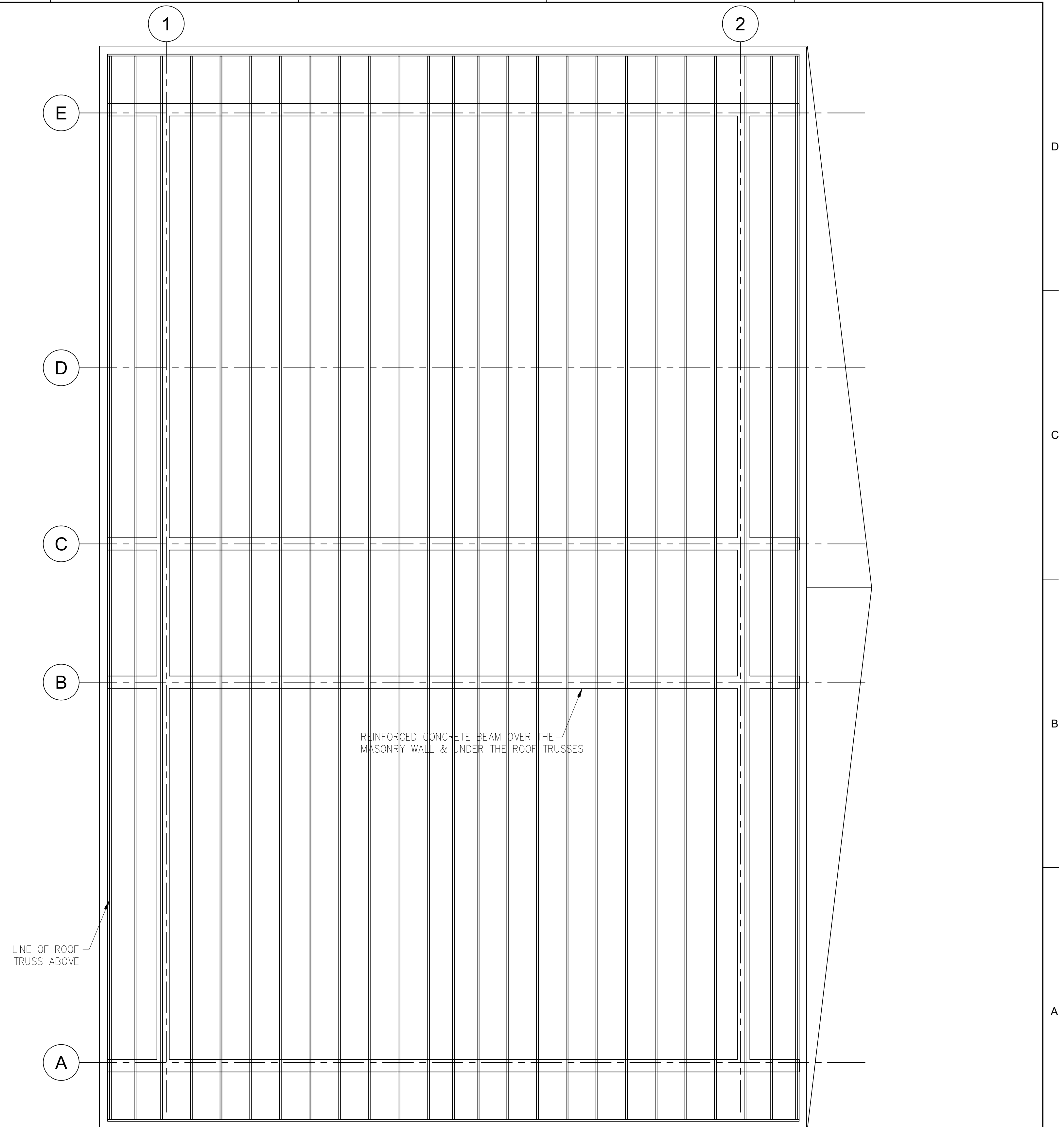
SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY FOUNDATION FORMWORK & REINFORCEMENT

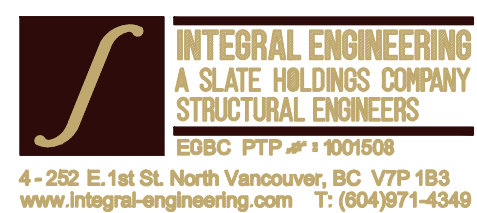
FILENAME | 10299470-S001-006.dwg | SHEET S003
SCALE | AS NOTED



MASONRY WALL PLAN & REINFORCEMENT 1:50



UNDER ROOF & ROOF PLAN 1:50



ISSUE	DATE	DESCRIPTION
1	2023-09-20	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED



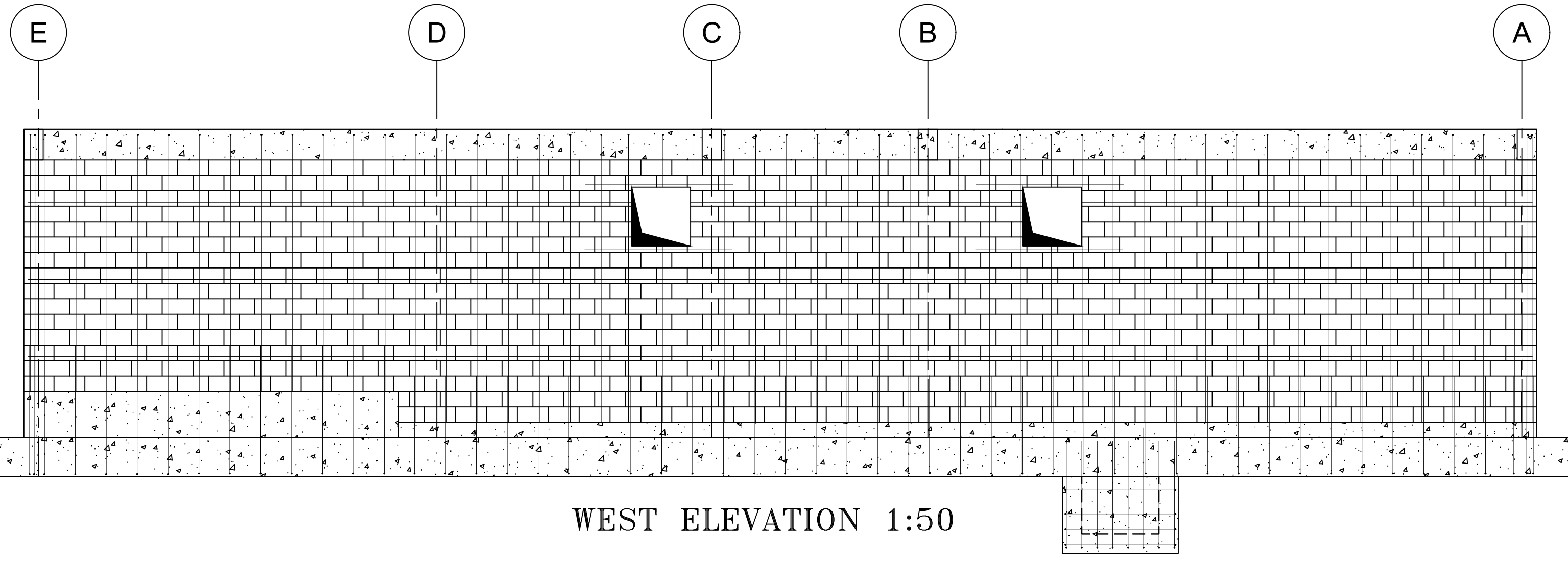
SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WALL PLAN & REINFORCEMENT / ROOF PLAN

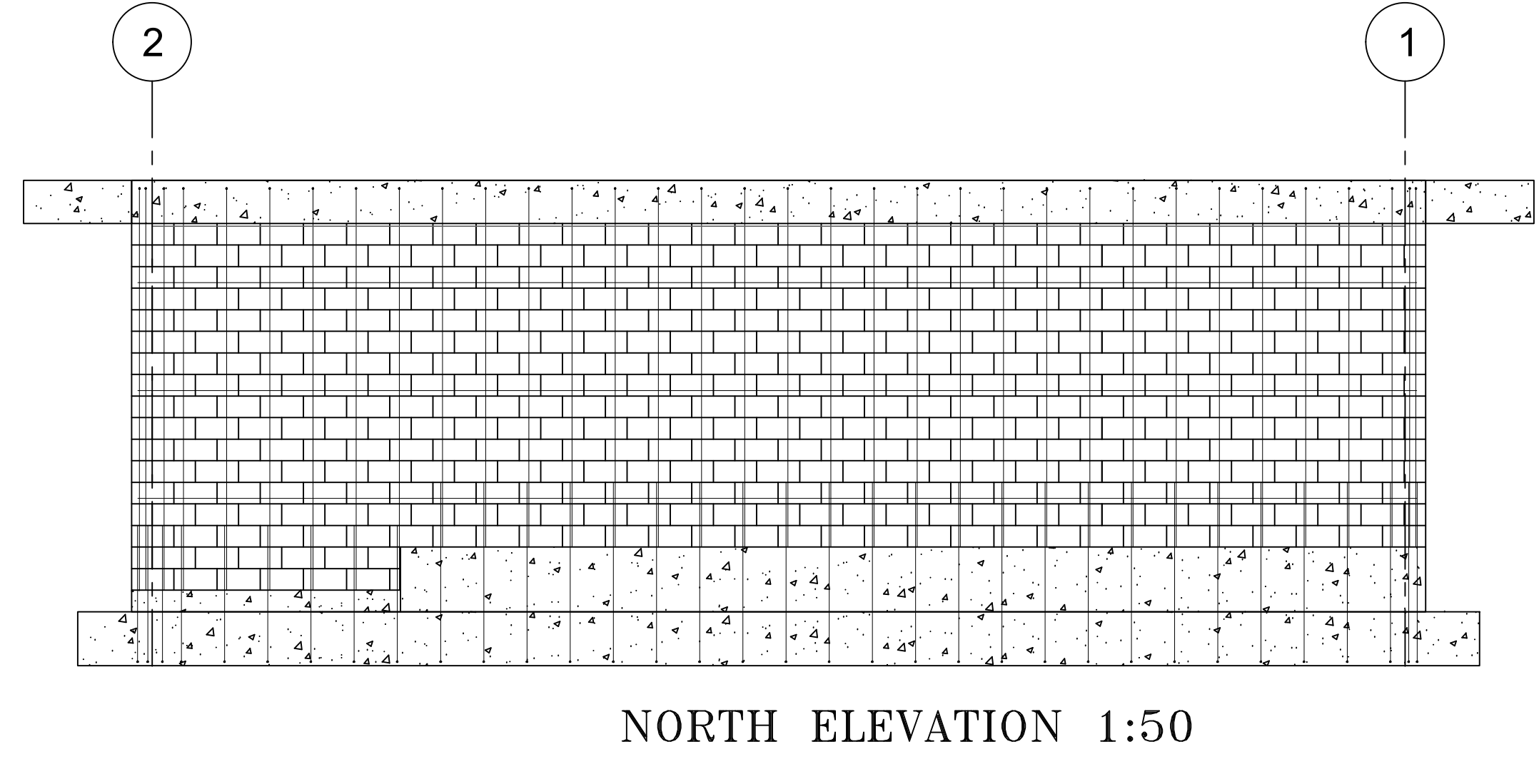
FILENAME 10299470-S001-006.dwg
SCALE AS NOTED

SHEET
S004

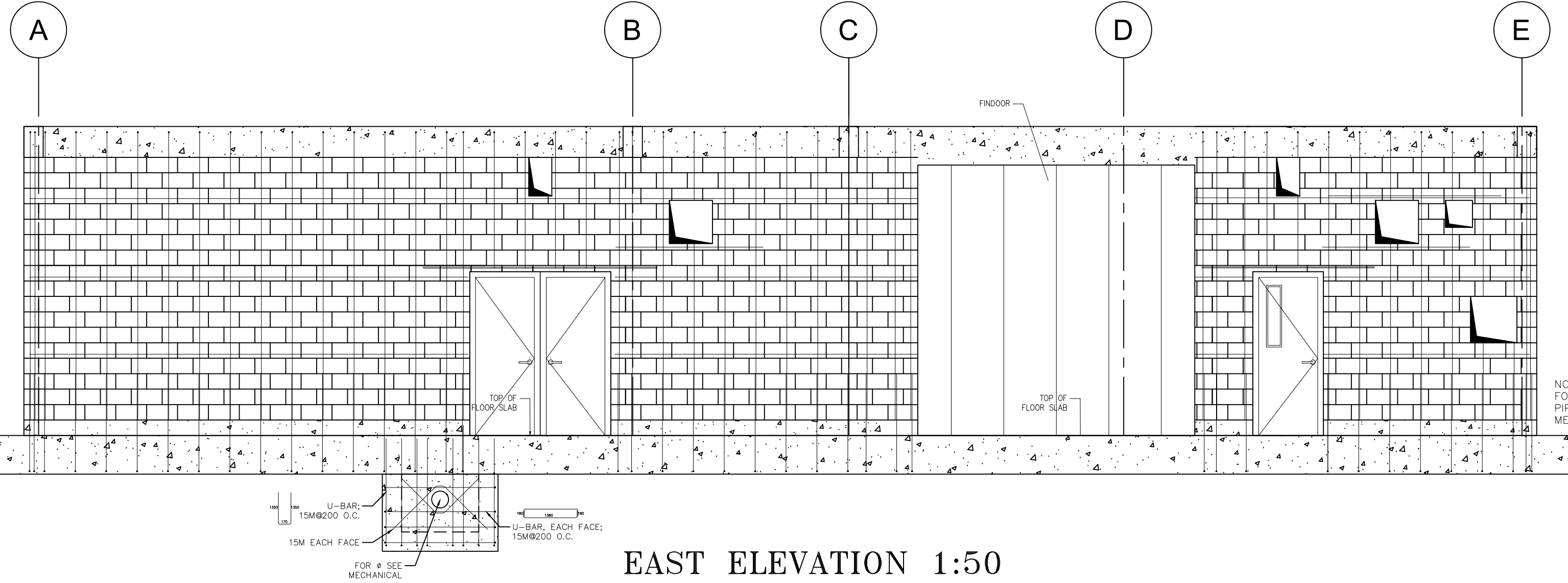
1 2 3 4 5 6 7 8



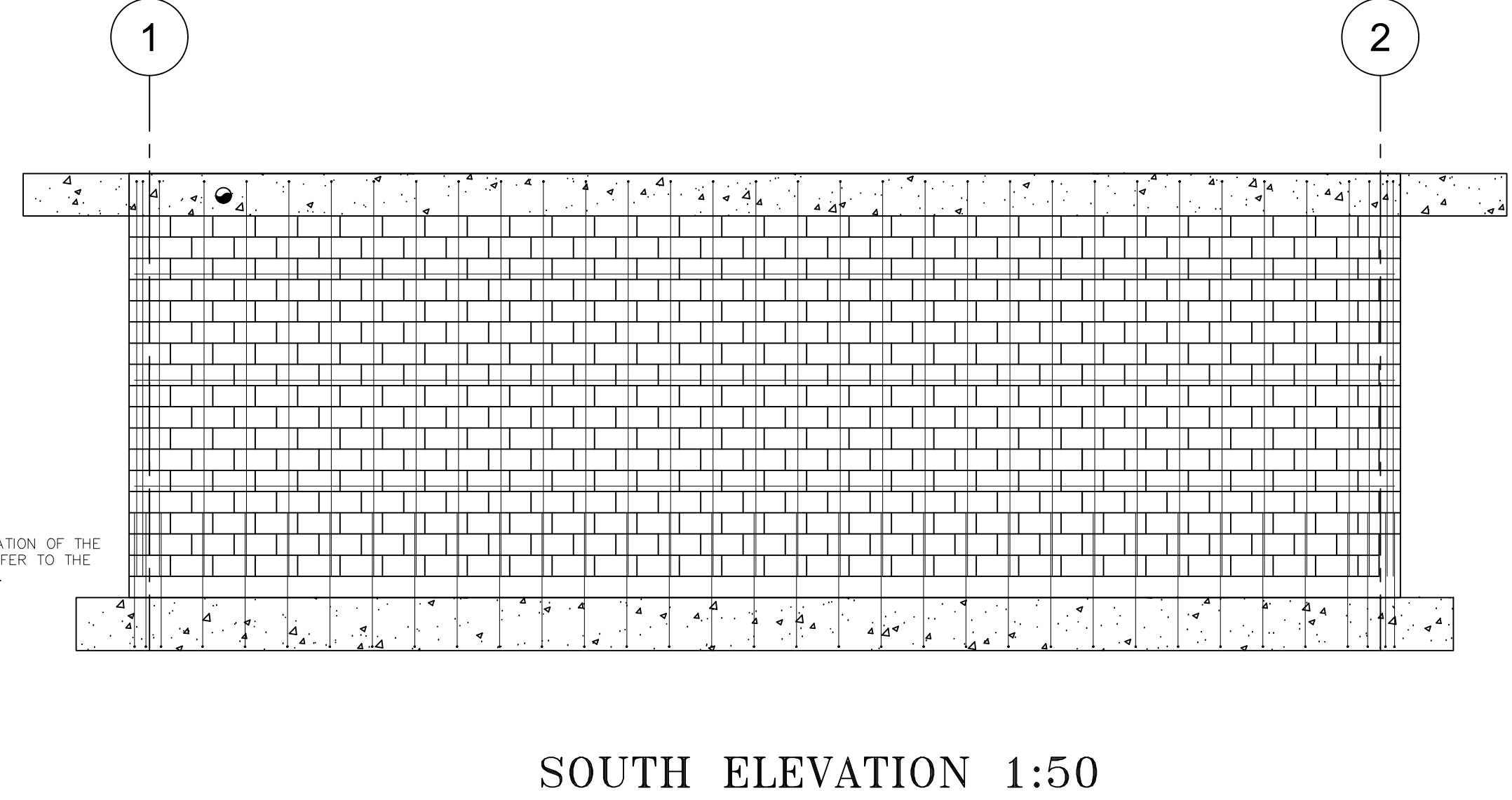
WEST ELEVATION 1:50



NORTH ELEVATION 1:50

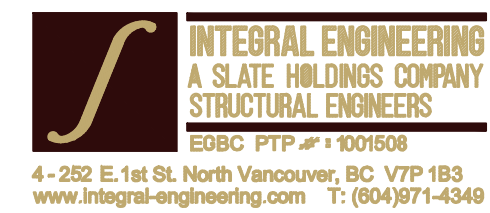
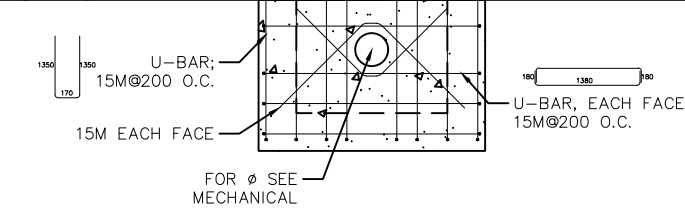


EAST ELEVATION 1:50



SOUTH ELEVATION 1:50

NOTE:
FOR THE PRECISE LOCATION OF THE
PIPE PENETRATIONS REFER TO THE
MECHANICAL DRAWINGS.



ISSUE	DATE	DESCRIPTION
1	2023-09-20	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

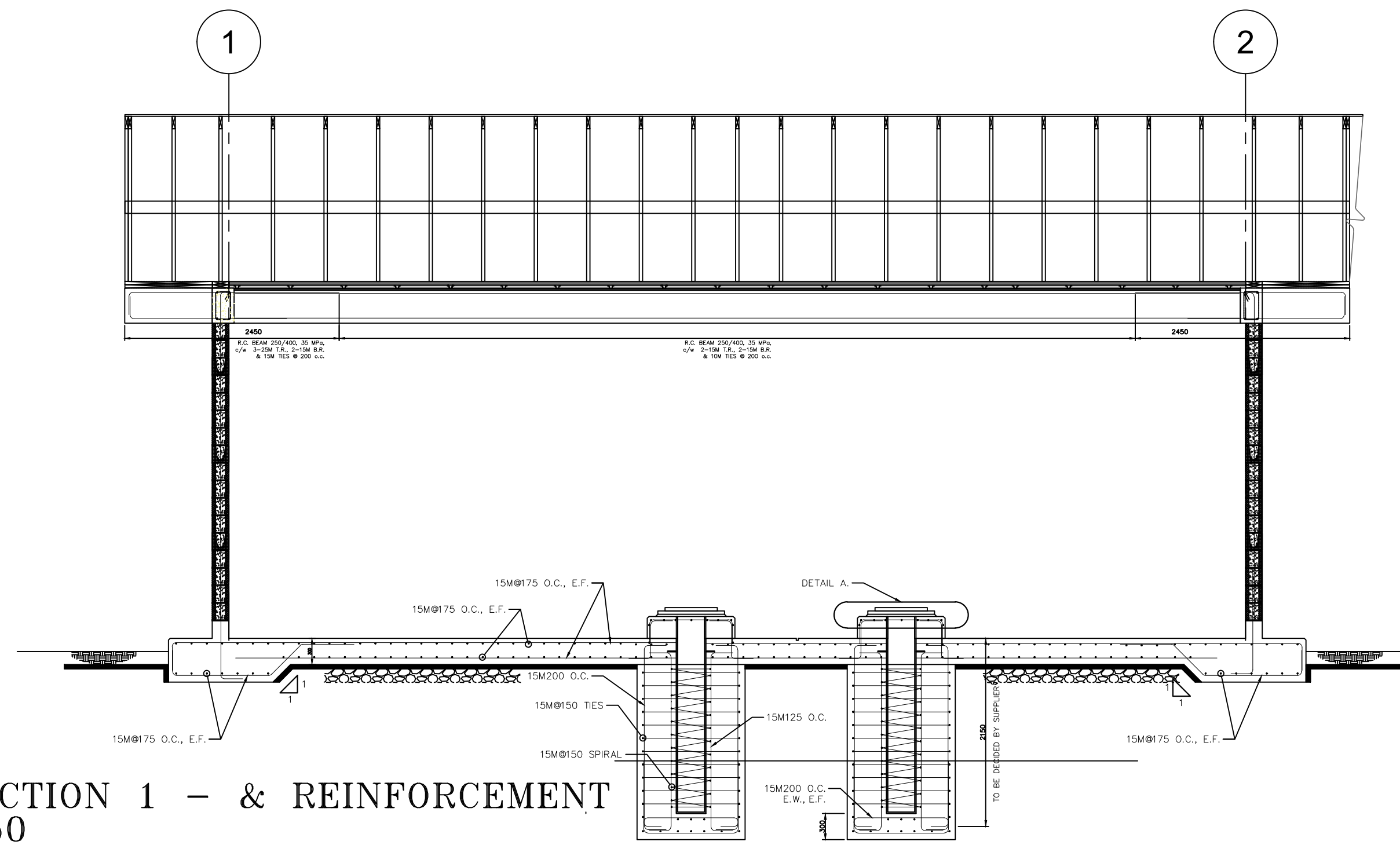
P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

WALL REINFORCEMENT VIEWS

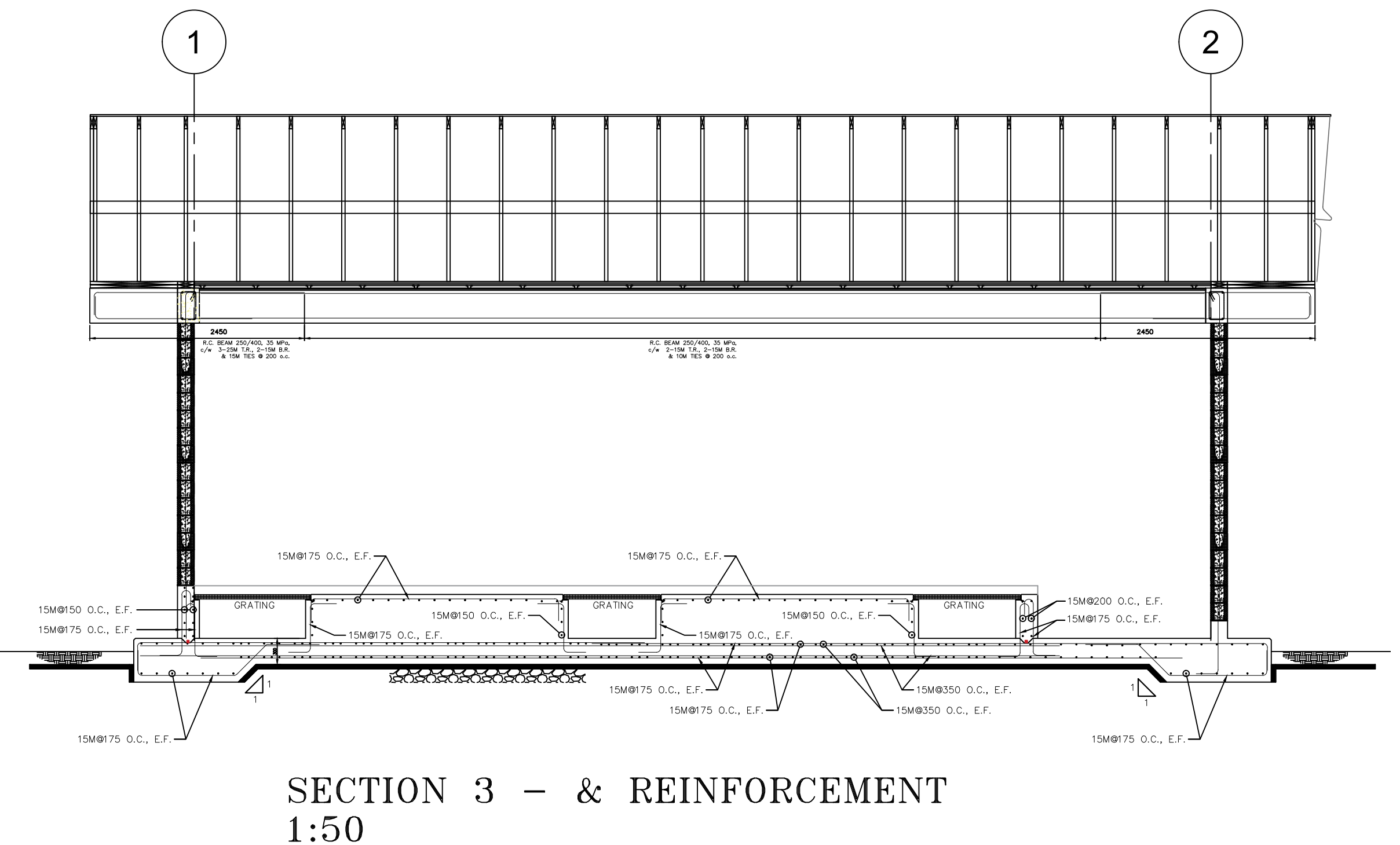
FILENAME | 10299470-S001-006.dwg
SCALE | AS NOTED

SHEET
S005

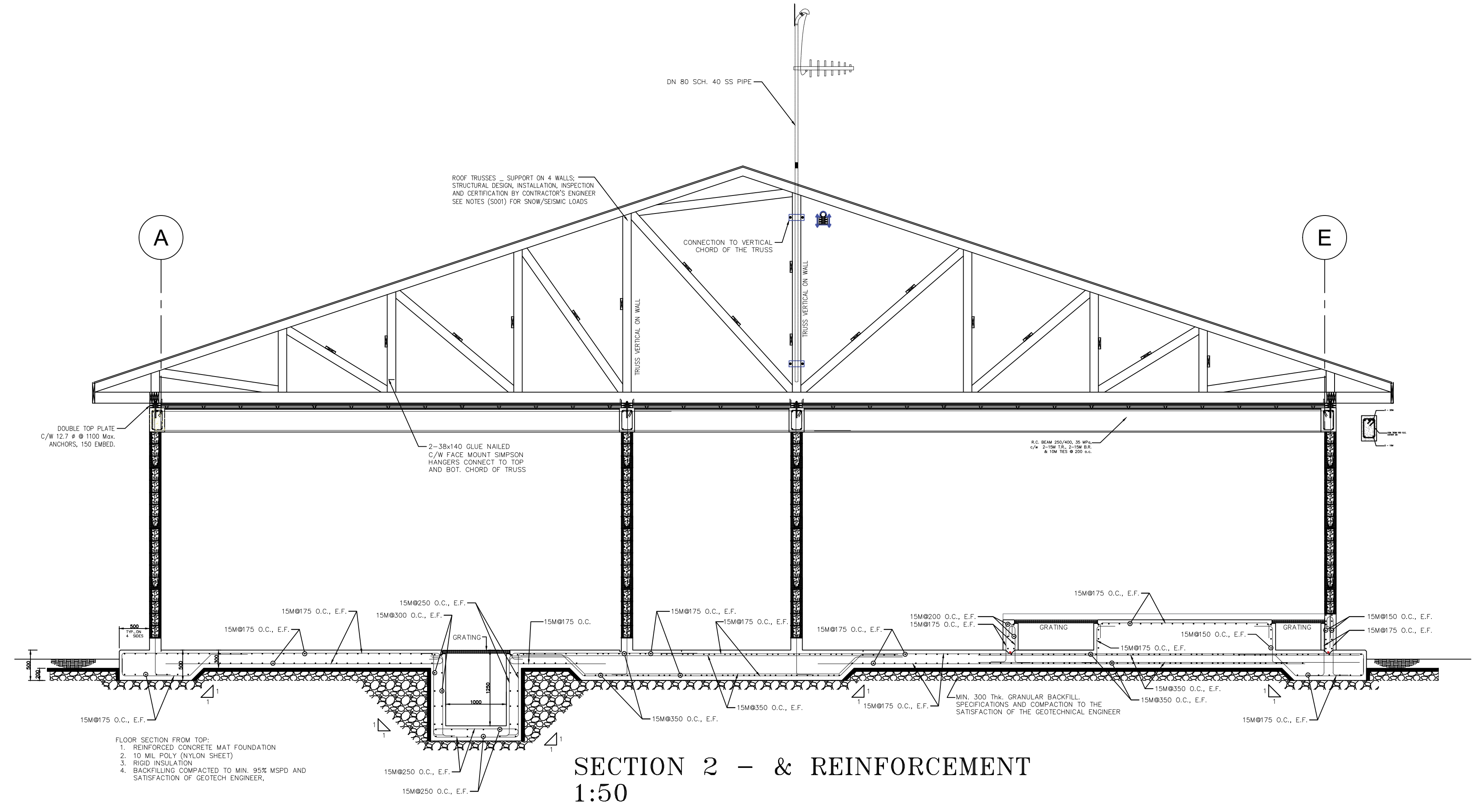
1 2 3 4 5 6 7 8



SECTION 1 - & REINFORCEMENT
1:50



SECTION 3 - & REINFORCEMENT
1:50



SECTION 2 - & REINFORCEMENT
1:50

- FLOOR SECTION FROM TOP:
1. REINFORCED CONCRETE MAT FOUNDATION
 2. 10 MIL. POLY (ON/ON SHEET)
 3. RIGID INSULATION
 4. BACKFILLING COMPACTED TO MIN. 95% MSPD AND SATISFACTION OF GEOTECH ENGINEER.



ISSUE	DATE	DESCRIPTION
1	2023-09-20	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	KS
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

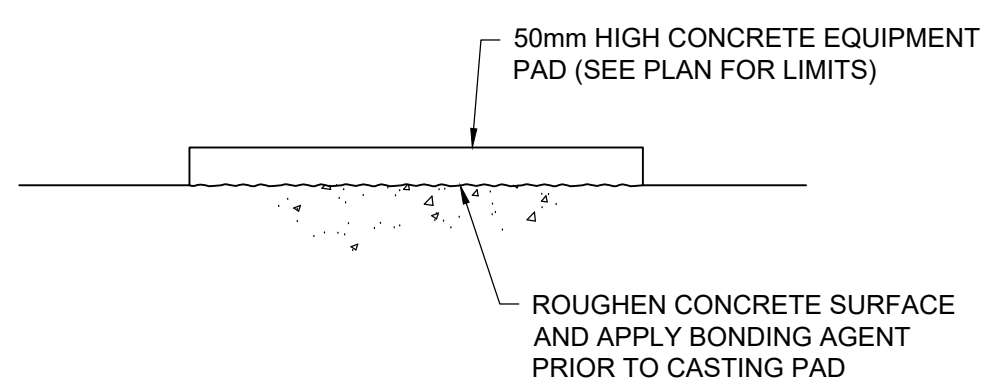
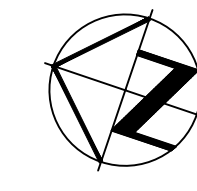
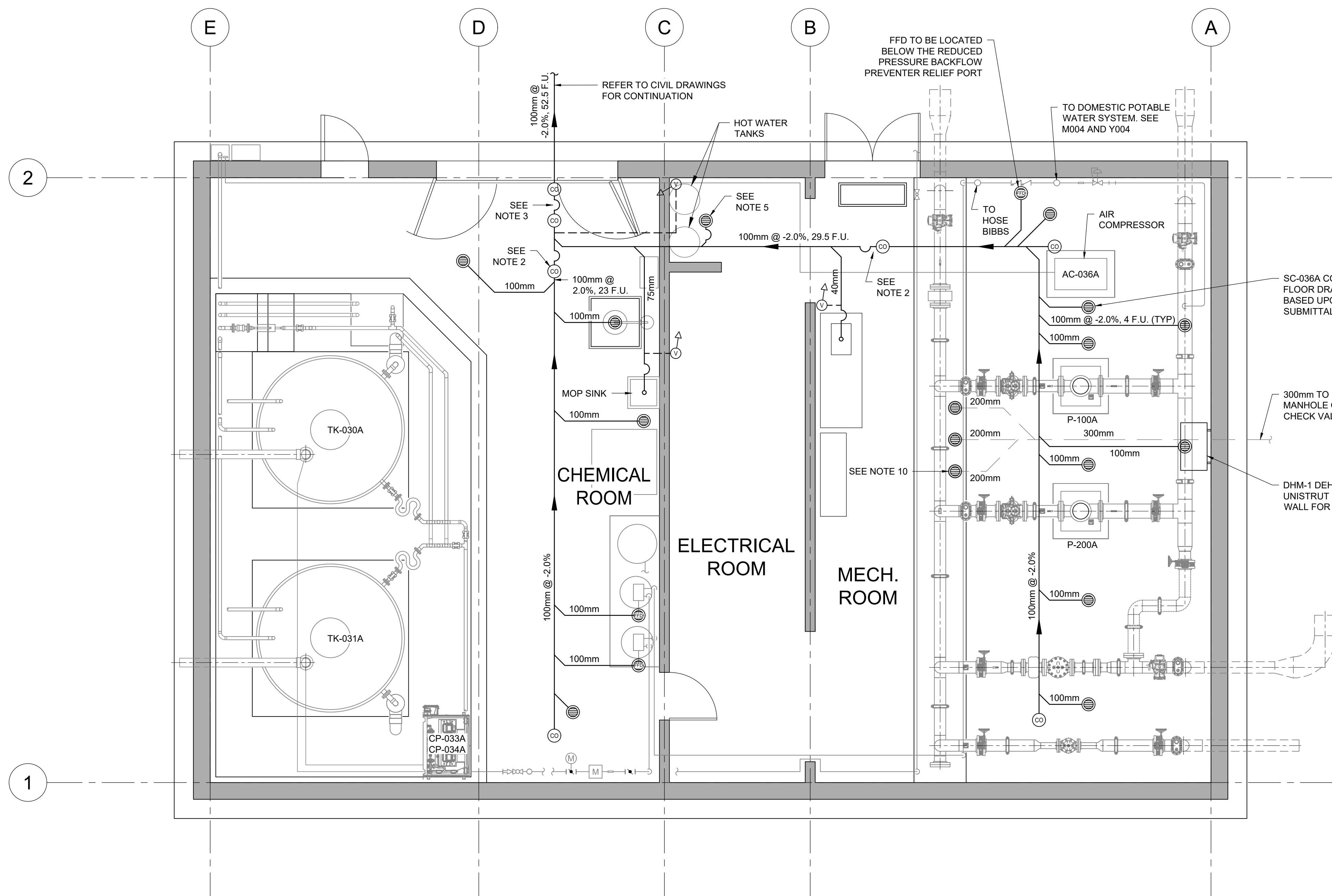
P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

SECTIONS

FILENAME	10299470-S001-006.dwg
SCALE	AS NOTED

SHEET
S006

2023



PLUMBING AND DRAINAGE SYMBOLS AND LINETYPE LEGEND

- POTABLE WATER COLD
- POTABLE WATER HOT / POTABLE WATER TEMPERED
- HOSE BIBB SUPPLY
- DOMESTIC SEWAGE
- DOMESTIC VENT
- ▶ SHOWING NORMAL FLOW DIRECTION
- ⊕ FLOOR DRAIN
- ⊕ FUNNEL FLOOR DRAIN
- ⊕ CLEAN OUT
- ⊕ VENT PIPE APPROX. LOCATION
- X.X F.U. FIXTURE UNIT COUNT

- NOTES:**
1. FLOOR DRAINS BASED ON ZURN ZN415B. FLOOR DRAINS SHALL HAVE 100mm PIPE CONNECTION AND 200mm STRAINER.
 2. RUNNING TRAP AND CLEANOUT. RUNNING TRAP TO SERVE A GROUP OF FLOOR DRAINS THAT ARE LOCATED IN THE SAME ROOM.
 3. BUILDING TRAP, CLEANOUT, AND VENT.
 4. RUNNING TRAPS TO BE PRIMED WITH A TRAP SEAL PRIMER. RUNNING TRAP IN CHEMICAL ROOM TO BE PRIMED FROM A TRAP SEAL PRIMER INSTALLED ON THE COLD WATER SUPPLY TO THE CHEMICAL ROOM SINK. RUNNING TRAP IN MECHANICAL ROOM TO BE PRIMED FROM A TRAP SEAL PRIMER INSTALLED ON THE COLD WATER SUPPLY TO THE MECHANICAL ROOM SINK.
 5. HOT WATER TANK FLOOR DRAIN TO BE PRIMED WITH A TRAP SEAL PRIMER INSTALLED ON COLD WATER SUPPLY TO THE MECHANICAL ROOM SINK.
 6. TRAP SEAL PRIMERS BASED ON ZURN Z1022-XL.
 7. INSTALLATION TO BE PER BRITISH COLUMBIA PLUMBING CODE.
 8. REFER TO PLUMBING SCHEMATIC ON M-004 FOR DOMESTIC WATER REQUIREMENTS.
 9. PLUMBING IS TO NOT RUN WITHIN THE ELECTRICAL ROOM.
 10. THREE FLOOR DRAINS TO BE INSTALLED IN TRENCH. FLOOR DRAINS BASED ON ZURN Z503, 391mm TOP HEAVY-DUTY AREA DRAIN. PIPE CONNECTIONS TO BE 200mm. PIPING TO INCREASE TO 300mm AND BE RUN TO OVERFLOW MANHOLE. RED VALVE TF-2 TO BE INSTALLED ON END OF PIPE WITHIN THE MANHOLE.
 11. ONE FUNNEL FLOOR DRAIN TO BE PROVIDED FOR EACH WATER SOFTENER SYSTEM RESIN TANK. FUNNEL FLOOR DRAINS TO BE LOCATED BASED ON WATER SOFTENER SYSTEM SHOP DRAWINGS.
 12. ONE FLOOR DRAIN TO BE PROVIDED FOR THE AIR COMPRESSOR CONDENSATE DRAIN. FLOOR DRAIN TO BE LOCATED BASED ON AIR COMPRESSOR SHOP DRAWINGS.
 13. DRAINAGE SYSTEM FIXTURE UNITS:
 - 13.1: 100mm FLOOR DRAINS: 4 F.U.
 - 13.2: MOP SINK: 3 F.U.
 - 13.3: GENERAL SINK: 1.5 F.U.

PLAN
SCALE 1:50



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

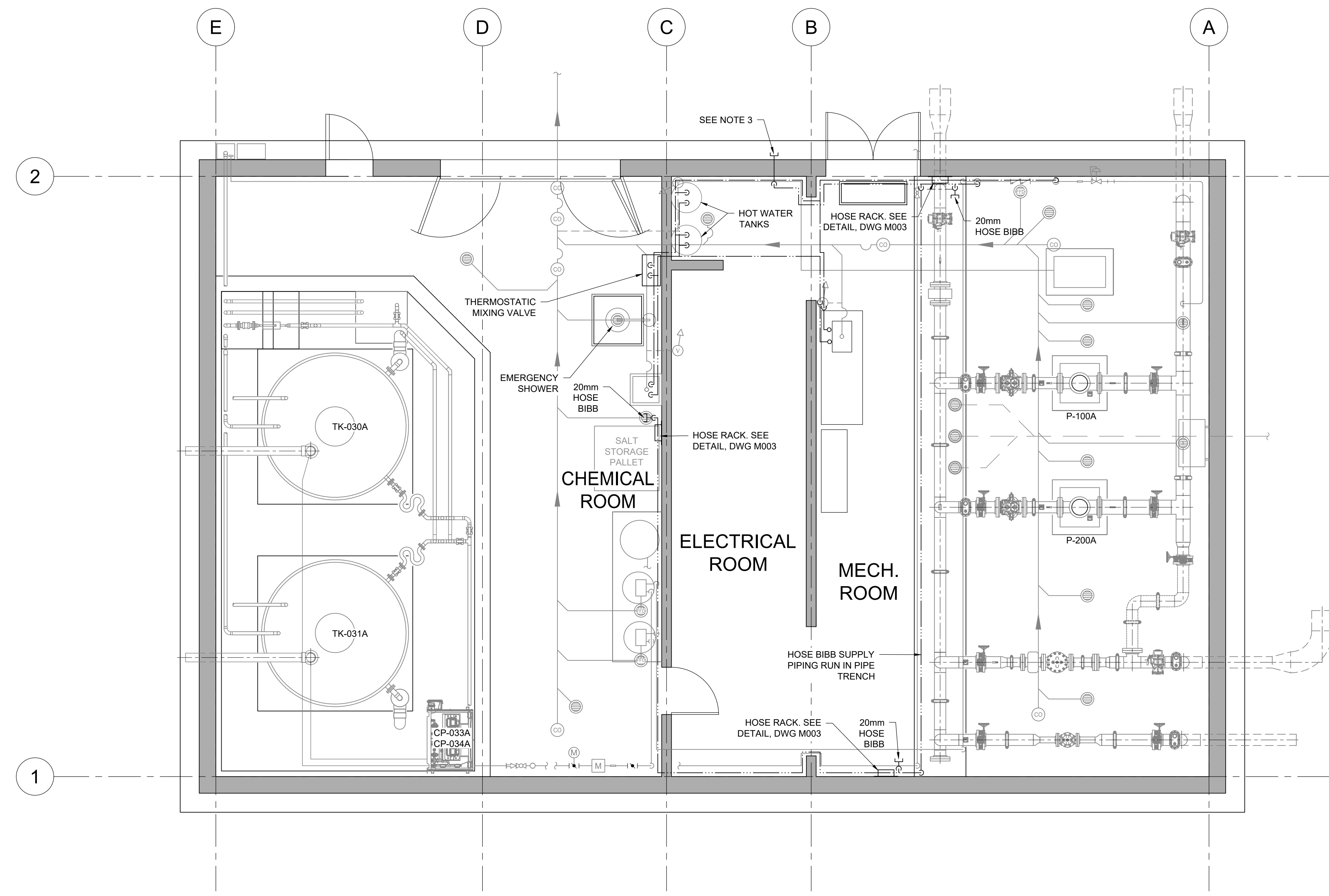
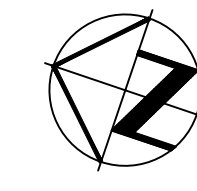


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

PLUMBING LAYOUT PLAN

FILENAME	10299470-M01-201-M001.dwg	SHEET	M001
SCALE	AS NOTED		

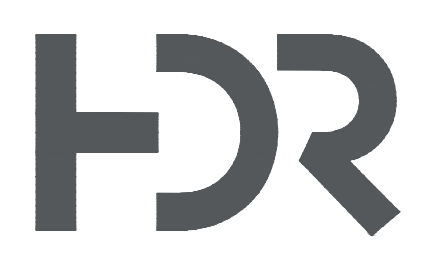


PLAN
SCALE 1:50

PLUMBING AND DRAINAGE SYMBOLS AND LINETYPE LEGEND

- POTABLE WATER COLD
- POTABLE WATER HOT / POTABLE WATER TEMPERED
- HOSE BIBB SUPPLY
- DOMESTIC SEWAGE
- DOMESTIC VENT
- ▶ SHOWING NORMAL FLOW DIRECTION
- ⊙ FLOOR DRAIN
- ⊕ FUNNEL FLOOR DRAIN
- ⊙ CLEAN OUT
- ⊙ VENT PIPE APPROX. LOCATION
- X.X F.U. FIXTURE UNIT COUNT

- NOTES:**
1. PLUMBING INSTALLATION TO BE PER BRITISH COLUMBIA PLUMBING CODE.
 2. SEE M-004 AND Y-004 FOR DOMESTIC PLUMBING SYSTEM LINE SIZE AND VALVE REQUIREMENTS.
 3. 20mm EXTERIOR WALL HYDRANT TO BE NON-FREEZE DESIGN WITH A LOCKING NICKEL-BRONZE BOX AND DOOR. DESIGN BASED UPON THE WATTS HY-725.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

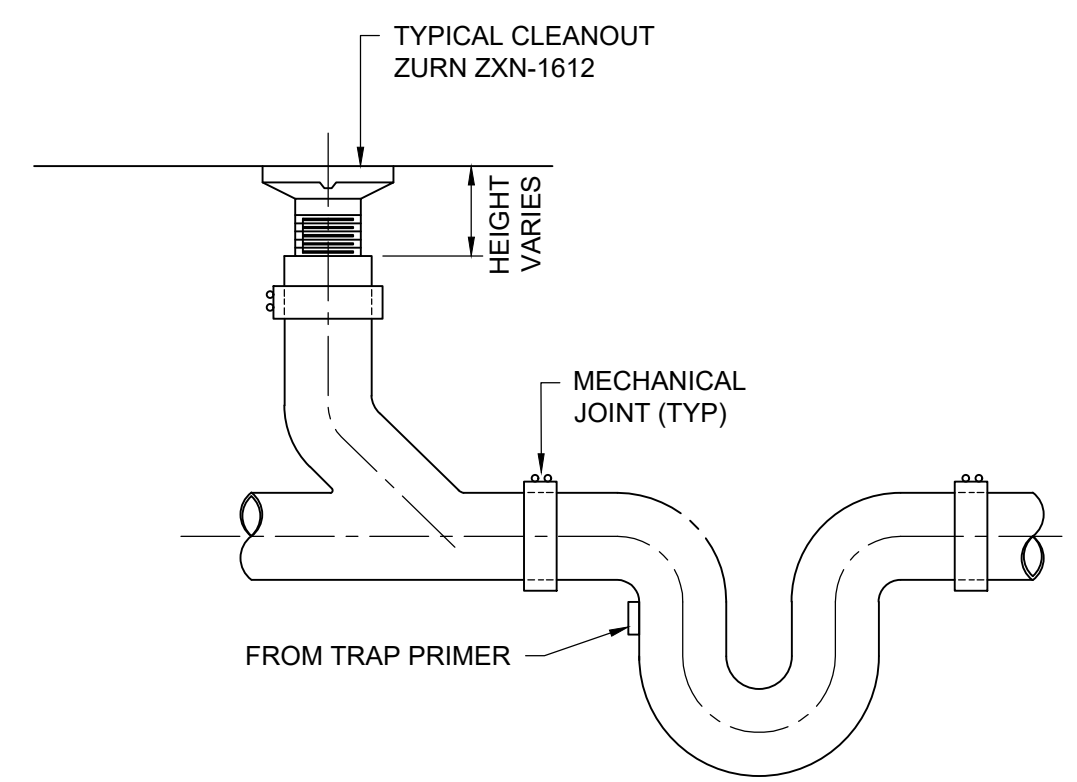


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

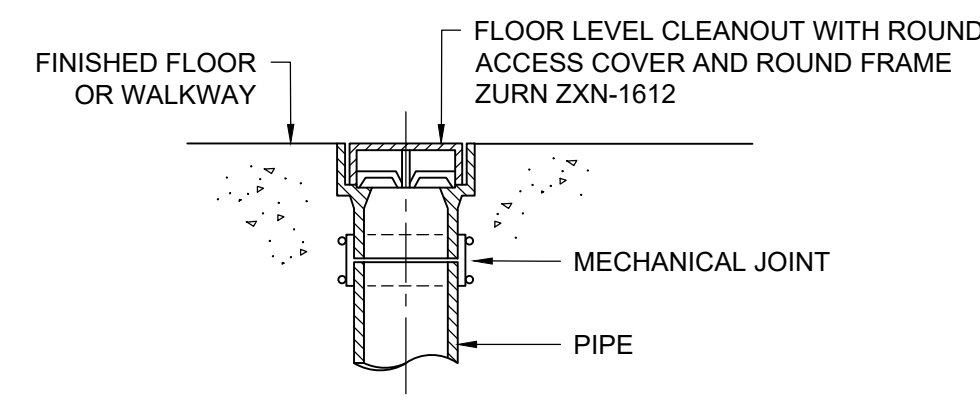
2023

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DOMESTIC PLUMBING SYSTEM LAYOUT PLAN**

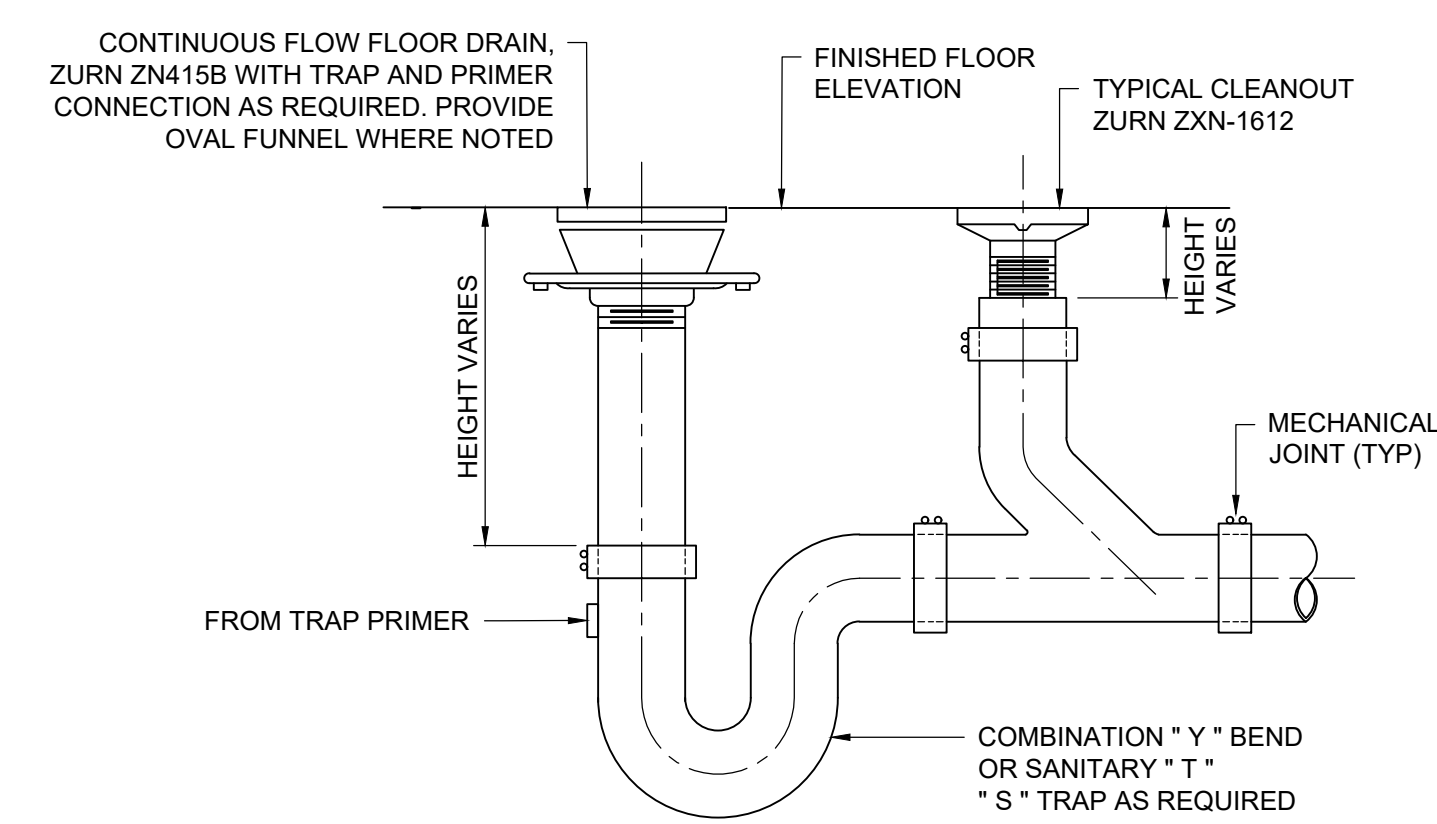
FILENAME	10299470-M01-201-M002.dwg	SHEET	M002
SCALE	AS NOTED		



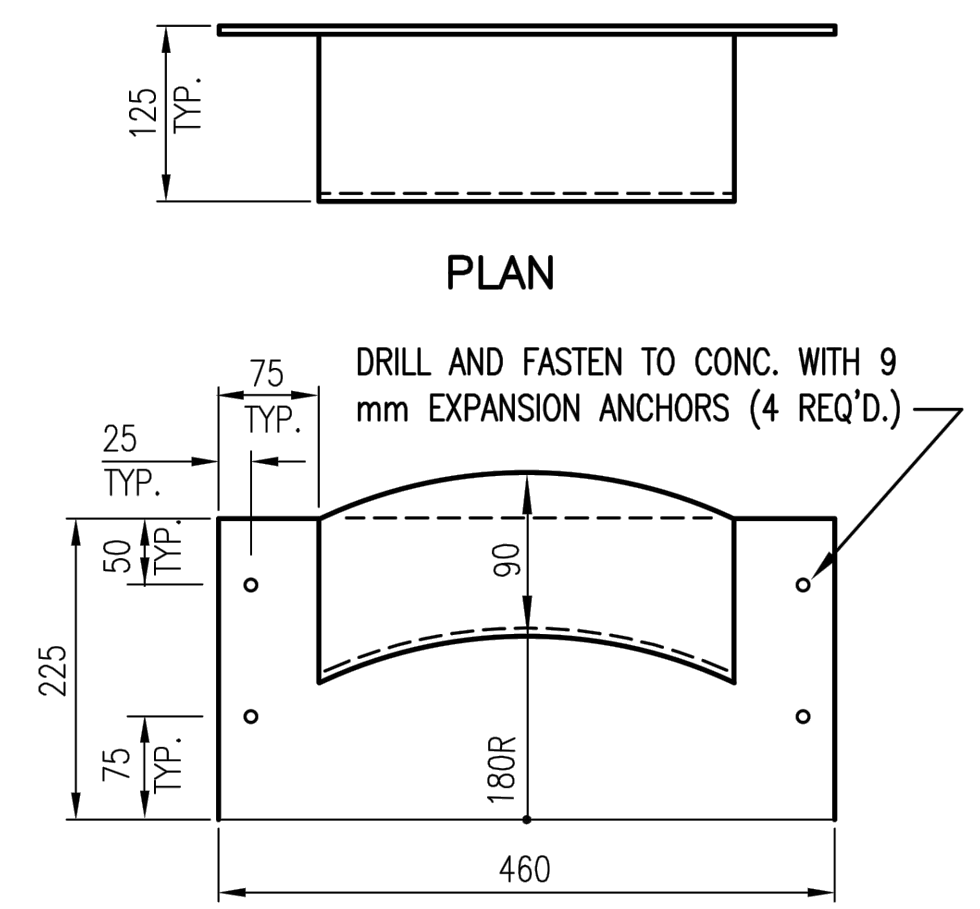
RUNNING TRAP INSTALLATION
TYPICAL DETAIL
SCALE NTS



CLEANOUT INSTALLATION
TYPICAL DETAIL
SCALE NTS



FLOOR DRAIN INSTALLATION
TYPICAL DETAIL
SCALE NTS



NOTE:
ALL HOSE RACKS SHALL BE WELDED CONSTRUCTION FROM 6mm STEEL PLATE, GALVANIZED AFTER FABRICATION. ALL BOLTS AND NUTS SHALL BE GALVANIZED.

WALL-MOUNTED HOSE RACK DETAIL
SCALE NTS



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



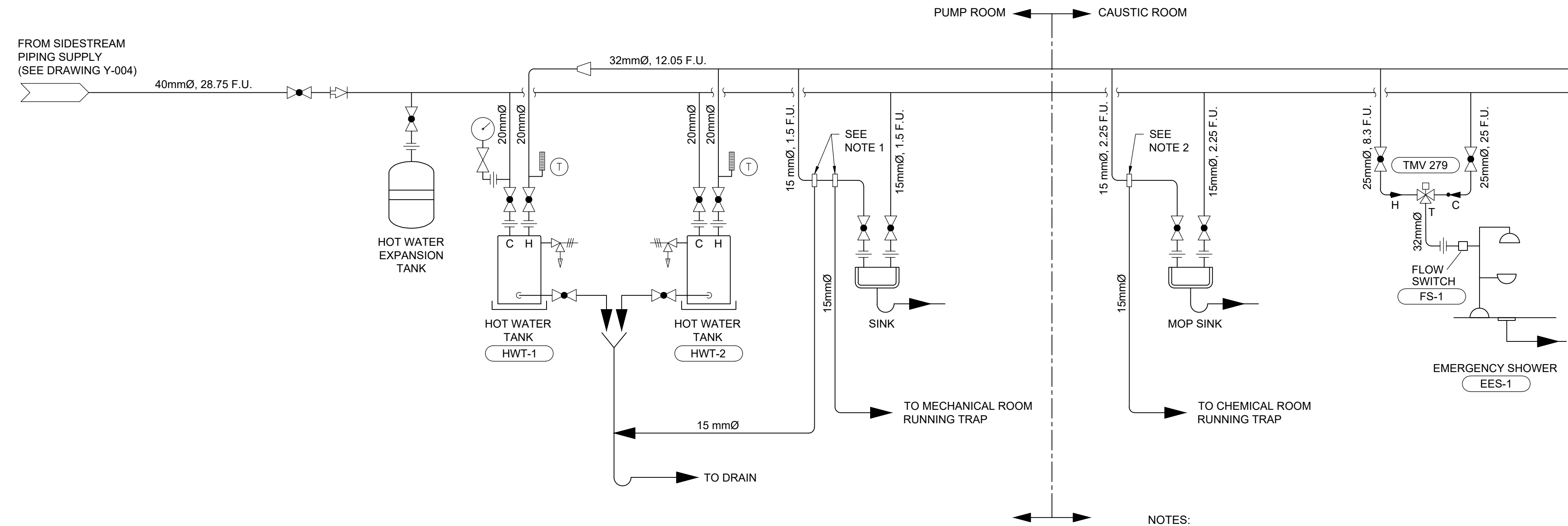
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

2023

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

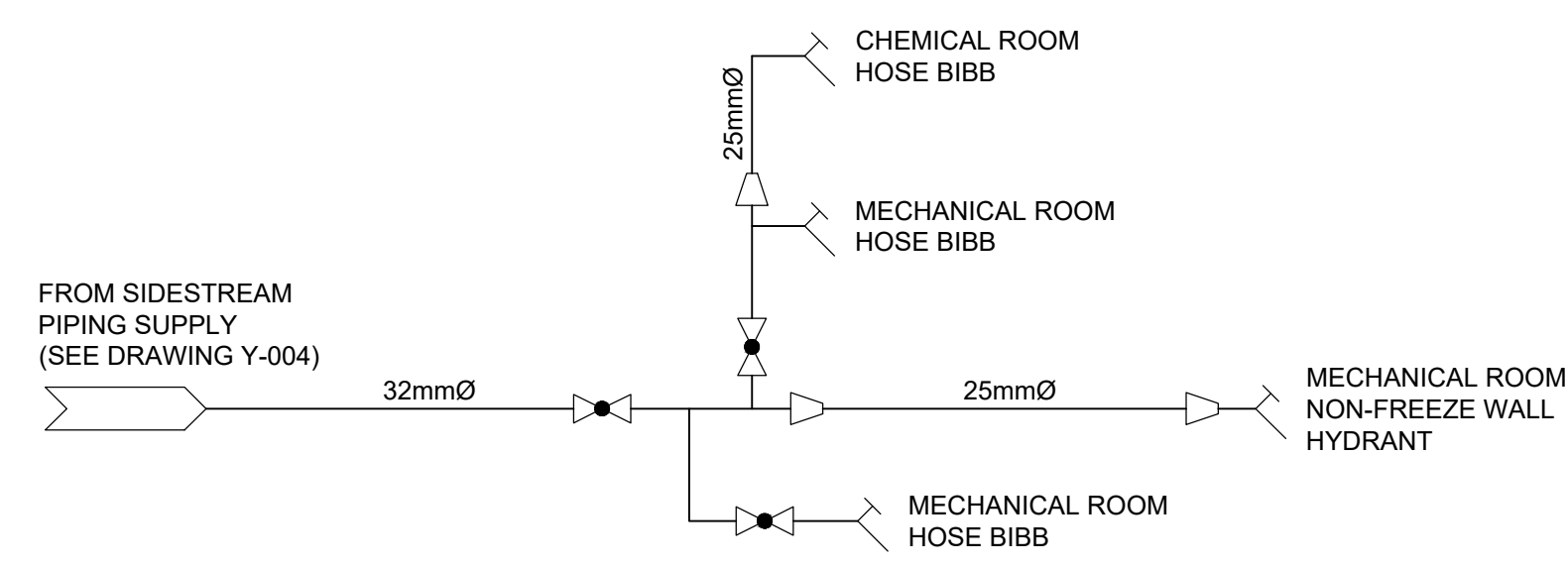
PLUMBING DETAILS

FILENAME	10299470-M01-201-M003.dwg	SHEET
SCALE	AS NOTED	M003



PLUMBING SCHEMATIC
SCALE NTS

- NOTES:
1. TRAP SEAL PRIMERS TO BE INSTALLED ON SINK COLD WATER SUPPLY FOR THE RUNNING TRAP AND HOT WATER TANKS FLOOR DRAIN. OUTLET AND PIPING TO BE MINIMUM 25mm (1/2") AND BE ROUTED TO THE TRAPS. PIPING TO HAVE A CONTINUOUS SLOPE TO THE TRAPS. TRAP SEAL PRIMERS AND OUTLET PIPING TO THE TRAPS TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS.
 2. TRAP SEAL PRIMER TO BE INSTALLED ON SINK COLD WATER SUPPLY. OUTLET AND PIPING TO BE MINIMUM 25mm (1/2") AND BE ROUTED TO THE MECHANICAL ROOM RUNNING TRAP. PIPING TO HAVE A CONTINUOUS SLOPE TO THE RUNNING TRAP. TRAP SEAL PRIMER AND OUTLET PIPING TO THE RUNNING TRAP TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS.
 3. ALL PLUMBING TO BE INSTALLED PER BRITISH COLUMBIA PLUMBING CODE.
 4. EMERGENCY SHOWER TO BE INSTALLED AND TESTED PER CAN/CSA B64.



- NOTES:
1. REDUCE LINE SIZE AT HOSE BIBB AND WALL HYDRANT LOCATION FOR 20mm CONNECTION SIZE.
 2. HOSE BIBBS AND WALL TO BE INSTALLED WITH VACUUM BREAKERS.

HOSE BIBB PIPING SCHEMATIC
SCALE NTS



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

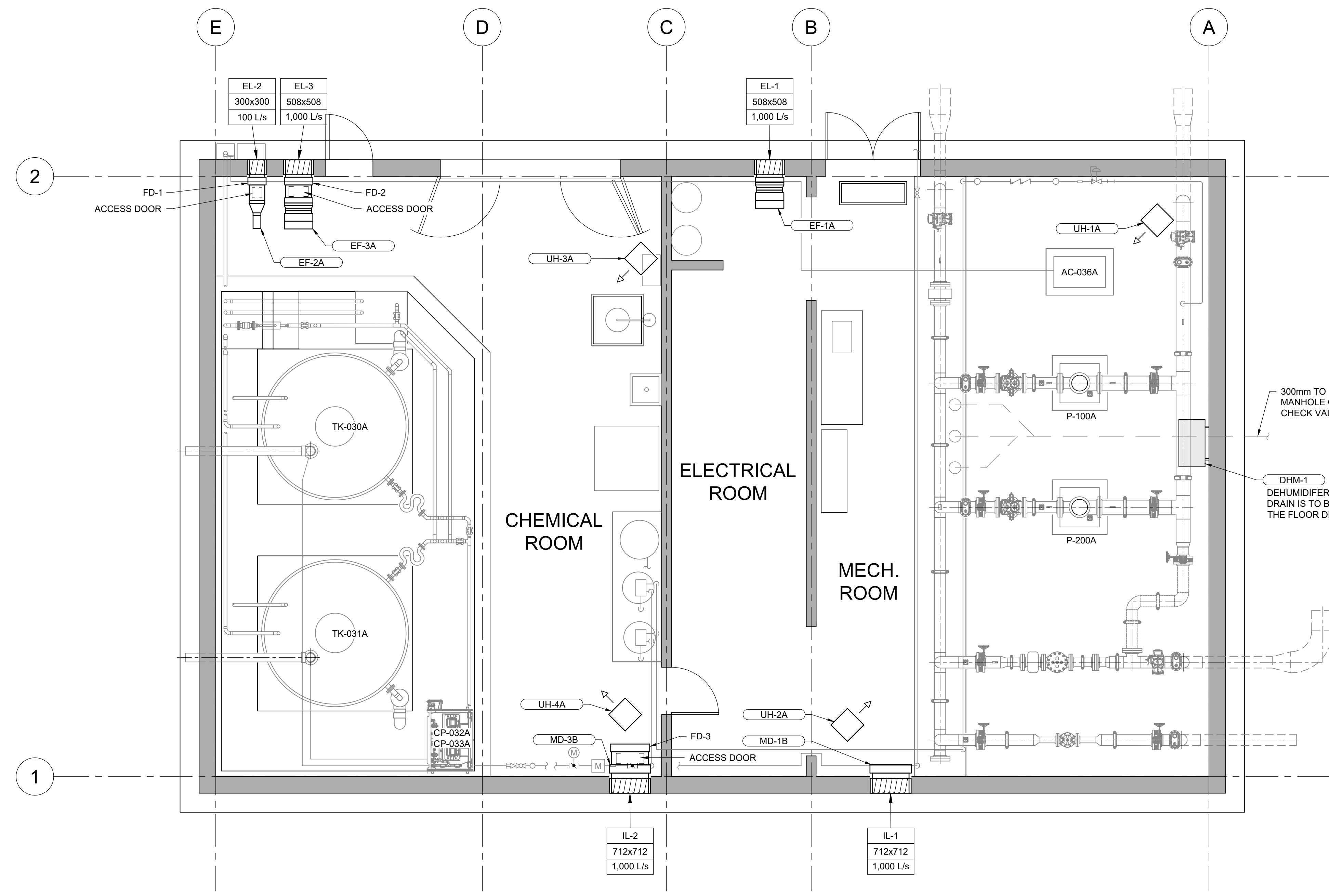
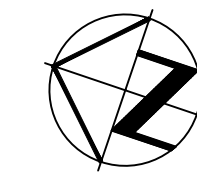


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

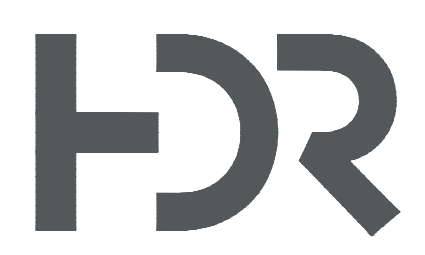
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

PLUMBING SCHEMATIC

FILENAME	10299470-M01-201-M004.dwg	SHEET	M004
SCALE	AS NOTED		



PLAN
SCALE 1:50



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY

HVAC LAYOUT PLAN

FILENAME	10299470-M01-201-M005.dwg	SHEET	M005
SCALE	AS NOTED		

FIRE DAMPER SCHEDULE						
NO.	LOCATION	MANUFACT'R	RATING	DESCRIPTION	SIZE	REMARKS
FD-1, FD-2, FD-3	CAUSTIC ROOM	GREENHECK OR NAILOR	1.5 HOUR	TYPE 'A' DYNAMIC CURTAIN-TYPE FIRE DAMPER	TO FIT WALL OPENING	1

REMARKS:
1. FIRE DAMPER TO BE INSTALLED WITHIN THE WALL ASSEMBLY. A DUCT SHALL BE INSTALLED ADJACENT TO THE DAMPER.

UNIT HEATER SCHEDULE										
NO.	LOCATION	MANUFACT'R	MODEL	CAPACITY KW	ELECTRICAL V	PH.	CY.	AIR FLOW CFM	FAN HP	REMARKS
UH-1A, UH-2A	PUMP ROOM	OUELLET	OAS07536AM	7.5	600	3	60	700	1/30	1
UH-3A, UH-4A	CAUSTIC ROOM	OUELLET	OAS07536AM	7.5	600	3	60	700	1/30	1

REMARKS:
1. COMPLETE WITH REMOTE WALL-MOUNTED THERMOSTAT.

LOUVRE SCHEDULE					
NO.	MANUFACTURER	SERVICE	MODEL	SIZE	REMARKS
IL-1	RUSKIN	PUMP ROOM AIR INTAKE	ELF 375 DXH	712x712	1, 2
IL-2	RUSKIN	CAUSTIC ROOM AIR INTAKE	ELF 375 DXH	712x712	1, 2
EL-1	RUSKIN	PUMP ROOM AIR EXHAUST	ELF 375 DXH	508x508	1, 2
EL-2	RUSKIN	CAUSTIC ROOM AIR EXHAUST	ELF 375 DXH	300x300	1, 2
EL-3	RUSKIN	CAUSTIC ROOM AIR EXHAUST	ELF 375 DXH	508x508	1, 2

REMARKS:
1. COMPLETE WITH BIRD SCREEN.
2. ALUMINUM CONSTRUCTION, DURANAR XL COATED

MOTORIZED DAMPER SCHEDULE									
NO.	LOCATION	SERVICE	MANUFACTURER	MODEL	P.D. (Pa)	MATERIAL	BLADE	ACTUATOR	REMARKS
MD-1B	PUMP ROOM	AIR INTAKE	TAMCO	9000SC	12	ALUMINUM	PARALLEL	BELIMO	1
MD-3B	CAUSTIC ROOM	AIR INTAKE	TAMCO	9000SC	12	ALUMINUM	PARALLEL	BELIMO	1

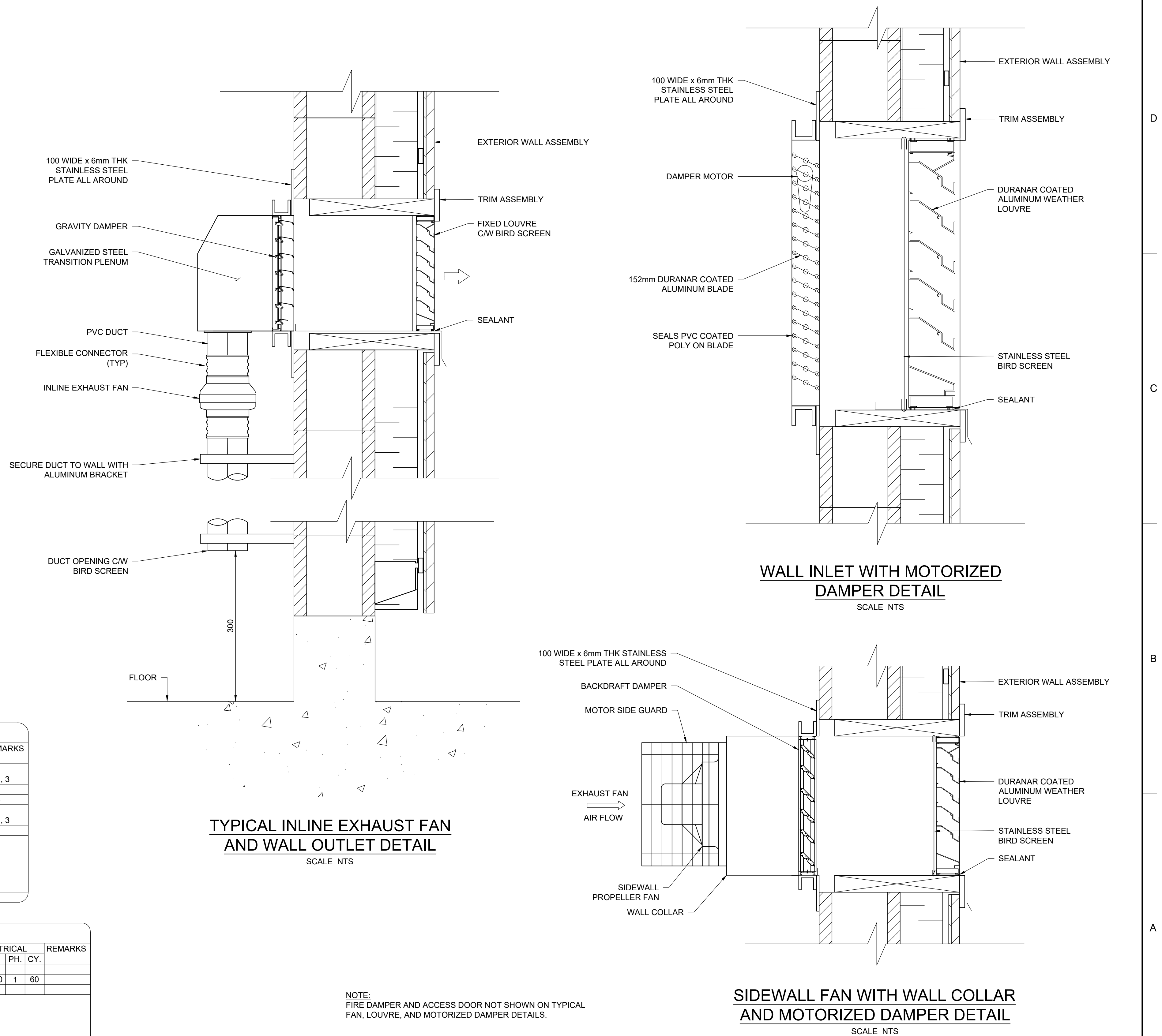
REMARKS:
1. BELIMO SPRING RETURN ACTUATOR, POWER CLOSE, FAIL OPEN.

FAN SCHEDULE												
NO.	LOCATION	MANUFACTURER	MODEL	TYPE	L/s	S.P. (Pa)	FRPM	ELECTRICAL			REMARKS	
								HP	V	PH. CY.		
EF-1A	PUMP ROOM	GREENHECK	SE1-14-436-VG	SIDEWALL PROPELLER	1000	90	1725	FRAC.	120	1	60	1, 2, 3
EF-2A	CAUSTIC ROOM	FANTECH	FR150	INLINE EXHAUST	100	62	2630	FRAC.	120	1	60	1, 3
EF-3A	CAUSTIC ROOM	GREENHECK	SE1-14-436-VG	SIDEWALL PROPELLER	1000	90	1725	FRAC.	120	1	60	1, 2, 3

REMARKS:
1. COMPLETE WITH WALL COLLAR, AND MOTOR SIDE GUARD.
2. COMPLETE WITH VARI-GREEN MOTOR REMOTE WALL MOUNTED SPEED DIAL.
3. SEE ELECTRICAL DIV.16. FOR RATING DETAILS *

DE-HUMIDIFIER EQUIPMENT SCHEDULE												
NO.	LOCATION	DESCRIPTION	MANUFACTURER	MODEL	EXTRACTION (L/D)	S.P. (Pa)	FRPM	ELECTRICAL			REMARKS	
								kW	V	PH. CY.		
DHM-1	PUMP ROOM	WALL HUNG DE-HUMIDIFIER UNIT	EBAC	CD 100 E	46	-	-	1.1	120	1	60	

REMARKS:
1. DEHUMIDIFIER CONDENSATE DRAIN SHALL BE PIPED TO THE CLOSEST FLOOR DRAIN.



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

2023

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
HVAC SCHEDULES & DETAILS

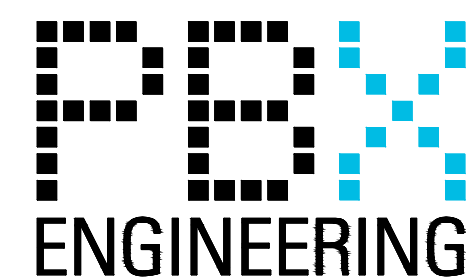
FILENAME	10299470-M01-201-M006.dwg	SHEET	M006
SCALE	AS NOTED		

ELECTRICAL - P291		
DRAWING No.	REV	DESCRIPTION
E001	0	SYMBOLS AND ABBREVIATIONS
E002	0	KEY PLAN
E003	0	SITE PLAN
E100	0	SINGLE LINE DIAGRAM
E101	0	PANEL SCHEDULE
E110	0	CONTROL BLOCK DIAGRAM
E111	0	NETWORK BLOCK DIAGRAM (1 OF 2)
E112	0	NETWORK BLOCK DIAGRAM (2 OF 2)
E120	0	AREA ENLARGEMENT - GENERAL ARRANGEMENT
E121	0	AREA ENLARGEMENT - CABLE TRAY LAYOUT
E122	0	AREA ENLARGEMENT - POWER DISTRIBUTION (600V)
E123	0	CABLE SCHEDULE (600V)
E124	0	AREA ENLARGEMENT - POWER DISTRIBUTION (120-208V)
E125	0	CABLE SCHEDULE (120-280V)
E126	0	AREA ENLARGEMENT - CONTROLS AND COMMUNICATIONS
E127	0	CABLE SCHEDULE (CONTROLS) (1 OF 2)
E128	0	CABLE SCHEDULE (CONTROLS) (2 OF 2)
E129	0	AREA ENLARGEMENT - STATION BUILDING SYSTEMS
E130	0	ELEVATION - MCC-1
E131	0	ELEVATION - CONTROL PANEL (CP-1) & BOM
E132	0	ELEVATION - RTU PANEL
E133	0	ELEVATION - CAUSTIC SODA TRUCK FILL PANEL (CP-032)
E140	0	WIRING DIAGRAMS - VFD-100A
E141	0	WIRING DIAGRAMS - VFD-200A
E142	0	WIRING DIAGRAMS - VENTILATION CONTROLS (1 OF 2)
E143	0	WIRING DIAGRAMS - VENTILATION CONTROLS (2 OF 2)
E144	0	WIRING DIAGRAMS - DEVICES (1 OF 3)
E145	0	WIRING DIAGRAMS - DEVICES (2 OF 3)
E146	0	WIRING DIAGRAMS - DEVICES (3 OF 3)
E150	0	DETAILS - LADDER LOGIC (1 OF 9)
E151	0	DETAILS - LADDER LOGIC (2 OF 9)
E152	0	DETAILS - LADDER LOGIC (3 OF 9)
E153	0	DETAILS - LADDER LOGIC (4 OF 9)
E154	0	DETAILS - LADDER LOGIC (5 OF 9)
E155	0	DETAILS - LADDER LOGIC (6 OF 9)
E156	0	DETAILS - LADDER LOGIC (7 OF 9)
E157	0	DETAILS - LADDER LOGIC (8 OF 9)
E158	0	DETAILS - LADDER LOGIC (9 OF 9)
E400	0	TYPICAL PLC & RTU CABINET WIRING TERMINATIONS (1 OF 2)
E401	0	TYPICAL PLC & RTU CABINET WIRING TERMINATIONS (2 OF 2)

ELECTRICAL - P279		
DRAWING No.	REV	DESCRIPTION
E200	0	AREA ENLARGEMENT
E210	0	SINGLE LINE DIAGRAM
E220	0	MCC & CONTROL PANEL LAYOUT DIAGRAM - EXISTING
E221	0	MCC & CONTROL PANEL LAYOUT DIAGRAM - PROPOSED
E230	0	CONTROL BLOCK DIAGRAM
E231	0	CONTROL SCHEMATIC & PANEL WIRING DIAGRAM - EXISTING
E232	0	CONTROL SCHEMATIC & PANEL WIRING DIAGRAM - PROPOSED
E240	0	WIRING DIAGRAMS - PUMP VFDs
E250	0	DETAILS - JUNCTION BOX WIRING DIAGRAMS & MISC. DETAILS
E251	0	DETAILS - LOOP DIAGRAMS (1 OF 3)
E252	0	DETAILS - LOOP DIAGRAMS (2 OF 3)
E253	0	DETAILS - LOOP DIAGRAMS (3 OF 3)
E254	0	DETAILS - LADDER LOGIC (1 OF 6)
E255	0	DETAILS - LADDER LOGIC (2 OF 6)
E256	0	DETAILS - LADDER LOGIC (3 OF 6)
E257	0	DETAILS - LADDER LOGIC (4 OF 6)
E258	0	DETAILS - LADDER LOGIC (5 OF 6)
E259	0	DETAILS - LADDER LOGIC (6 OF 6)

ELECTRICAL - W212		
DRAWING No.	REV	DESCRIPTION
E300	0	SINGLE LINE DIAGRAM, SITE PLAN, SYMBOL LEGEND - EXISTING
E301	0	SINGLE LINE DIAGRAM, SITE PLAN, SYMBOL LEGEND - PROPOSED
E310	0	CONTROL BLOCK DIAGRAM - EXISTING
E311	0	CONTROL BLOCK DIAGRAM - PROPOSED
E320	0	LIGHTING AND POWER & CONTROL LAYOUTS - EXISTING
E321	0	LIGHTING AND POWER & CONTROL LAYOUTS - PROPOSED
E330	0	ELEVATION - RTU CABINET - EXISTING
E331	0	ELEVATION - RTU CABINET - PROPOSED
E340	0	DEVICE WIRING - EXISTING
E341	0	DEVICE WIRING - PUMP 1 VFD - PROPOSED
E350	0	COMMON CONTROL SCHEMATIC & RTU DIAGRAM - EXISTING
E351	0	COMMON CONTROL SCHEMATIC & RTU DIAGRAM - PROPOSED
E360	0	DETAILS - LADDER LOGIC (1 OF 5)
E361	0	DETAILS - LADDER LOGIC (2 OF 5)
E362	0	DETAILS - LADDER LOGIC (3 OF 5)
E363	0	DETAILS - LADDER LOGIC (4 OF 5)
E364	0	DETAILS - LADDER LOGIC (5 OF 5)

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

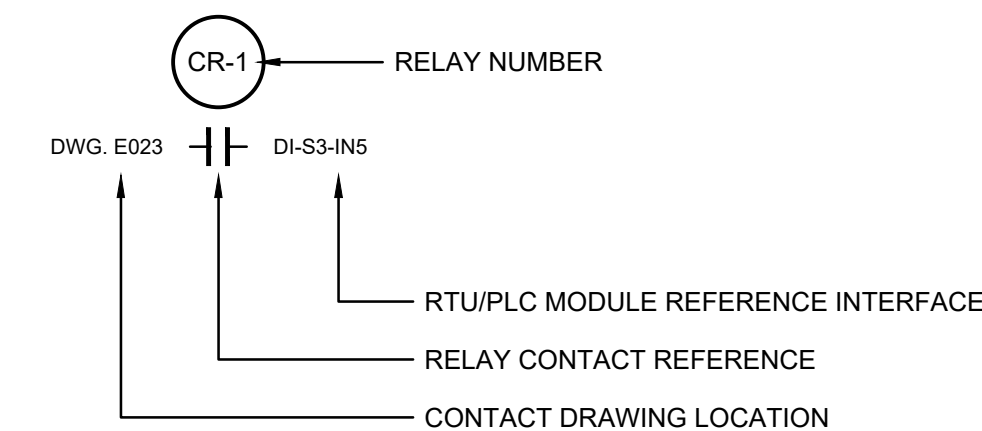
DRAWING INDEX

FILENAME	E000 DRAWING INDEX.DWG	SHEET	E000
SCALE	AS NOTED		

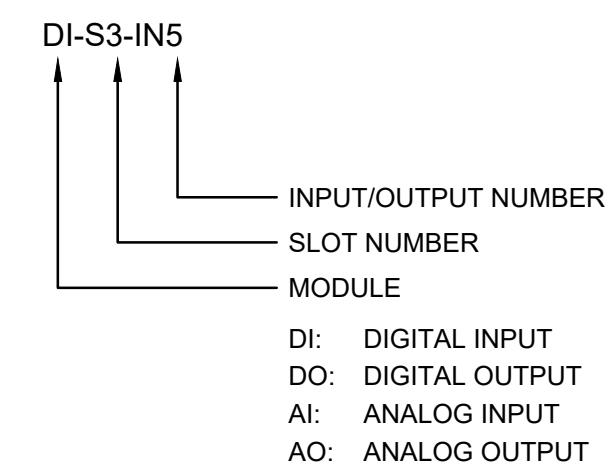
SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE 120V (GFCI)
	LIGHT SWITCH
	MOTOR
	ASTRONOMICAL LIGHTING TIMER SWITCH
	SECURITY DOOR SWITCH
	MOTION DETECTOR
	STROBE
	HORN
	SMOKE DETECTOR
	HEAT DETECTOR
	KEYPAD - SECURITY ALARM
	EMERGENCY LIGHTING UNIT WALL PACK & EXIT SIGN COMBO
	EMERGENCY LIGHTING UNIT WALL PACK
	EMERGENCY LIGHTING DOUBLE REMOTE HEAD
	GROUNDING
	CONTACTOR/RELAY COIL
	FUSE
	LOAD BREAK SWITCH
	POWER TRANSFORMER
	NORMAL OPEN CONTACT
	NORMAL CLOSED CONTACT
	CIRCUIT BREAKER
	LED FIXTURE
	DISCONNECT
	120V PLUG
	CONDUIT/CABLE TERMINATION (FILLED DOT ENTERS FROM ABOVE, HOLLOW DOT ENTERS FROM BELOW)
	GROUND ELECTRODE/ROD

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	CT SHORTING SWITCH OR TEST BLOCK
	BC HYDRO METER
	CLIMATE CONTROL THERMOSTAT
	LEVEL SENSOR (LE) OR LEVEL INDICATING TRANSMITTER (LIT) No.X
	FLOW METER SENSOR (FE) OR FLOW INDICATING TRANSMITTER (FIT) No.X
	SURGE PROTECTION DEVICE
	PUMP X
	SUPPLY FAN X; EXHAUST FAN X
	MOTORIZED VALVE
	GROUNDING SYSTEM EXTENSION TAIL
	OUTDOOR LED WALLPACK
	TEMPERATURE SENSOR

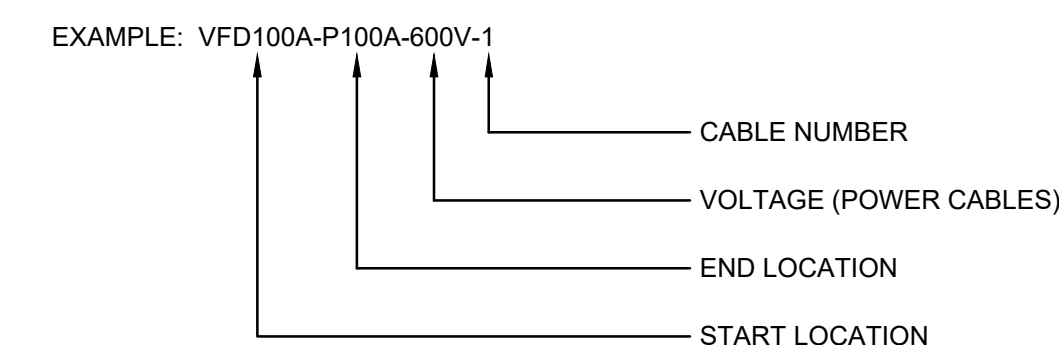
RELAY NAMING AND REFERENCING CONVENTIONS:



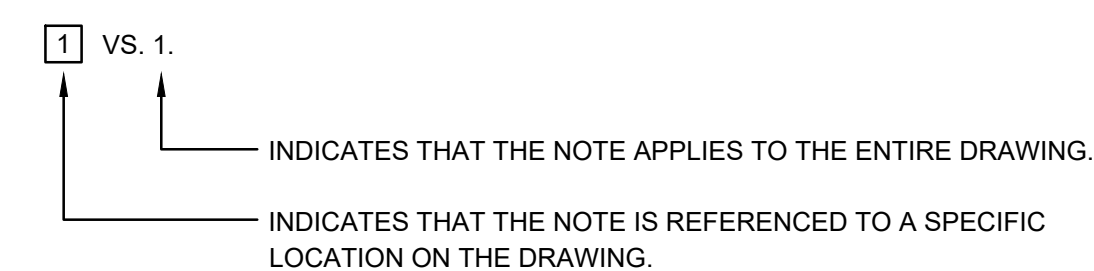
I/O NAMING CONVENTION:



CABLE LABELLING NOMENCLATURE:



NOTES LEGEND:

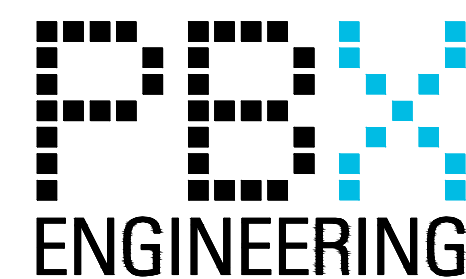


LINE TYPE LEGEND (SITE PLAN)	
LINE	DESCRIPTION
	120V CONDUIT/CABLE
	COMMUNICATIONS OR LOW VOLTAGE CONDUIT/CABLE
	347/600V CONDUIT/CABLE
	GROUNDING
	FIBRE OPTIC (RED)
	ETHERNET (PURPLE)
	PHONE LINE (GREEN)

ABBREVIATIONS:

AC	AIR COMPRESSOR
ATS	AUTOMATIC TRANSFER SWITCH
BAT	BATTERY
C	COIL
CEC	CANADIAN ELECTRICAL CODE (LATEST EDITION)
COMM	COMMUNICATIONS
COMP	COMPRESSOR
CONT	CONTAINMENT
CP	CONTROL PANEL
CTRL	CONTROL
DPM	DIGITAL POWER METER
EHT	ELECTRICAL HEAT TRACE
EF	EXHAUST FAN
F	FUSE
FCB	FEEDER CIRCUIT BREAKER
FCV	FLOW CONTROL VALVE
FE	FLOW SENSOR
FIT	FLOW INDICATING TRANSMITTER
BFCI	GROUND FAULT CIRCUIT INTERRUPTER HOT/ENERGIZED
HOA	HAND-OFF-AUTO CONTROL
HP	HORSE POWER
HWT	HOT WATER TANK
I/O	INPUT/OUTPUT
IP	INTERNET PROTOCOL
LE	LEVEL SENSOR
LED	LIGHT EMITTING DIODE
LSH	LEVEL SWITCH HIGH
LTG	LIGHT/LIGHTING
MCC	MOTOR CONTROL CENTRE
MD	MOTORIZED DAMPER
MGB	MASTER GROUND BAR
MV	MOTORIZED VALVE
NC	NEUTRAL
NO	NORMALLY CLOSED
NO	NORMALLY OPEN
PUMP	PUMP
PS	POWER SUPPLY
PEC	PHOTOCELL LIGHTING CIRCUIT CONTROLLER
PH, Ø	PHASE
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PRV	PRESSURE REDUCING VALVE
PS	POWER SUPPLY
RSV	PRESSURE SAFETY VALVE
RELAY	RELAY
RTU	REMOTE TERMINAL UNIT
S2S	SEA TO SKY
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
NS	NETWORK SWITCH
THERMOSTAT	THERMOSTAT
TE	TEMPERATURE SENSOR
TEMP	TEMPERATURE
TK	TANK
TPSH	TWISTED PAIR SHIELDED
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WS	WATER SOFTENER
XFMR	TRANSFORMER

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

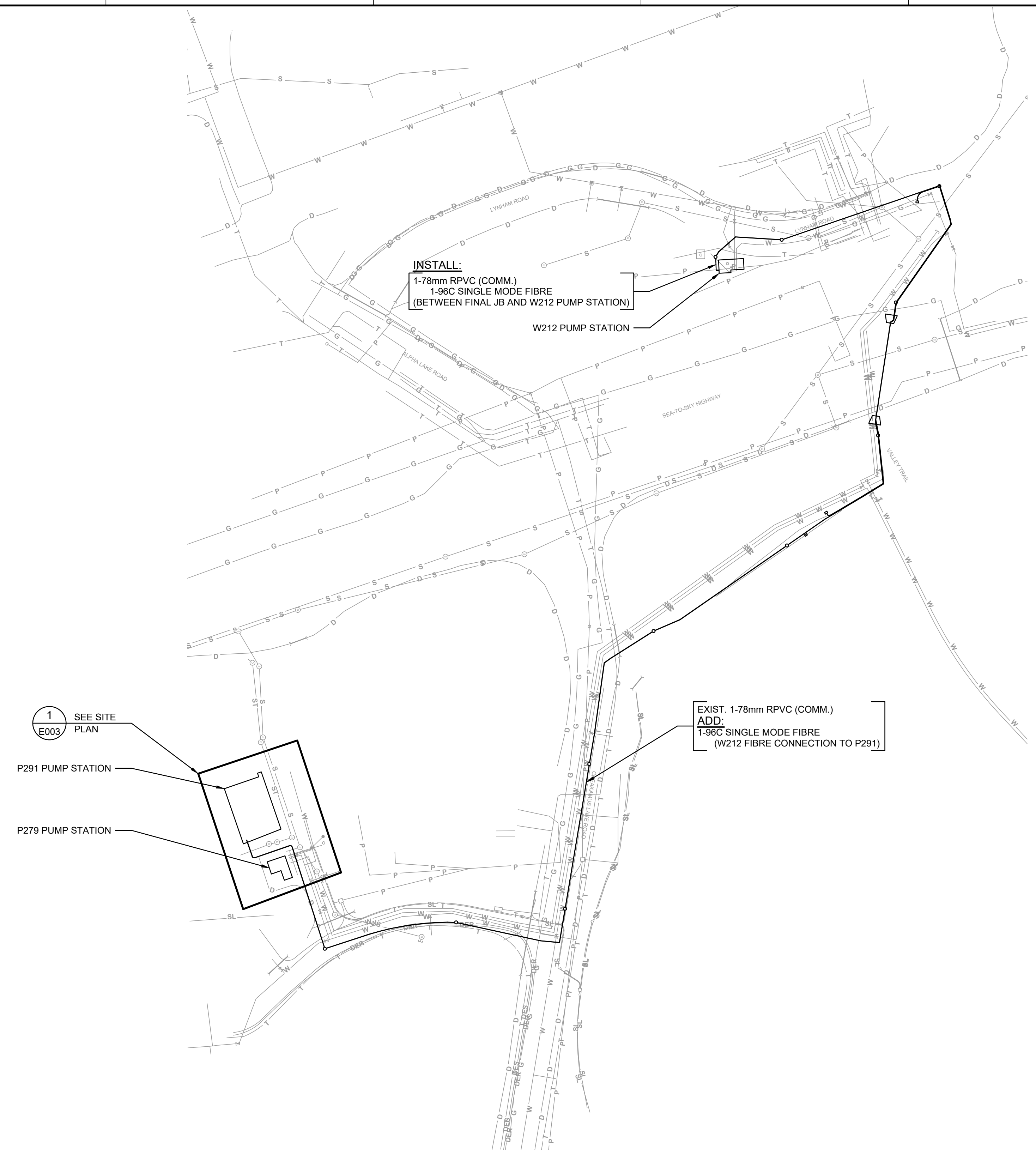
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



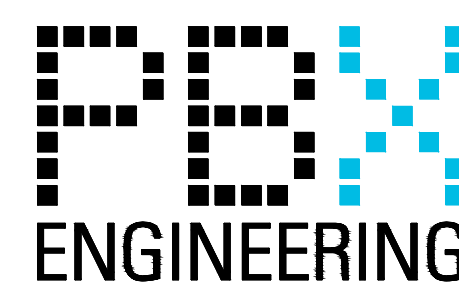
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**
SYMBOLS AND ABBREVIATIONS



KEY PLAN
 0 1:1000 50

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



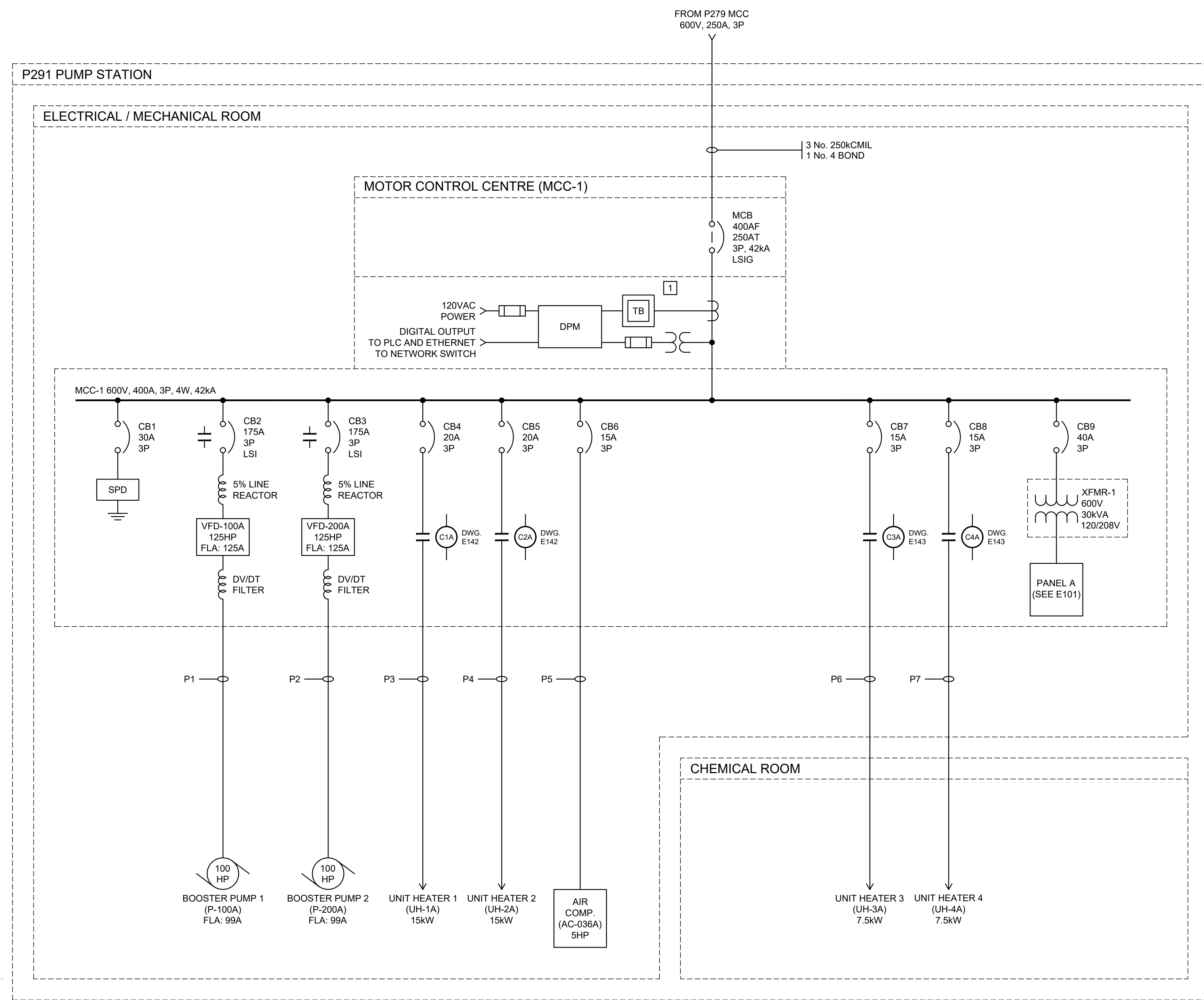
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY**

KEY PLAN

FILENAME | E002 KEY PLAN.DWG
 SCALE | AS NOTED

SHEET
E002

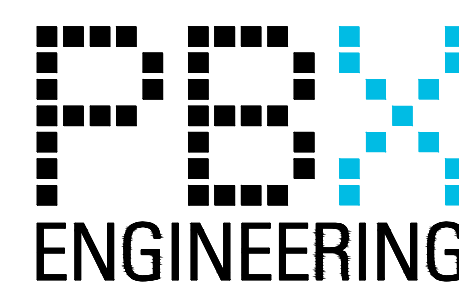


NOTES:

- ** EQUIPMENT SIZE TO BE CONFIRMED BY THE EQUIPMENT MANUFACTURER.
- 1. PROVIDED CT SHORTING SWITCH OR TEST BLOCK.
- 2. CONTRACTOR TO CONFIRM THE NEW PUMP FLA AND ENSURE CORRECT SIZING OF THE CORRESPONDING EQUIPMENT. FLA SHOWN IS BASED ON THE CEC.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

SINGLE LINE DIAGRAM

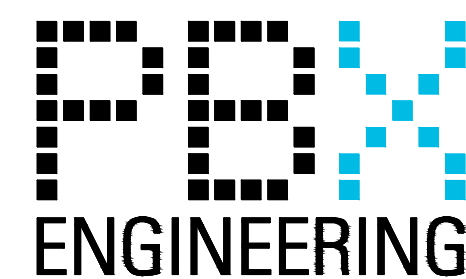
FILENAME	E100 SINGLE LINE DIAGRAM.DWG	SHEET	E100
SCALE	AS NOTED		

P291 PUMP STATION PNL A SCHEDULE

DESCRIPTION	W	BKR.	CIRCUIT NO.	BKR.	W	DESCRIPTION
MECHANICAL ROOM VENTILATION CONTROL (VFPC-1)	-	20A	1 - 2	15A	-	CHEMICAL TRANSFER PUMP (P-036A)
WATER SOFTENER SYSTEM RECEPTACLE	-	20A	3 - 4	15A	-	CAUSTIC DOSING PUMP 1 (CP-033A)
CHEMICAL ROOM VENTILATION CONTROL (VFPC-2)	-	20A	5 - 6	15A	-	CAUSTIC DOSING PUMP 2 (CP-034A)
ELEC / MECH ROOM DEHUMIDIFIER (DHM-1)	-	20A	7 - 8	20A	-	ELECTRICAL ROOM RECEPTACLES
HOT WATER TANK 1 (HWT-1)	4500	20A	9 - 10	20A	-	MECHANICAL ROOM RECEPTACLES
		3P	11 - 12	20A	-	CHEMICAL ROOM RECEPTACLES
			13 - 14	15A	-	ELEC / MECH ROOM LIGHTS & EMERGENCY LIGHTS
HOT WATER TANK 2 (HWT-2)	4500	20A	15 - 16	15A	-	CHEMICAL ROOM LIGHTS & EMERGENCY LIGHTS
		3P	17 - 18	15A	-	S2S ALARM PANEL RECEPTACLE
			19 - 20	15A	-	PUMP STATION EXTERIOR LIGHTS
MOTORIZED VALVE (MV-001A)	450	15A	21 - 22	15A	-	CONTROL PANEL UPS FEED (CP-1)
MOTORIZED VALVE (MV-005A)	450	15A	23 - 24	15A	-	ELEC / MECH ROOM SMOKE DETECTORS
MOTORIZED VALVE (MV-007D)	450	15A	25 - 26	15A	-	CHEMICAL ROOM SMOKE DETECTORS
MOTORIZED VALVE (MV-008G)	84	15A	27 - 28	15A	-	PUMP STATION EXTERIOR FLOOD LIGHT
MOTORIZED VALVE (MV-038B)	450	15A	29 - 30	15A	-	HEAT TRACE - TANK 1 (TK-030A)
-	-	-	31 - 32	15A	-	HEAT TRACE - TANK 2 (TK-031A)
-	-	-	33 - 34	15A	-	HEAT TRACE - TRANSFER PUMP
-	-	-	35 - 36	15A	-	HEAT TRACE - DOSING PUMP
-	-	-	37 - 38	15A	-	HEAT TRACE - RAIN WATER LEADERS
-	-	-	39 - 40	15A	-	HEAT TRACE - RAIN WATER LEADERS
-	-	-	41 - 42	-	-	-
TOTAL W						TOTAL W
MAINS: 100A		VOLTS: 120/208V				
MOUNTING: -		LOCATION: MCC-1				
MAIN BKR.: 100A		FED FROM: XFMR-1				
FEEDER: -		ENTER AT: -				

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED

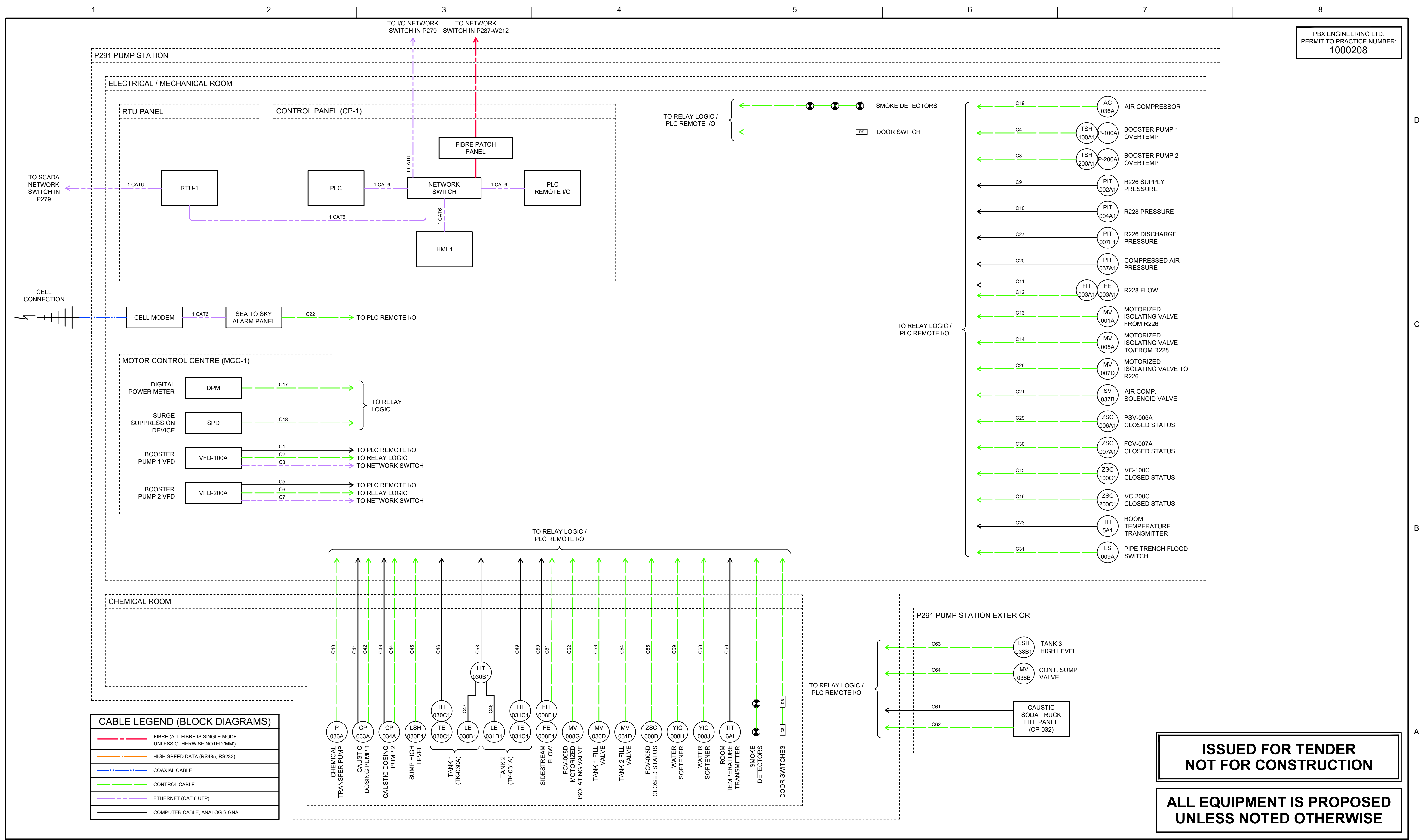


**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY**
PANEL SCHEDULE

FILENAME | E101 PANEL SCHEDULE.DWG
 SCALE | AS NOTED

SHEET
E101

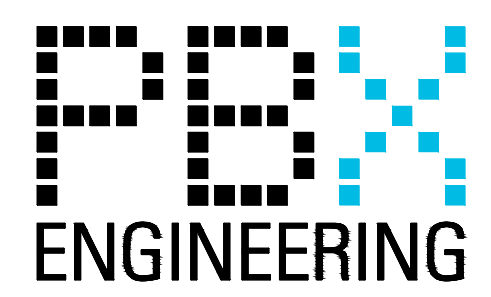


CABLE LEGEND (BLOCK DIAGRAMS)

	FIBRE (ALL FIBRE IS SINGLE MODE UNLESS OTHERWISE NOTED 'MM')
	HIGH SPEED DATA (RS485, RS232)
	COAXIAL CABLE
	CONTROL CABLE
	ETHERNET (CAT 6 UTP)
	COMPUTER CABLE, ANALOG SIGNAL

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

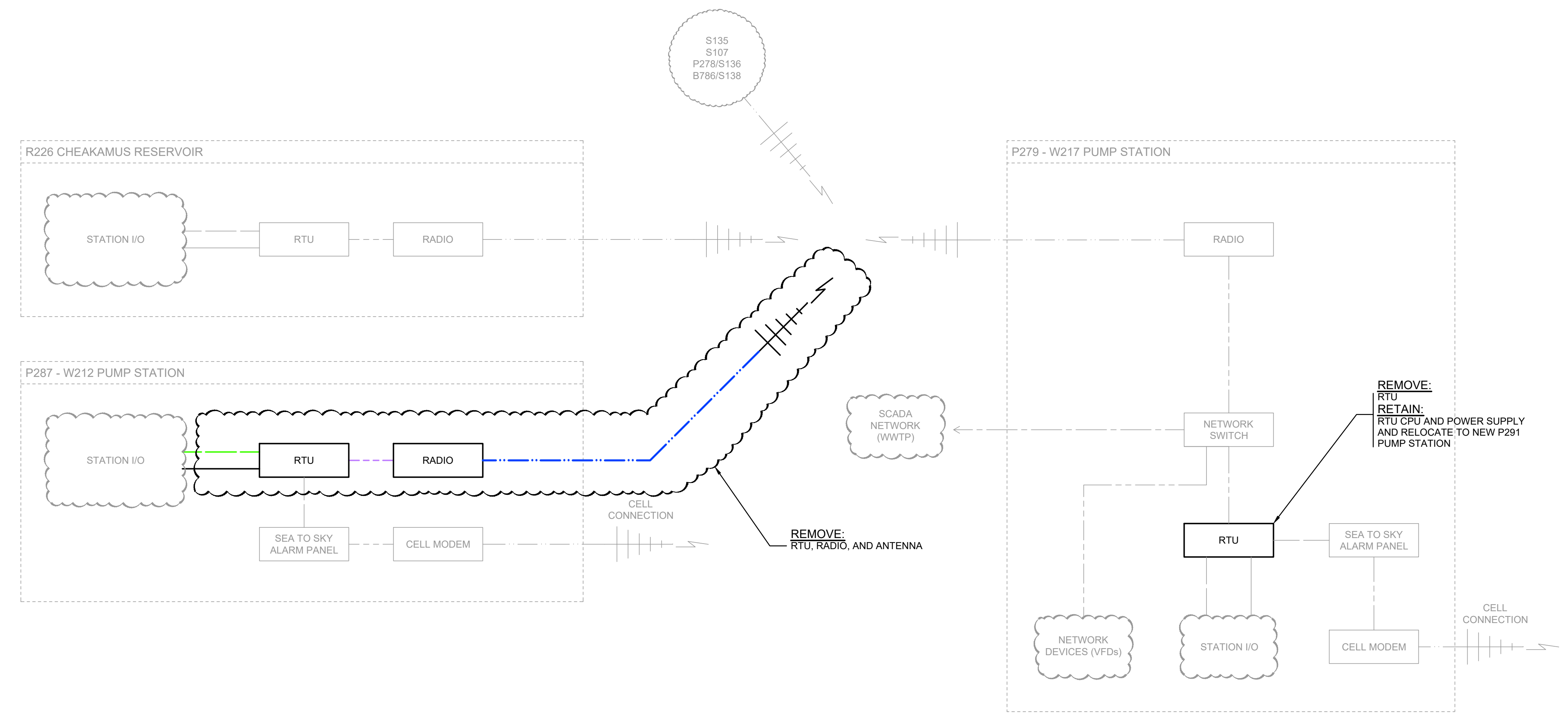


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

CONTROL BLOCK DIAGRAM

FILENAME	E110 CONTROL BLOCK DIAGRAM.DWG	SHEET	E110
SCALE	AS NOTED		



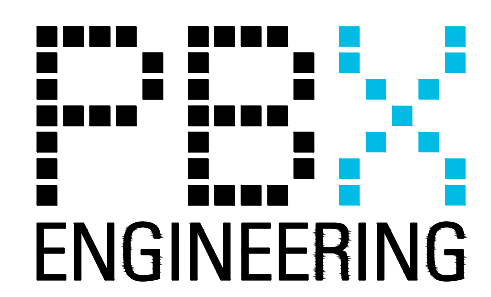
CABLE LEGEND (BLOCK DIAGRAMS)

	FIBRE (ALL FIBRE IS SINGLE MODE UNLESS OTHERWISE NOTED 'MM')
	HIGH SPEED DATA (RS485, RS232)
	COAXIAL CABLE
	CONTROL CABLE
	ETHERNET (CAT 6 UTP)
	COMPUTER CABLE, ANALOG SIGNAL

LEGEND

	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

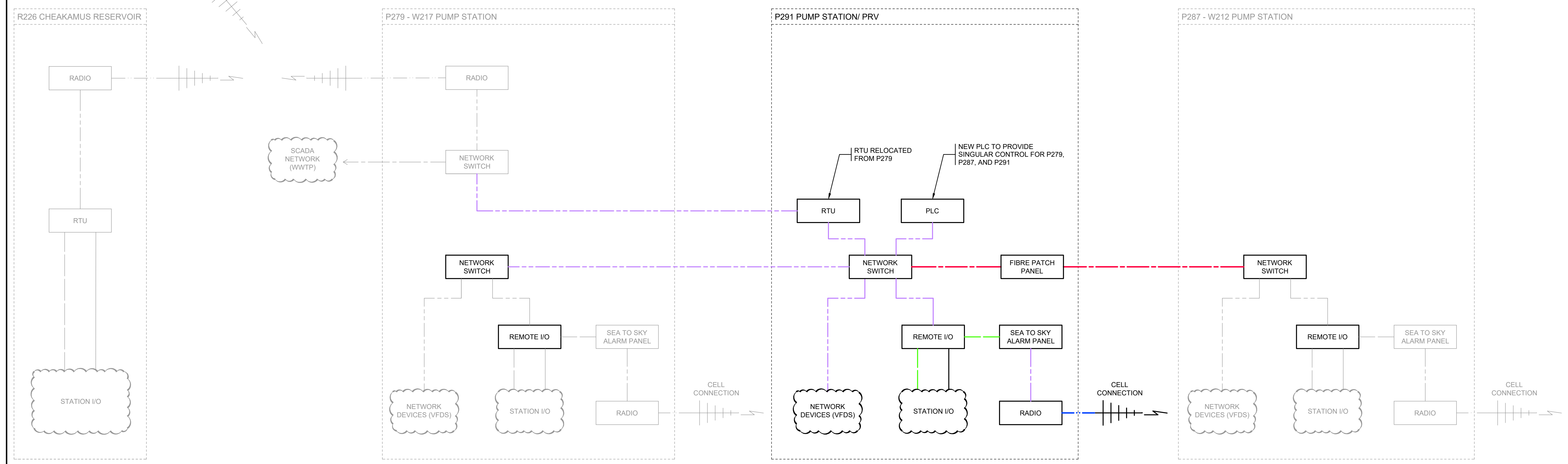
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 NETWORK BLOCK DIAGRAM (1 OF 2)**



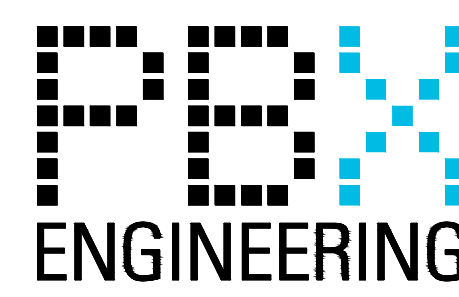
CABLE LEGEND (BLOCK DIAGRAMS)

	FIBRE (ALL FIBRE IS SINGLE MODE UNLESS OTHERWISE NOTED 'MM')
	HIGH SPEED DATA (RS485, RS232)
	COAXIAL CABLE
	CONTROL CABLE
	ETHERNET (CAT 6 UTP)
	COMPUTER CABLE, ANALOG SIGNAL

LEGEND

	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

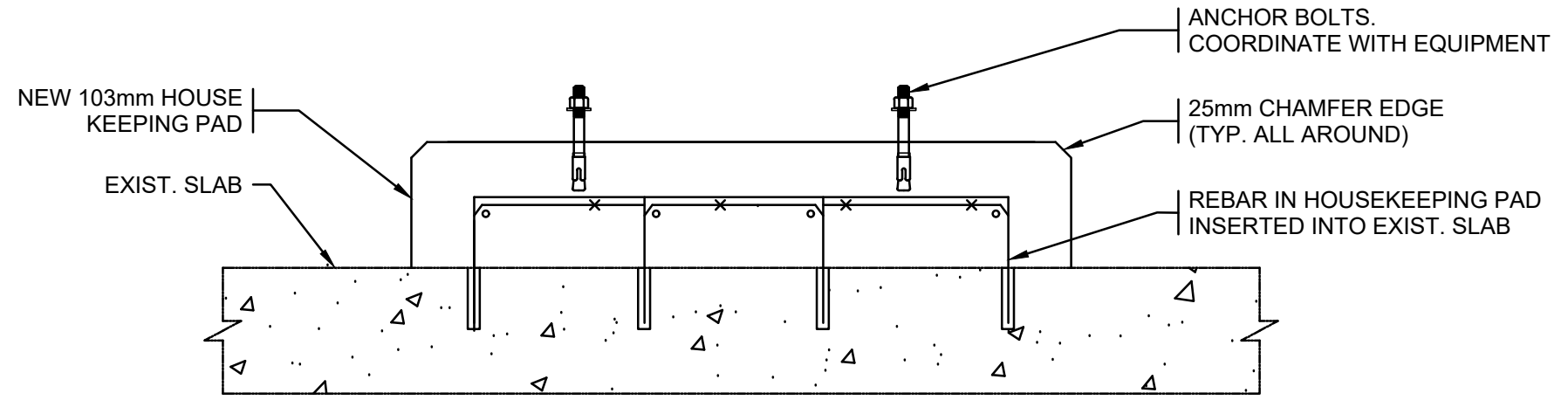
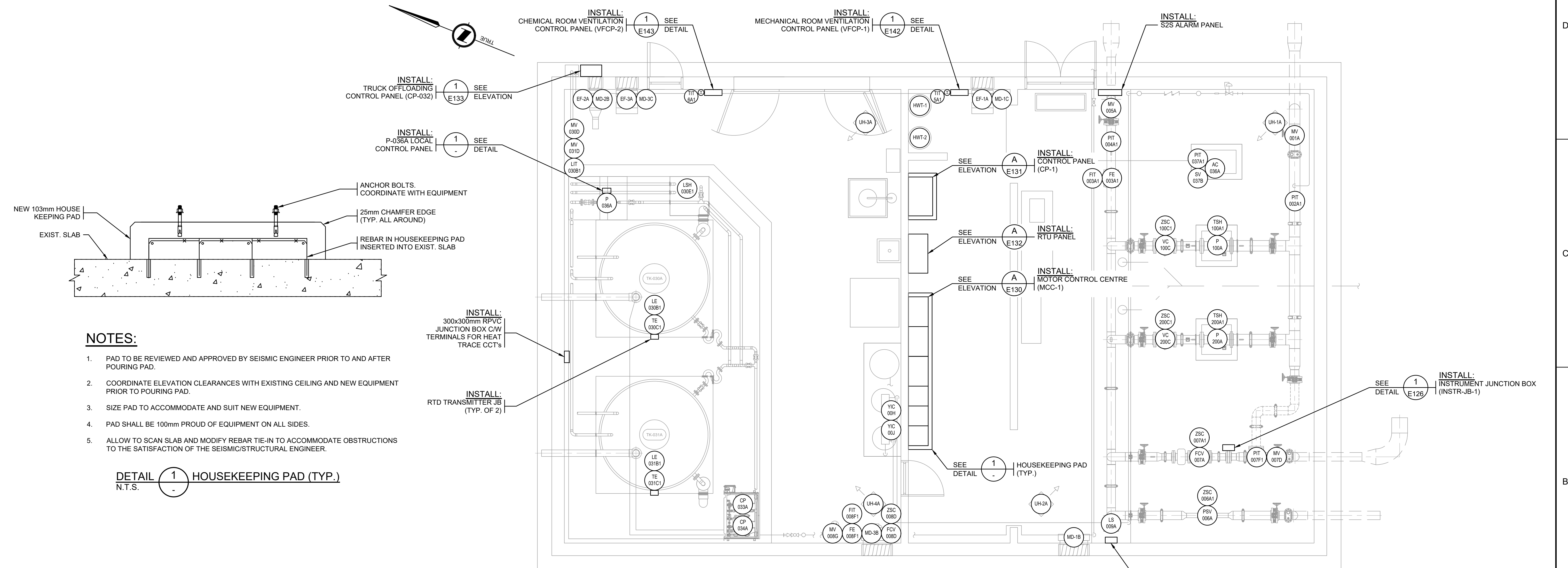
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

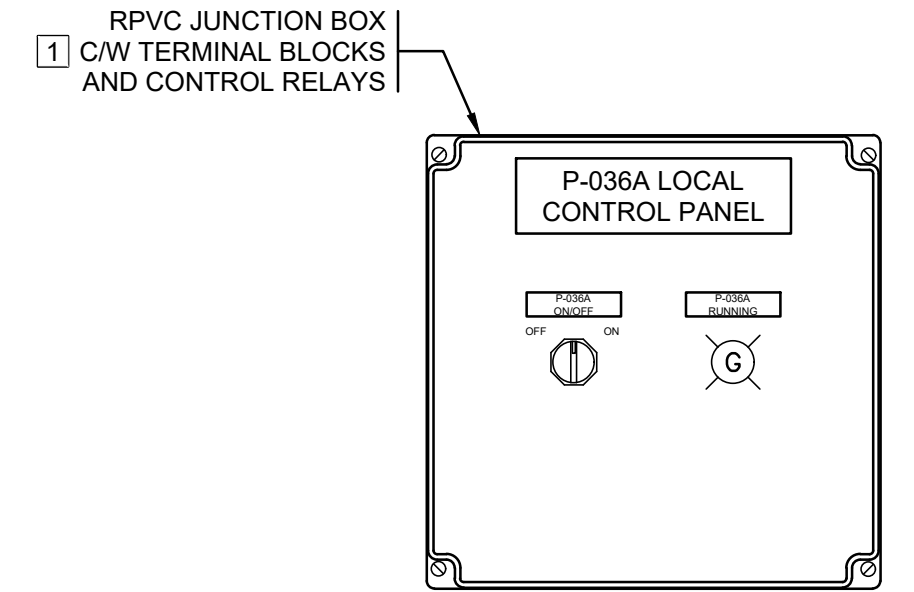
**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 NETWORK BLOCK DIAGRAM (2 OF 2)**



NOTES:

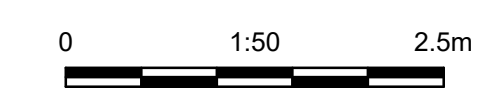
- PAD TO BE REVIEWED AND APPROVED BY SEISMIC ENGINEER PRIOR TO AND AFTER POURING PAD.
- COORDINATE ELEVATION CLEARANCES WITH EXISTING CEILING AND NEW EQUIPMENT PRIOR TO POURING PAD.
- SIZE PAD TO ACCOMMODATE AND SUIT NEW EQUIPMENT.
- PAD SHALL BE 100mm PROUD OF EQUIPMENT ON ALL SIDES.
- ALLOW TO SCAN SLAB AND MODIFY REBAR TIE-IN TO ACCOMMODATE OBSTRUCTIONS TO THE SATISFACTION OF THE SEISMIC/STRUCTURAL ENGINEER.

DETAIL 1 HOUSEKEEPING PAD (TYP.)
N.T.S.



DETAIL 1 P-036A LOCAL CONTROL PANEL
N.T.S.

AREA ENLARGEMENT 1 P291 PUMP STATION
1:50

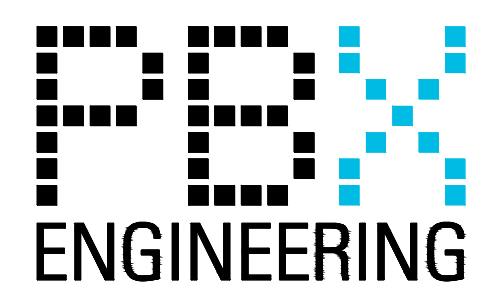


**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**

NOTES:

- CONTRACTOR TO SELECT SUITABLE SIZE OF RPVC JUNCTION BOX.



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

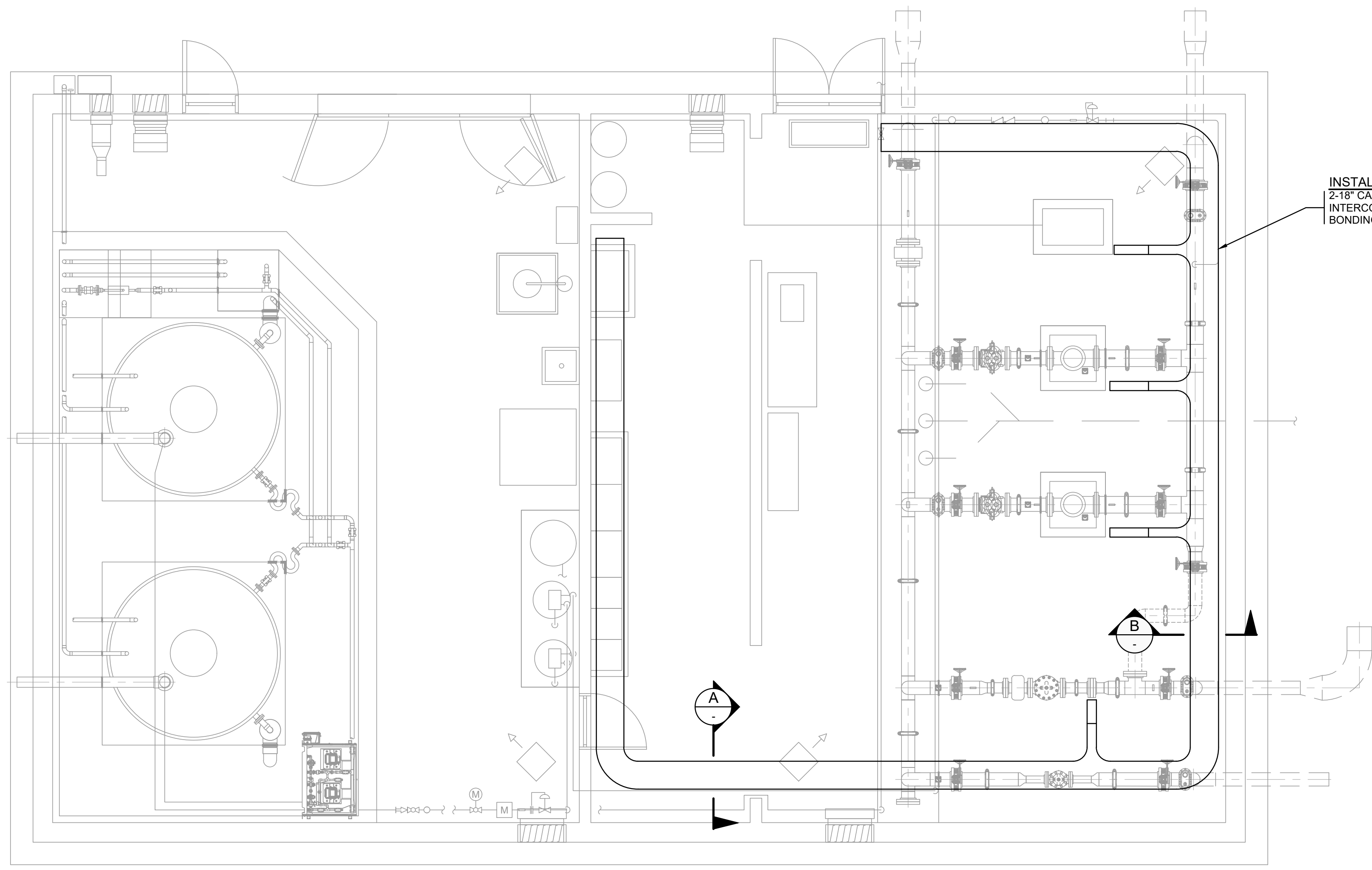
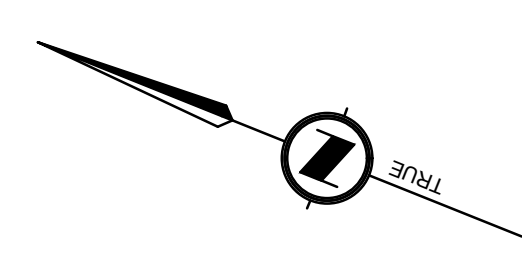
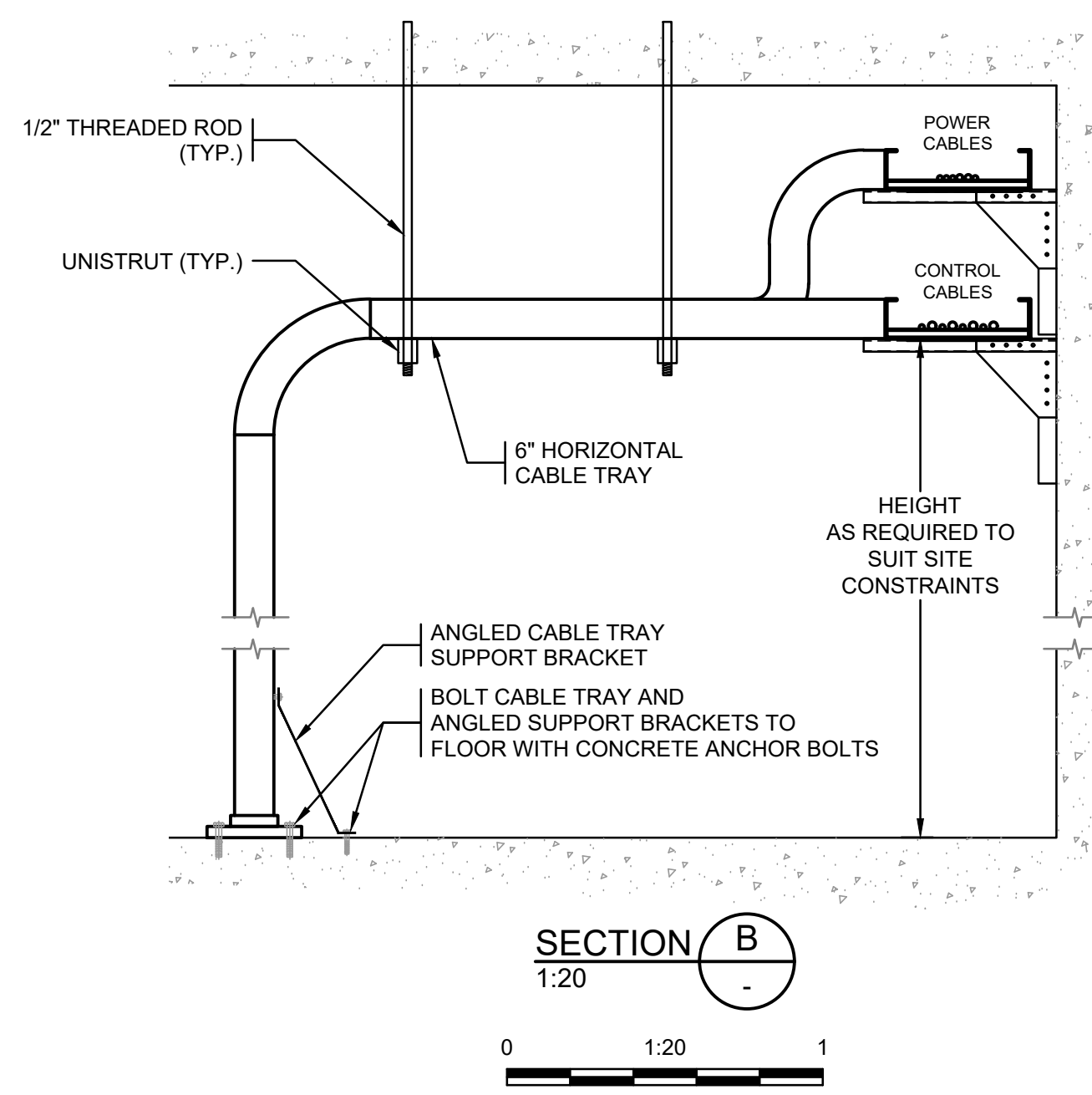
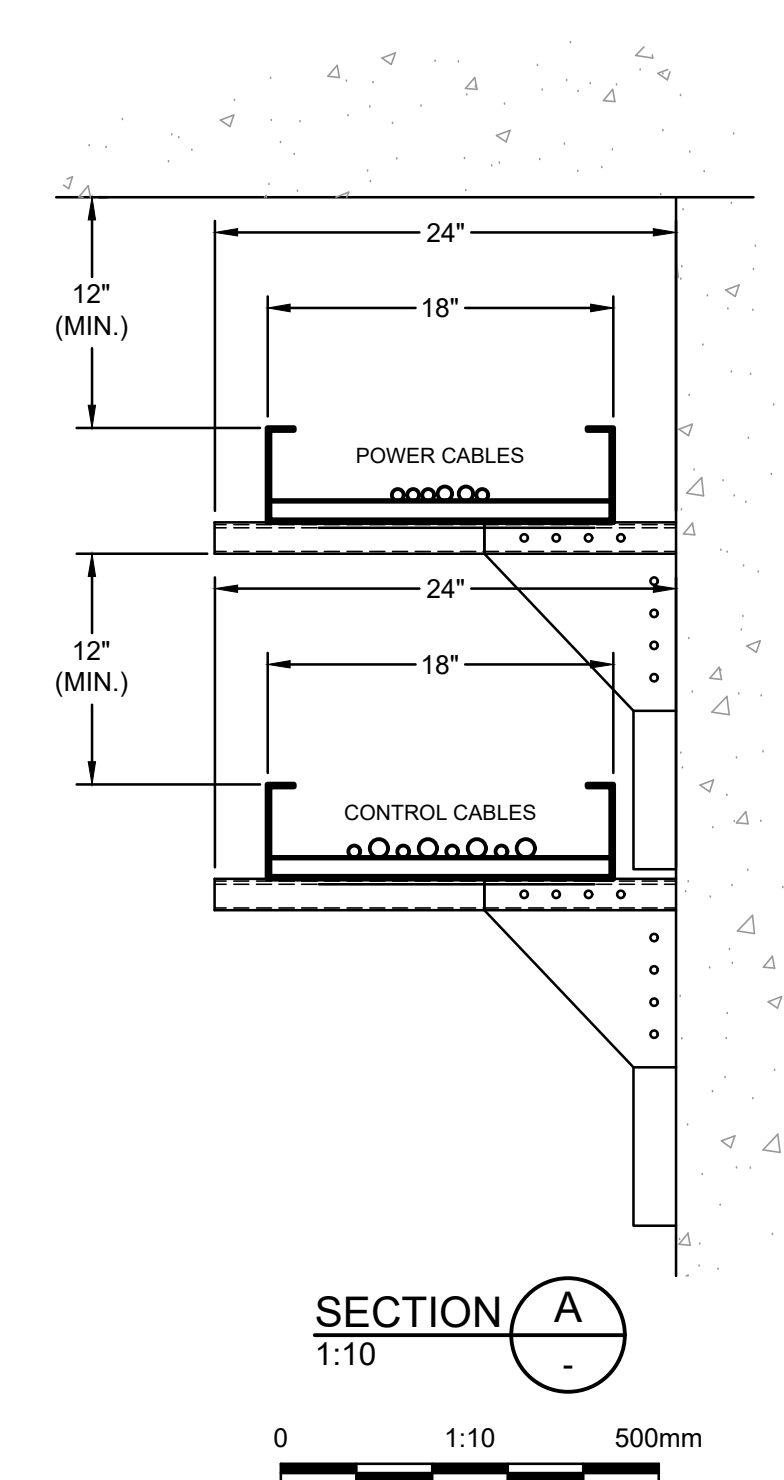
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
AREA ENLARGEMENT - GENERAL ARRANGEMENT**



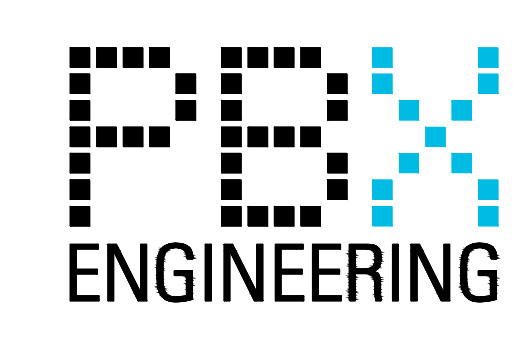
INSTALL:
 2-18" CABLE TRAY.
 INTERCONNECT CABLE TRAY
 BONDING PER CEC

AREA ENLARGEMENT 1 P291 PUMP STATION
 1:50
 0 1:50 2.5m

NOTES:
 1. CONTRACTOR TO INSTALL CABLE TRAY PER CEC REQUIREMENTS.

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

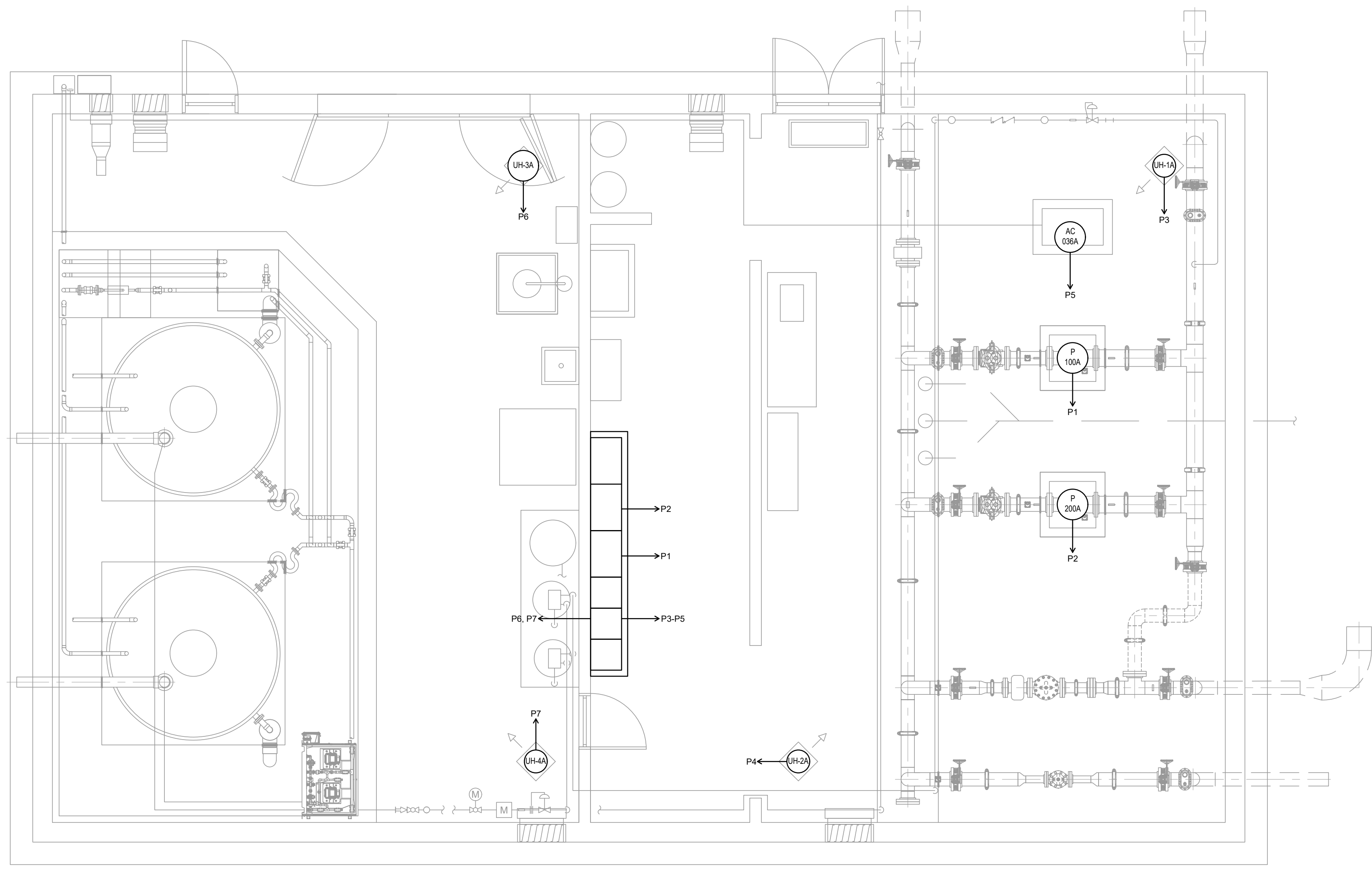
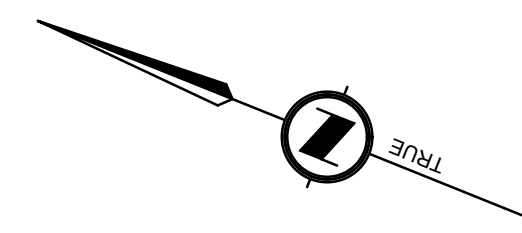
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 AREA ENLARGEMENT - CABLE TRAY LAYOUT**

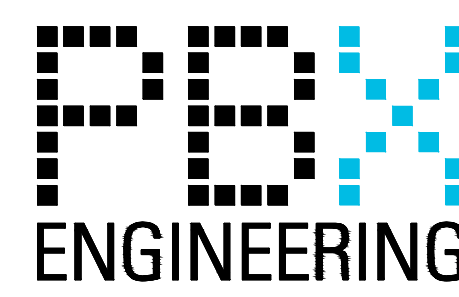


AREA ENLARGEMENT 1 P291 PUMP STATION
1:50
E003

NOTES:
1. REFER TO CABLE SCHEDULE FOR CABLE AND CONDUIT DETAILS.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



			PROJECT MANAGER	M. DAY
			CIVIL	
			STRUCTURAL	
			ARCHITECTURAL	
			PROCESS	
			MECHANICAL	
			ELECTRICAL	BW
			INSTRUMENTATION	
0	2023-09-22	ISSUED FOR TENDER	PROJECT NUMBER	E20307
ISSUE	DATE	DESCRIPTION		

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

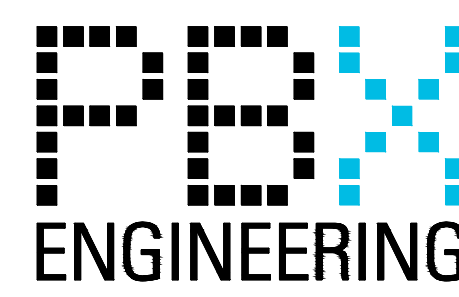
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
AREA ENLARGEMENT - POWER DISTRIBUTION (600V)**

PBX ENGINEERING LTD.
 PERMIT TO PRACTICE NUMBER:
 1000208

CABLE SCHEDULE (600V)										
ITEM No.	CABLE TAG	DESCRIPTION	CABLE SIZE	CABLE TYPE	SYSTEM VOLTAGE	INSULATION	ROUTING	CONDUIT	SOURCE	DESTINATION
P1	VFD100A-P100A-600V	BOOSTER PUMP 100A	1-3C No. 2/0 AWG + BOND	ARMOURED VFD	600V	1000V	CABLE TRAY	-	VFD-100A (MCC-1)	P-100A
P2	VFD200A-P200A-600V	BOOSTER PUMP 200A	1-3C No. 2/0 AWG + BOND	ARMOURED VFD	600V	1000V	CABLE TRAY	-	VFD-200A (MCC-1)	P-200A
P3	CB4-UH1A-600V	UNIT HEATER 1A	1-3C No. 12 AWG + BOND	TECK	600V	1000V	CABLE TRAY	-	CB4 (MCC-1)	UH-1A
P4	CB5-UH2A-600V	UNIT HEATER 2A	1-3C No. 12 AWG + BOND	TECK	600V	1000V	CABLE TRAY	-	CB5 (MCC-1)	UH-2A
P5	CB6-AC036A-600V	AIR COMPRESSOR	1-3C No. 12 AWG + BOND	TECK	600V	1000V	CABLE TRAY	-	CB6 (MCC-1)	AC-036A
P6	CB7-UH3A-600V	UNIT HEATER 3A	3 No. 12 AWG	RW90 XLPE	600V	1000V	UNDERGROUND	1-27mm RPVC	CB7 (MCC-1)	UH-3A
			1 No. 14 BOND							
P7	CB8-UH4A-600V	UNIT HEATER 4A	3 No. 12 AWG	RW90 XLPE	600V	1000V	UNDERGROUND	1-27mm RPVC	CB8 (MCC-1)	UH-4A
			1 No. 14 BOND							

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED

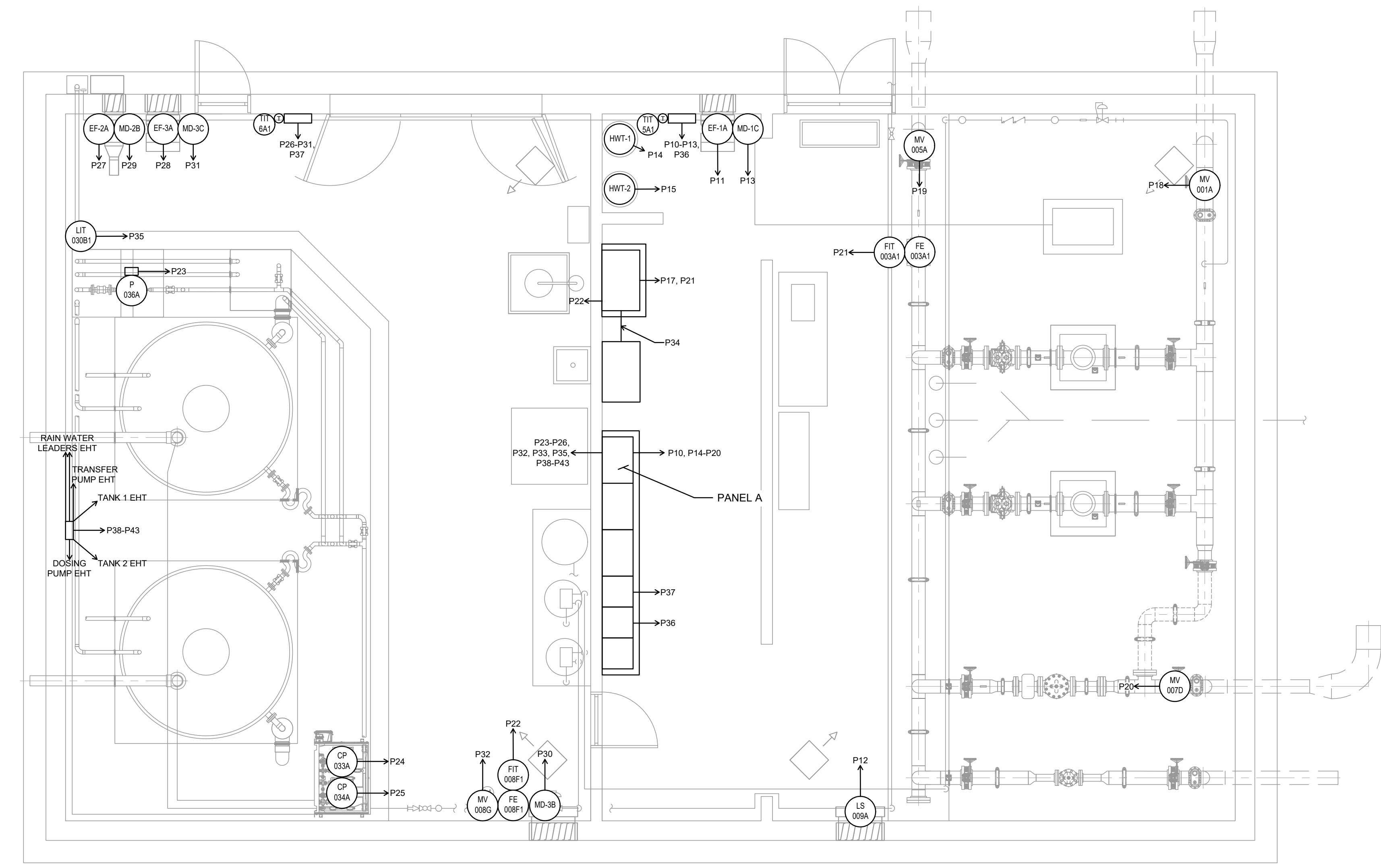
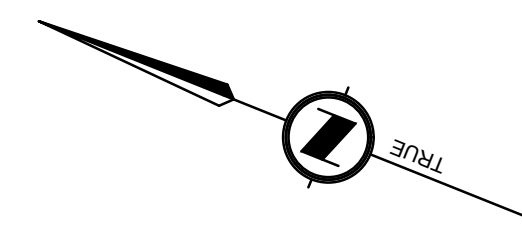


**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY**

CABLE SCHEDULE (600V)

FILENAME | E123 CABLE SCHEDULE (600V).DWG | SHEET
 SCALE | AS NOTED | **E123**

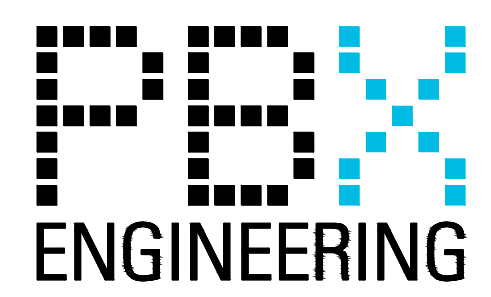


AREA ENLARGEMENT 1 P291 PUMP STATION
 1:50
 0 1:50 2.5m

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**

NOTES:
 1. REFER TO CABLE SCHEDULE FOR CABLE AND CONDUIT DETAILS.



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 AREA ENLARGEMENT - POWER DISTRIBUTION (120-208V)**

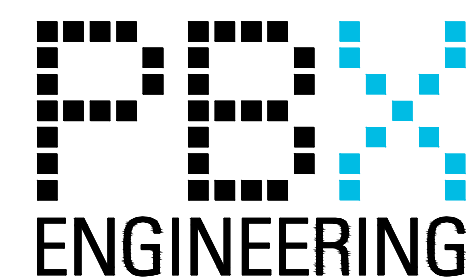
CABLE SCHEDULE (120/208V)										
ITEM No.	CABLE TAG	DESCRIPTION	CABLE SIZE	CABLE TYPE	SYSTEM VOLTAGE	INSULATION	ROUTING	CONDUIT	SOURCE	DESTINATION
P10	PNLA-VFCP1-120V	MECHANICAL ROOM VENTILATION CONTROL PANEL	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	PNL-A	VFCP-1
P11	VFCP1-EF1A-120V	EXHAUST FAN 1A	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-1	EF-1A
P12	VFCP1-MD1B-120V	MOTORIZED DAMPER 1B	1-3C No. 14 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-1	MD-1B
P13	VFCP1-MD1C-120V	MOTORIZED DAMPER 1C	1-3C No. 14 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-1	MD-1C
P14	PNLA-HWT1-208V	HOT WATER TANK 1	1-3C No. 12 AWG + BOND	TECK	208	600V	SURFACE	-	PNL-A	HWT-1
P15	PNLA-HWT2-208V	HOT WATER TANK 2	1-3C No. 12 AWG + BOND	TECK	208	600V	SURFACE	-	PNL-A	HWT-2
P16	PNLA-DHM1-120V	DEHUMIDIFIER	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	PNL-A	DHM-1
P17	PNLA-UPS1-120V	CONTROL PANEL UPS FEED	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	PNL-A	UPS-1
P18	PNLA-MV001A-120V	MOTORIZED VALVE 001A	1-2C No. 12 AWG + BOND	TECK	120	600V	CABLE TRAY	-	PNL-A	MV-001A
P19	PNLA-MV005A-120V	MOTORIZED VALVE 005A	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	MV-005A
			1 No. 14 BOND							
P20	PNLA-MV007D-120V	MOTORIZED VALVE 007D	1-2C No. 12 AWG + BOND	TECK	120	600V	CABLE TRAY	-	PNL-A	MV-007D
P21	CP1-FIT003A1-120V	FLOW METER TRANSMITTER 003A1	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	CP-1	FIT-003A1
			1 No. 14 BOND							
P22	CP1-FIT008F1-120V	FLOW METER TRANSMITTER 008F1	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	CP-1	FIT-008F1
			1 No. 14 BOND							
P23	PNLA-P036A-120V	CHEMICAL TRANSFER PUMP	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	P-036A
			1 No. 14 BOND							
P24	PNLA-CP033A-120V	CAUSTIC DOSING PUMP 1	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	CP-033A
			1 No. 14 BOND							
P25	PNLA-CP034A-120V	CAUSTIC DOSING PUMP 2	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	CP-034A
			1 No. 14 BOND							
P26	PNLA-VFCP2-120V	CHEMICAL ROOM VENTILATION CONTROL PANEL	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	VFCP-2
			1 No. 14 BOND							
P27	VFCP2-EF2A-120V	EXHAUST FAN 2A	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	EF-2A
P28	VFCP2-EF3A-120V	EXHAUST FAN 3A	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	EF-3A
P29	VFCP2-MD2B-120V	MOTORIZED DAMPER 2B	1-3C No. 14 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	MD-2B
P30	VFCP2-MD3B-120V	MOTORIZED DAMPER 3B	1-3C No. 14 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	MD-3B
P31	VFCP2-MD3C-120V	MOTORIZED DAMPER 3C	1-3C No. 14 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	MD-3C
P32	PNLA-MV008G-120V	MOTORIZED VALVE 008G	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	MV-008G
			1 No. 14 BOND							
P33	PNLA-MV038B-120V	MOTORIZED VALVE 038B	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-35mm RPVC	PNL-A	MV-038B (OUTSIDE)
			1 No. 14 BOND							
P34	UPS1-RTU-120V	RTU PANEL FEED	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	UPS-1	RTU
P35	UPS1-LIT030B1-120V	REMOTE LEVEL TRANSMITTER	2 No. 12 AWG	RW90 XLPE	120	600V	UNDERGROUND	1-27mm RPVC	UPS-1	LIT-030B1
			1 No. 14 BOND							
P36	VFCP1-C1A/C2A-120V	MECH ROOM HEATER CONTACTORS CONTROL PWR.	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-1	C1A/C2A (MCC-1)
P37	VFCP2-C3A/C4A-120V	CHEM ROOM HEATER CONTACTORS CONTROL PWR.	1-2C No. 12 AWG + BOND	TECK	120	600V	SURFACE	-	VFCP-2	C4A/C4A (MCC-1)
P38	PNLA-EHT-TNK1-120V	HEAT TRACE TO TANK 1	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	ETH-TNK1
P39	PNLA-EHT-TNK2-120V	HEAT TRACE TO TANK 2	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	EHT-TNK2
P40	PNLA-EHT-TRFPUMP-120V	HEAT TRACE TO TRANSFER PUMP	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	EHT-TRFPUMP
P41	PNLA-EHT-DOSPUMP-120V	HEAT TRACE TO DOSING PUMP	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	EHT-DOSPUMP
P42	PNLA-EHT-RAINWTR1-120V	HEAT TRACE RAIN WATER LEADERS	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	EHT-RAINWTR-1
P43	PNLA-EHT-RAINWTR2-120V	HEAT TRACE RAIN WATER LEADERS	1-2C No. 12 AWG + BOND	TECK	120	600V	UNDERGROUND	1-27mm RPVC	PNL-A	EHT-RAINWTR-2

NOTES:

1. CABLING FOR LIGHTING, SMOKE DETECTORS, AND RECEPTACLES NOT SHOWN ON CABLE SCHEDULE. CONTRACTOR SHALL PROVIDE CONDUIT AND CABLING PER THE CEC. CABLES SHALL BE ROUTED IN CABLE TRAY IN THE ELECTRICAL / MECHANICAL ROOM AND UNDERGROUND CONDUIT IN THE CHEMICAL ROOM.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

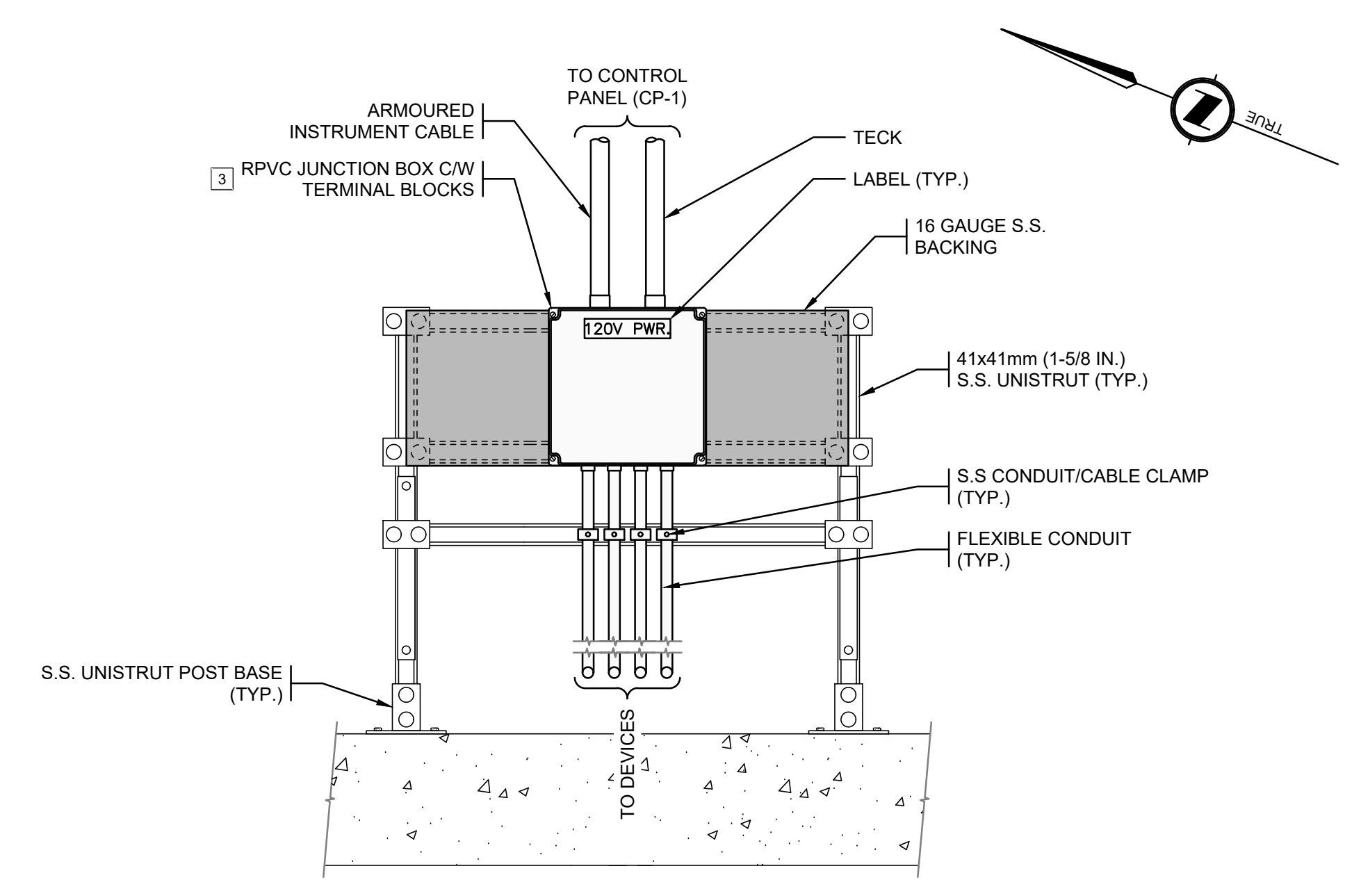
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



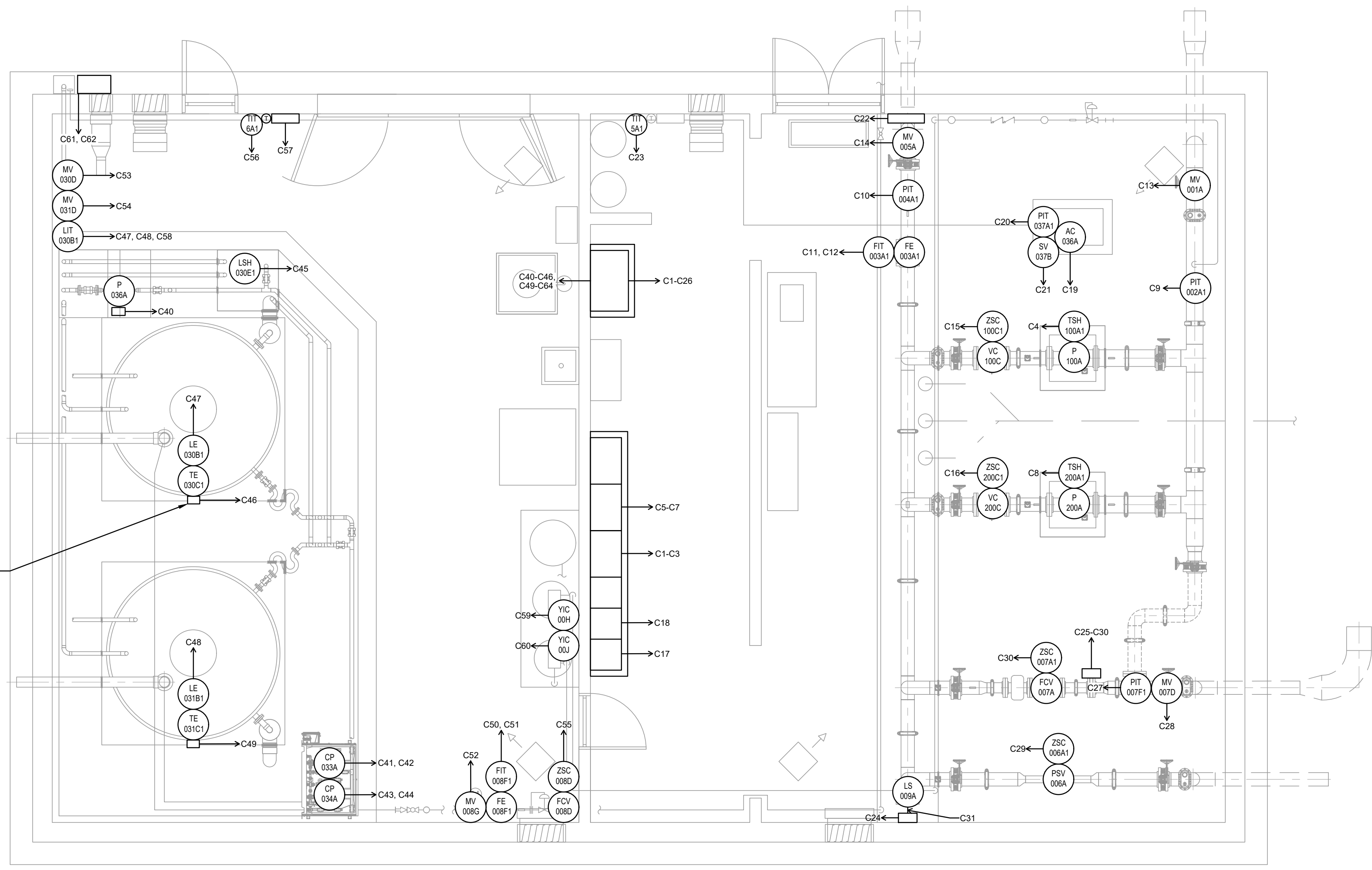
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
CABLE SCHEDULE (120-208V)**



DETAIL 1 UNISTRUT FRAME
 1:10
 E126
 0 1:10 500mm

2 RTD TRANSMITTER JB (TYP. OF 2)

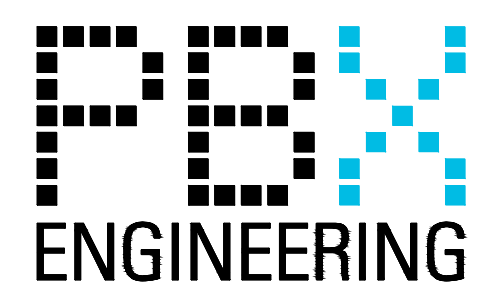


AREA ENLARGEMENT 1 P291 PUMP STATION
 1:50
 E003
 0 1:50 2.5m

- NOTES:**
- REFER TO CABLE SCHEDULE FOR CABLE AND CONDUIT DETAILS.
 - REFER TO RTD TRANSMITTER WIRING DIAGRAM.
 - CONTRACTOR TO SELECT SUITABLE SIZE OF RPVC JUNCTION BOX.
 - LSH-038B1 AND MV-038B LOCATED OUTSIDE PUMP STATION. CABLING NOT SHOWN ON THIS DRAWING. REFER TO SITE PLAN.

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

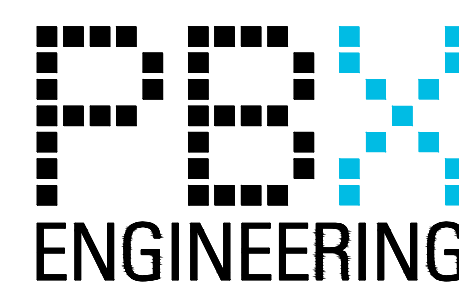
**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 AREA ENLARGEMENT - CONTROLS AND COMMUNICATIONS**

PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

CABLE SCHEDULE (CONTROLS)									
ITEM No.	CABLE TAG	DESCRIPTION	CABLE SIZE	CABLE TYPE	INSULATION	ROUTING	CONDUIT	SOURCE	DESTINATION
C1	CP1-VFD100A-1	BOOSTER PUMP 1 VFD	2-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	CABLE TRAY	-	CP-1	VFD-100A
C2	CP1-VFD100A-2		1-20C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	VFD-100A
C3	CP1-VFD100A-3		1-CAT6	ARMOURED ETHERNET CABLE	600V	CABLE TRAY	-	CP-1	VFD-100A
C4	CP1-TSH100A1	BOOSTER PUMP 1 TEMPERATURE SWITCH	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	TSH-100A1
C5	CP1-VFD200A-1	BOOSTER PUMP 2 VFD	2-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	CABLE TRAY	-	CP-1	VFD-200A
C6	CP1-VFD200A-2		1-20C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	VFD-200A
C7	CP1-VFD200A-3		1-CAT6	ARMOURED ETHERNET CABLE	600V	CABLE TRAY	-	CP-1	VFD-200A
C8	CP1-TSH100A1	BOOSTER PUMP 2 TEMPERATURE SWITCH	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	TSH-200A1
C9	CP1-PIT002A1	PRESSURE TRANSMITTER	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	CABLE TRAY	-	CP-1	PIT-002A1
C10	CP1-PIT004A1	PRESSURE TRANSMITTER	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	PIT-004A1
C11	CP1-FIT003A1-1	FLOW METER TRANSMITTER	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	CABLE TRAY	-	CP-1	FIT-003A1
C12	CP1-FIT003A1-2		1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	FIT-003A1
C13	CP1-MV001A	MOTORIZED VALVE	1-8C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	MV-001A
C14	CP1-MV005A	MOTORIZED VALVE	8 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	MV-005A
C15	CP1-ZSC100C1	VALVE POSITION SWITCH	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	ZSC-100C1
C16	CP1-ZSC200C1	VALVE POSITION SWITCH	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	ZSC-200C1
C17	CP1-DPM	DIGITAL POWER METER	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	DPM
C18	CP1-SPD	SURGE SUPPRESSION DEVICE	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	SPD
C19	CP1-AC036Q	AIR COMPRESSOR	1-2C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	AC-036Q
C20	CP1-PIT037A1	PRESSURE TRANSMITTER	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	PIT-037A1
C21	CP1-SV037B	SOLENOID VALVE	2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	SV-037B
C22	CP1-S2SPNL	SEA TO SKY ALARM PANEL	1-21C No. 16 AWG	TECK	600V	SURFACE	-	CP-1	S2S ALARM PANEL
C23	CP1-TIT5A1	MECHANICAL ROOM TEMPERATURE TX.	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	SURFACE	-	CP-1	TIT-5A1
C24	CP1-INSTR1-1	INSTRUMENT JUNCTION BOX 1	1-3C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	INSTR-JB-1
C25	CP1-INSTR2-1	INSTRUMENT JUNCTION BOX 2	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	CABLE TRAY	-	CP-1	INSTR-JB-2
C26	CP1-INSTR2-2		1-12C No. 16 AWG	SURFACE	600V	CABLE TRAY	-	CP-1	INSTR-JB-2
C27	INSTR2-PIT007F1	PRESSURE TRANSMITTER	1-1PR. No. 18 TPSH	SURFACE	600V	SURFACE	-	INSTR-JB-2	PIT-007F1
C28	INSTR2-MV007D	MOTORIZED VALVE	1-8C No. 16 AWG	SURFACE	600V	SURFACE	-	INSTR-JB-2	MV-007D
C29	INSTR2-ZSC006A1	VALVE POSITION SWITCH	1-2C No. 16 AWG	SURFACE	600V	SURFACE	-	INSTR-JB-2	ZSC-006A1
C30	INSTR2-ZSC007A1	VALVE POSITION SWITCH	1-2C No. 16 AWG	SURFACE	600V	SURFACE	-	INSTR-JB-2	ZSC-007A1
C31	INSTR1-LS009A	FLOAT SWITCH	-	MANUFACTURER CABLE	600V	UNDERGROUND	1-27mm RPVC	INSTR-JB-1	LS-009A

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

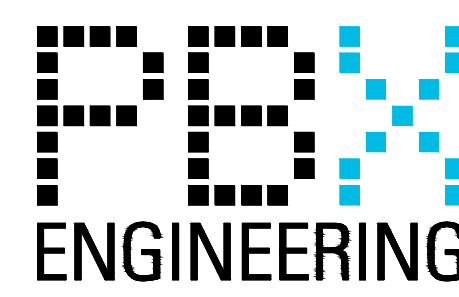
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
CABLE SCHEDULE (CONTROLS) (1 OF 2)**

PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

CABLE SCHEDULE (CONTROLS) (2 OF 2)									
C40	CP1-P036A	CHEMICAL TRANSFER PUMP	2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	P-036A
C41	CP1-CP033A-1	CAUSTIC DOSING PUMP 1	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-033A
C42	CP1-CP033A-2		4 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-033A
C43	CP1-CP034A-1	CAUSTIC DOSING PUMP 2	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-034A
C44	CP1-CP034A-2		4 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-034A
C45	CP1-LSH030E1	FLOAT SWITCH	-	MANUFACTURER CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	LSH-030E1
C46	CP1-TE030C1	TEMPERATURE SENSOR	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	TE-030C1
C47	CP1-LE030B1	RADAR LEVEL SENSOR	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	SURFACE	-	LE-030B1	LIT-030B1
C48	CP1-LE031B1	RADAR LEVEL SENSOR	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	SURFACE	-	LE-031B1	LIT-030B1
C49	CP1-TE031C1	TEMPERATURE SENSOR	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	TE-031C1
C50	CP1-FIT008F1-1	FLOW METER TRANSMITTER	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	FIT-008F1
C51	CP1-FIT008F1-2		2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	FIT-008F1
C52	CP1-MV008G	MOTORIZED VALVE	8 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	MV-008G
C53	CP1-MV030D	MOTORIZED VALVE	8 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	MV-030D
C54	CP1-MV031D	MOTORIZED VALVE	8 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	MV-031D
C55	CP1-ZSC008D	VALVE POSITION SWITCH	2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	ZSC-008D
C56	CP1-TIT6A1	CHEMICAL ROOM TEMPERATURE TX.	1-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	TIT-6A1
C57	CP1-VFCP2	CHEMICAL ROOM VENTILATION CONTROL PANEL	2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	VFCP2
C58	CP1-LIT030B1	REMOTE LEVEL TRANSMITTER	2-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	LIT-030B1
C59	CP1-YIC008H	WATER SOFTENER SYSTEM	1-4C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	YIC-008H
C60	CP1-YIC008J	WATER SOFTENER SYSTEM	1-4C No. 16 AWG	TECK	600V	CABLE TRAY	-	CP-1	YIC-008J
C61	CP1-CP032-1	CAUSTIC SODA TRUCK FILL PANEL	2-1PR. No. 18 TPSH	ARMOURED INSTRUMENT CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-032 (OUTSIDE)
C62	CP1-CP032-2		30 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	CP-032 (OUTSIDE)
C63	CP1-LSH038B1	FLOAT SWITCH	-	MANUFACTURER CABLE	600V	UNDERGROUND	1-27mm RPVC	CP-1	LSH-038B1 (OUTSIDE)
C64	CP1-MV038B	MOTORIZED VALVE	2 No. 16 AWG	RW90 XLPE	600V	UNDERGROUND	1-27mm RPVC	CP-1	MV-038B (OUTSIDE)

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

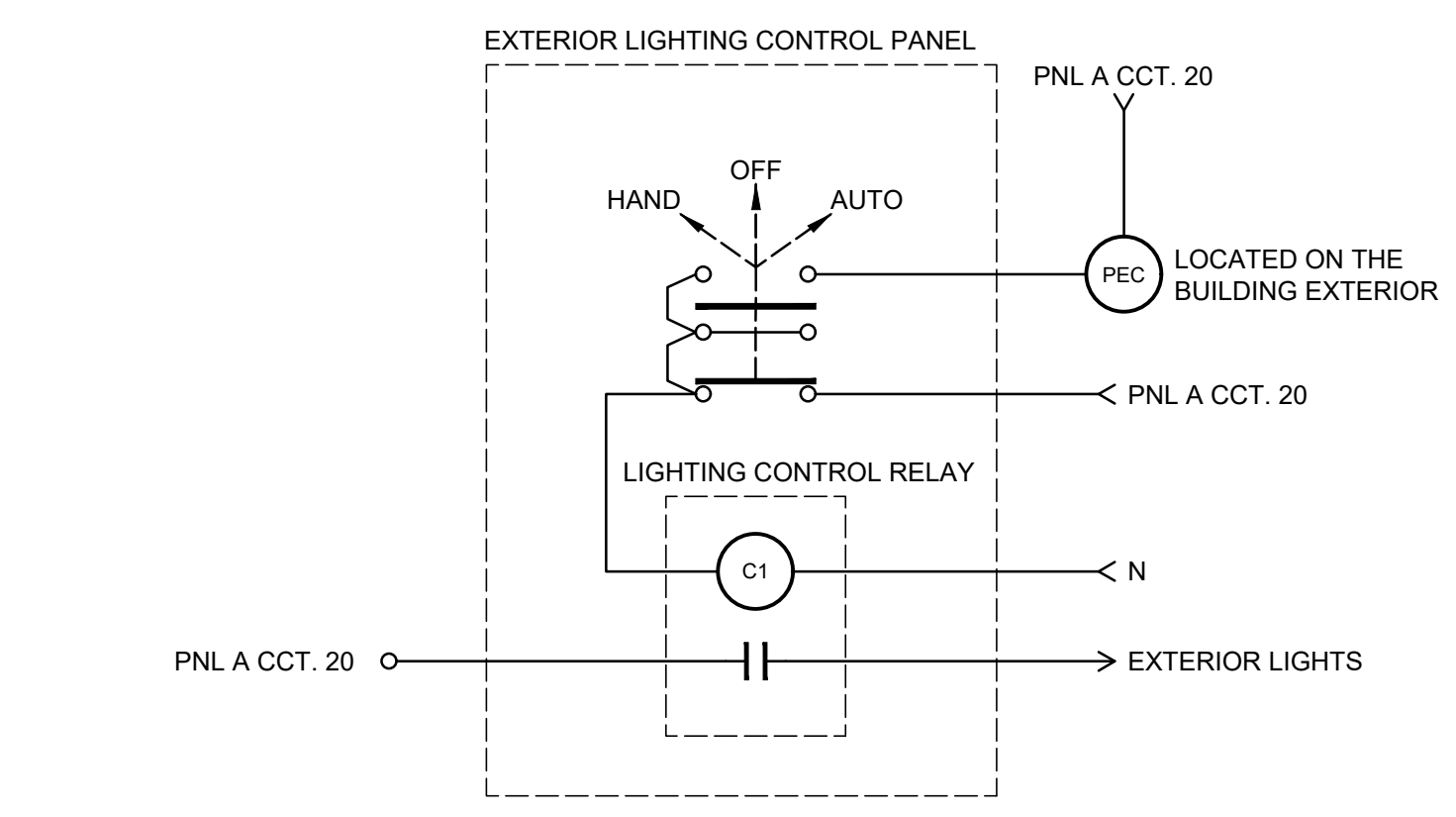
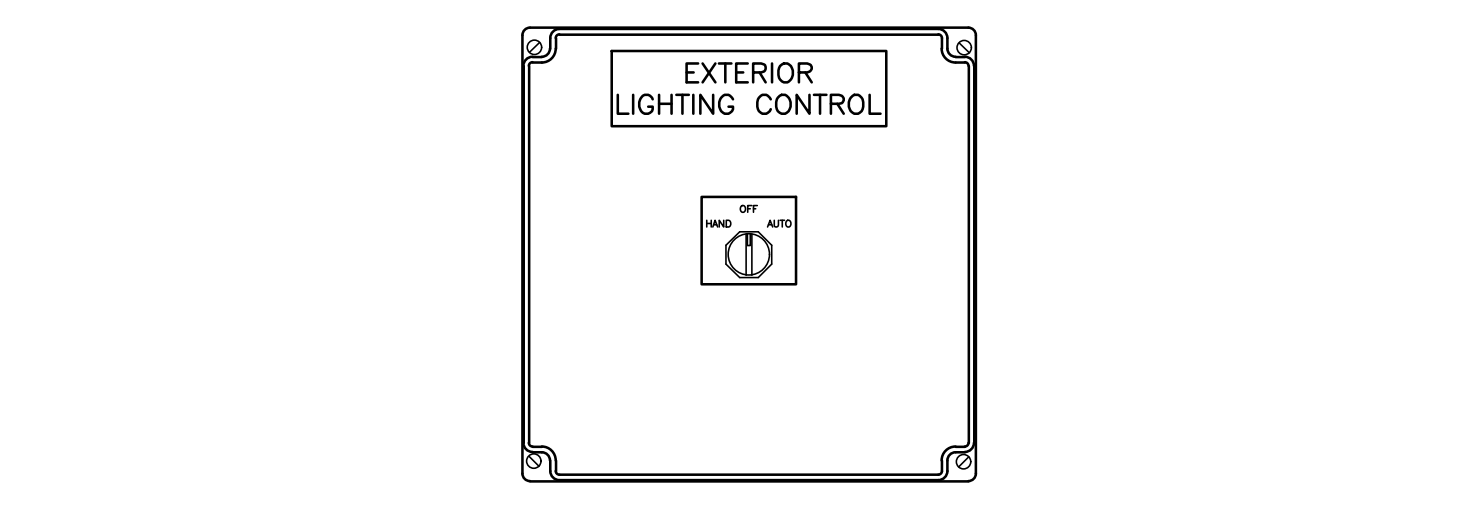
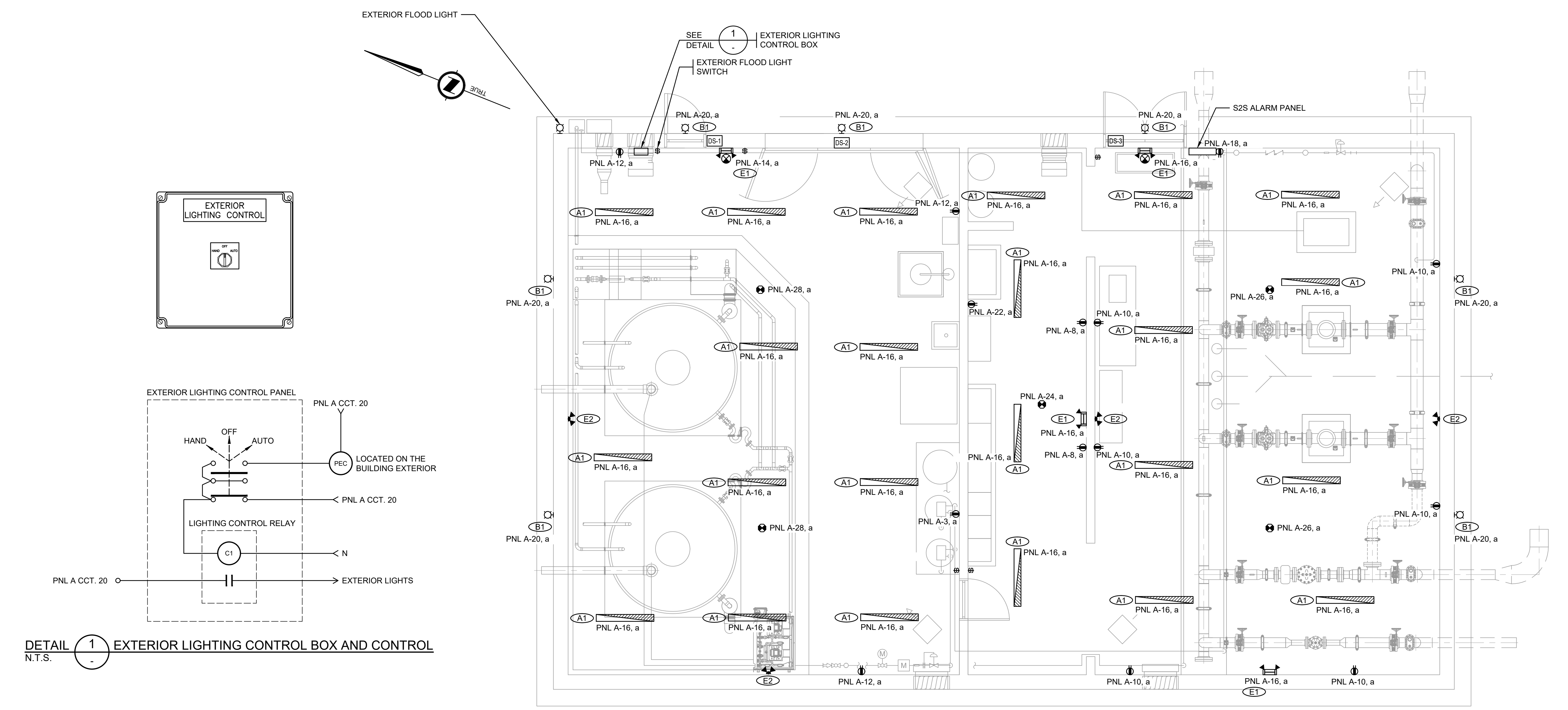
ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

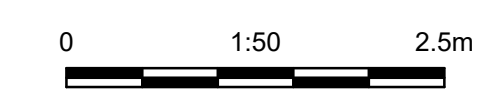
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
CABLE SCHEDULE (CONTROLS) (2 OF 2)**

1 2 3 4 5 6 7 8



DETAIL 1 EXTERIOR LIGHTING CONTROL BOX AND CONTROL
N.T.S.

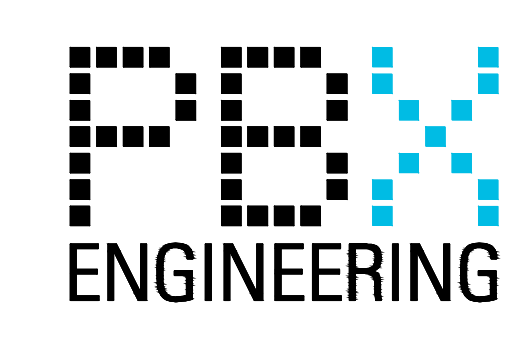
AREA ENLARGEMENT 1 P291 PUMP STATION
1:50



LUMINAIRE SCHEDULE						
TYPE	LUMINAIRE DETAILS					
	DESCRIPTION	MAKE AND MODEL	SOURCE	CONTROL	VOLTAGE	MOUNTING
A1	VAPOUR TIGHT, LED LUMINAIRE	COOPER LIGHTING - METALUX-4VT2-LD5-4-DR10 O-UNV-L850-CD1-WL	LED 5000K 80 CRI 4000 LUMENS	3-WIRE	120-277V	CEILING OR CHAIN MOUNTED
B1	LUMARK CROSSTOUR XTOR, LED LUMINAIRE	COOPER LIGHTING - LUMARK-XTOR1B-W	LED 4000K 80CRI 1396 LUMENS	3-WIRE	120-277V	WALL MOUNTED
E1	EMERGENCY WALL LIGHT PACK	LITHONIA LIGHTING EU2C	LED 5000K	3-WIRE	120-277V	WALL MOUNTED
E2	EMERGENCY REMOTE LIGHT HEAD	LITHONIA LIGHTING ERE-W-T-SQ-WP	LED 5000K	3-WIRE	3.6VDC	WALL MOUNTED

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

2023

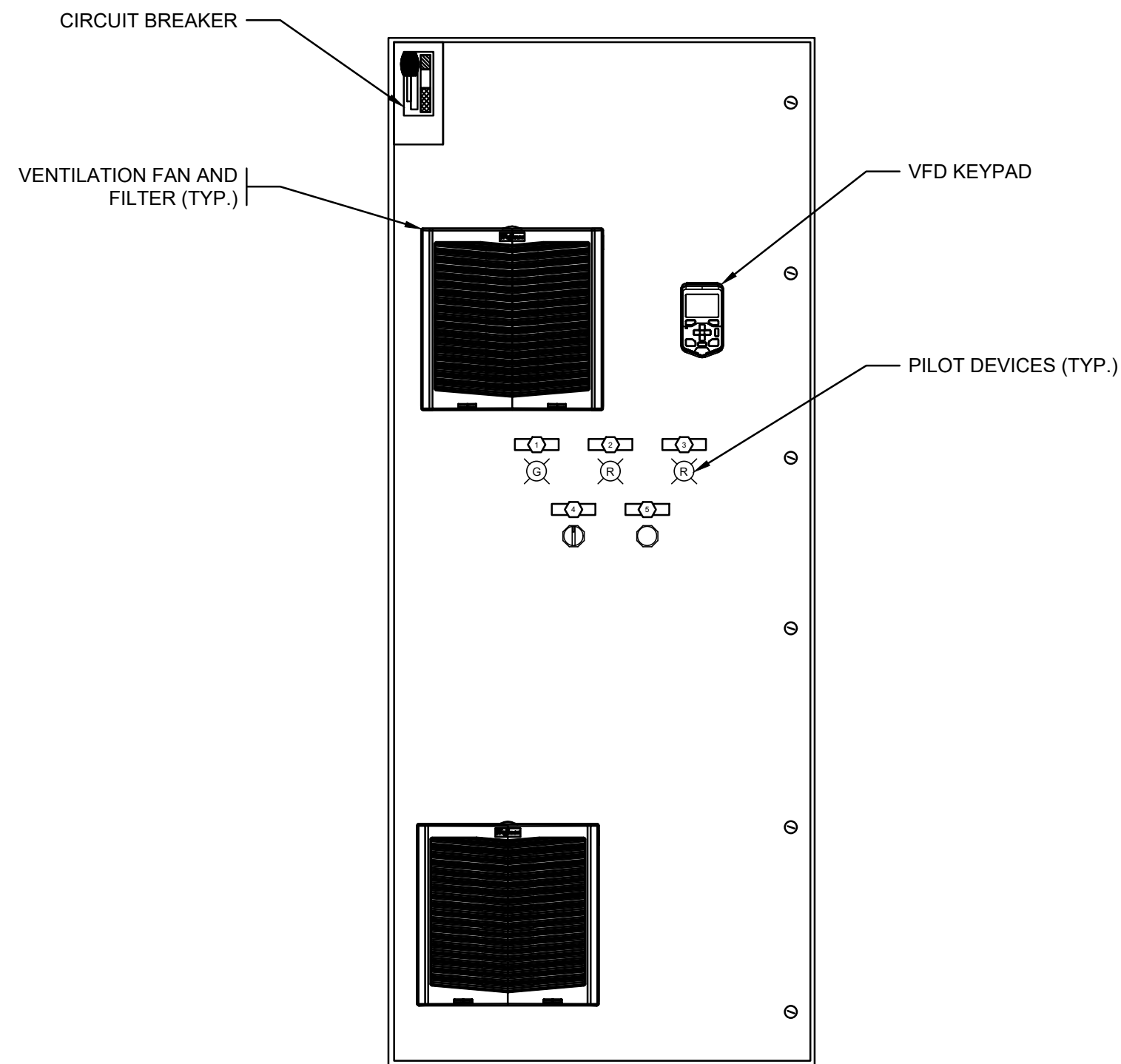
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
AREA ENLARGEMENT - STATION BUILDING SYSTEMS**

FILENAME	E:\01 AREA ENLARGEMENT - STATION BUILDING SYSTEMS.DWG	SHEET
SCALE	AS NOTED	E129

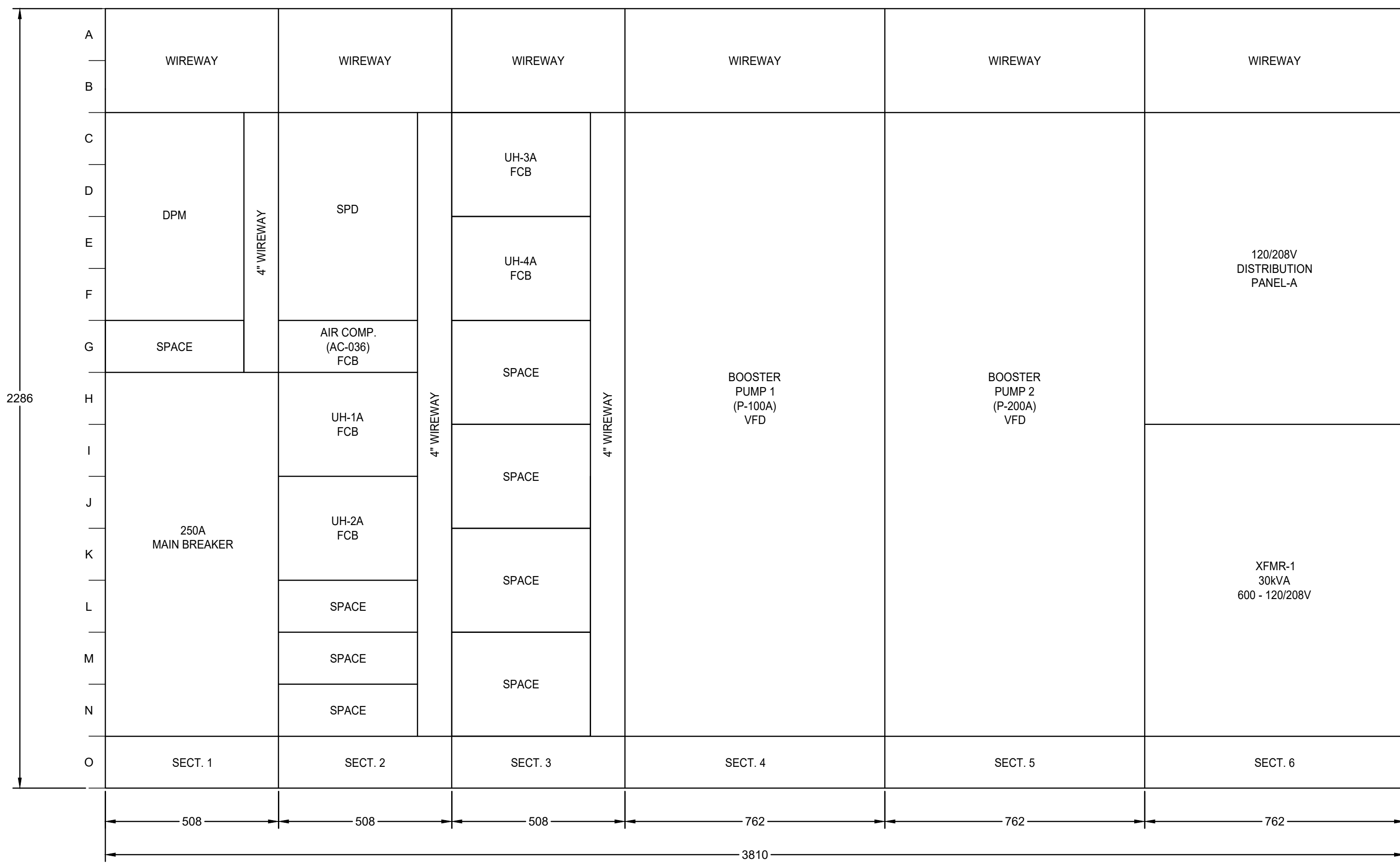
ITEM	LABEL	PILOT DEVICE
①	P-XXXX RUNNING	GREEN PUSH-TO-TEST LIGHT
②	P-XXXX FAULT	RED PUSH-TO-TEST LIGHT
③	P-XXXX OVERTEMP	RED PUSH-TO-TEST LIGHT
④	P-XXXX HOA	THREE-WAY SWITCH
⑤	P-XXXX FAULT RESET	PUSHBUTTON

NOTE:

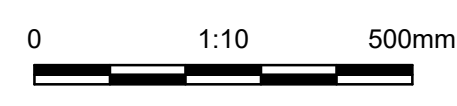
1. LABELS: P-100A FOR BOOSTER PUMP 1 AND P-200A FOR BOOSTER PUMP 2.



DETAIL ① VFD FRONT PANEL (TYP.)
N.T.S.



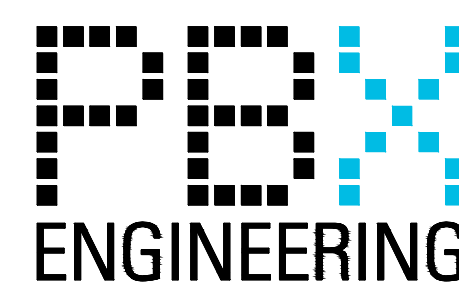
ELEVATION ① MOTOR CONTROL CENTRE (MCC-1)
1:10



**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

FUNCTIONAL DESIGN ONLY
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR
ENGINEER'S APPROVAL PRIOR TO FABRICATION

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

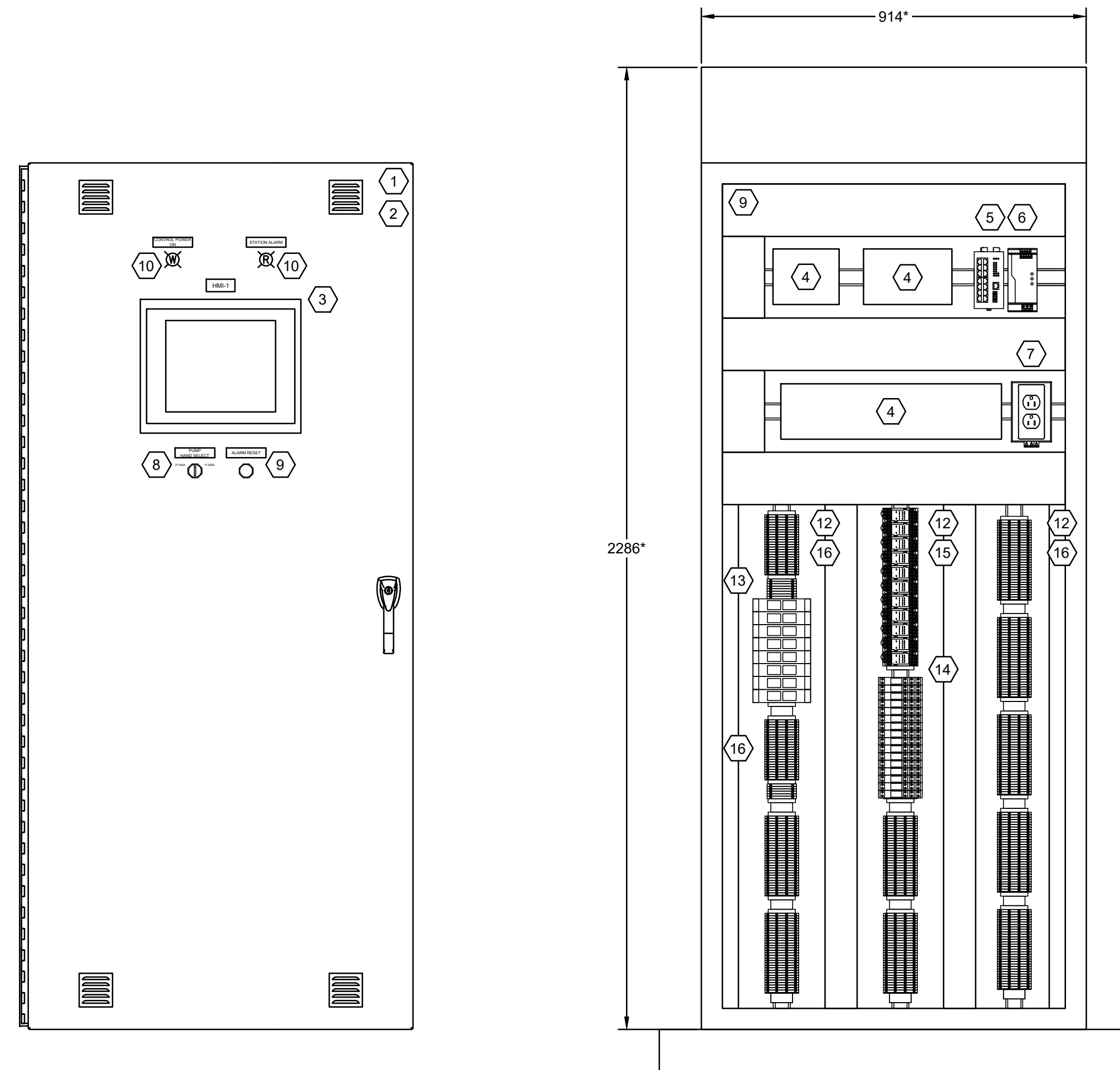


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

ELEVATION - MCC-1

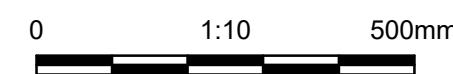
FILENAME	E130 ELEVATION - MCC-1.DWG	SHEET
SCALE	AS NOTED	E130



FRONT PANEL

BACK PANEL

ELEVATION A CONTROL PANEL (CP-1)
1:10



CP-1 BILL OF MATERIALS			
ITEM	QTY.	DESCRIPTION	MAKE/MODEL
1	1	90x36x20" (HxWxD) NEMA TYPE 12 ENCLOSURE	HAMMOND 1418 FS SERIES
2	1	BACK PANEL FOR ENCLOSURE	HAMMOND
3	1	HMI	ALLEN BRADLEY PANELVIEW PLUS 7 15"
4	1	COMPACTLOGIX 5370 L3 CONTROLLER, 2MB MEMORY	1769-L33ER
	6	16 POINT 24 VDC SINKING/SOURCING INPUT MODULE	1769-IQ16
	2	120/240V AC POWER SUPPLY (5V @ 4 AMP)	1769-PA4
	1	RIGHT BANK-TO-RIGHT BANK EXPANSION (305 mm)	1769-CRR1
	4	16 POINT RELAY OUTPUT MODULE	1769-OW16
	2	8 CHANNEL ANALOG VOLTAGE/CURRENT INPUT MODULE	1769-IF8
5	2	4 CHANNEL ISOLATED ANALOG CURRENT OUTPUT MODULE	1769-OF4CI
	2	NETWORK SWITCH	STRATIX 5700 20 PORT
6	1	24VDC POWER SUPPLY, 20A	PHOENIX CONTACT QUINT-PS/1AC/24DC/20
7	1	DUPLEX RECEPTACLE, MODULE, DIN-RAIL, 15A 120VAC	PHOENIX CONTACT
8	1	TWO-WAY SELECTOR SWITCH	ALLEN-BRADLEY
9	1	PUSHBUTTON	ALLEN-BRADLEY
10	2	PUSH-TO-TEST PILOT LIGHT	ALLEN-BRADLEY
11	AS REQUIRED	WIRING DUCT	PANDUIT
12	AS REQUIRED	DIN RAIL	PHOENIX CONTACT
13	AS REQUIRED	CONTROL CIRCUIT BREAKERS	PHOENIX CONTACT
14	AS REQUIRED	FUSE HOLDER C/W FUSES	PHOENIX CONTACT
15	AS REQUIRED	CONTROL RELAYS	PHOENIX CONTACT
16	AS REQUIRED	TERMINALS	PHOENIX CONTACT

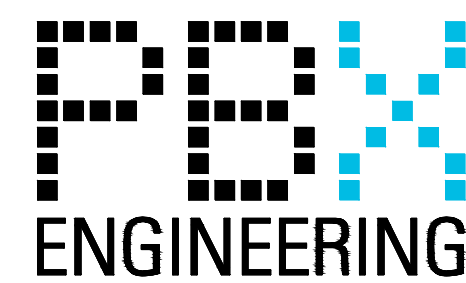
NOTES:

- * DIMENSIONS SHOWN REPRESENT INTERNAL DIMENSIONS AND ARE APPROXIMATE.
- 1. ENSURE A MINIMUM CLEARANCE OF 2" ON ALL SIDES OF COMPACTLOGIX REMOTE I/O RACK.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

FUNCTIONAL DESIGN ONLY
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR
ENGINEER'S APPROVAL PRIOR TO FABRICATION

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION	PROJECT MANAGER	M. DAY
0	2023-09-22	ISSUED FOR TENDER		
PROJECT MANAGER		CIVIL		
STRUCTURAL				
ARCHITECTURAL				
PROCESS				
MECHANICAL				
ELECTRICAL		BW		
INSTRUMENTATION				
PROJECT NUMBER		E20307		

ORIGINAL
SEALED



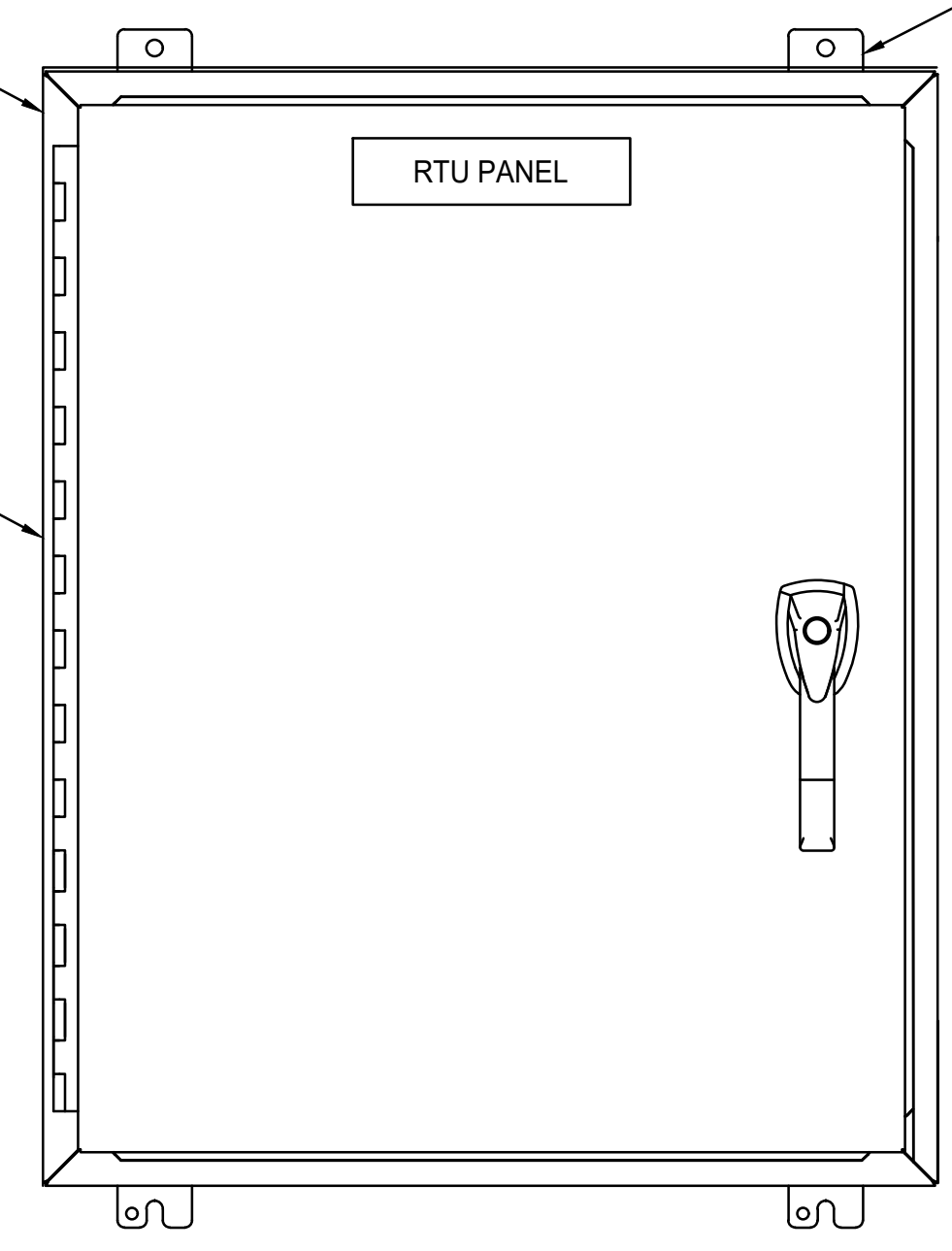
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
ELEVATION - CONTROL PANEL (CP-1) & BOM**

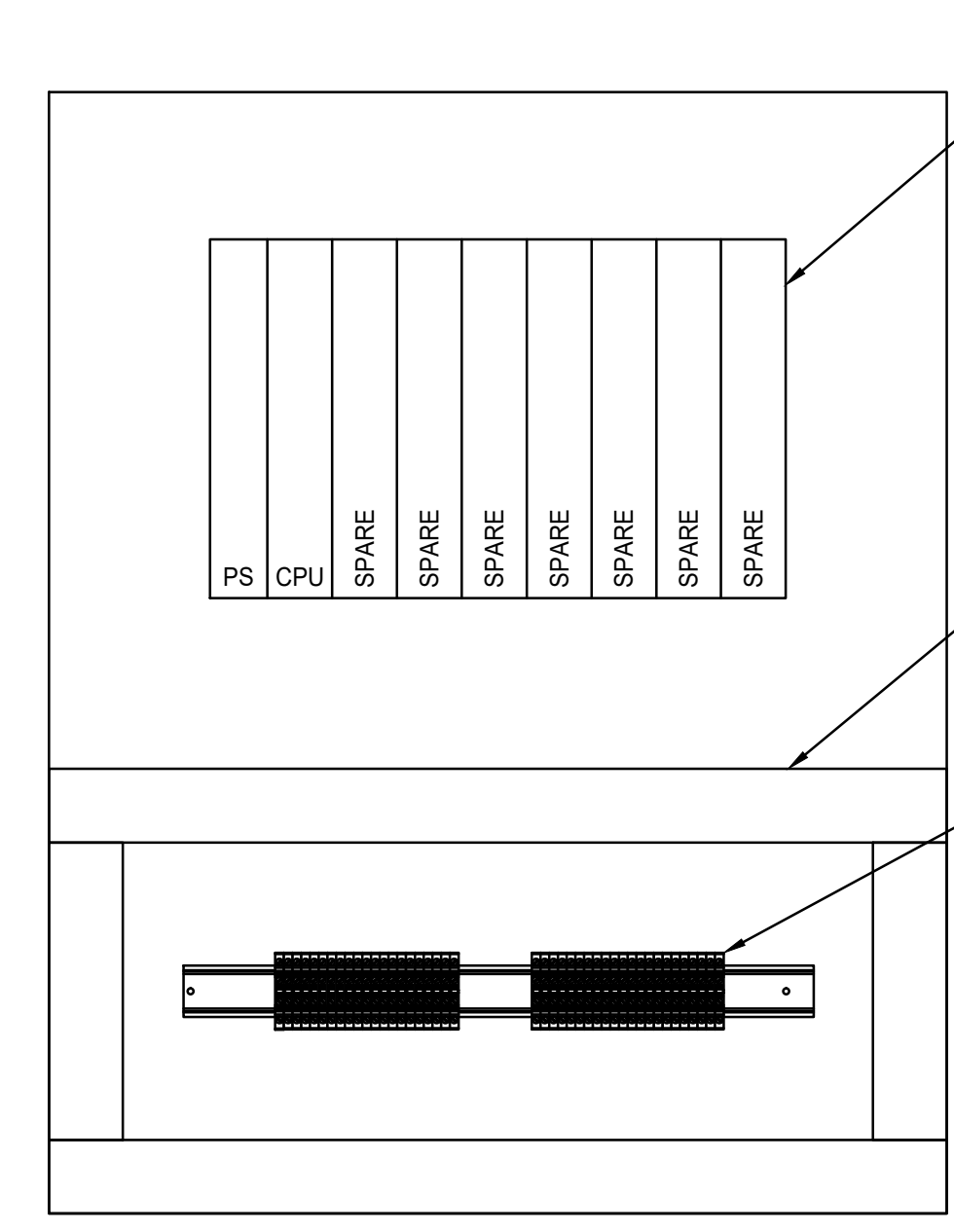
NEMA TYPE 12 RATED ENCLOSURE
 POWDER COATED (ANSI 61) GREY.
 BACK PANEL SHALL BE 12GA.
 GALVANIZED, POWDER COATED WHITE

CONTINUOUSLY
 HINGED DOOR

MOUNTING
 BRACKETS (TYP.)



FRONT PANEL

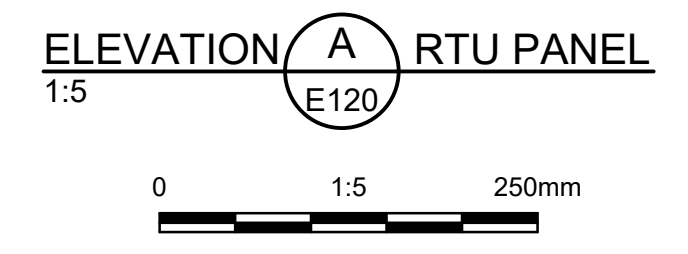
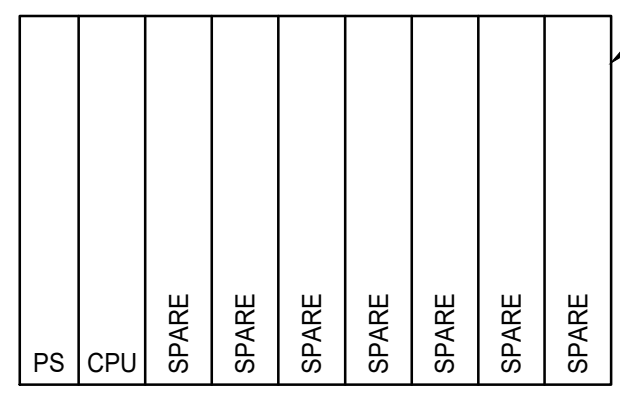


BACK PANEL

ACE3600 RTU
 RELOCATED FROM P279

50mm WIREWAY (TYP.)

TERMINALS (TYP.)



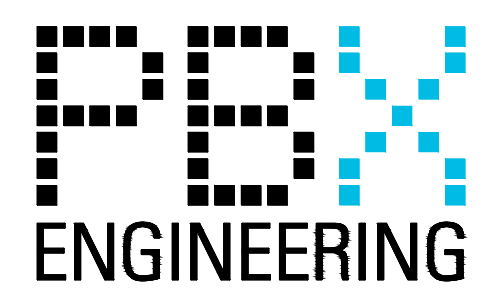
NOTES:

* DIMENSIONS SHOWN REPRESENT INTERNAL DIMENSIONS AND ARE APPROXIMATE.

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

FUNCTIONAL DESIGN ONLY
 CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR
 ENGINEER'S APPROVAL PRIOR TO FABRICATION

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



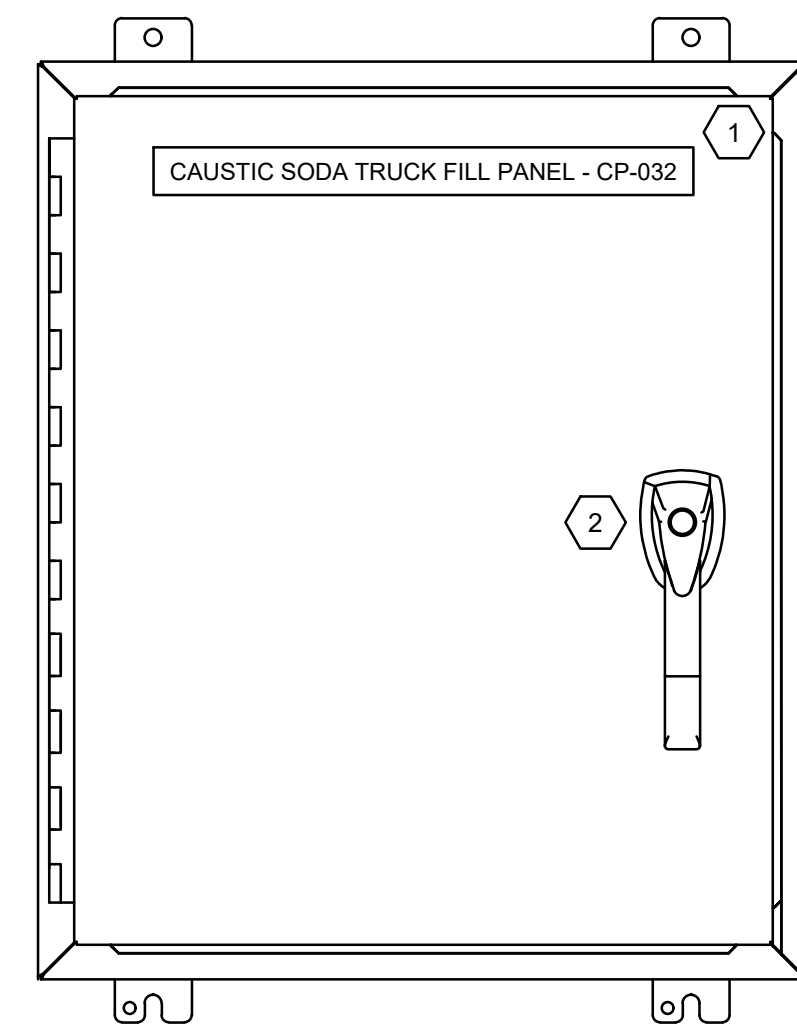
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

2023

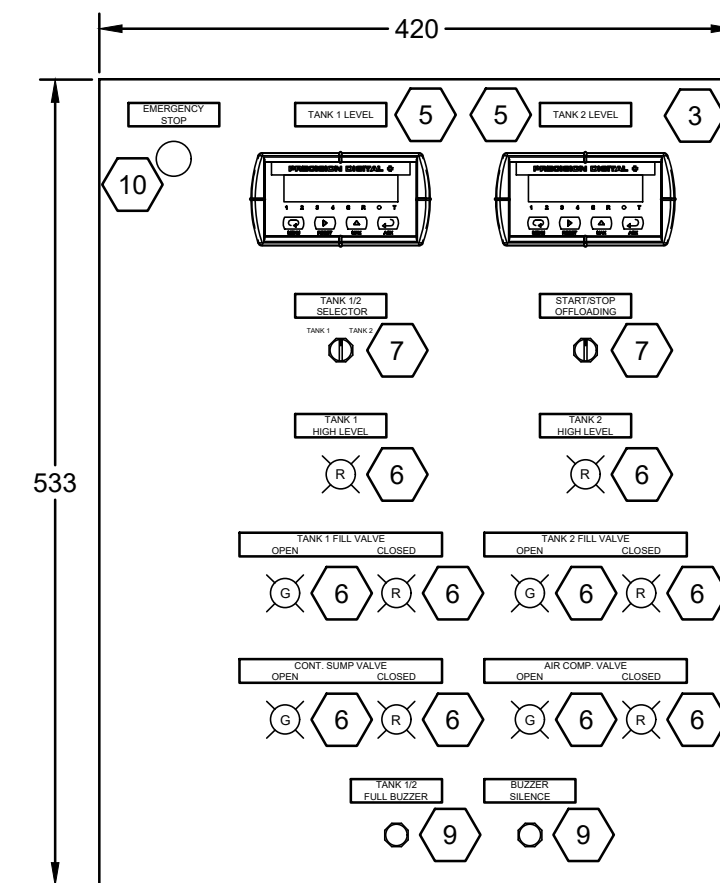
**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY**

ELEVATION - RTU PANEL

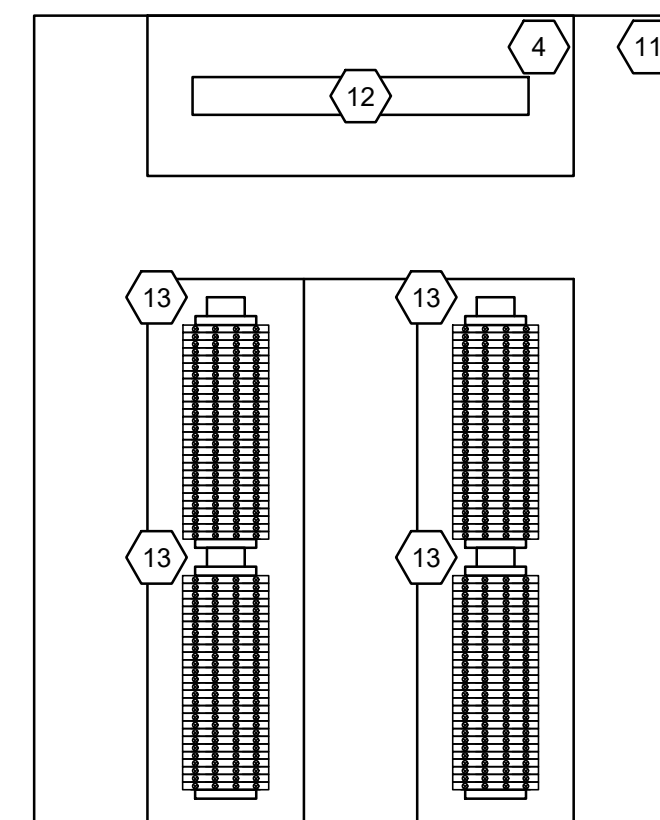
FILENAME	E132 ELEVATION - RTU PANEL.DWG	SHEET
SCALE	AS NOTED	E132



FRONT LAYOUT



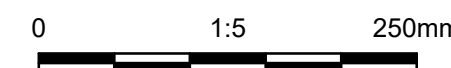
INNER PANEL



BACK PANEL

CP-032 BILL OF MATERIALS			
ITEM	QTY.	DESCRIPTION	MAKE/MODEL
1	1	24x20x10" (HxWxD) NEMA TYPE 4X SS ENCLOSURE	HAMMOND HWSSHK SERIES
2	1	NEMA TYPE 4X PADLOCKABLE HANDLE	HAMMOND MHK SERIES
3	1	SWING PANEL KIT	HAMMOND SPB SERIES
4	1	BACK PANEL FOR ENCLOSURE	HAMMOND
5	2	DIGITAL PANEL METER	TRIDENT PD765-7R2-00
6	10	PUSH-TO-TEST PILOT LIGHT	ALLEN-BRADLEY 800T SERIES
7	2	TWO-WAY SELECTOR SWITCH	ALLEN-BRADLEY 800T SERIES
8	1	PUSHBUTTON	ALLEN-BRADLEY 800T SERIES
9	1	BUZZER / HORN	ALLEN-BRADLEY 855P SERIES
10	1	EMERGENCY STOP PUSH BUTTON	ALLEN-BRADLEY 800T SERIES
11	AS REQUIRED	WIRING DUCT	PANDUIT
12	AS REQUIRED	DIN RAIL	PHOENIX CONTACT
13	AS REQUIRED	TERMINALS	PHOENIX CONTACT

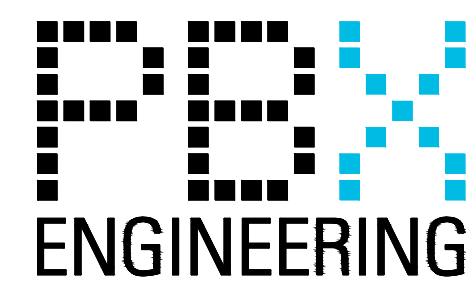
ELEVATION A CAUSTIC SODA TRUCK FILL PANEL (CP-032)
 1:5



**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**

FUNCTIONAL DESIGN ONLY
 CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR
 ENGINEER'S APPROVAL PRIOR TO FABRICATION

**ALL EQUIPMENT IS PROPOSED
 UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

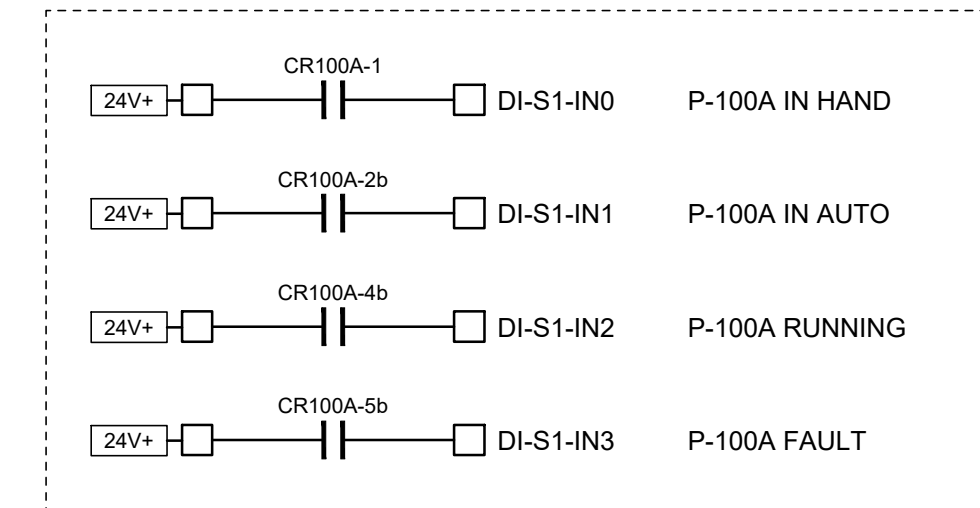
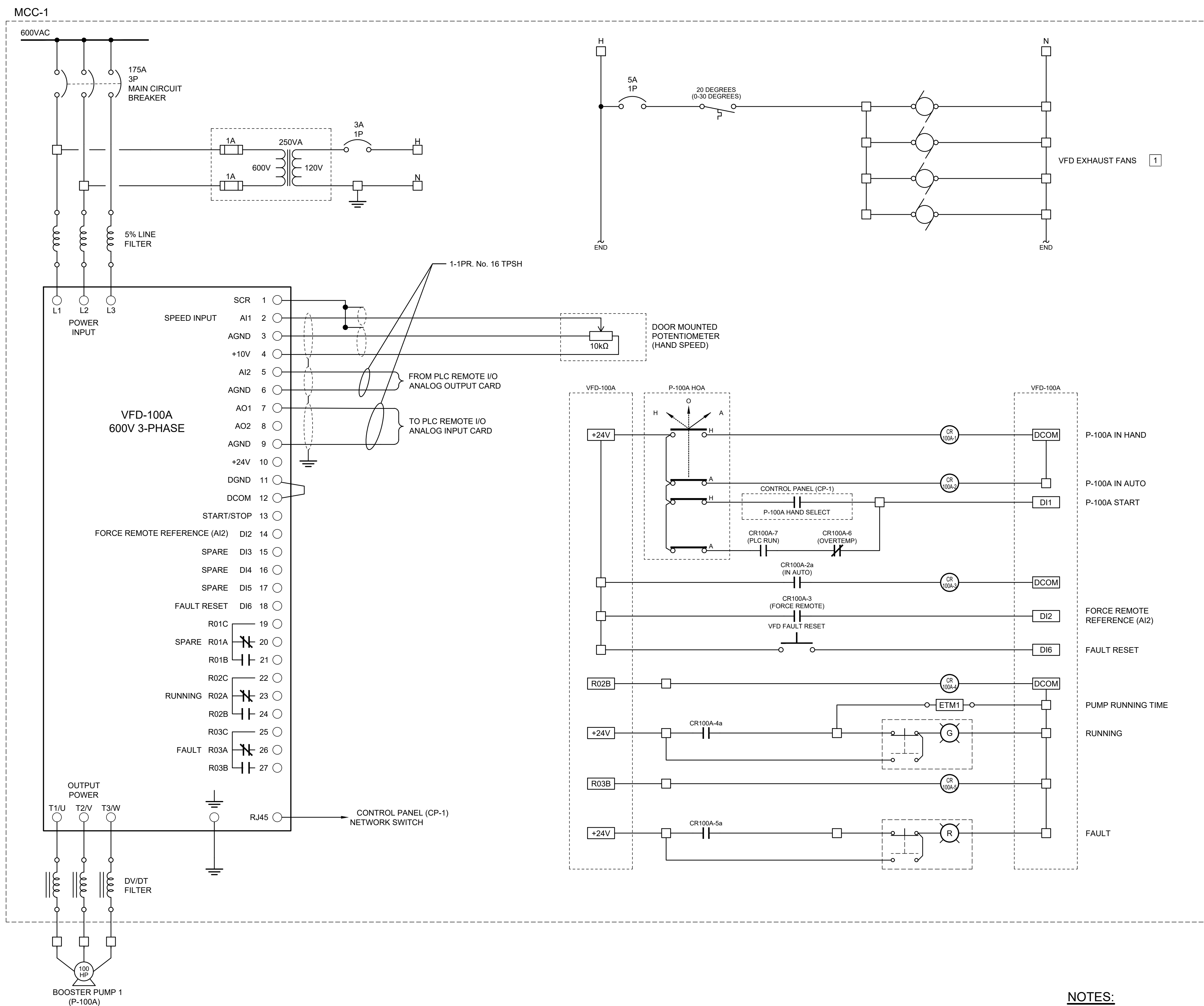
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 ELEVATION - CAUSTIC SODA TRUCK FILL PANEL (CP-032)**

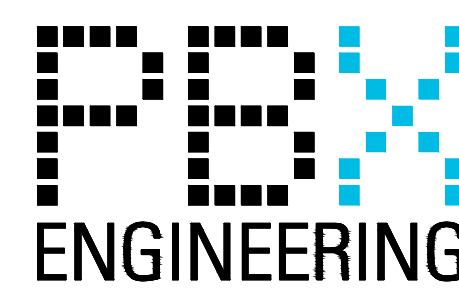


VFD-100A VFD WIRING

NOTES:
1 MANUFACTURER TO PERFORM HEAT LOAD CALCULATIONS AND PROVIDE VENTILATION WITHIN THE MCC COMPARTMENT FOR ADEQUATE COOLING TO PREVENT OVERTEMPERATURE FAULTS IN THE VFDs AND FILTER EQUIPMENT.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

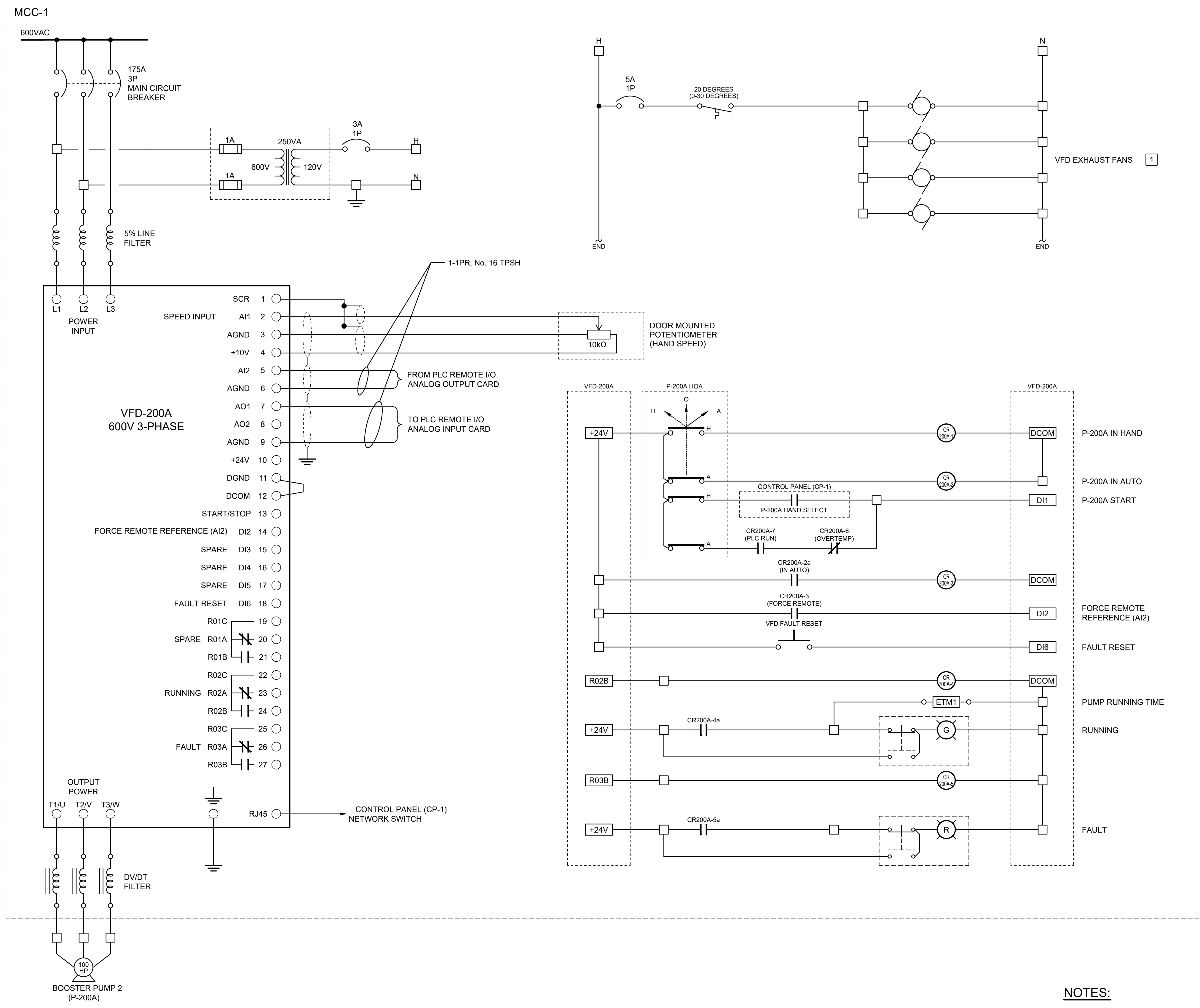
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

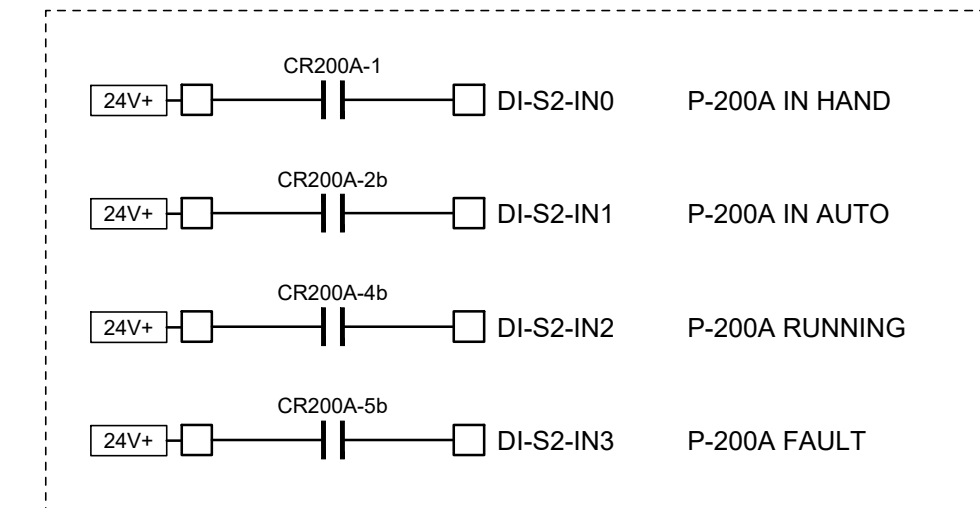


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAMS - VFD-100A**



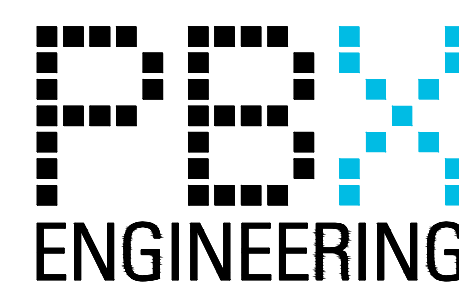
VFD-200A VFD WIRING



NOTES:
1 MANUFACTURER TO PERFORM HEAT LOAD CALCULATIONS AND PROVIDE VENTILATION WITHIN THE MCC COMPARTMENT FOR ADEQUATE COOLING TO PREVENT OVERTEMPERATURE FAULTS IN THE VFDs AND FILTER EQUIPMENT.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

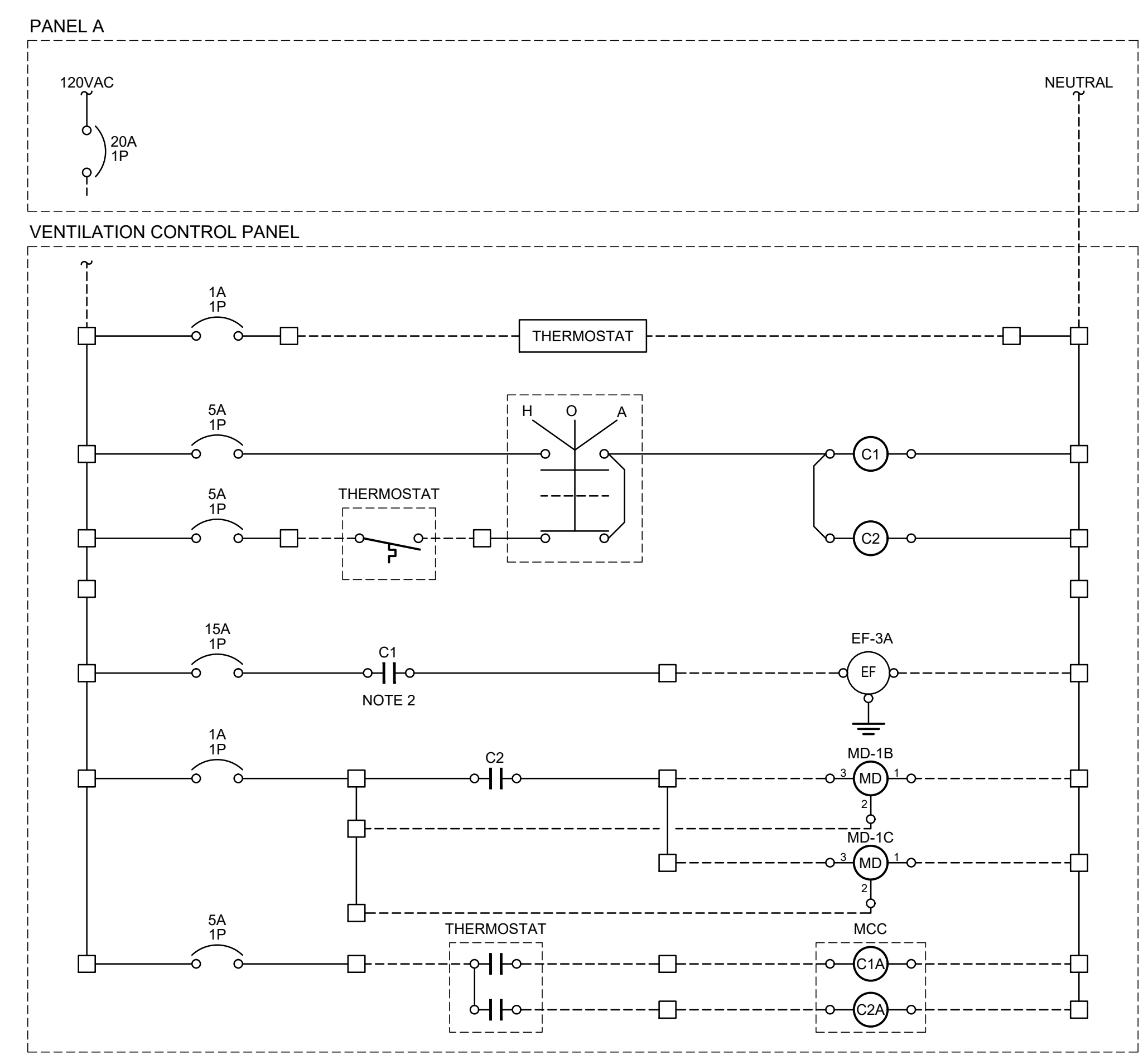
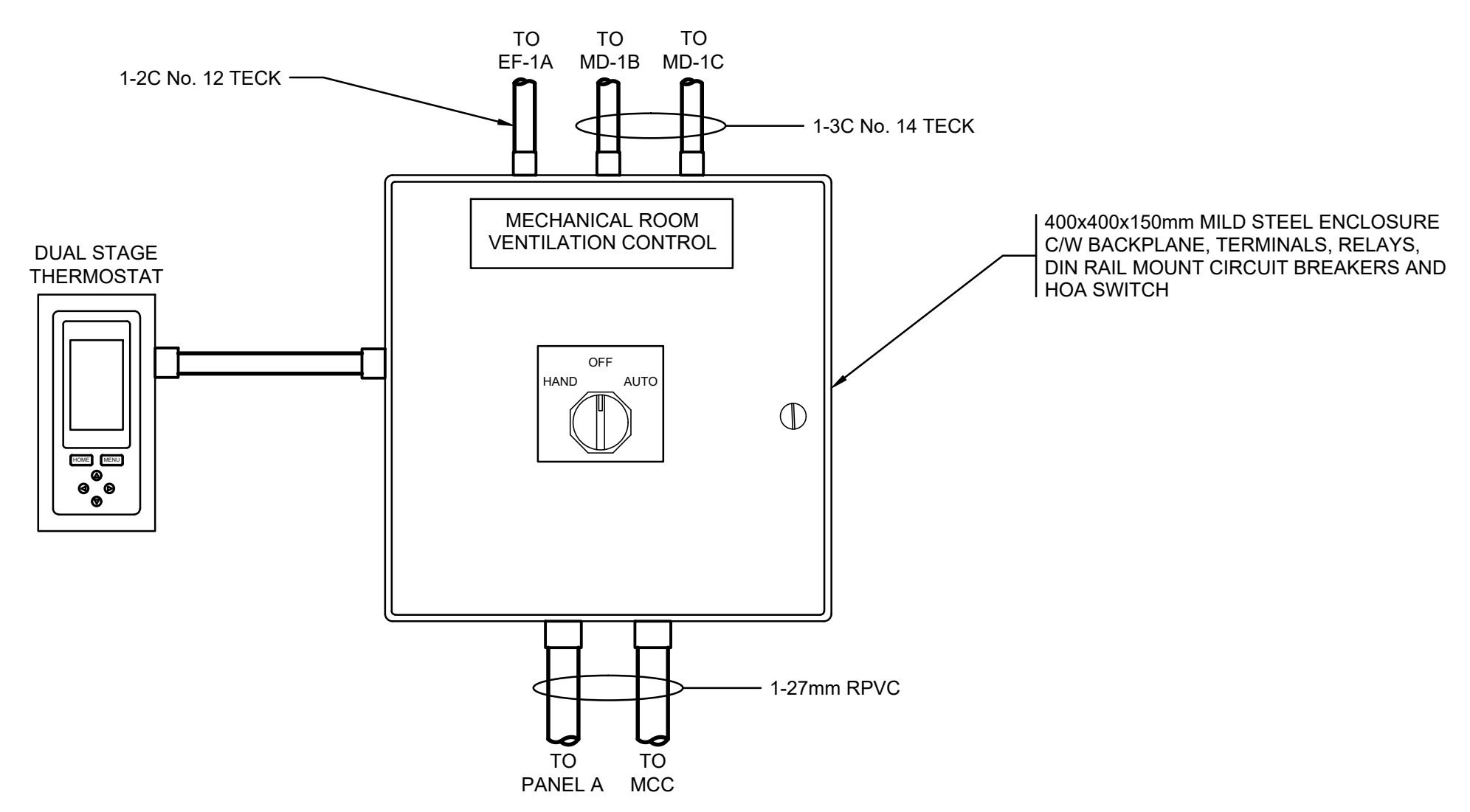
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAMS - VFD-200A**



DETAIL 1 MECHANICAL ROOM VENTILATION CONTROL PANEL (VFCP-1) AND
N.T.S. E120 WIRING DIAGRAM

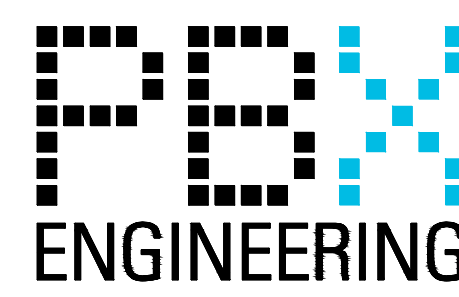
NOTES:

- CONTROL RELAY INSTALLED IN CONTROL PANEL OPERATED BY PLC BASED ON REQUIREMENTS IN THE PROCESS CONTROL NARRATIVE.
- NEMA SIZE 00 STARTER.

----- DASHED LINES DESIGNATE
WIRING LEAVING THE
CONTROL PANELS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

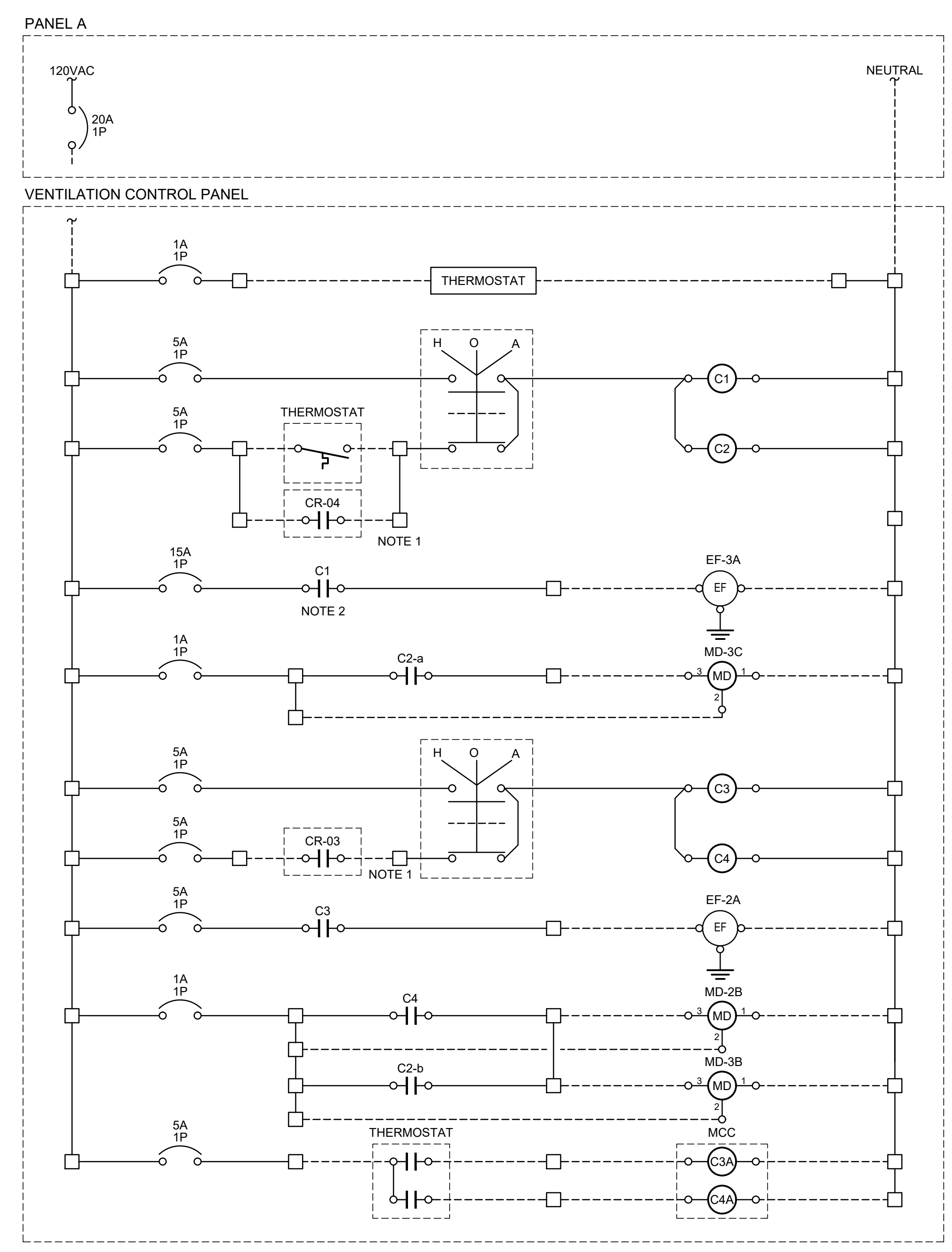
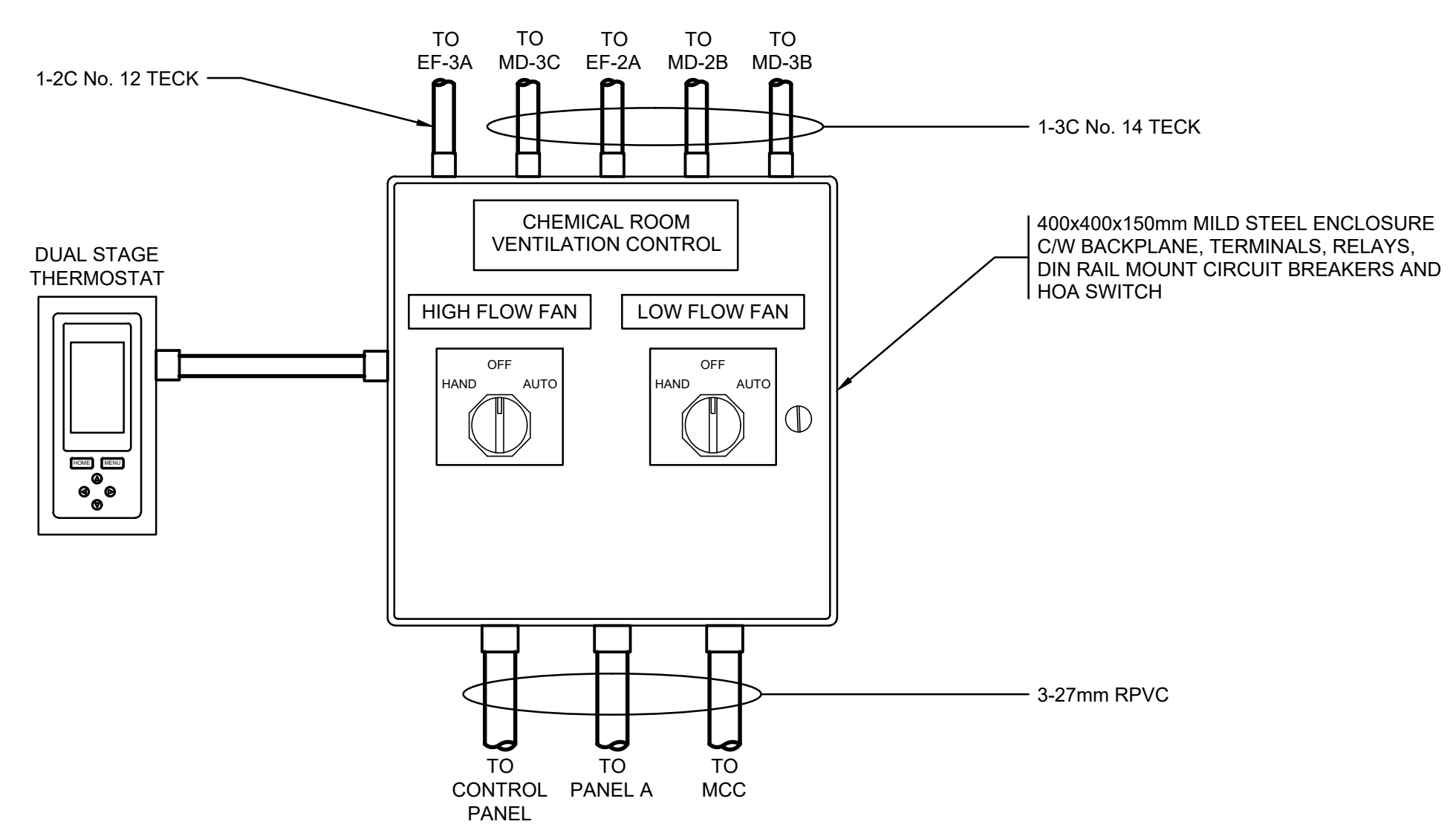
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAM - VENTILATION CONTROLS (1 OF 2)**



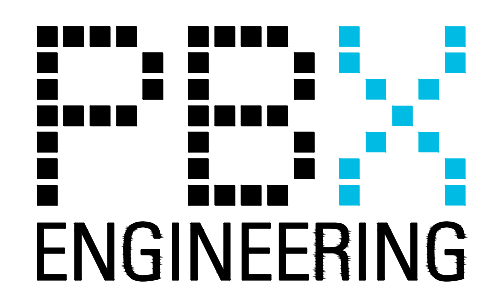
DETAIL 1 CHEMICAL ROOM VENTILATION CONTROL PANEL (VFCP-2)
N.T.S. E120 WIRING DIAGRAM

- NOTES:**
- CONTROL RELAY INSTALLED IN CONTROL PANEL OPERATED BY PLC BASED ON REQUIREMENTS IN THE PROCESS CONTROL NARRATIVE.
 - NEMA SIZE 00 STARTER.

----- DASHED LINES DESIGNATE WIRING LEAVING THE CONTROL PANELS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

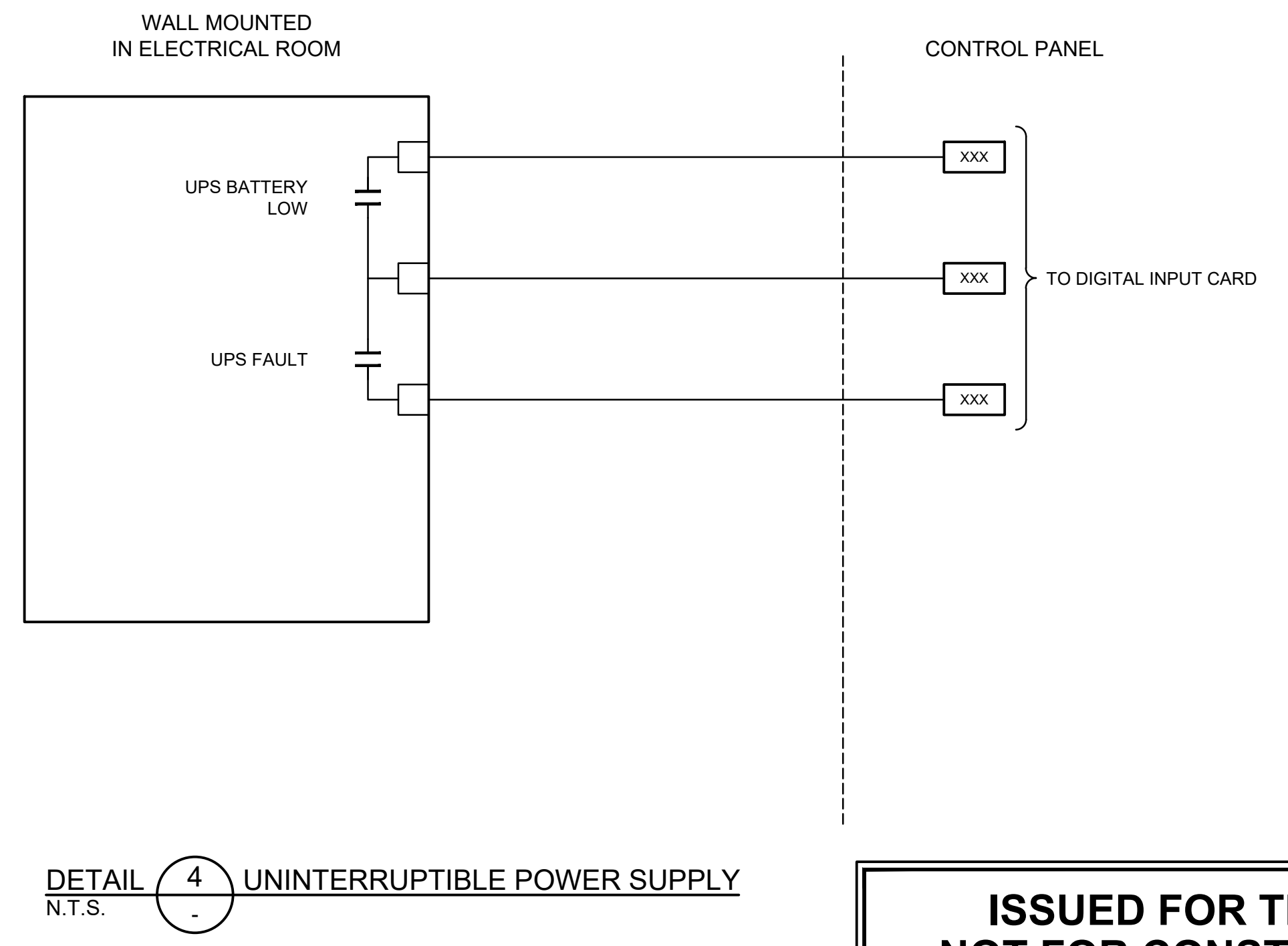
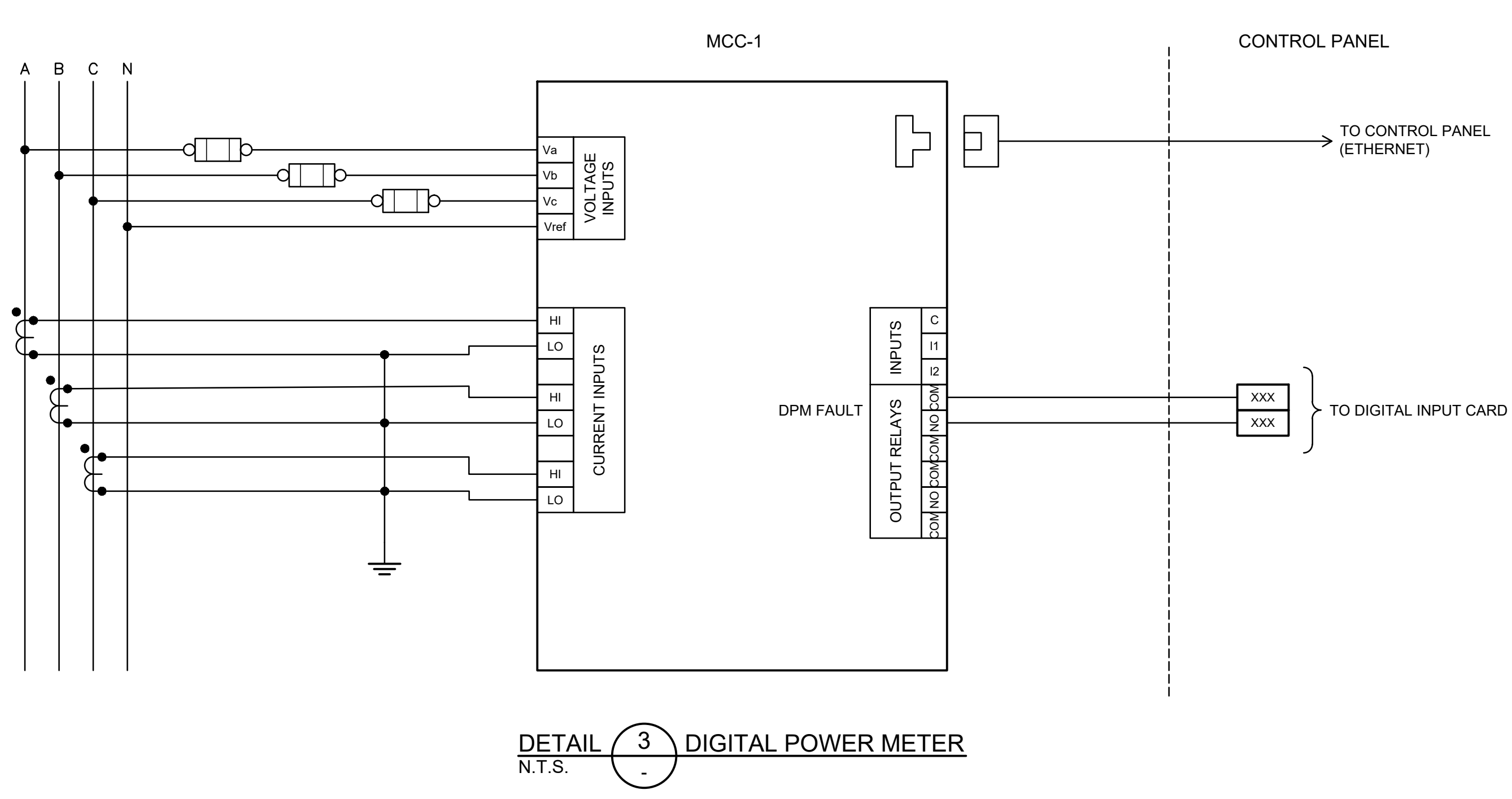
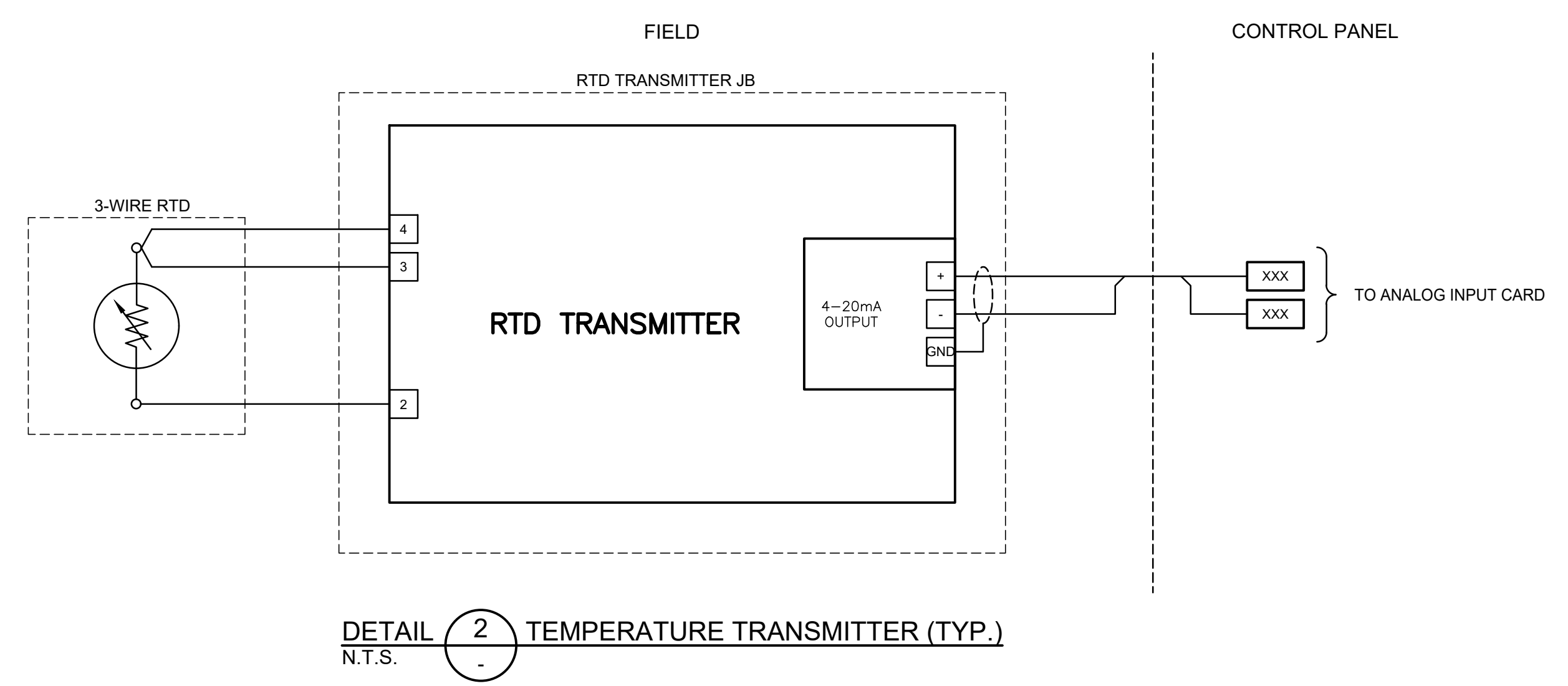
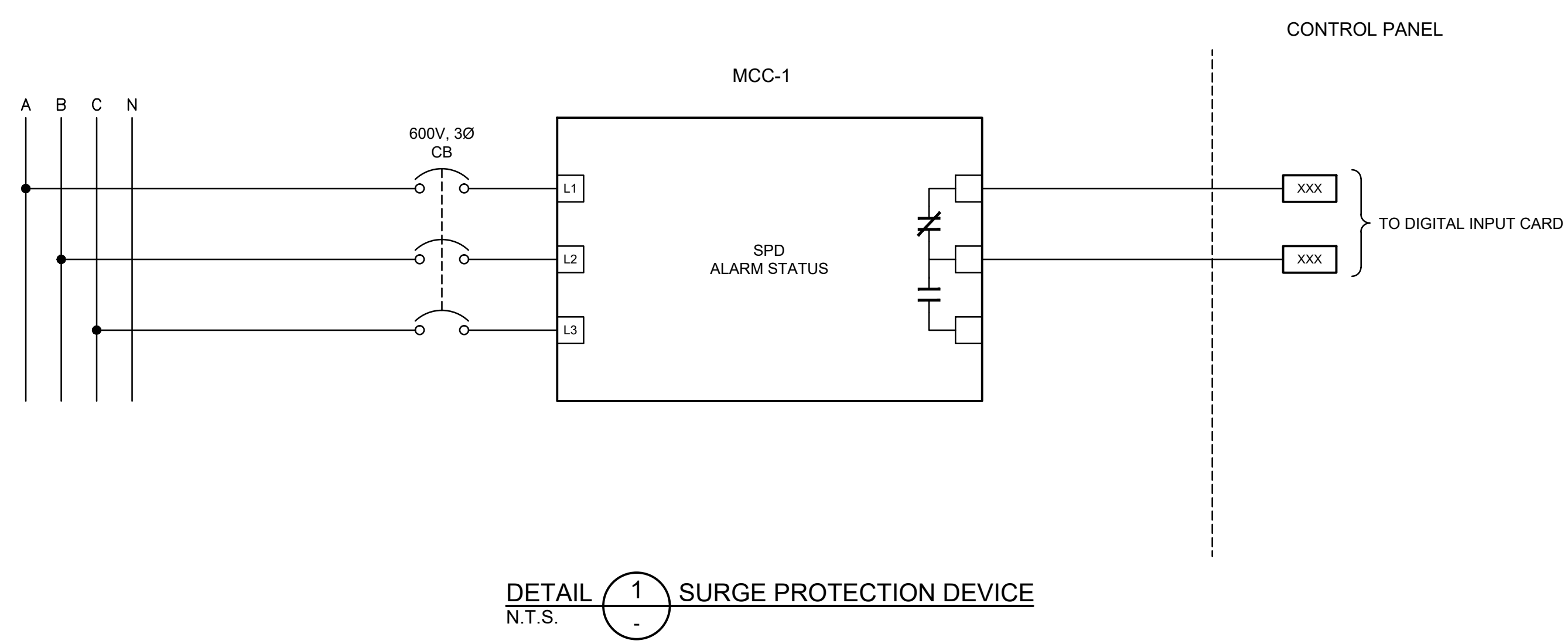


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

2023

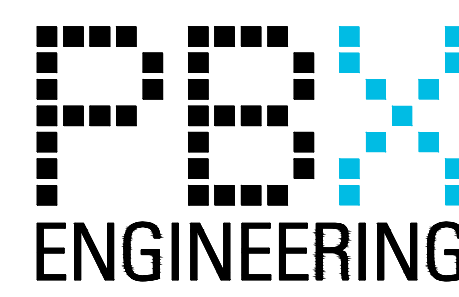
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAM - VENTILATION CONTROLS (2 OF 2)**

FILENAME	SCALE	SHEET
E143 WIRING DIAGRAM - VENTILATION CONTROLS (2 OF 2).DWG	AS NOTED	E143



**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

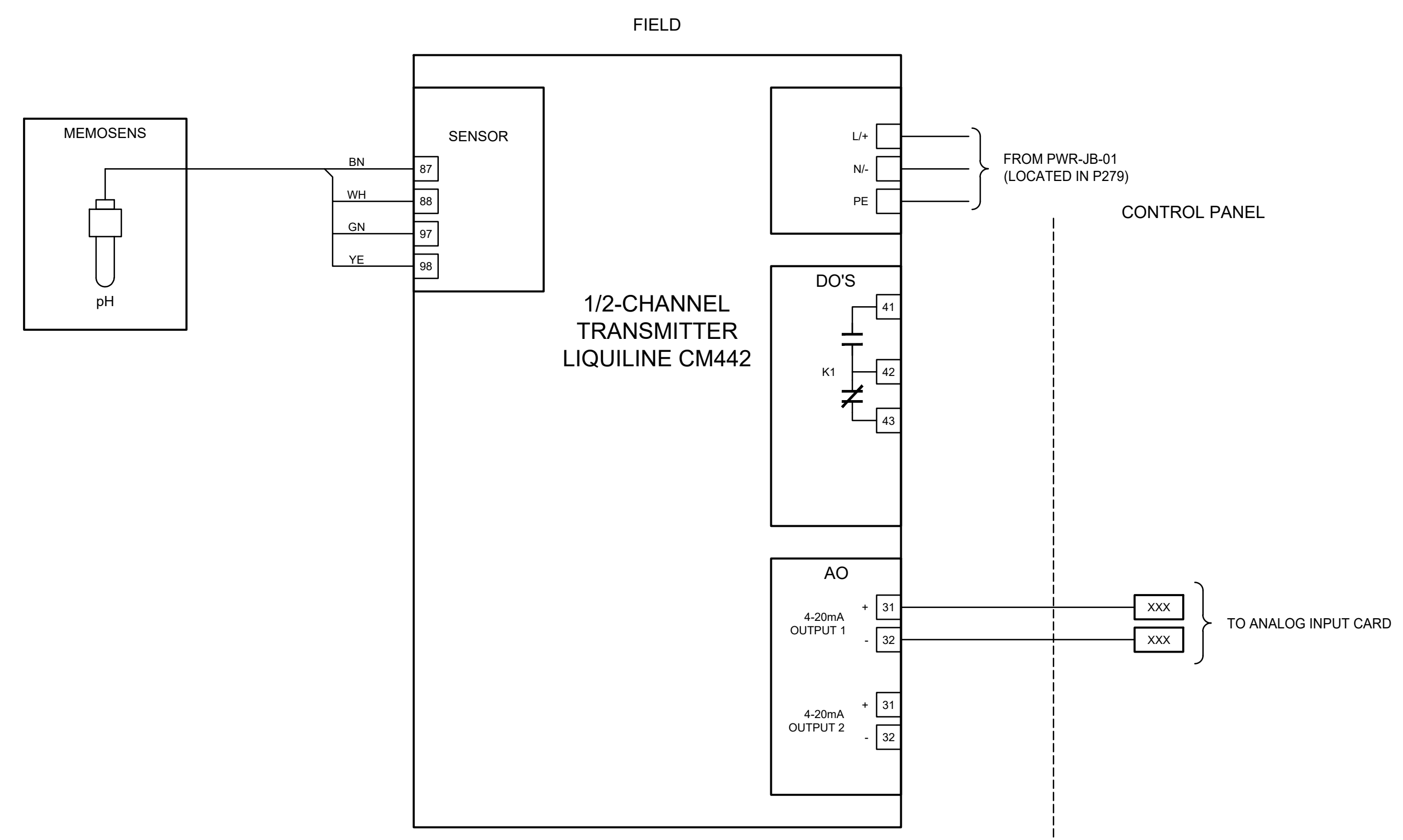
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

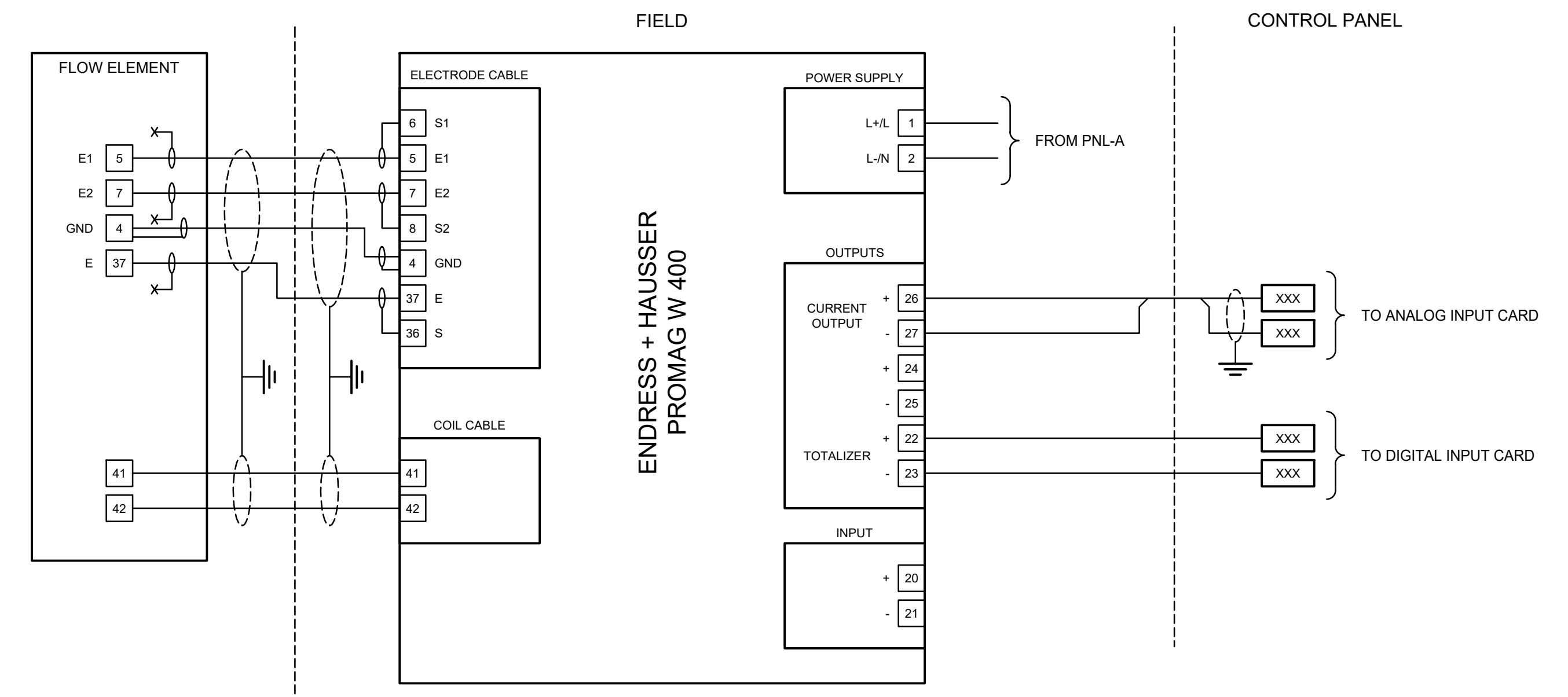


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

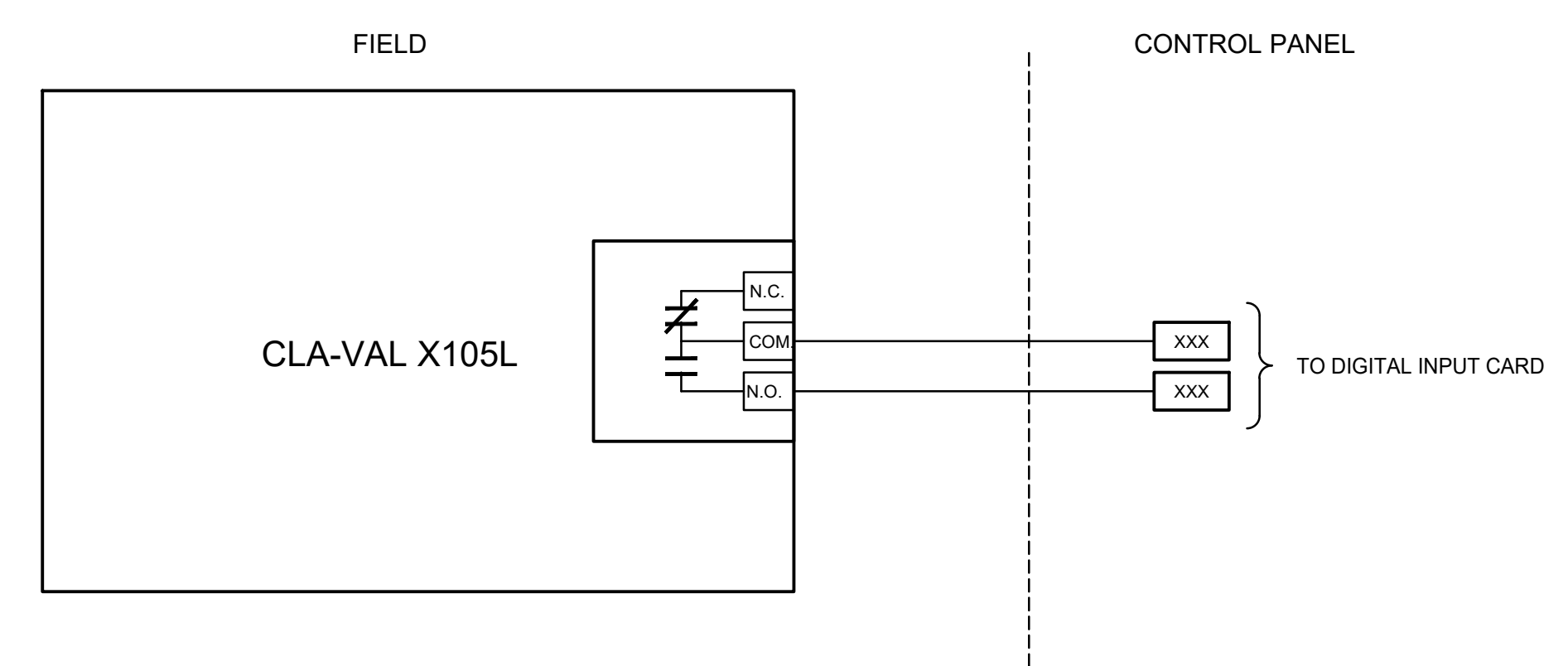
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAMS - DEVICES (1 OF 3)**



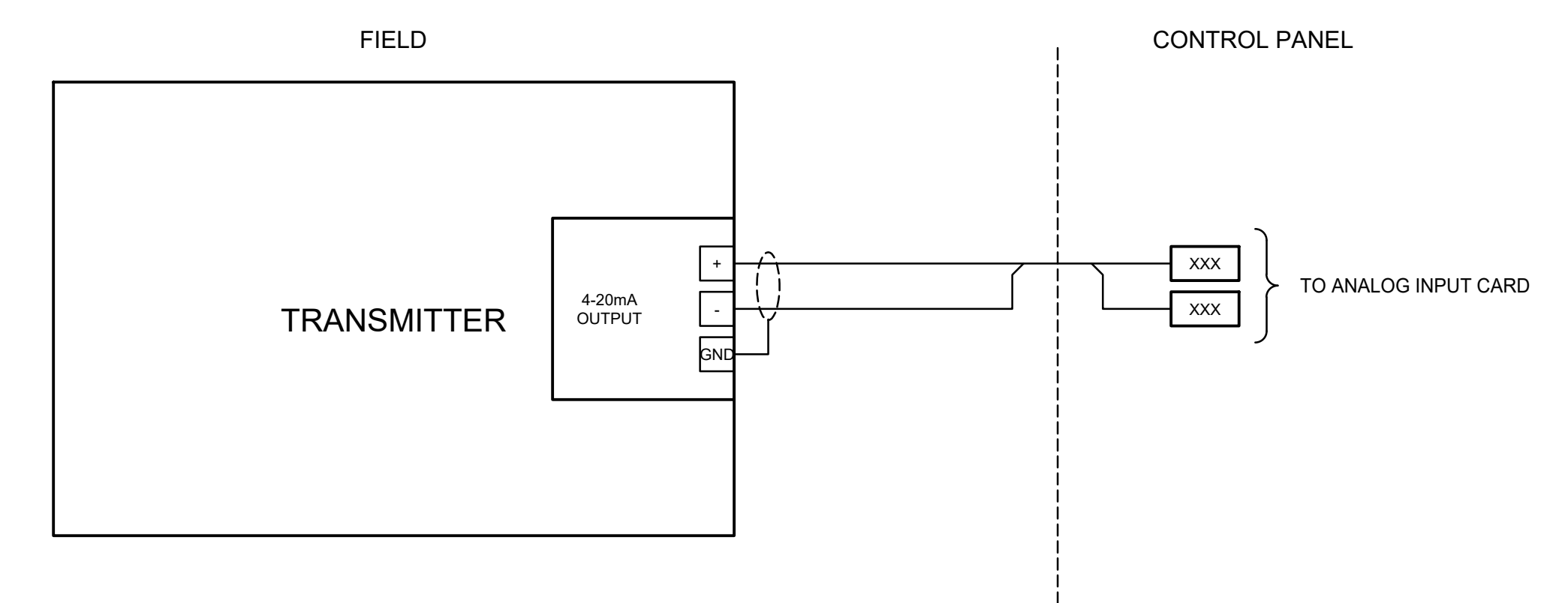
DETAIL 1 PH ANALYZER WIRING DIAGRAM
N.T.S. (AIT-008Q1)



DETAIL 2 FIT WIRING DIAGRAM (TYP.)
N.T.S.



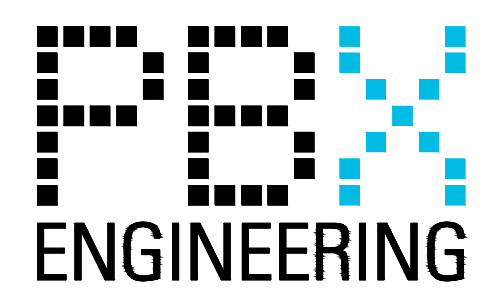
DETAIL 3 VALVE LIMIT SWITCH WIRING DIAGRAM
N.T.S.



DETAIL 4 4-20mA INSTRUMENT WIRING DIAGRAM (TYP.)*
N.T.S. * TYPICAL FOR PIT AND RADAR LEVEL TRANSMITTERS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION	PROJECT NUMBER
0	2023-09-22	ISSUED FOR TENDER	E20307

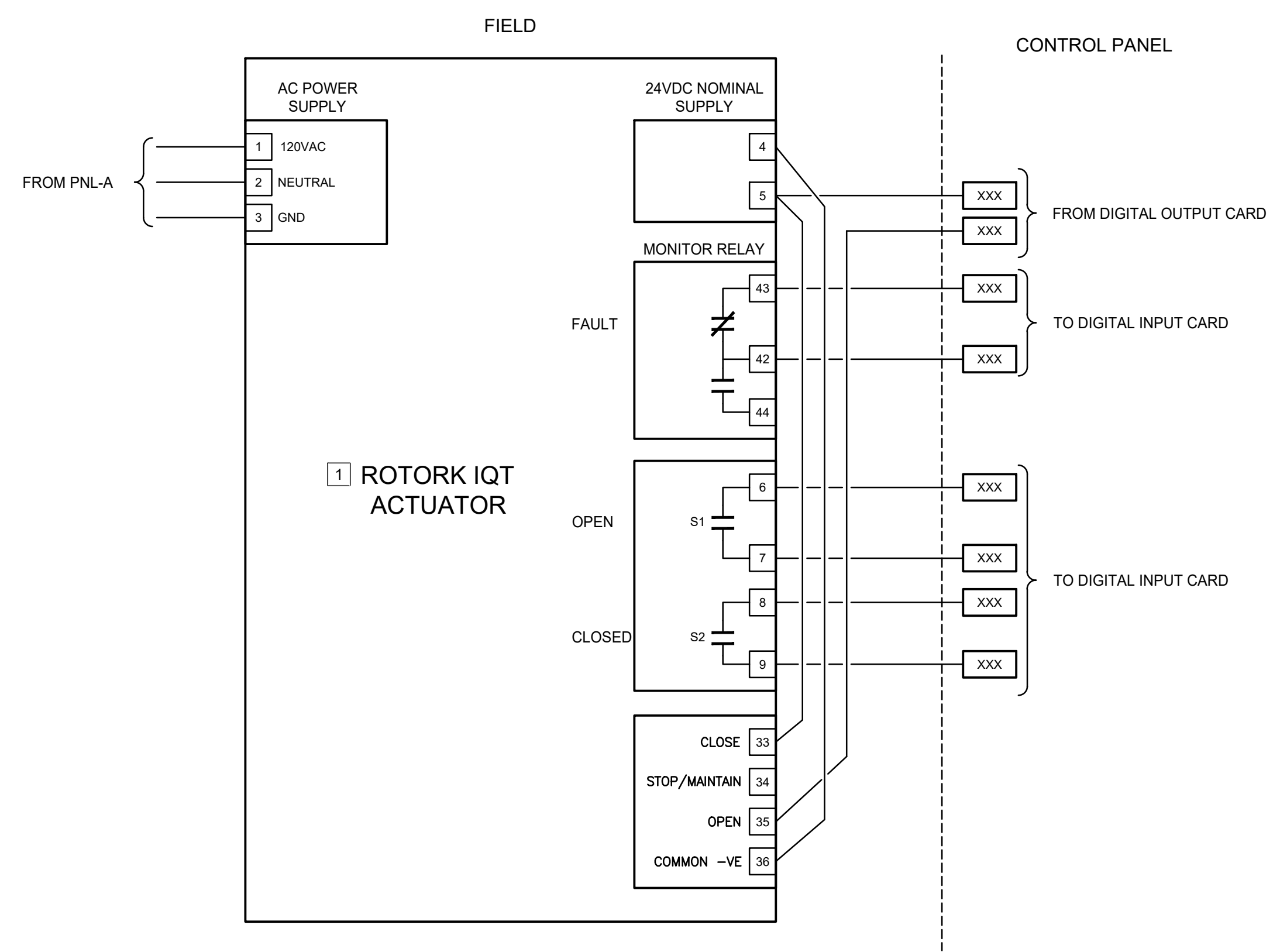
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

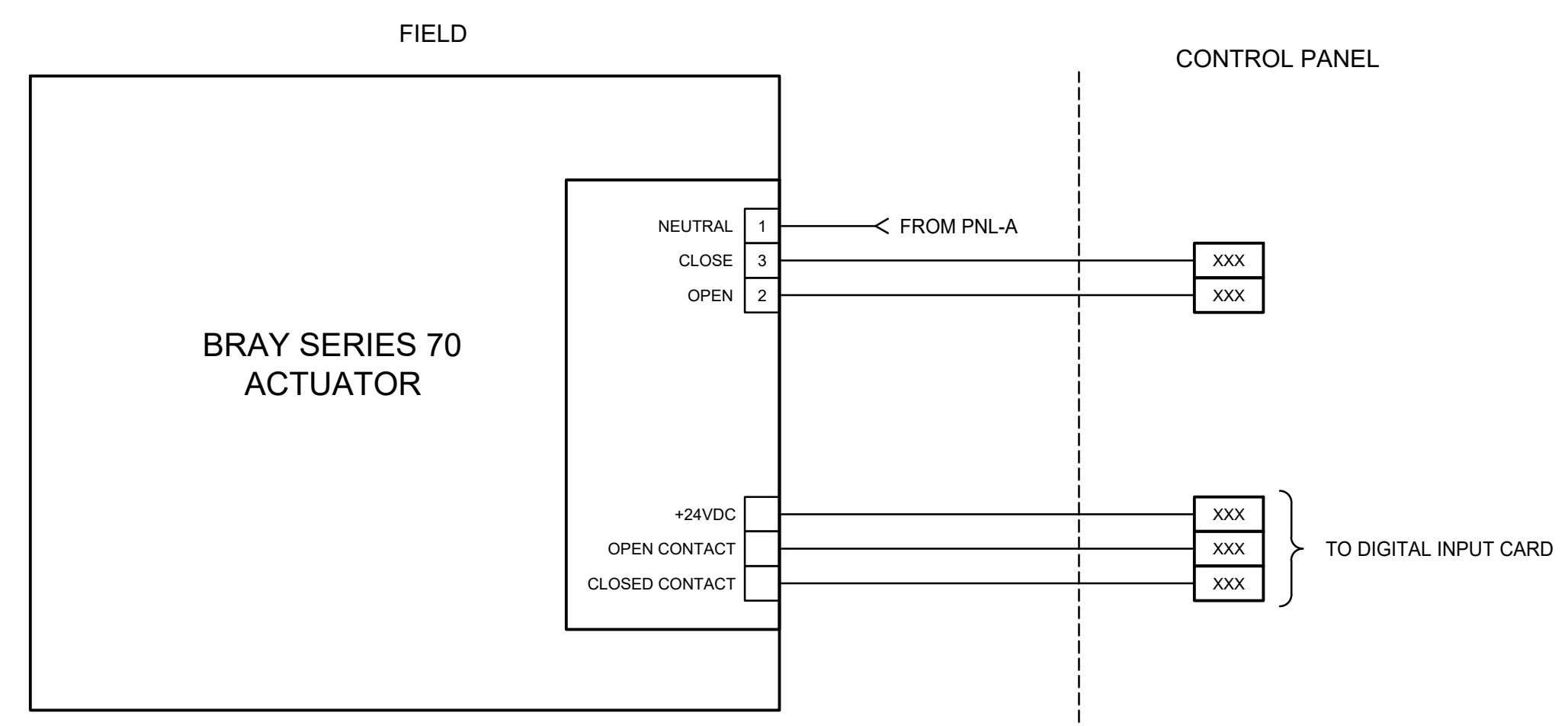


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

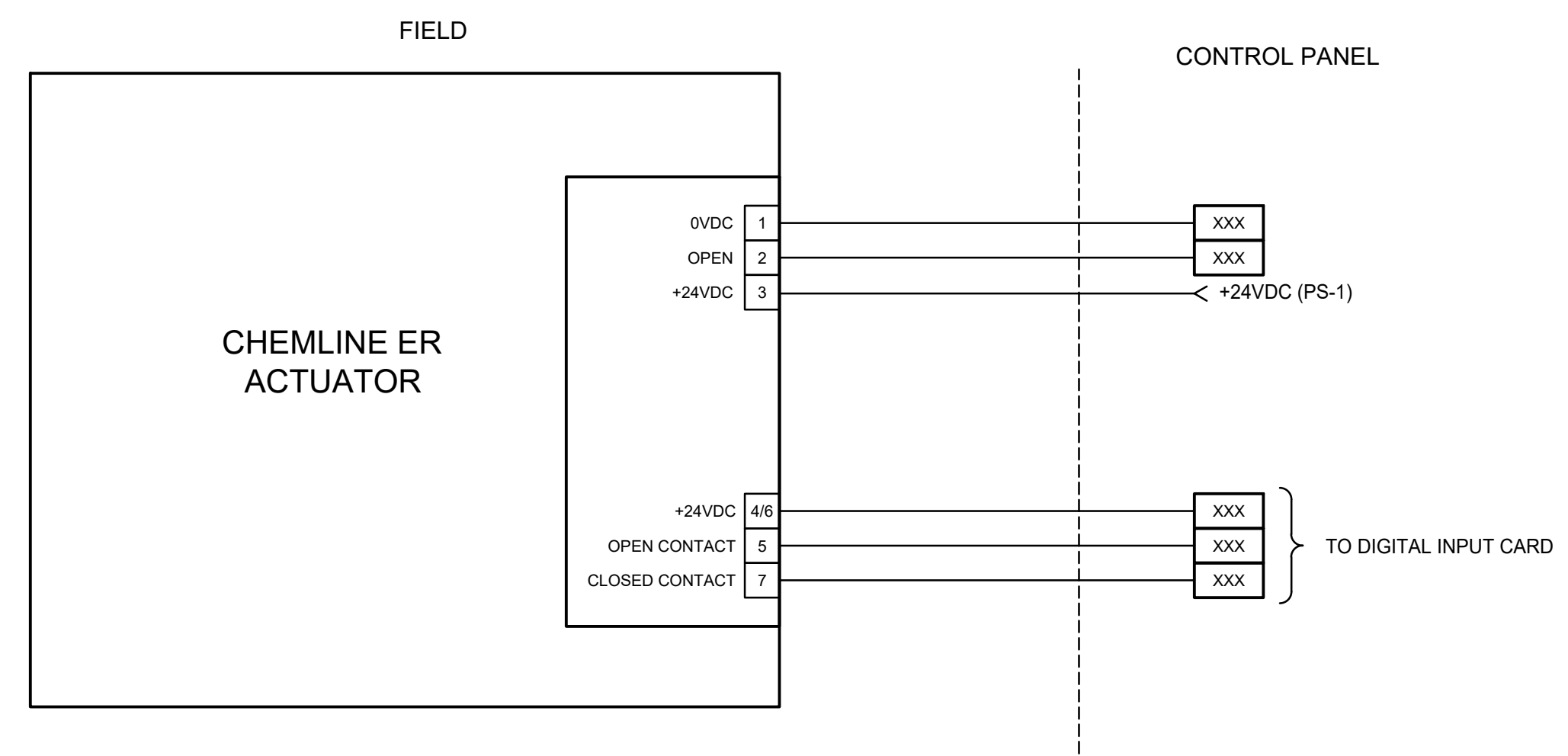
**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAMS - DEVICES (2 OF 3)**



DETAIL 1 ROTORK IQT ACTUATOR WIRING DIAGRAM (TYP.)
N.T.S.



DETAIL 2 BRAY SERIES 70 ACTUATOR
WIRING DIAGRAM (TYP.)
N.T.S.

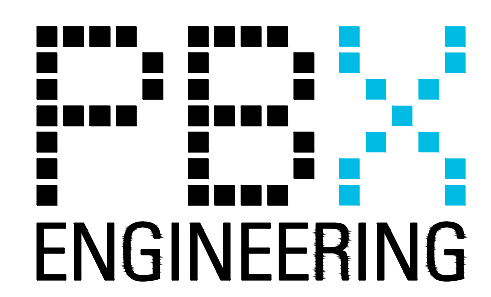


DETAIL 3 CHEMLINE ER ACTUATOR WIRING DIAGRAM (TYP.)
N.T.S.

NOTES:
1 ROTORK WIRING SHOWN IN ENERGIZE TO OPEN CONFIGURATION.

ISSUED FOR TENDER
NOT FOR CONSTRUCTION

ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

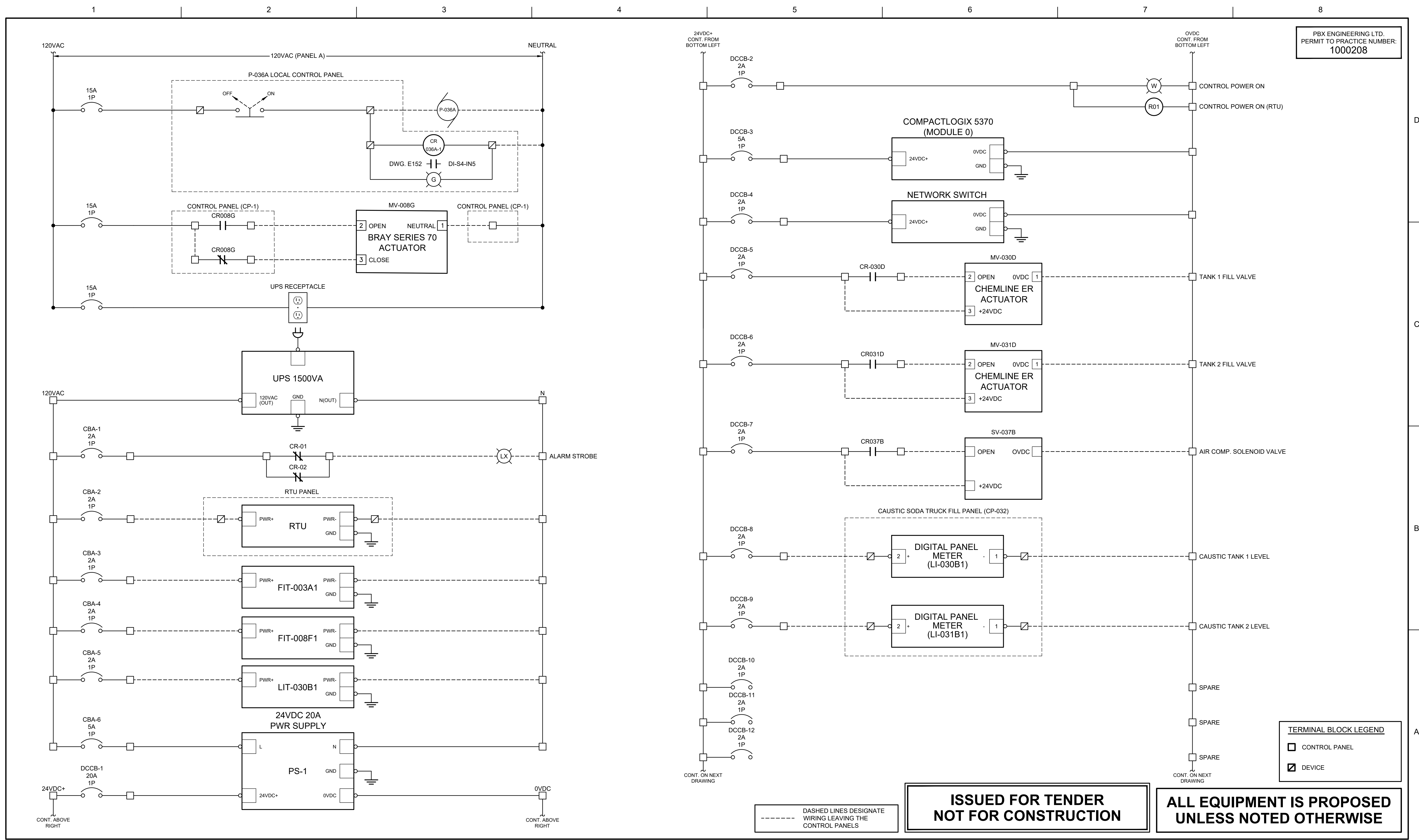
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

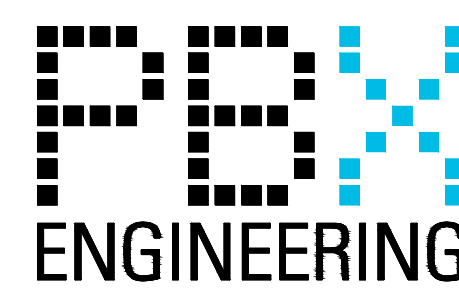
P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
WIRING DIAGRAMS - DEVICES (3 OF 3)



PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

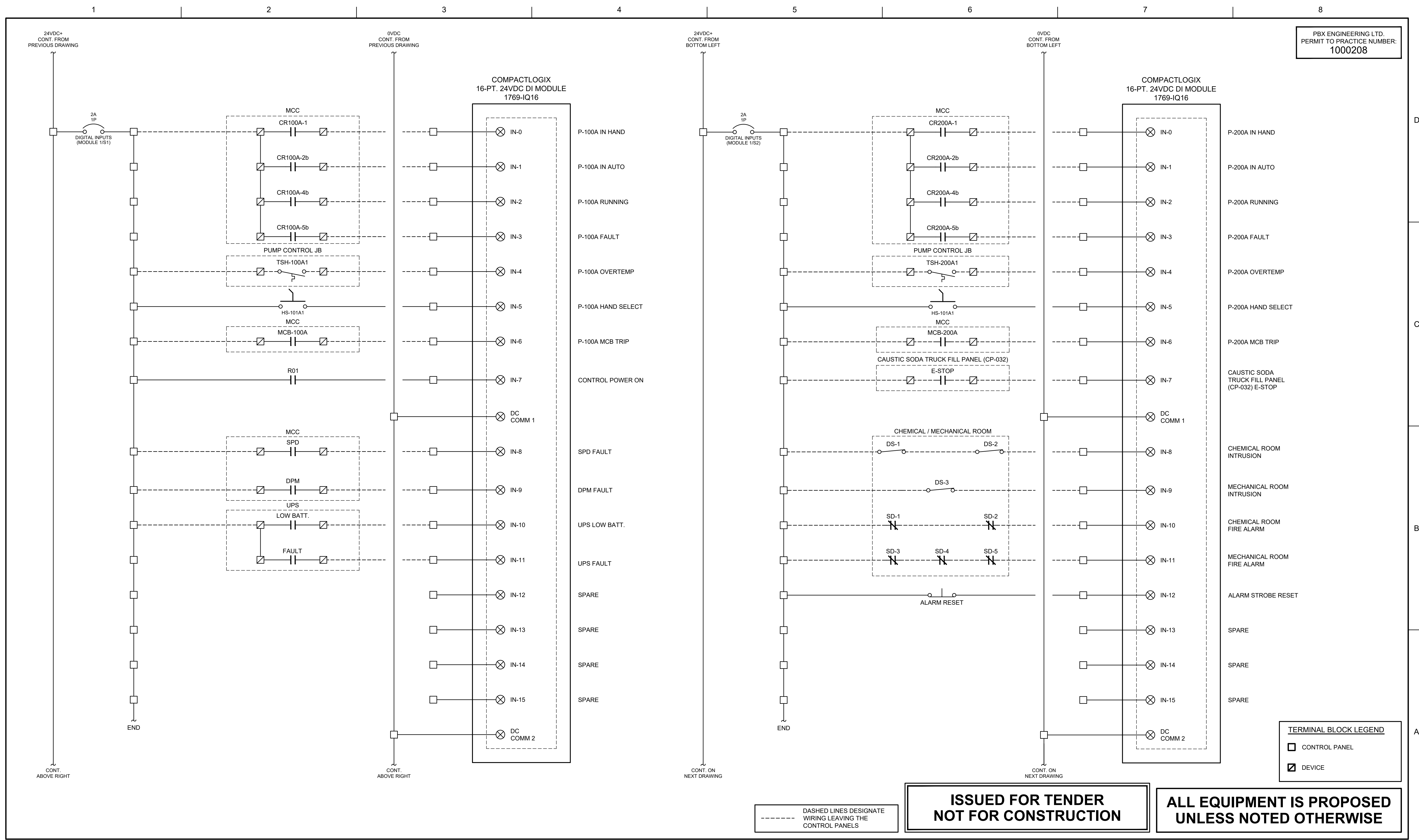
ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DETAILS - LADDER LOGIC (1 OF 9)**

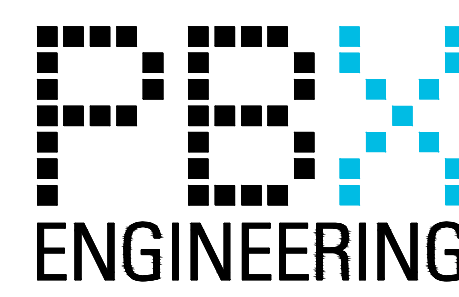
FILENAME	E:\150 DETAILS - LADDER LOGIC (1 OF 9).DWG	SHEET
SCALE	AS NOTED	E150



----- DASHED LINES DESIGNATE WIRING LEAVING THE CONTROL PANELS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

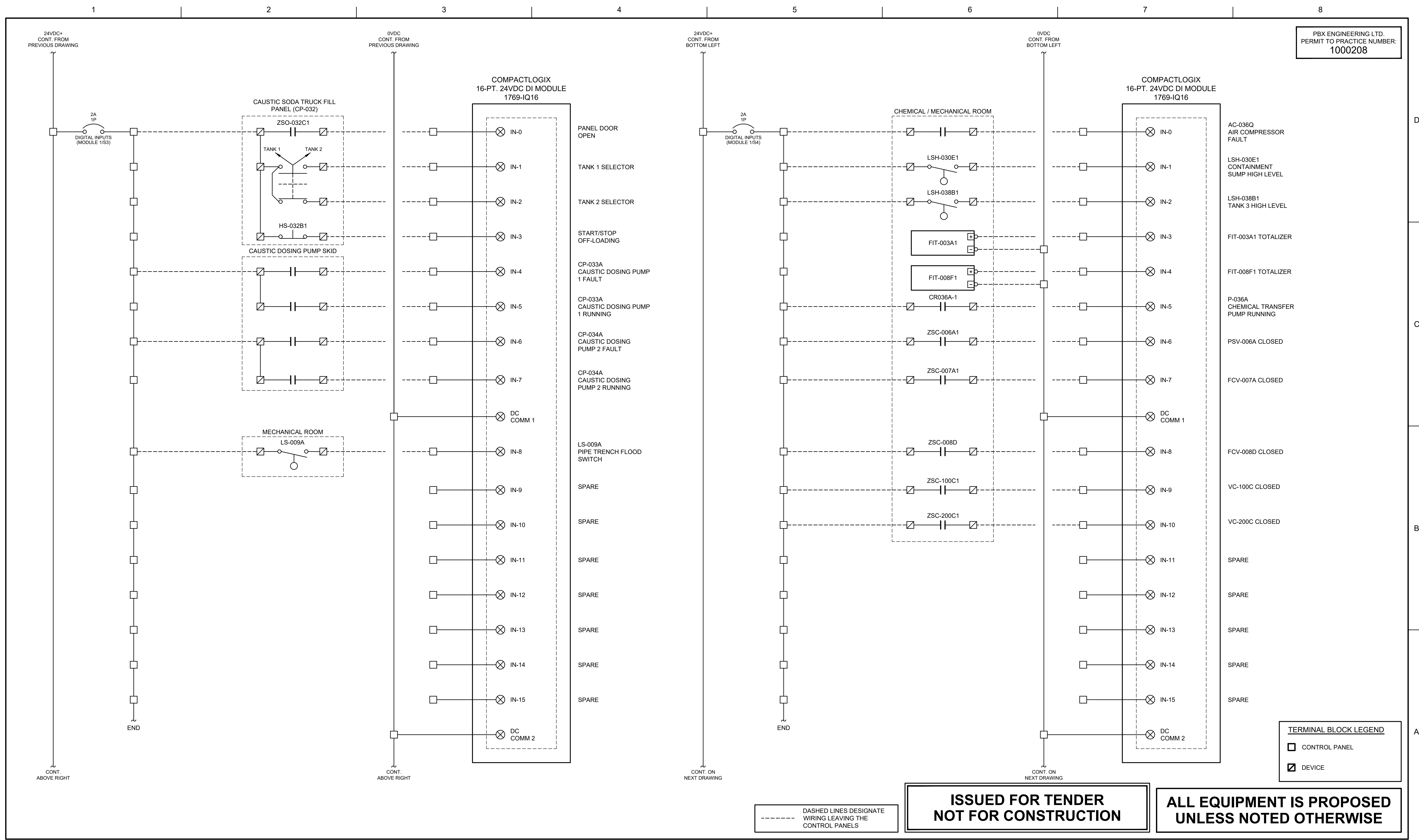


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

DETAILS - LADDER LOGIC (2 OF 9)

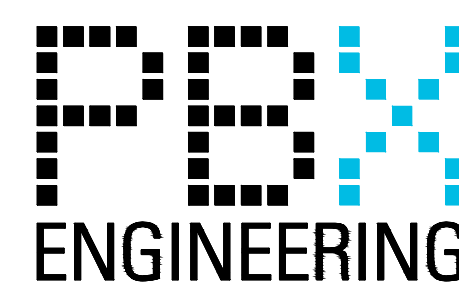
FILENAME	E151 DETAILS - LADDER LOGIC (2 OF 9).DWG	SHEET	E151
SCALE	AS NOTED		



----- DASHED LINES DESIGNATE WIRING LEAVING THE CONTROL PANELS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED

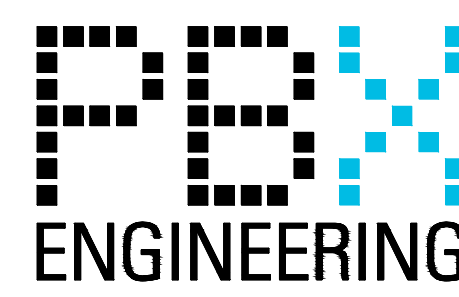
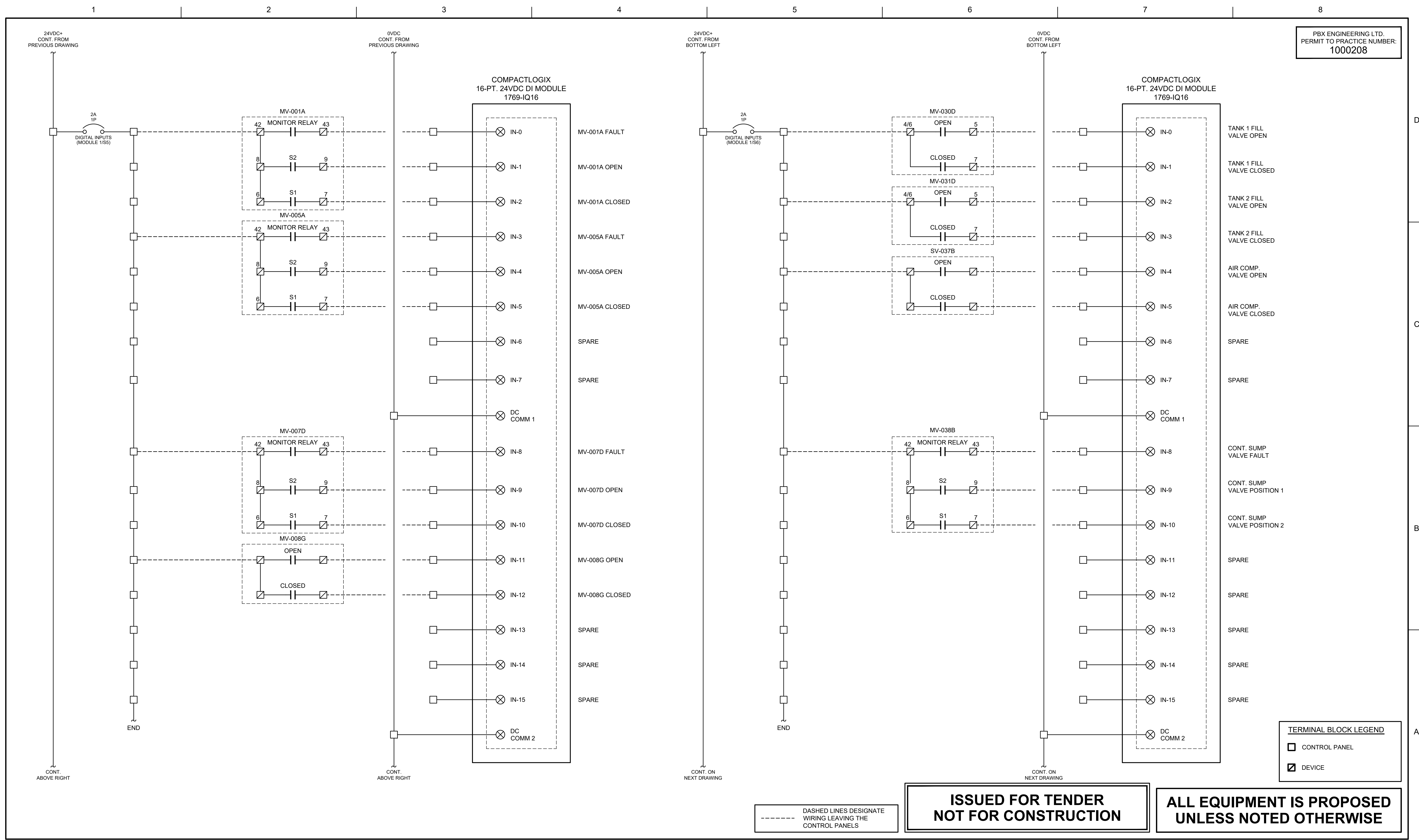


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**

DETAILS - LADDER LOGIC (3 OF 9)

FILENAME	E152 DETAILS - LADDER LOGIC (3 OF 9).DWG	SHEET	E152
SCALE	AS NOTED		



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED

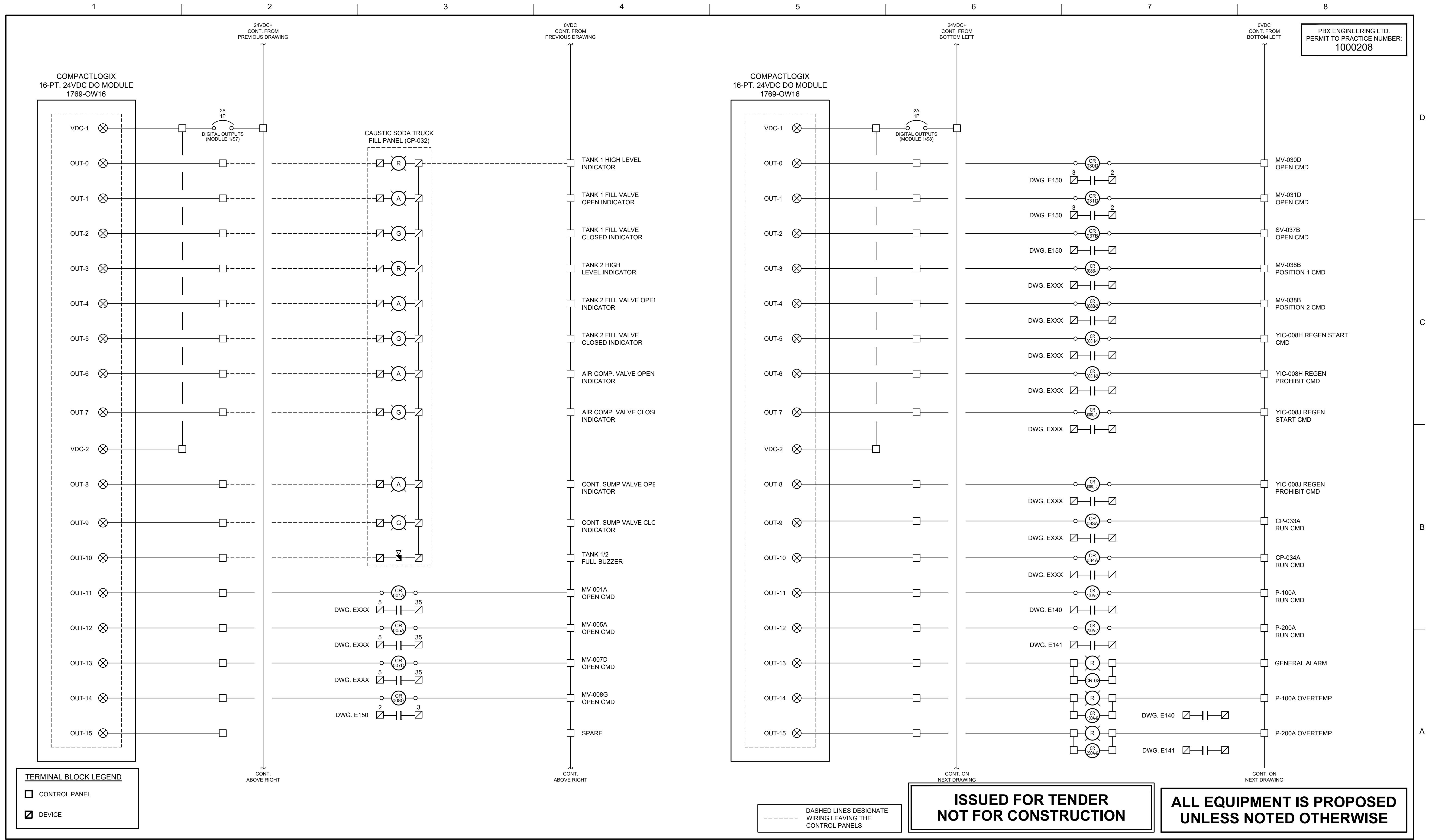


SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY

DETAILS - LADDER LOGIC (4 OF 9)

FILENAME	E153 DETAILS - LADDER LOGIC (4 OF 9).DWG	SHEET
SCALE	AS NOTED	E153



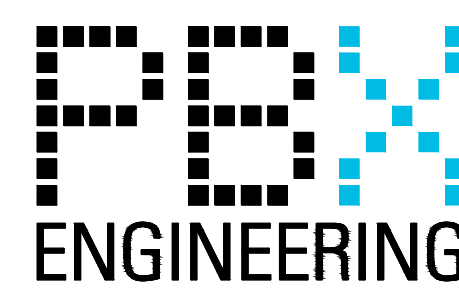
PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

TERMINAL BLOCK LEGEND

□	CONTROL PANEL
⊠	DEVICE

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

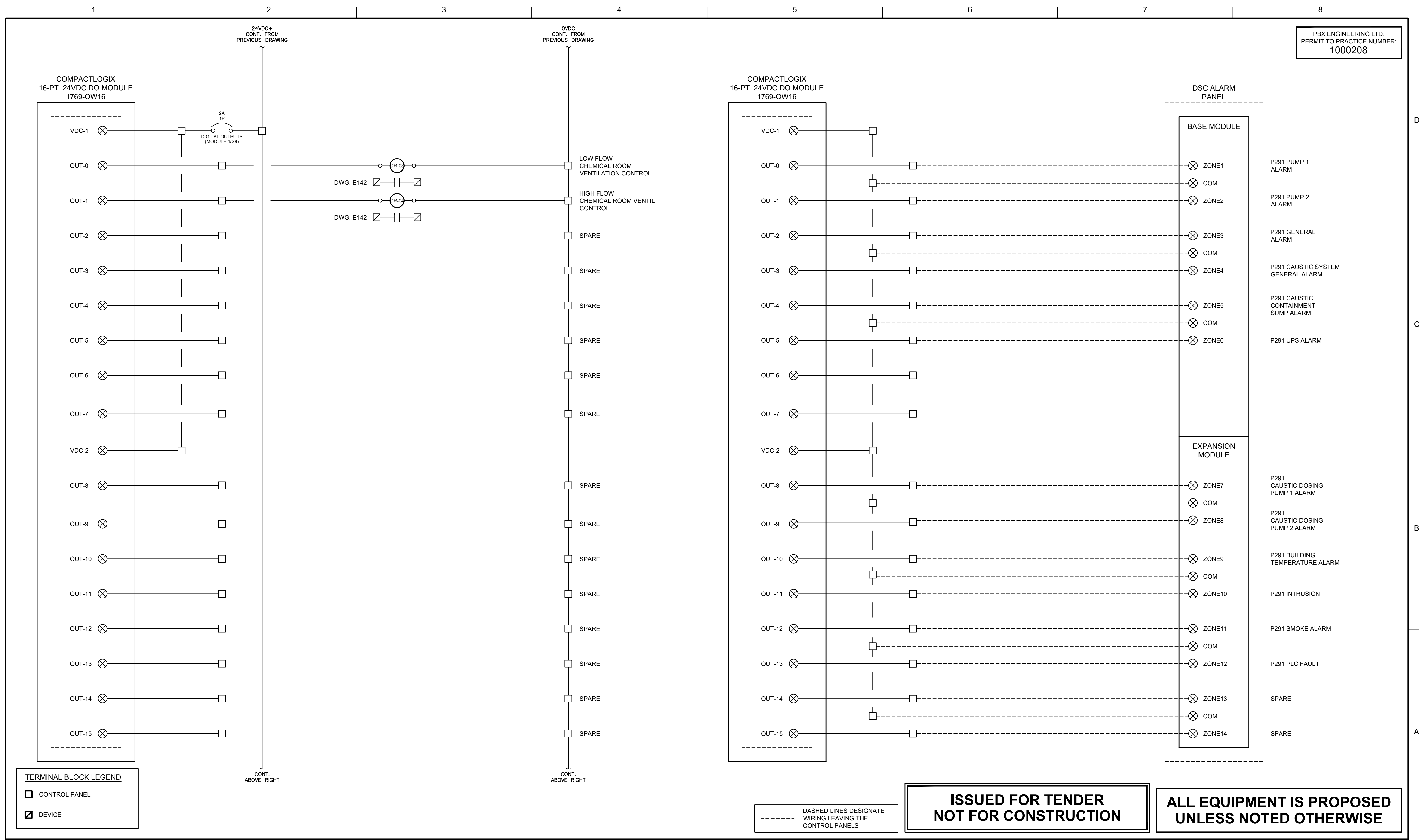


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DETAILS - LADDER LOGIC (5 OF 9)

FILENAME	E154 DETAILS - LADDER LOGIC (5 OF 9).DWG	SHEET	E154
SCALE	AS NOTED		

2023

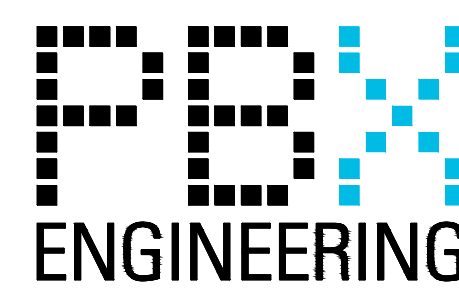


TERMINAL BLOCK LEGEND

	CONTROL PANEL
	DEVICE

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

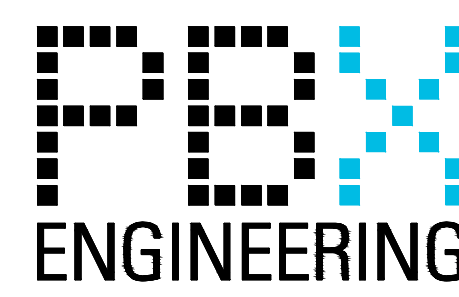
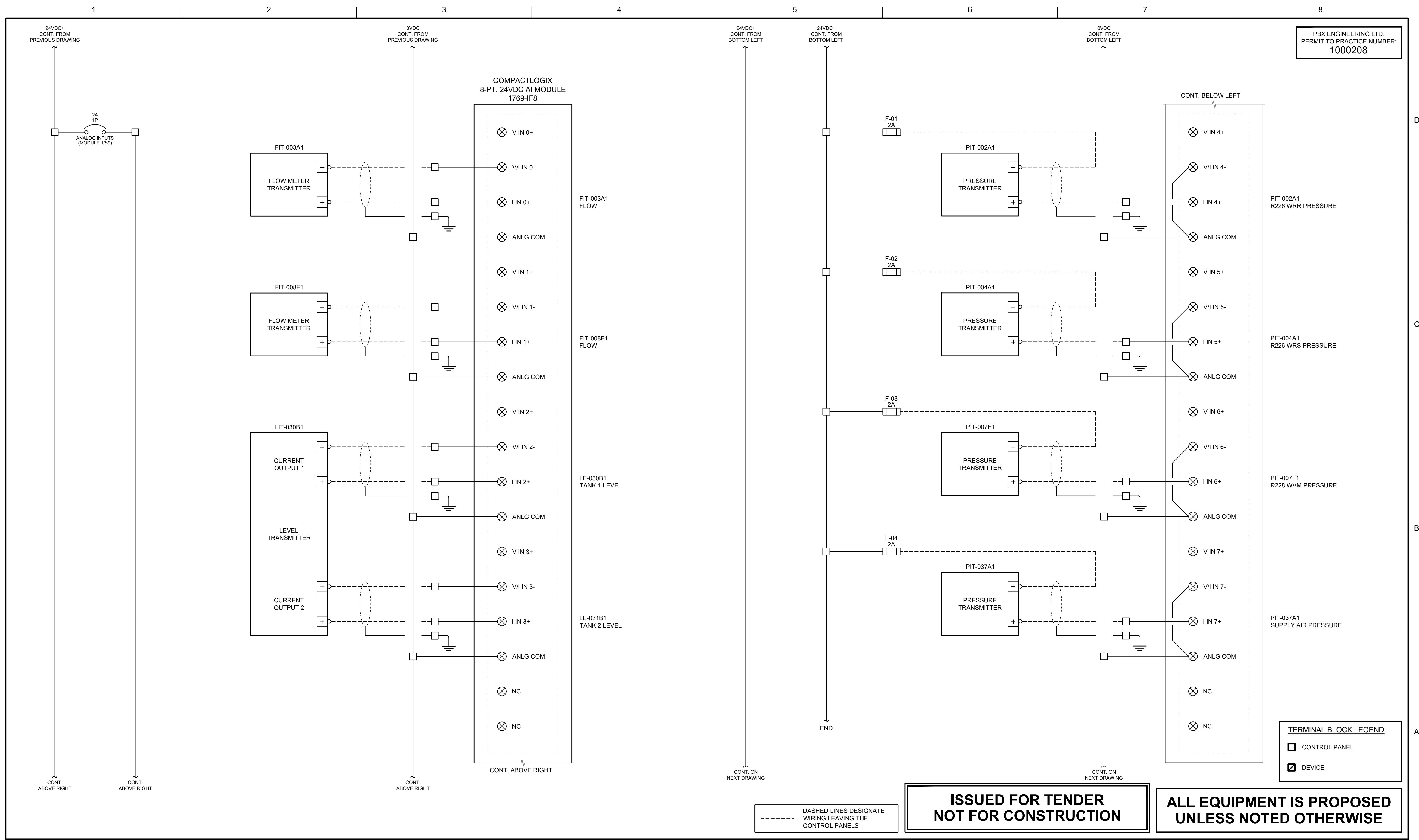
ORIGINAL
SEALED



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**
DETAILS - LADDER LOGIC (6 OF 9)

FILENAME	E155 DETAILS - LADDER LOGIC (6 OF 9).DWG	SHEET	E155
SCALE	AS NOTED		



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

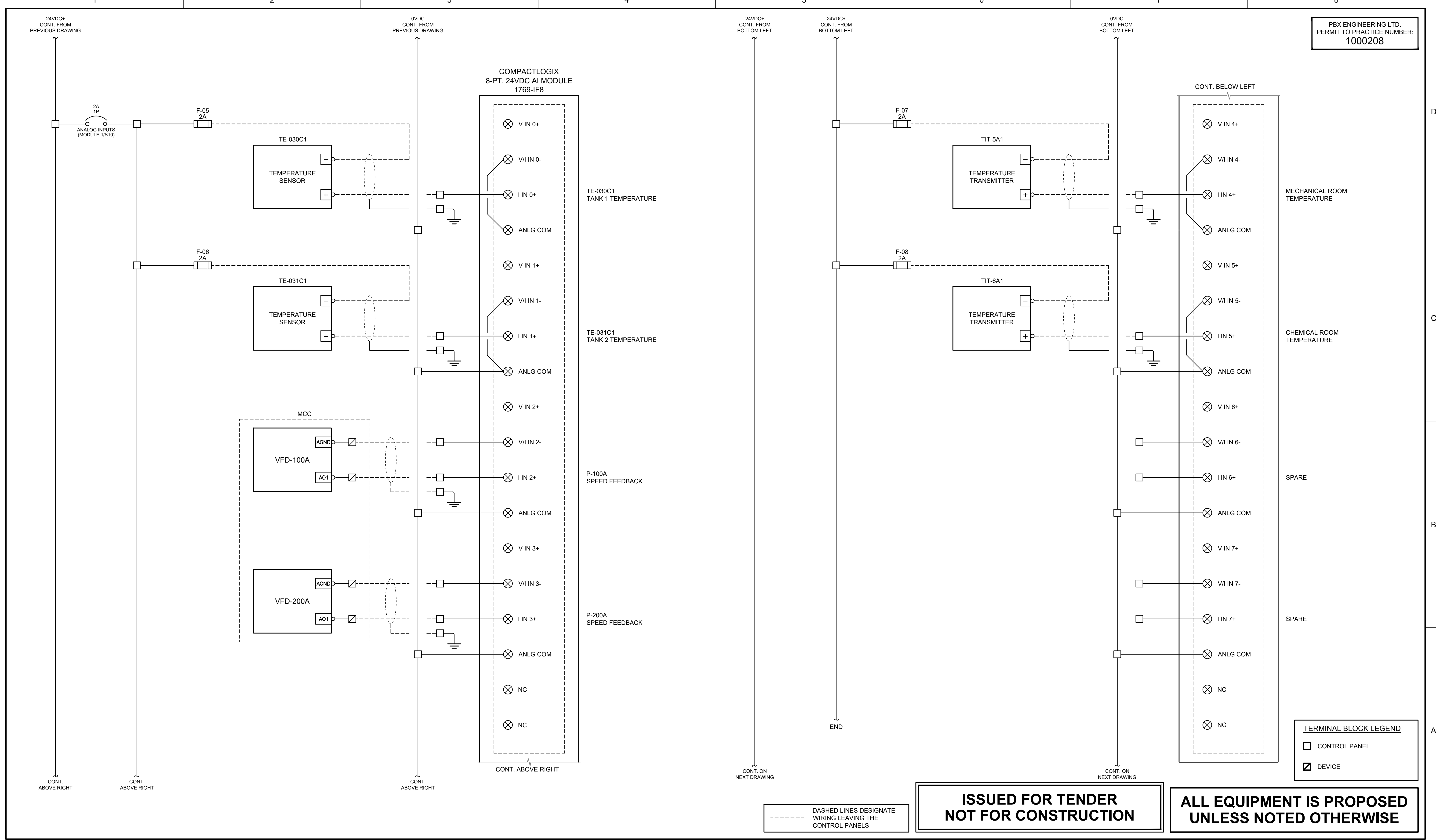
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

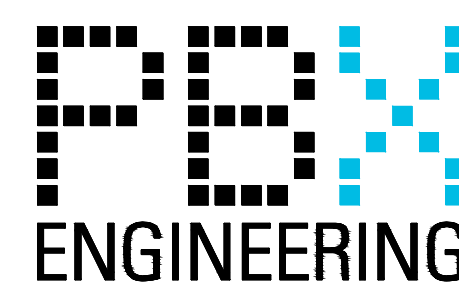
P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DETAILS - LADDER LOGIC (7 OF 9)



----- DASHED LINES DESIGNATE WIRING LEAVING THE CONTROL PANELS

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

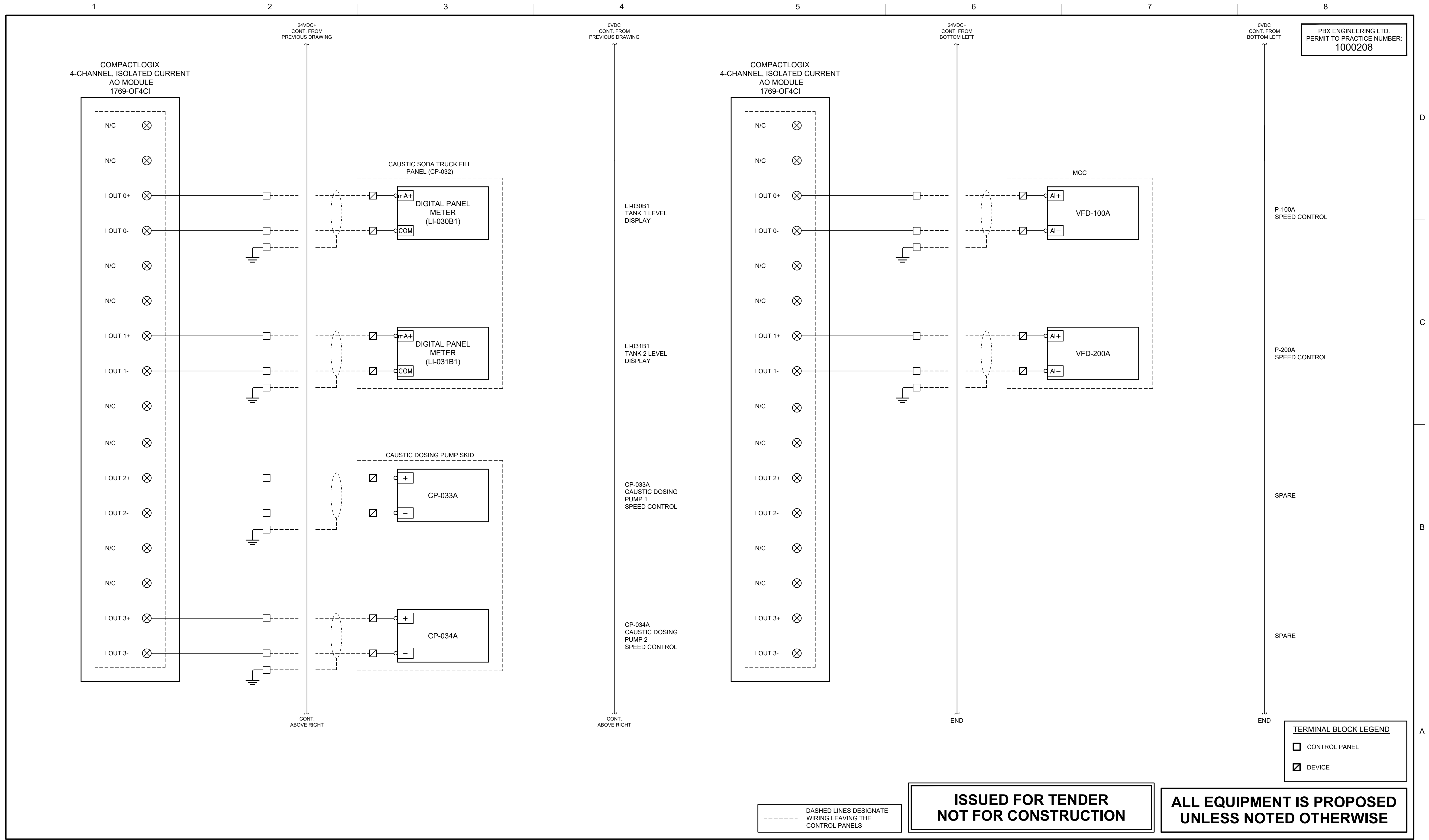
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DETAILS - LADDER LOGIC (8 OF 9)**



PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

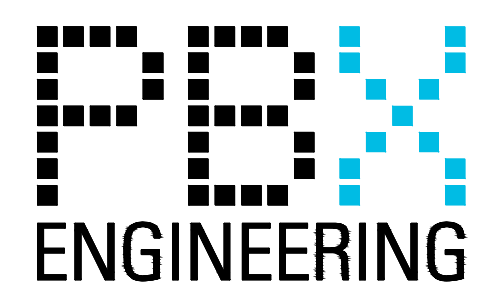
TERMINAL BLOCK LEGEND

<input type="checkbox"/>	CONTROL PANEL
<input checked="" type="checkbox"/>	DEVICE

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**

----- DASHED LINES DESIGNATE
WIRING LEAVING THE
CONTROL PANELS



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

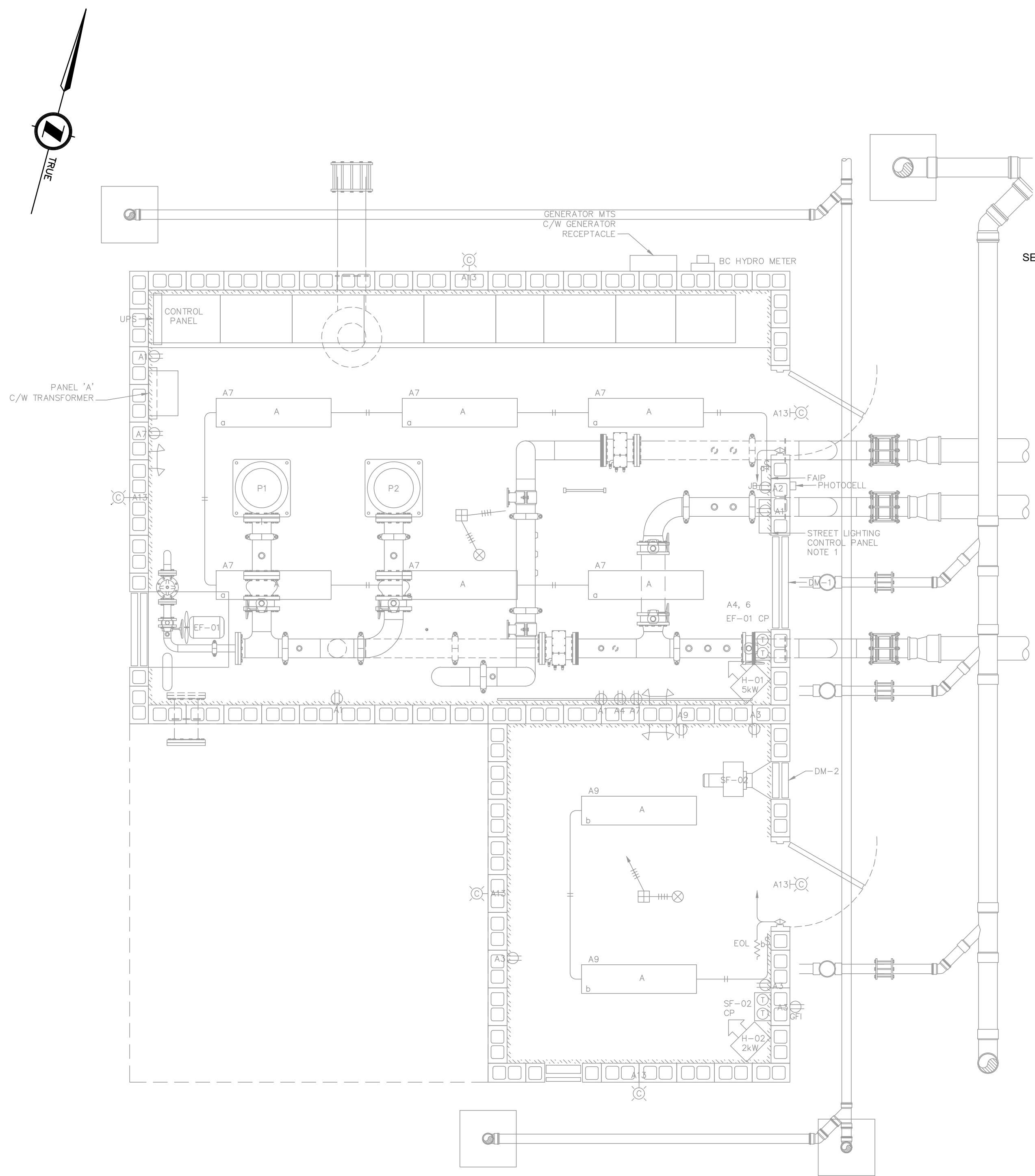
ORIGINAL
SEALED



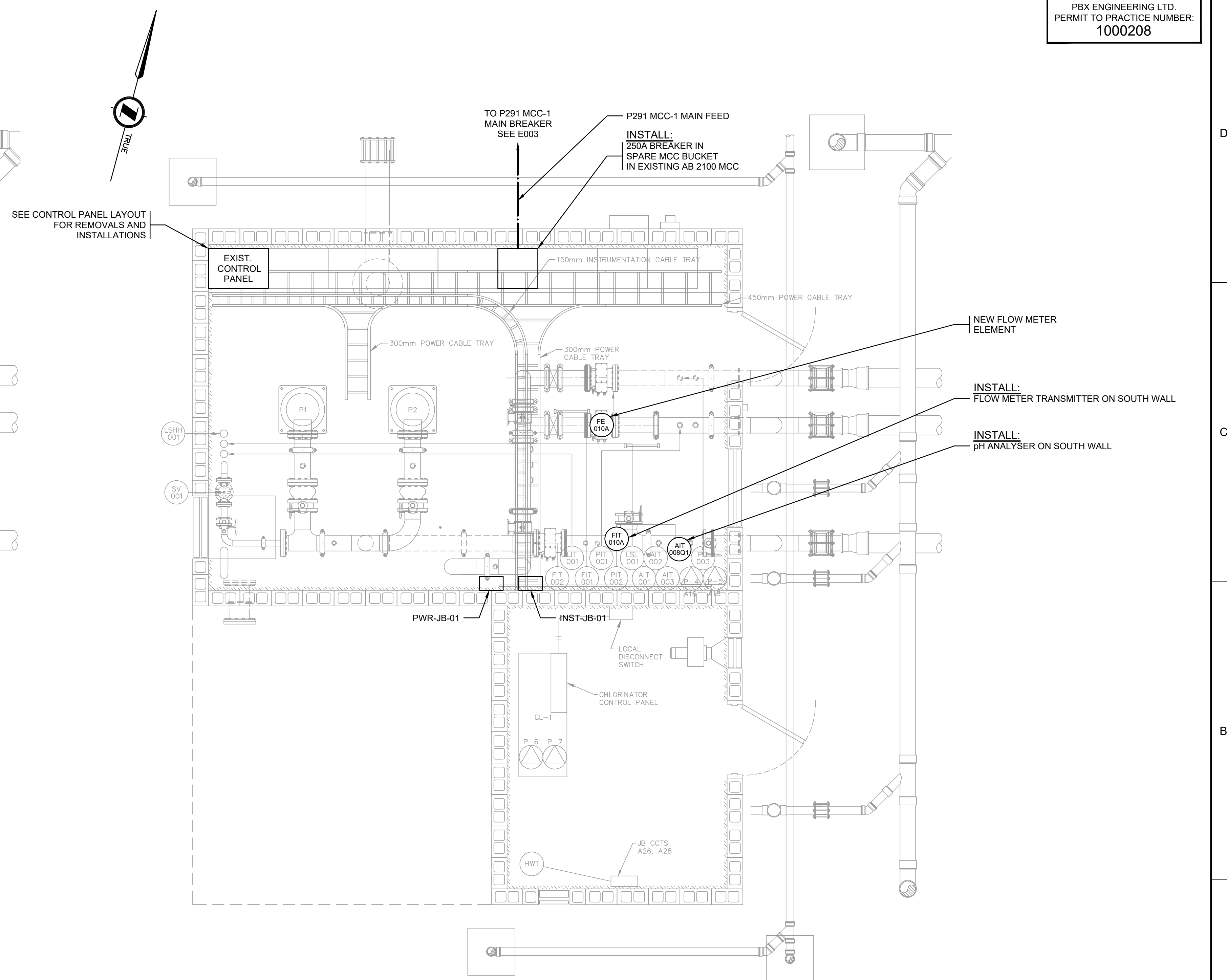
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
DETAILS - LADDER LOGIC (9 OF 9)**

FILENAME	E158 DETAILS - LADDER LOGIC (9 OF 9).DWG	SHEET	E158
SCALE	AS NOTED		

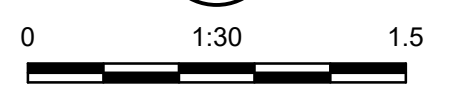


RECEPTACLE, LIGHTING & VENTILATION LAYOUT
SCALE 1:30



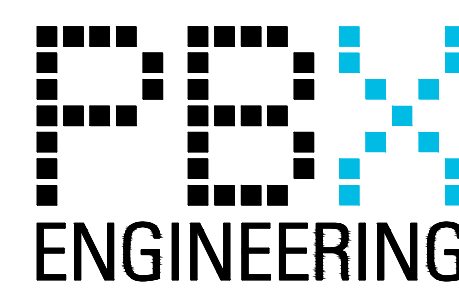
CABLE TRAY & INSTRUMENTATION LAYOUT
SCALE 1:30

AREA ENLARGEMENT (A) P279 PUMP STATION
1:30



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

AREA ENLARGEMENT

FILENAME	E200 AREA ENLARGEMENT.DWG	SHEET	E200
SCALE	AS NOTED		

SINGLE LINE

SERVICE ENTRY WEATHERHEAD
GROUND POINT
UTILITY METER
OVERLOAD RELAY

CONTACTOR
CIRCUIT BREAKER
MOTOR (HP INDICATED)
REACTOR

WIRE SIZE LEGEND
EXAMPLES:
3/8" TECK = 3/8" AWG TECK 90 CABLE
3/8", 50C = 3 CONDUCTORS #8AWG IN 20mm DIA. CONDUIT
2 x 3/8", 50C = 2 RUNS OF 3/8", 50C

SCHEMATIC

RELAY OR CONTACTOR
INDIC. LIGHT - LETTER INDICATES COLOUR:
R = RED G = GREEN
A = AMBER B = BLUE

SELECTOR SWITCH
NORMALLY CLOSED CONTACT,
OFF DELAY
PRESSURE SWITCH (N.O.)
PRESSURE SWITCH (N.C.)
FLOAT SWITCH (N.O.)
FLOAT SWITCH (N.C.)
HUMIDISTAT
THERMAL SWITCH (N.O.)
CLOSE ON TEMP RISE
THERMAL SWITCH (N.C.)
OPEN ON TEMP DROP
MOV

TERMINAL SYMBOLS
PLC OUTPUT
PLC INPUT
CONTROL PANEL/IB TERMINAL
DEVICE TERMINAL
FUSED TERMINAL BLOCK
WIRE NUMBER
CONNECTION

LAYOUT

FLUORESCENT FIXTURE
- LETTER REFERS TO FIXTURE SCHEDULE
IN SPECIFICATION
- LETTER & NO. REFERS TO PANEL & CIRCUIT NO.
- SMALL CASE LETTER INDICATES CONTROLLING SWITCH
H.I.D. OR INCANDESCENT FIXTURE
H.I.D. OR INCANDESCENT FIXTURE - WALL MOUNTED
EMERGENCY LIGHT C/W DC POWER SUPPLY
CONNECT TO UNSWITCHED CIRCUIT CONDUCTOR
EMERGENCY LIGHT REMOTE UNIT (DUAL HEAD)
LIGHT SWITCH
- 2 DENOTES 2 POLE
- 3 DENOTES 3 WAY
DUPLIX RECEPTACLE
- LETTER & NO. REFER TO PANEL & CIRCUIT NO.
- GFI DENOTES GROUND FAULT INTERRUPTER
- WP DENOTES WEATHERPROOF
JUNCTION BOX
TELEPHONE OUTLET
MOTOR - ELECTRICAL/MECHANICAL CONNECTION
UNIT HEATER WITH INTEGRAL THERMOSTAT
- WATTS AS NOTED
BASEBOARD HEATER WITH INTEGRAL THERMOSTAT
RADIANT HEATER
GROUND ROD

GROUND CONDUCTOR
WIRING (DASHES INDICATE NUMBER OF CONDUCTORS)
HOME RUN WIRING
INDICATES WIRING UP TO NEXT FLOOR
INDICATES WIRING DOWN TO NEXT FLOOR
NEW WORK OR EQUIPMENT SHOWN DARK
WHERE NEW & EXISTING ARE SHOWN TOGETHER
EXISTING WORK & EQUIPMENT SHOWN LIGHT

GENERAL ABBREVIATIONS:
AFG = ABOVE FINISHED GRADE
PC = PHOTO CONTROLLED
WP = WEATHERPROOF
AFF = ABOVE FINISHED FLOOR

CONTROL DEVICE:
DM = DAMPER MOTOR
ETM = ELAPSED TIME METER
FAR = FIRE ALARM RELAY
RY = RELAY
LC = LIGHTING CONTACTOR
M = MAGNETIC MOTOR STARTER
MG = MOTOR LOCKING MAGNET
PC = PHOTO CONTROLLER
PWR = POWER MONITOR RELAY
RS = ROPE SWITCH
S = FAN SPEED CONTROLLER
SV = SOLENOID VALVE
TC = TIME CLOCK
TS = TAMPER SWITCH
VC = VACUUM SYSTEM CONTROL
R = REMOTE KEYPAD
HMI = HUMAN MACHINE INTERFACE

INSTRUMENTATION:
CE = CONDUCTIVITY SENSOR
FE = FLOW SENSOR
FI = FLOW INDICATOR
FIT = FLOW INDICATOR TRANSMITTER
FS = FLOW SWITCH
GE = GAS SENSOR
KS = TIMER SWITCH
LE = LEVEL SENSOR
LS = LEVEL SWITCH
PE = PRESSURE SENSOR
PS = PRESSURE SWITCH
PT = PRESSURE TRANSMITTER
SC = SPEED CONTROL
SE = SPEED SENSOR
SS = SPEED SWITCH
TE = TEMPERATURE SENSOR
POS = POSITION SWITCH
T = THERMOSTAT

ALARMS

HEAT DETECTOR
SMOKE DETECTOR
DOOR POSITION SWITCH
END OF LINE RESISTOR

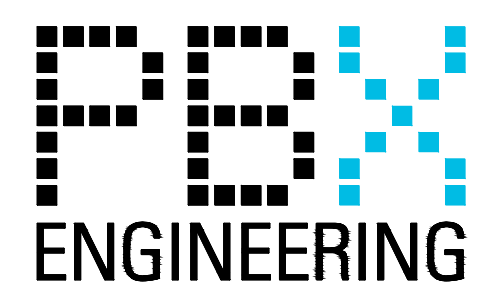
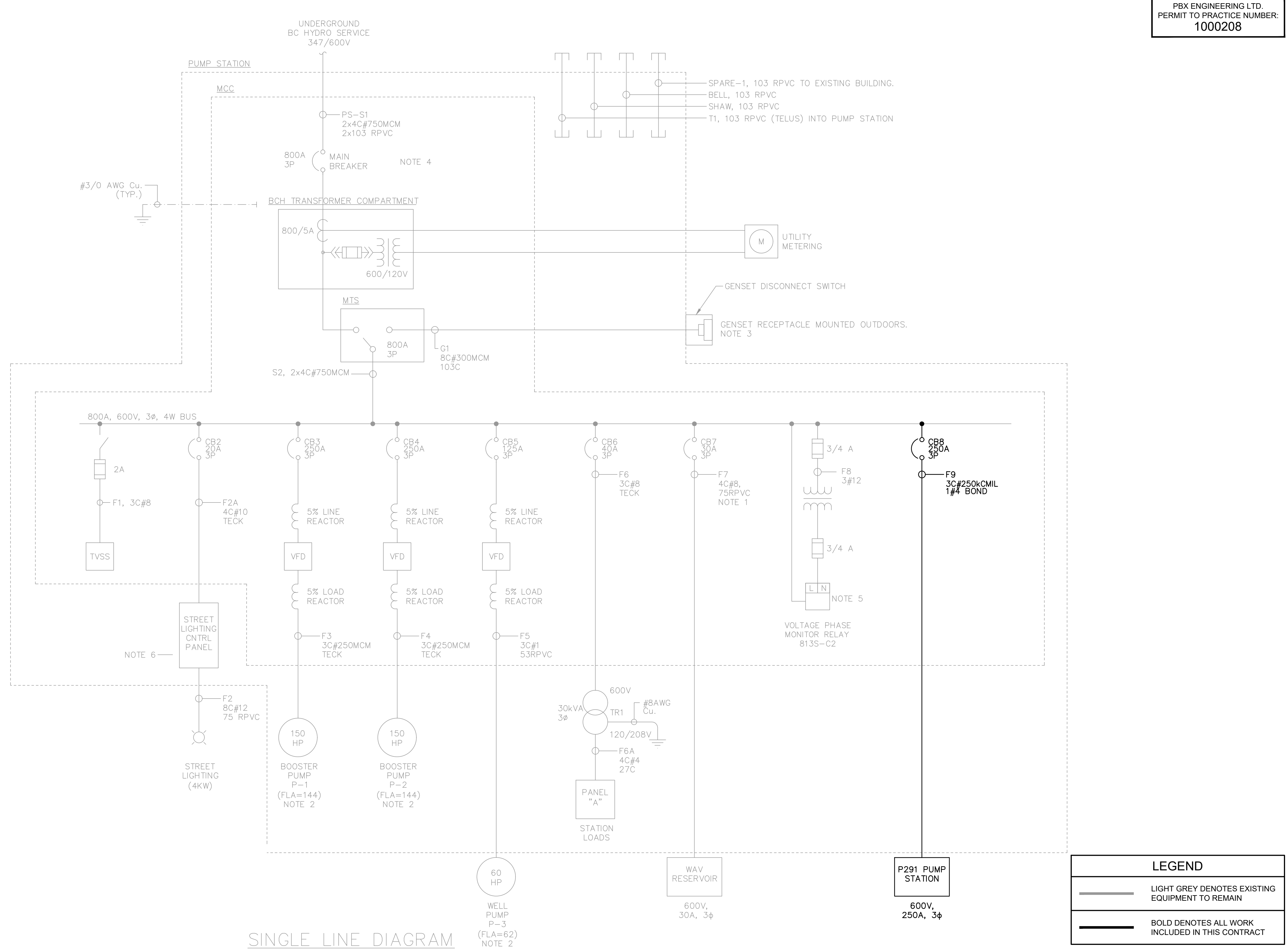
LOOP SUMMARY SYMBOLS

SIGNAL AT PLC
A = 1 OR 0 FOR INPUT OR OUTPUT
BB = SLOT NUMBER
C = POINT NUMBER

SIGNAL MONITORED BY HMI
SIGNAL ISOLATOR
SIGNAL SOURCE
SIGNAL INDICATOR

VV = VOLTAGE SUPPLY WHERE APPLICABLE
XX = PT = PRESSURE TRANSMITTER
FM = FLOW METER
TM = TURBIDITY METER
IT = ISOLATOR
YYY = AREA NUMBER

- NOTES:**
- SHOWN AS 'SI' ON DWG. E41.
 - PUMP CABLES, CIRCUIT BREAKERS AND VFDs ARE SIZED TO ACCOMMODATE A FUTURE UPGRADE TO 200HP (P1 & P2) AND 100HP (P3) PUMPS. ENSURE THE CORRECT NAMEPLATE DATA IS PROGRAMMED INTO THE VFD.
 - GENSET CABLE AND PLUG SIZED TO SUIT A 500 KW GENSET, PUMP STATION TO OPERATE WITH ONE BOOSTER PUMP OFFLINE WITH GENSET RUNNING.
 - THE MCC MAIN CIRCUIT BREAKER SHALL BE TYPE HMDLG WITH GROUND PROTECTION SYSTEM COMPLETE WITH AUXILIARY CONTACTS.
 - PHASE LOSS MONITOR TYPE SHALL BE AN ALLEN BRADLEY VOLTAGE PHASE MONITOR, 813S-E2D60.
 - SEE DWG E2, E3 & E4 FOR CONTROL PANEL & WIRING DETAILS.



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



SOUTH WHISTLER WATER SUPPLY
PHASE 2

P279 - PUMP STATION MODIFICATIONS

SINGLE LINE DIAGRAM

FILENAME	E210 - SINGLE LINE DIAGRAM	SHEET
SCALE	AS NOTED	E210

125 AMP MAIN BUS 100 AMP MAIN BREAKER		PANEL A				120/208 VOLT, 3 PHASE, 4 WIRE 30 CIRCUIT			
DESCRIPTION	WATTS	CCT	CCT	WATTS	DESCRIPTION	WATTS	CCT	CCT	DESCRIPTION
RECEPTACLES - PUMP ROOM	200	15ASP	1	2	15ASP	-			FAIP PANEL
RECEPTACLES - CHLORINATION ROOM	200	15ASP	3	4	15A2P	560			PUMP STATION EXHAUST FAN EF-01
SPARE	-	15ASP	5	6	15A2P	-			SPARE
LIGHTS - PUMP ROOM	448	15ASP	7	8	15ASP	-			SPARE
LIGHTS - CHLORINATION ROOM	128	15ASP	9	10	15ASP	-			SPARE
SPARE	-	15ASP	11	12	15A2P	746			CHLORINATION ROOM SUPPLY FAN SF-02
LIGHTS - OUTSIDE	490	15ASP	13	14	15A2P	-			SPARE
UPS (1500VA)	700	15ASP	15	16	15ASP	230			INSTRUMENTATION PUMP P-4
SPARE	-	15A2P	17	18	15ASP	230			INSTRUMENTATION PUMP P-5
			19	20					
UNIT HEATER H-01 - PUMP ROOM	5000	30A2P	21	22	15A3P	-			CHLORINATOR (CL-1)
			23	24					
UNIT HEATER H-02 - CHLORINATION ROOM	2000	15A2P	25	26	60A2P	9500			CHLORINATION ROOM INLINE WATER HEATER
			27	28					
			29	30					SPACE

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

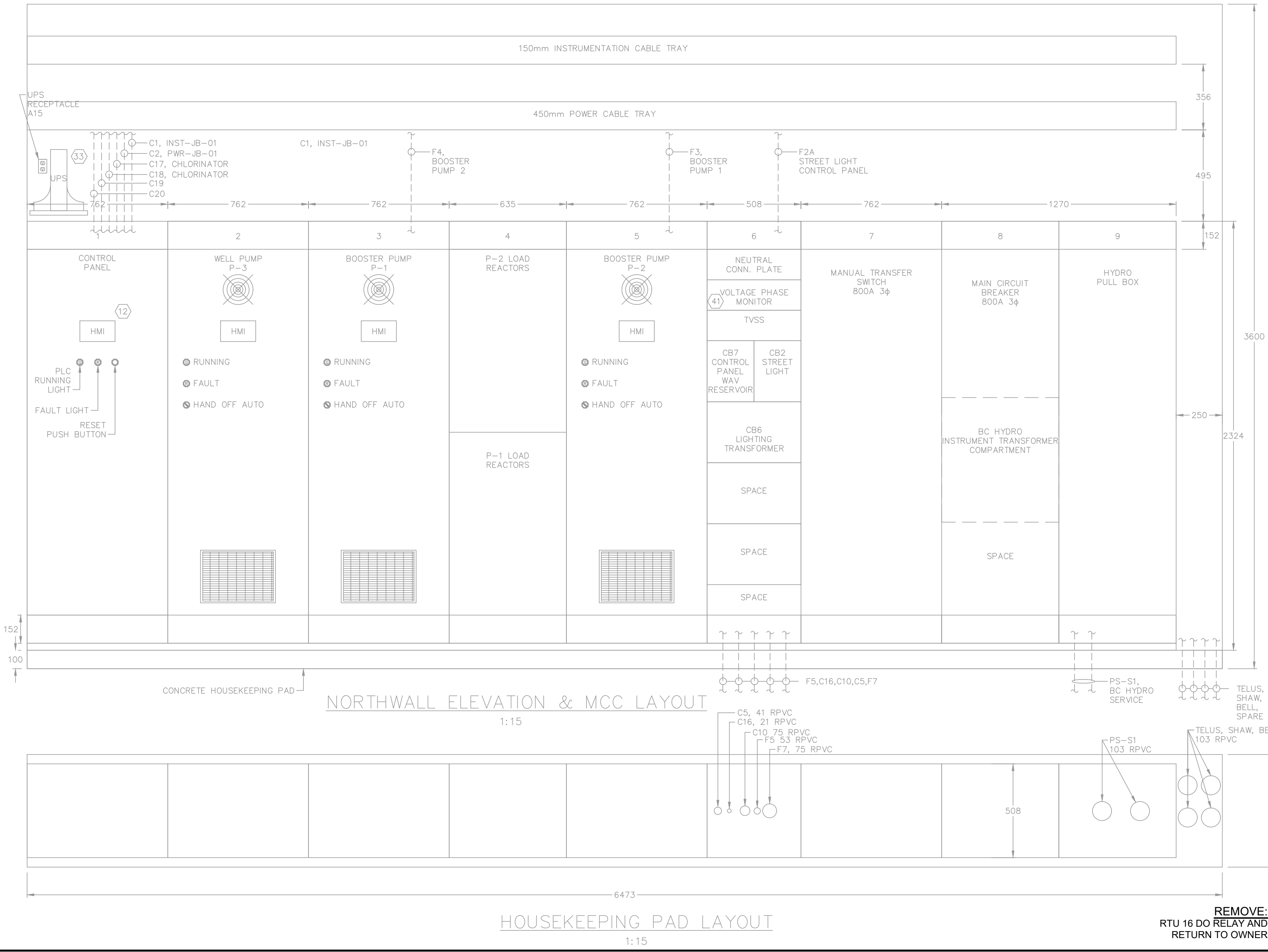
LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

REMOVE:
ALL ACE3600 RTU I/O MODULES, BATTERY, AND CHARGER AND RETURN TO OWNER
RETAIN:
RTU 7 SLOT LARGE FRAME, RTU LARGE CHASSIS, ACE3640 CPU, AND ACE3600 POWER SUPPLY AND RELOCATE TO NEW P291 PUMP STATION

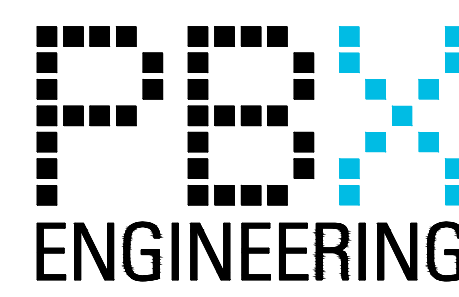
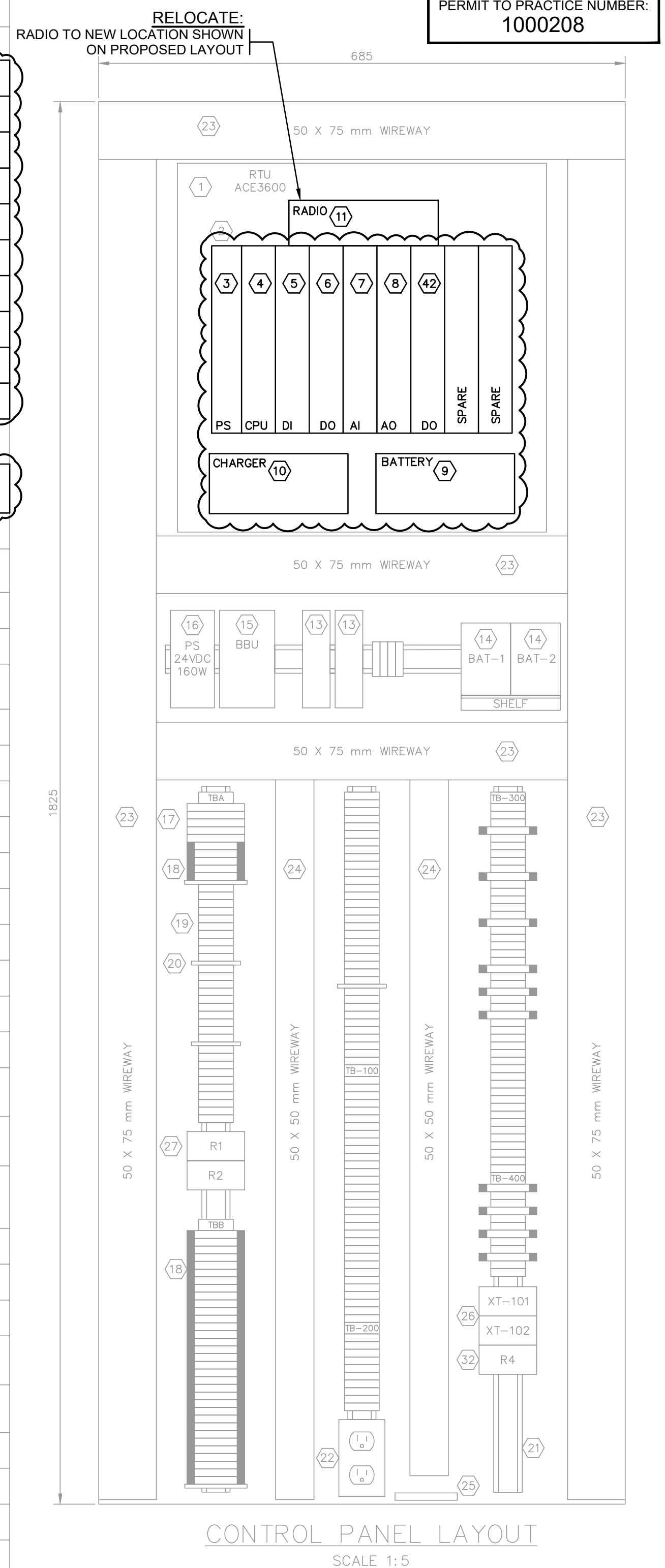
REMOVE:
GE QUICKPANEL HMI

MAIN CONTROL PANEL BILL OF MATERIALS			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	RTU 7 SLOT LARGE FRAME	V107
2	1	RTU LARGE CHASSIS	V056
3	1	ACE3600 POWER SUPPLY	F7509
4	1	ACE3640 CPU	V446
5	1	32 (DI) (FAST 24V)	V379
6	1	8 (DO) (EE 24V)	V508
7	1	16 (AI) (+/-20 MA)	V463
8	1	4 (AO)	V118
9	1	10 AH BATTERY	V328BM
10	1	CHARGER	V261
11	1	RADIO (800-960 MHZ) C/W INSITE ANTENNA	9710 MDS RADIO
12	1	HMI GE QUICKPANEL - 9" MONOCHROME SCREEN, 24VDC (SEE E26)	QPI3D200E2P
13	2	THERMISTOR MOTOR PROTECTION RELAY	JRN 1011-1CB00
14	2	12VDC, 7.2 AHR SEALED LEAD ACID BATTERY	PANASONIC LC-R12R2P
15	1	24VDC BATTERY BACKUP UNIT	WEIDMULLER 99162B-0024
16	1	160W 24VDC POWER SUPPLY	WEIDMULLER 992534-0024
17	5	WEIDMULLER CIRCUIT BREAKER TERMINAL BLOCK	CB 4200 SERIES
18	AS REQ'D	WEIDMULLER FUSE TERMINAL BLOCK	ASK SERIES
19	AS REQ'D	WEIDMULLER TERMINAL BLOCK	SAK4/EN SERIES
20	AS REQ'D	WEIDMULLER TERMINAL BLOCK PARTITION	SAK4/EN SERIES
21	AS REQ'D	DIN RAIL	
22	1	120VAC DUPLEX RECEPTACLE	
23	AS REQ'D	50 X 75 MM WIREWAY	
24	AS REQ'D	50 X 50 MM WIREWAY	
25	1	GROUND BAR	
26	3	MOORE SIGNAL ISOLATOR	ECT SERIES
27	3	120VAC RELAY WITH INDICATING LIGHT	OMRON MK SERIES
28	1	YAGI ANTENNA - 890-960 MHZ. (SEE E26)	BM Y890M5502N1
29	1	125 - 1000 MHZ, POLYPHASE (SEE E26)	POL-IS-50NX-C2-MA
30	1	LMR-400, TYPE 3/8" FOAM, 50 OHM, BRAIDED CABLE C/W 3/8" N, CRIMP SPRING FINGER, LMR-400 CONNECTOR	LMR-400
31	1	ANTENNA POLE: (SEE E26)	ANTENNA-POLE-1-1/2"
32	1	24VDC RELAY WITH INDICATING LIGHT	OMRON MK SERIES
33	1	UPS-LIEBERT 1500VA	GXT2-1500RT120
34		ITEM REMOVED	
35	1	HMI 3RD PARTY PROTOCOL SOFTWARE (NOT SHOWN)	V377
36	1	ACE INSTALLATION KIT (NOT SHOWN)	V152
37	1	PLUG-IN RS-485 PORT (NOT SHOWN)	V440
38	1	PLUG-IN RS-232 PORT (NOT SHOWN)	V184
39	2	20 WIRE CABLE WITH TB HOLDER 3M (NOT SHOWN)	V253
40	2	40 WIRE CABLE WITH TB HOLDER 3M (NOT SHOWN)	V358
41	1	VOLTAGE PHASE MONITOR	813S-E2D60
42	1	RTU 16 DO RELAY	16 DO EE RELAY 2A

REMOVE:
RTU 16 DO RELAY AND RETURN TO OWNER



PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P279 - PUMP STATION MODIFICATIONS
MCC & CONTROL PANEL LAYOUT
DIAGRAM - EXISTING**

FILENAME	E220 MCC & CONTROL PANEL LAYOUT DIAGRAM.DWG	SHEET
SCALE	AS NOTED	E220

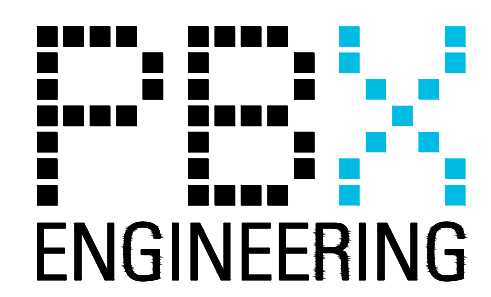
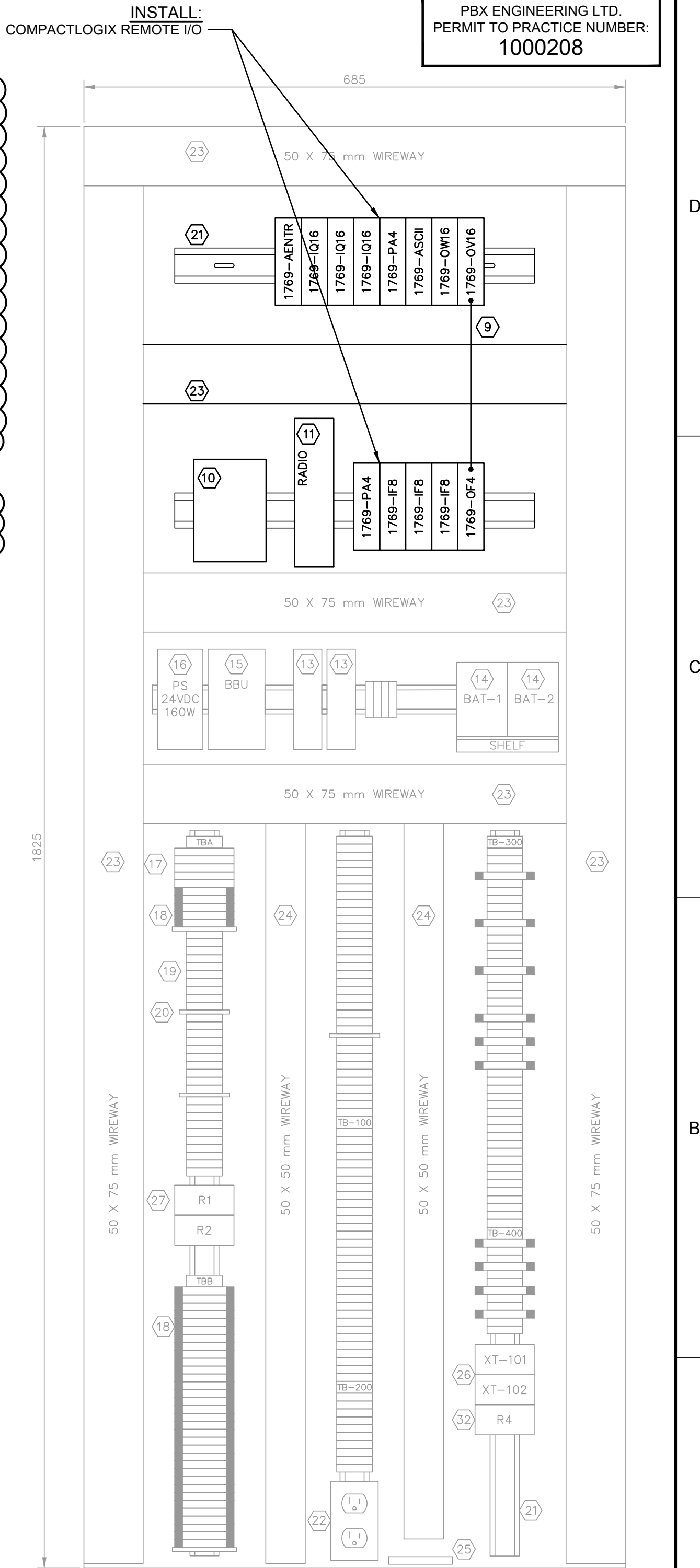
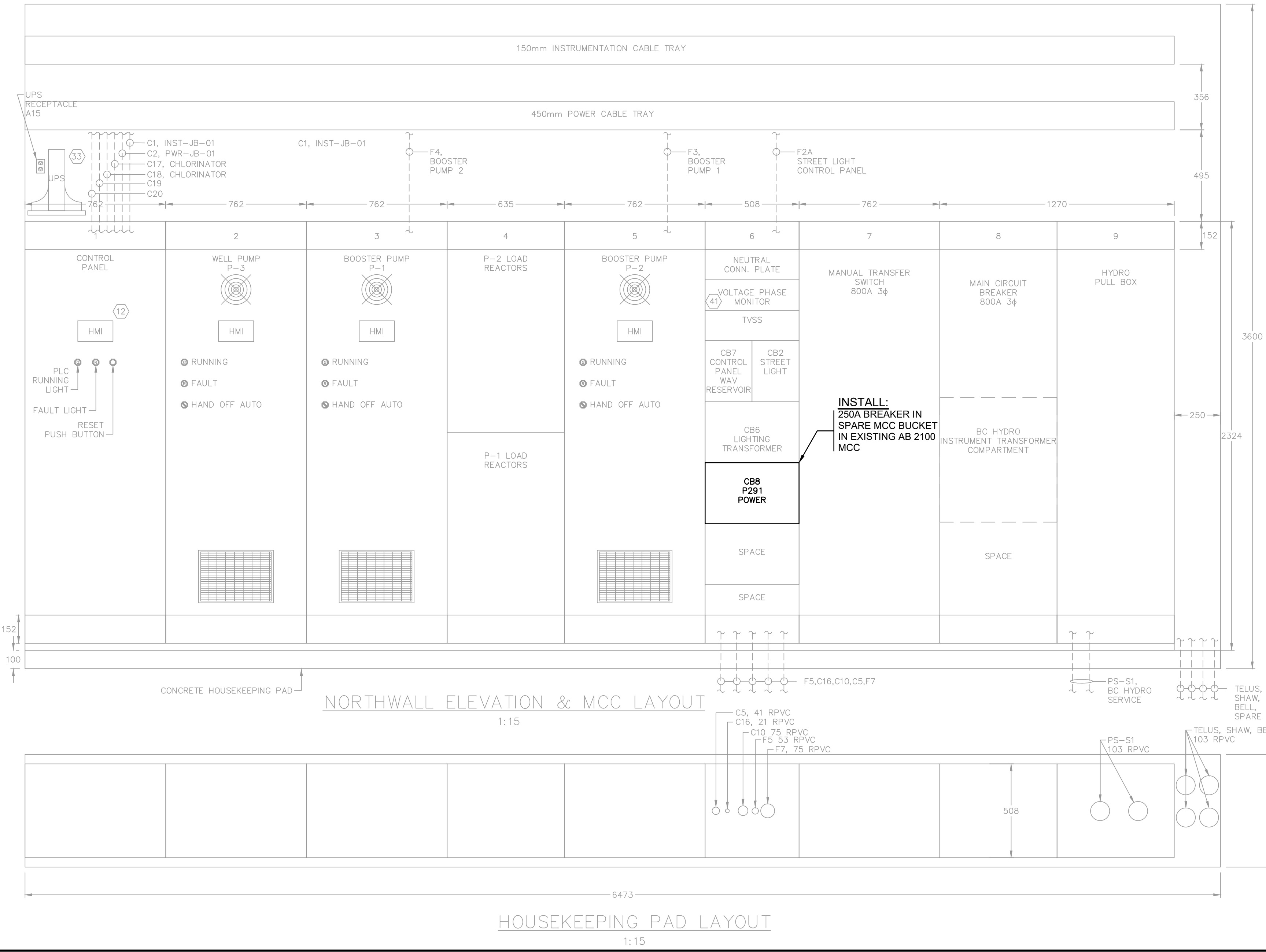
125 AMP MAIN BUS 100 AMP MAIN BREAKER		PANEL A				120/208 VOLT, 3 PHASE, 4 WIRE 30 CIRCUIT			
DESCRIPTION	WATTS	CCT	CCT	WATTS	DESCRIPTION				
RECEPTACLES - PUMP ROOM	200	15ASP	1 2	15ASP	FAIP PANEL				
RECEPTACLES - CHLORINATION ROOM	200	15ASP	3 4	15A2P	560 PUMP STATION EXHAUST FAN EF-01				
SPARE	-	15ASP	5 6	15A2P	746 CHLORINATION ROOM SUPPLY FAN SF-02				
LIGHTS - PUMP ROOM	448	15ASP	7 8	15ASP	- SPARE				
LIGHTS - CHLORINATION ROOM	128	15ASP	9 10	15ASP	- SPARE				
SPARE	-	15ASP	11 12	15A2P	230 INSTRUMENTATION PUMP P-4				
LIGHTS - OUTSIDE	490	15ASP	13 14	15ASP	230 INSTRUMENTATION PUMP P-5				
UPS (1500VA)	700	15ASP	15 16	15ASP	- CHLORINATOR (CL-1)				
SPARE	-	15A2P	17 18	15ASP	-				
UNIT HEATER H-01 - PUMP ROOM	5000	30A2P	21 22	15A3P	-				
UNIT HEATER H-02 - CHLORINATION ROOM	2000	15A2P	23 24	60A2P	9500 CHLORINATION ROOM INLINE WATER HEATER				
			25 26						
			27 28						
			29 30		SPACE				

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

NOTES:
1. ENSURE A MINIMUM CLEARANCE OF 2" ON ALL SIDES OF COMPACTLOGIX REMOTE I/O RACK.

MAIN CONTROL PANEL BILL OF MATERIALS			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	COMPACTLOGIX POWER SUPPLY	1769-PA4
2	1	NETWORK INTERFACE MODULE	1769-AENTR
3	1	SERIAL INTERFACE MODULE	MV69E-MBS
4	3	16-PT. DI MODULE	1769-IQ16
5	1	8-PT. DO MODULE	1769-OWB1
6	1	16-PT. DO MODULE	1769-OV16
7	3	8-PT. AI MODULE	1769-IF8
8	1	8-PT. AO MODULE	1769-OF8C
9	1	1769 EXPANSION I/O CABLE	1769-CRR1
10	1	NETWORK SWITCH	STRATIX 5700
11	1	RADIO (800-960 MHZ) C/W INSITE	9710 MDS RADIO
12	1	HMI ALLEN-BRADLEY - 15" PANELVIEW PLUS 7	2711P-T15C21D8S
13	2	THERMISTOR MOTOR PROTECTION RELAY	JRN 1011-1CB00
14	2	12VDC, 7.2 AHR SEALED LEAD ACID BATTERY	PANASONIC LC-R12R2P
15	1	24VDC BATTERY BACKUP UNIT	WEIDMULLER 99162B-0024
16	1	160W 24VDC POWER SUPPLY	WEIDMULLER 992534-0024
17	5	WEIDMULLER CIRCUIT BREAKER TERMINAL BLOCK	CB 4200 SERIES
18	AS REQ'D	WEIDMULLER FUSE TERMINAL BLOCK	ASK SERIES
19	AS REQ'D	WEIDMULLER TERMINAL BLOCK	SAK4/EN SERIES
20	AS REQ'D	WEIDMULLER TERMINAL BLOCK PARTITION	SAK4/EN SERIES
21	AS REQ'D	DIN RAIL	
22	1	120VAC DUPLEX RECEPTACLE	
23	AS REQ'D	50 X 75 MM WIREWAY	
24	AS REQ'D	50 X 50 MM WIREWAY	
25	1	GROUND BAR	
26	3	MOORE SIGNAL ISOLATOR	ECT SERIES
27	3	120VAC RELAY WITH INDICATING LIGHT	OMRON MK SERIES
28	1	YAGI ANTENNA - 890-960 MHZ. (SEE E26)	BMV890M5502N1
29	1	125 - 1000 MHZ, POLYPHASER (SEE E26)	POL-IS-50NX-C2-MA
30	1	LMR-400, TYPE 3/8" FOAM, 50 OHM, BRAIDED CABLE C/W 3/8" N, CRIMP SPRING FINGER, LMR-400 CONNECTOR	LMR-400
31	1	ANTENNA POLE: (SEE E26)	ANTENNA-POLE-1-1/2"
32	1	24VDC RELAY WITH INDICATING LIGHT	OMRON MK SERIES
33	1	UPS-LIEBERT 1500VA	GXT2-1500RT120
34		ITEM REMOVED	
35	1	HMI 3RD PARTY PROTOCOL SOFTWARE (NOT SHOWN)	V377
36	1	ACE INSTALLATION KIT (NOT SHOWN)	V152
37	1	PLUG-IN RS-485 PORT (NOT SHOWN)	V440
38	1	PLUG-IN RS-232 PORT (NOT SHOWN)	V184
39	2	20 WIRE CABLE WITH TB HOLDER 3M (NOT SHOWN)	V253
40	2	40 WIRE CABLE WITH TB HOLDER 3M (NOT SHOWN)	V358
41	1	VOLTAGE PHASE MONITOR	813S-E2D60



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

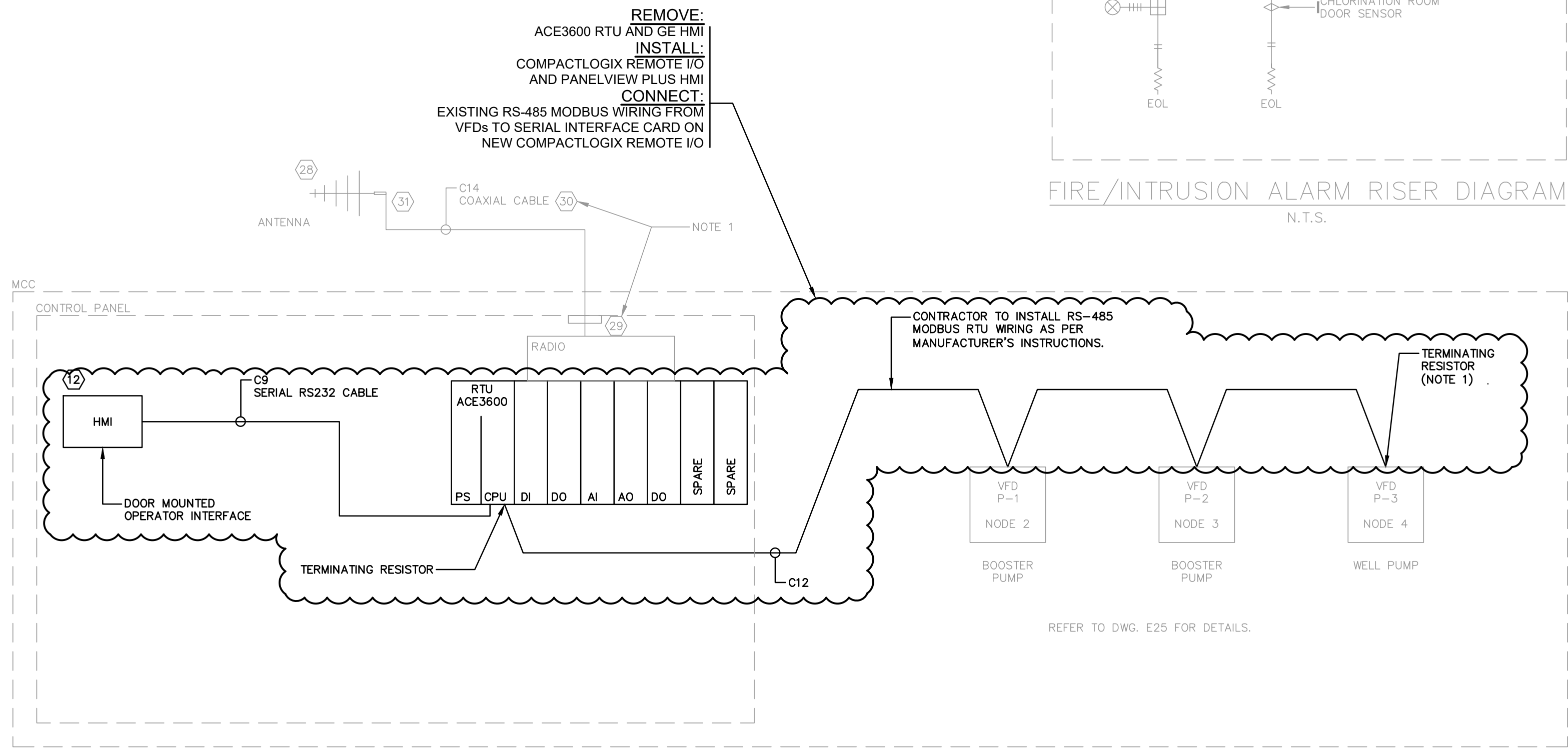
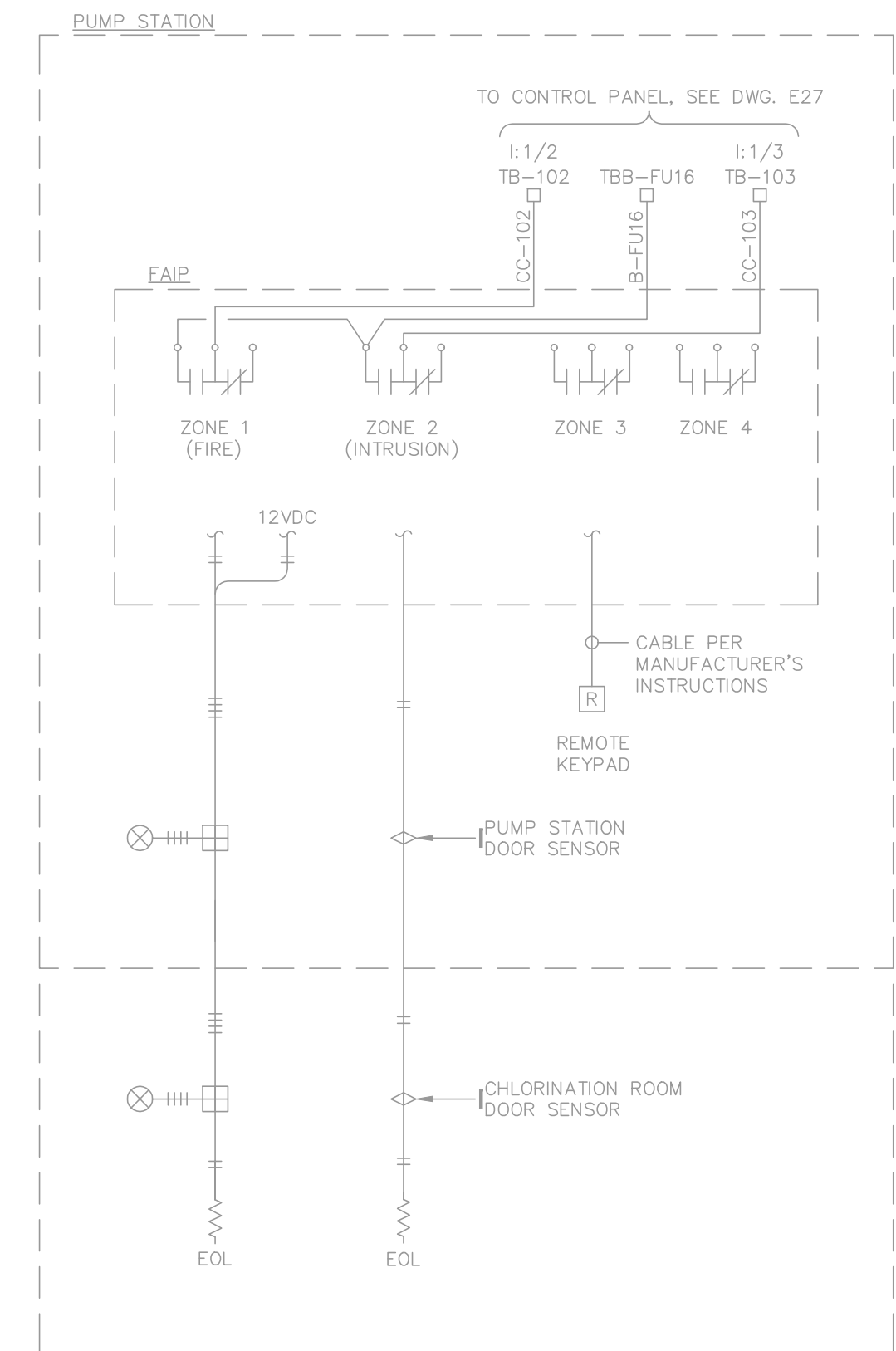
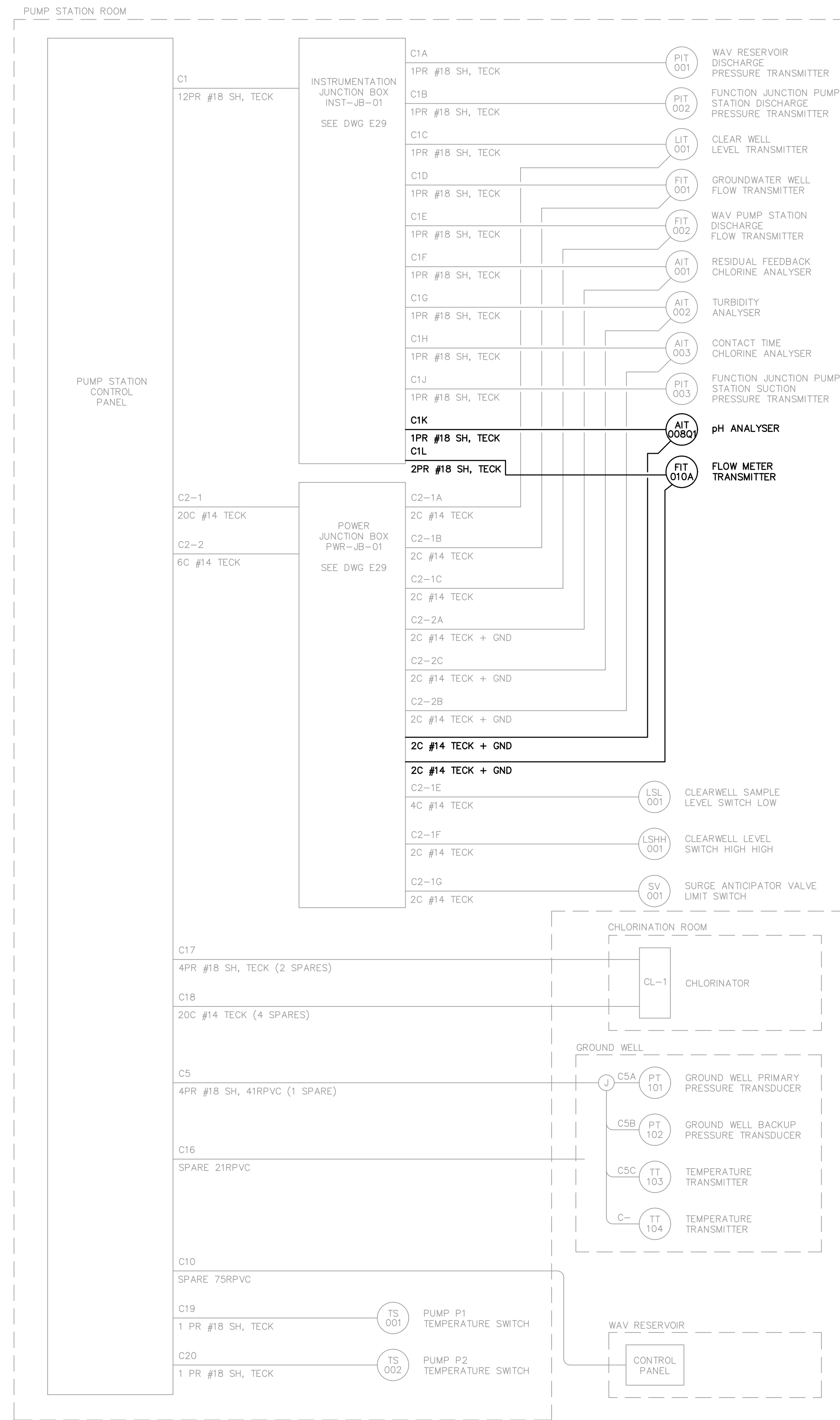
ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P279 - PUMP STATION MODIFICATIONS
MCC & CONTROL PANEL LAYOUT
DIAGRAM - PROPOSED**

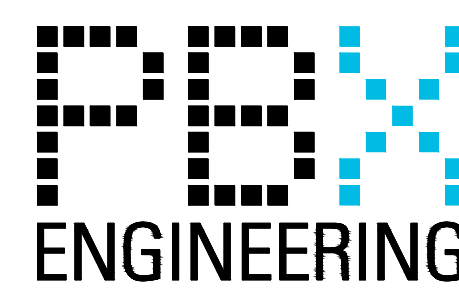
FILENAME	E221 MCC & CONTROL PANEL LAYOUT DIAGRAM PROPOSED.DWG	SHEET
SCALE	AS NOTED	E221



LEGEND

	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED

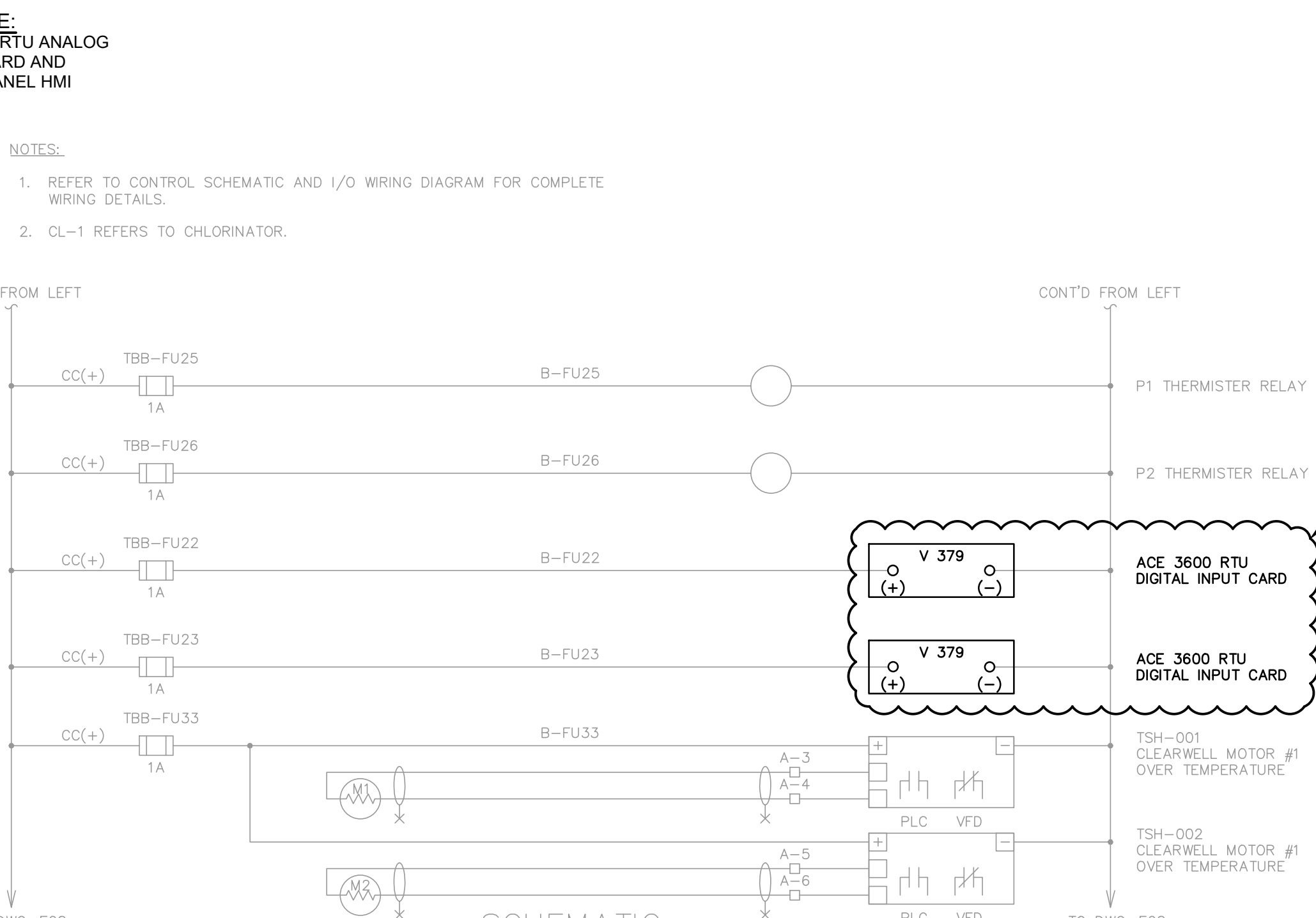
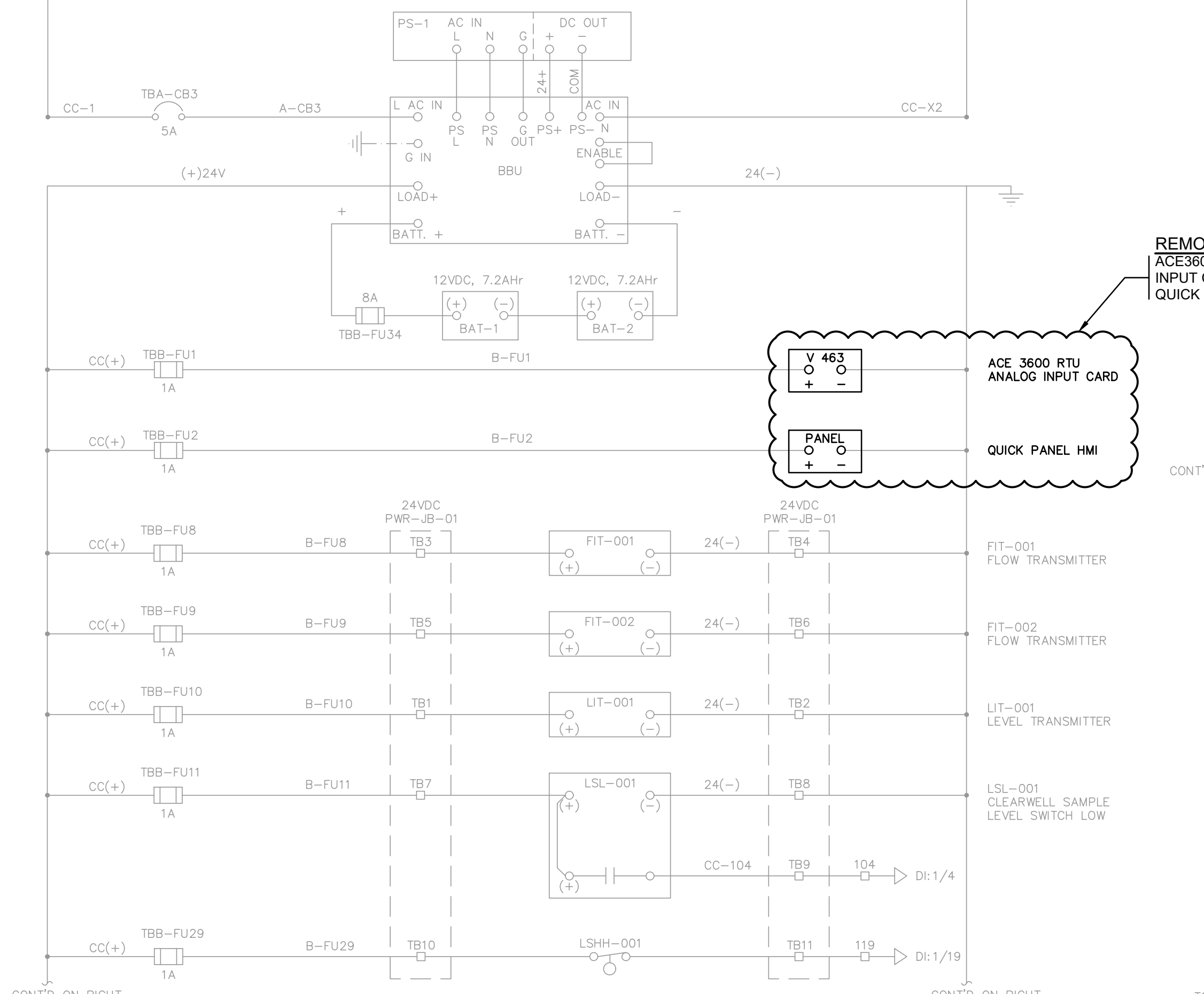
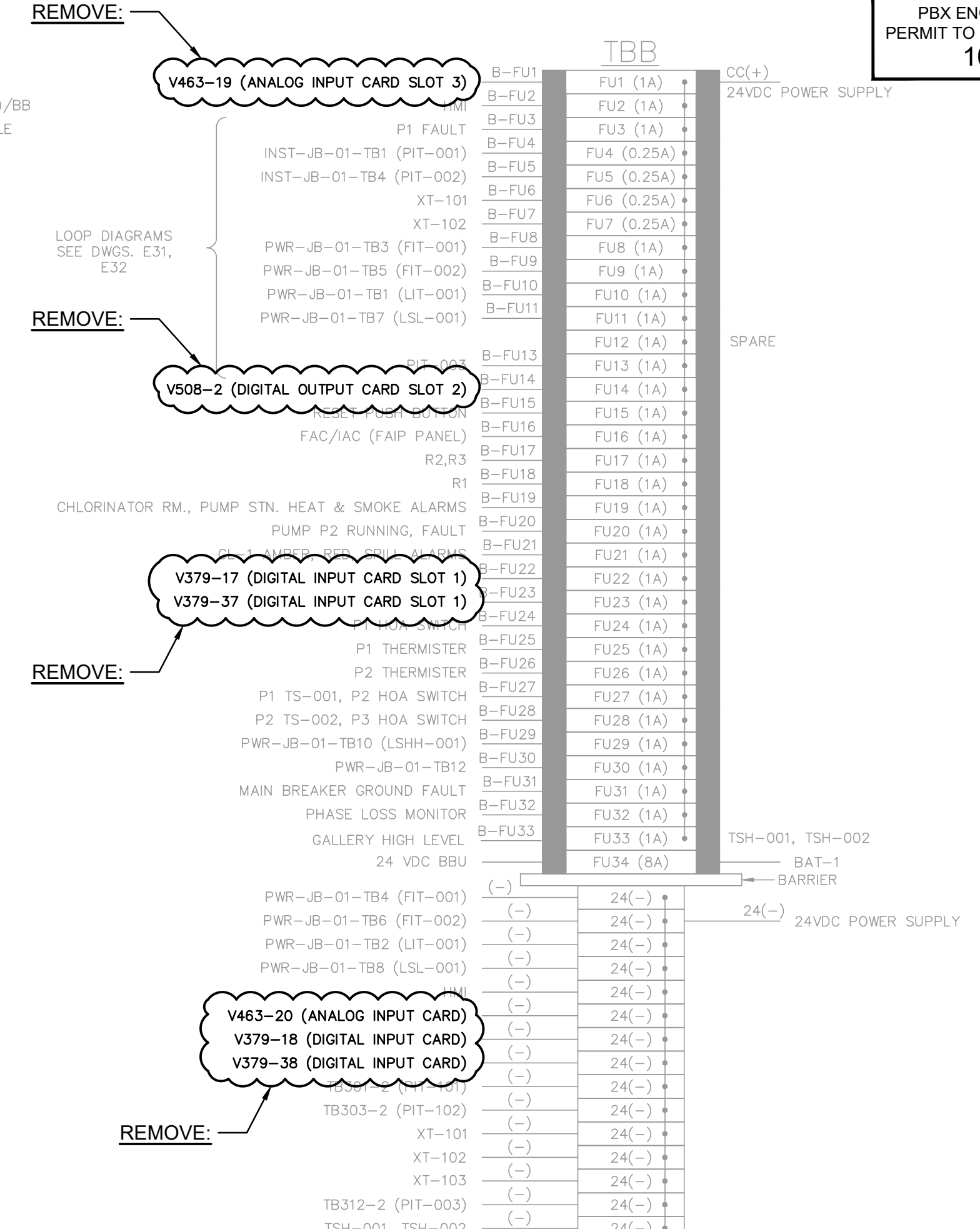
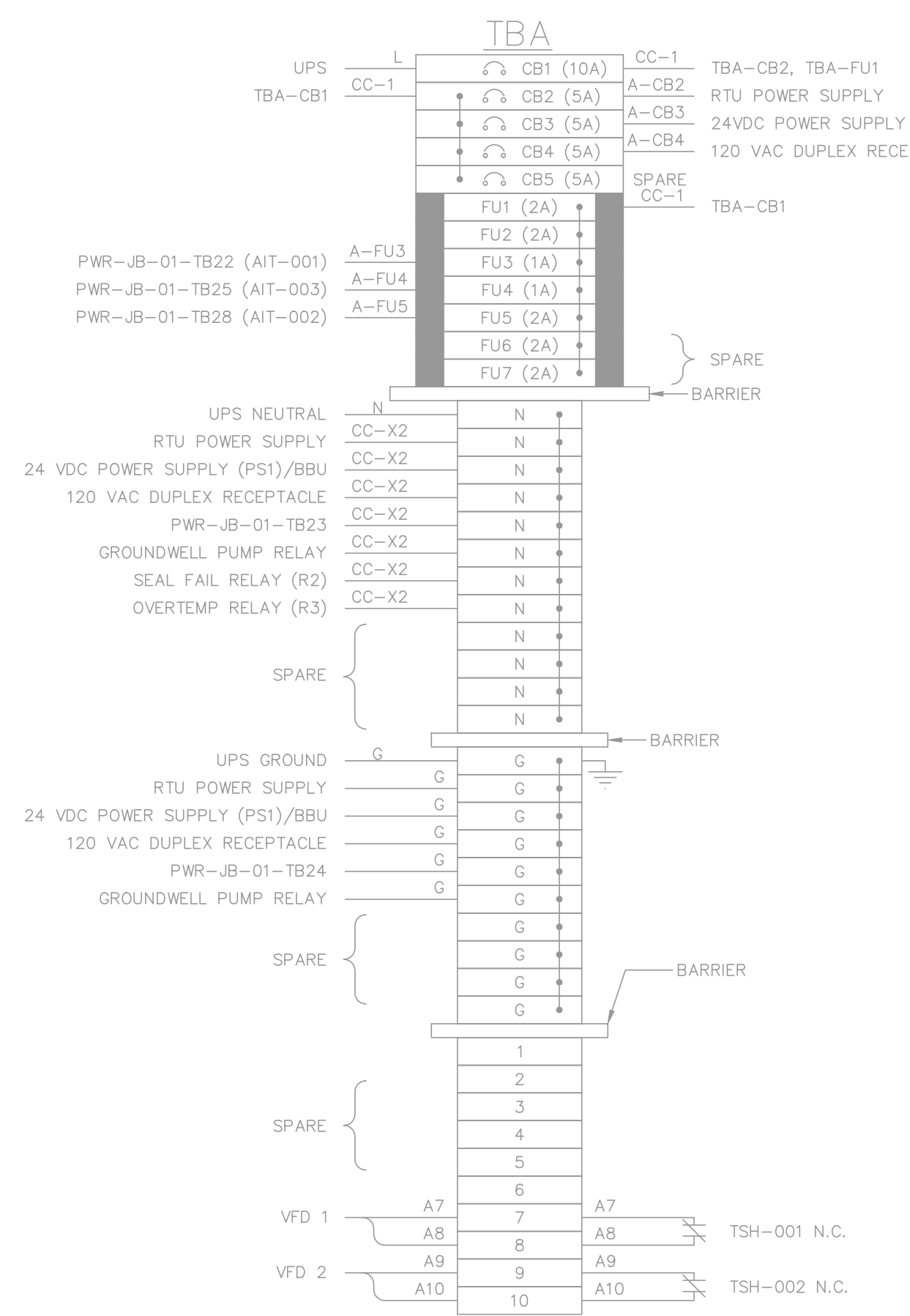
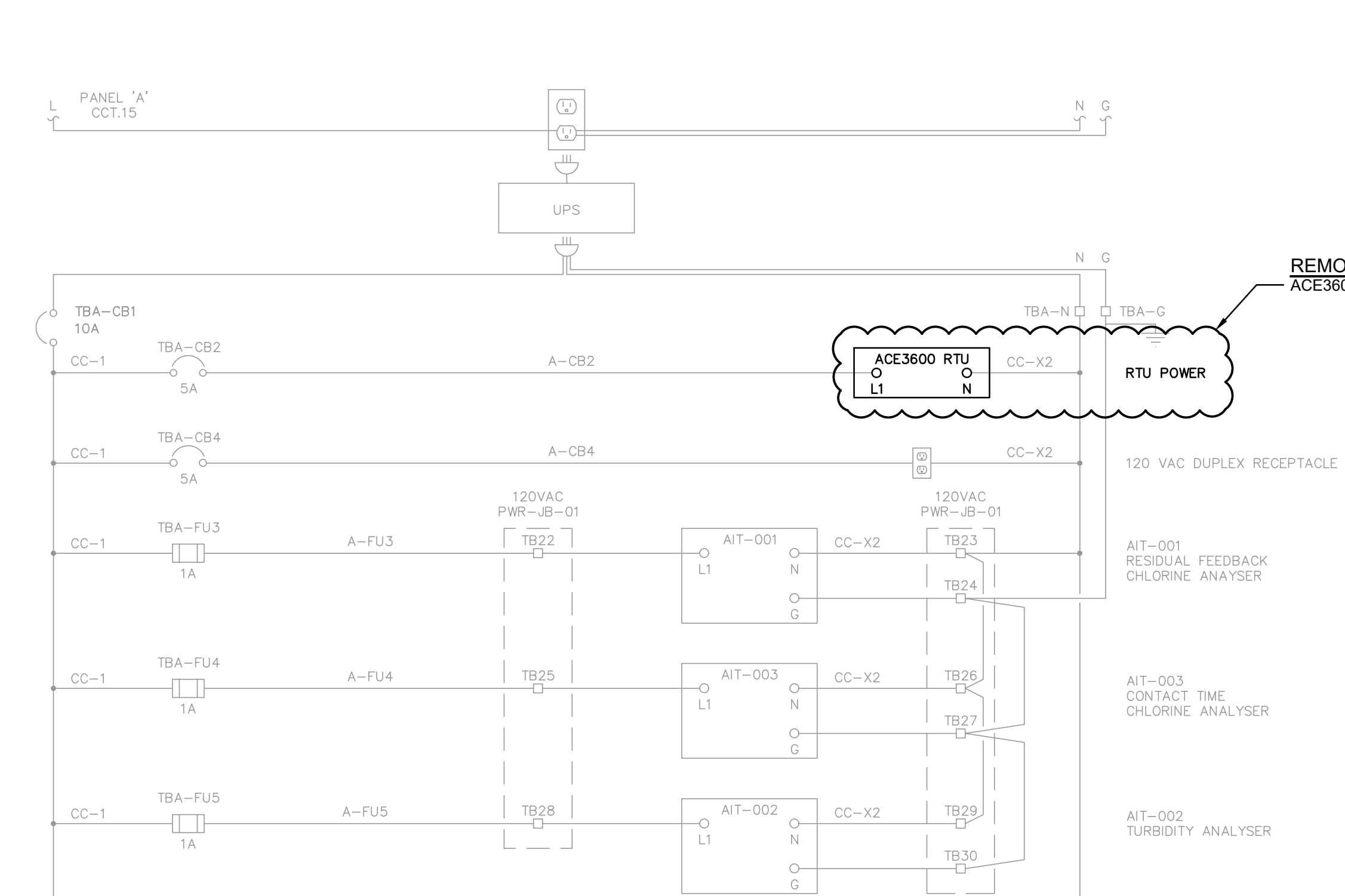


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

CONTROL BLOCK DIAGRAM

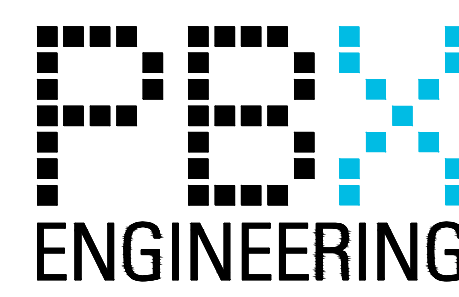
FILENAME	E230 CONTROL BLOCK DIAGRAM.DWG	SHEET	E230
SCALE	AS NOTED		



- NOTES:
- REFER TO CONTROL SCHEMATIC AND I/O WIRING DIAGRAM FOR COMPLETE WIRING DETAILS.
 - CL-1 REFERS TO CHLORINATOR.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

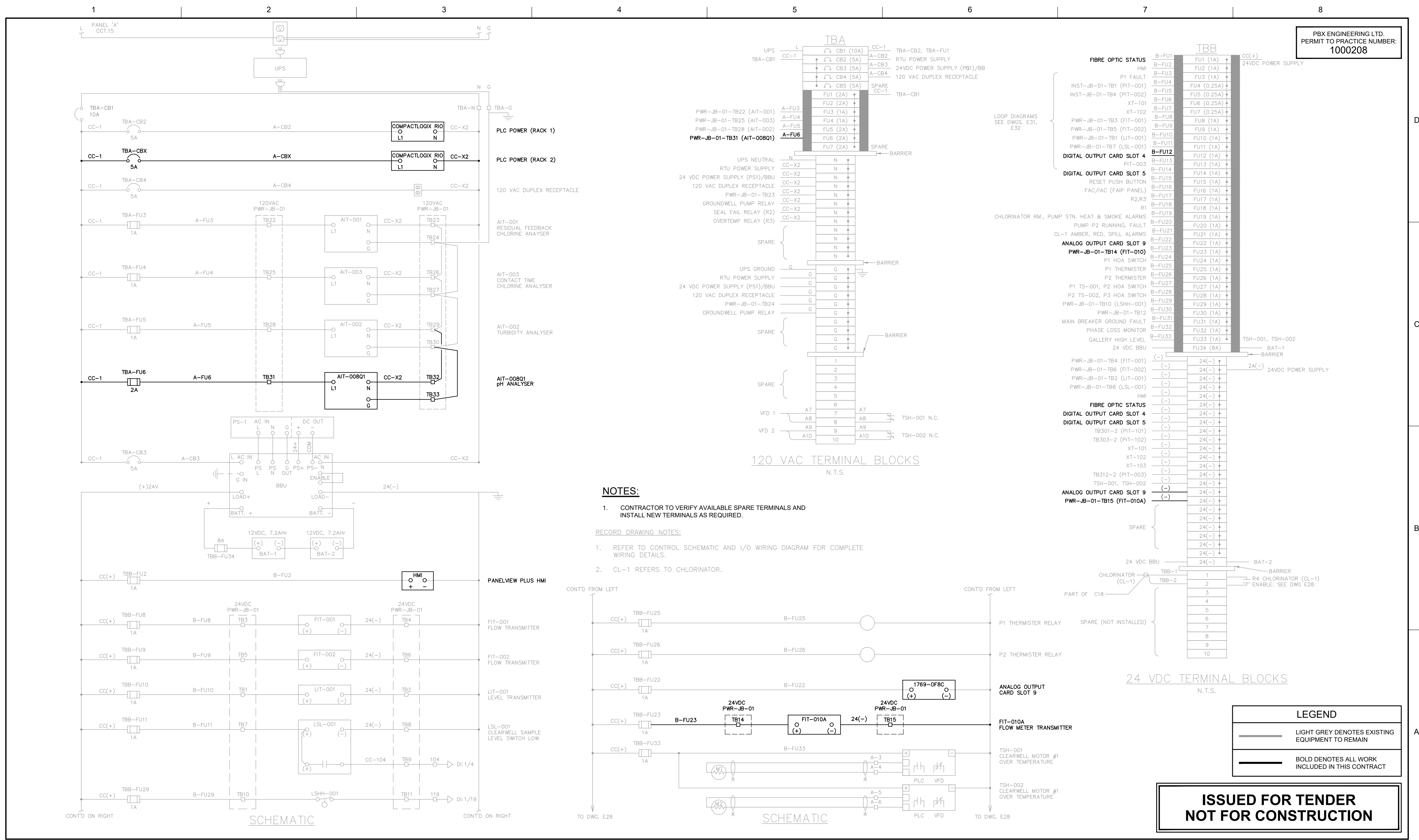
ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P279 - PUMP STATION MODIFICATIONS
CONTROL SCHEMATIC & PANEL
WIRING DIAGRAM - EXISTING**

FILENAME	SCALE	SHEET
E231 CONTROL SCHEMATIC & PANEL WIRING DIAGRAM.DWG	AS NOTED	E231



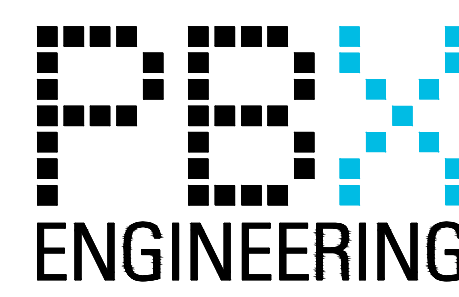
NOTES:

- CONTRACTOR TO VERIFY AVAILABLE SPARE TERMINALS AND INSTALL NEW TERMINALS AS REQUIRED.

RECORD DRAWING NOTES:

- REFER TO CONTROL SCHEMATIC AND I/O WIRING DIAGRAM FOR COMPLETE WIRING DETAILS.
- CL-1 REFERS TO CHLORINATOR.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

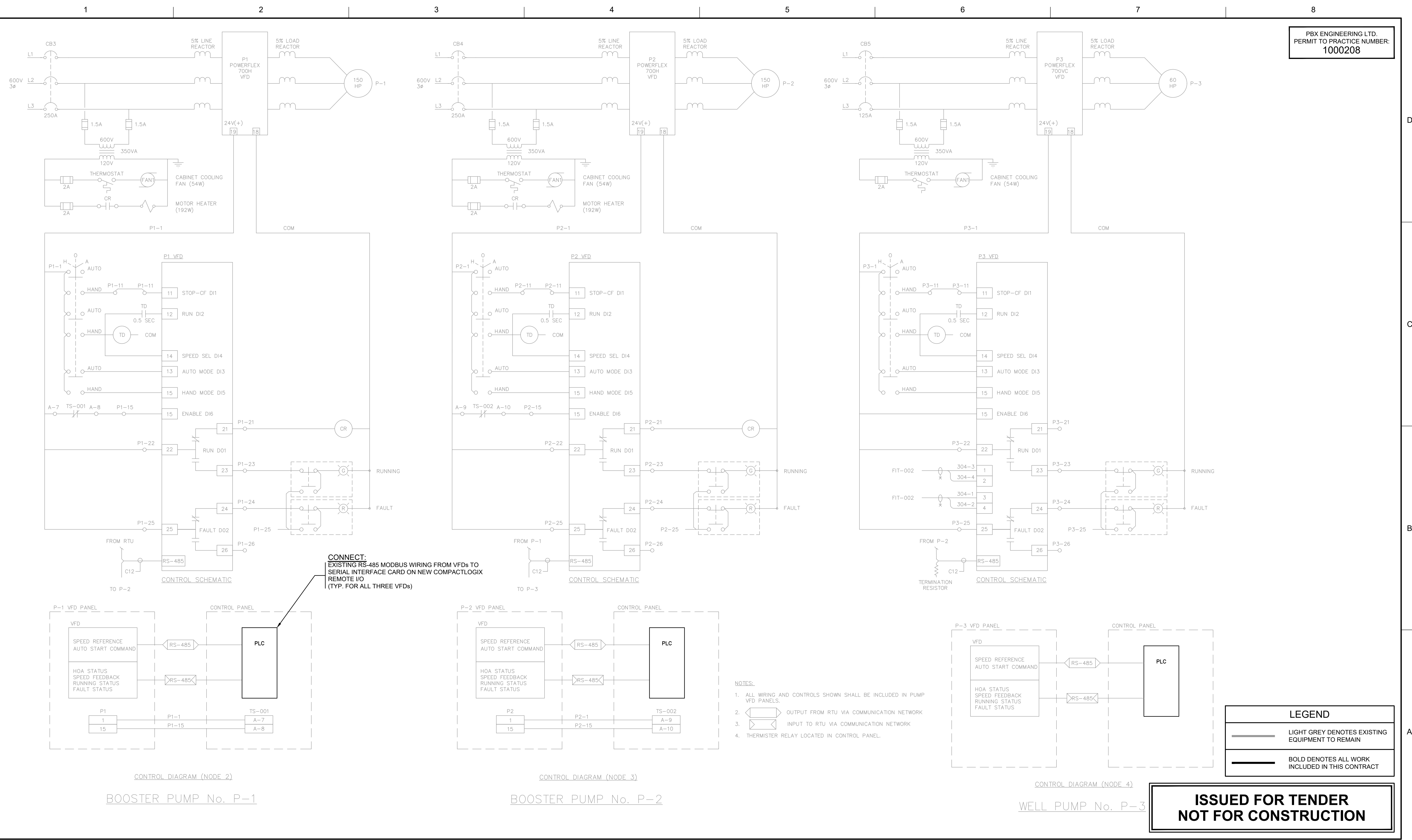
PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P279 - PUMP STATION MODIFICATIONS
CONTROL SCHEMATIC & PANEL
WIRING DIAGRAM - PROPOSED**

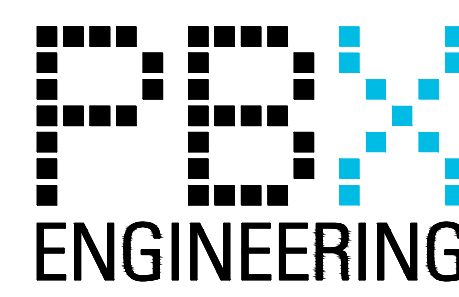


CONNECT:
EXISTING RS-485 MODBUS WIRING FROM VFDs TO
SERIAL INTERFACE CARD ON NEW COMPACTLOGIX
REMOTE I/O
(TYP. FOR ALL THREE VFDs)

- NOTES:
1. ALL WIRING AND CONTROLS SHOWN SHALL BE INCLUDED IN PUMP VFD PANELS.
 2. OUTPUT FROM RTU VIA COMMUNICATION NETWORK
 3. INPUT TO RTU VIA COMMUNICATION NETWORK
 4. THERMISTER RELAY LOCATED IN CONTROL PANEL.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

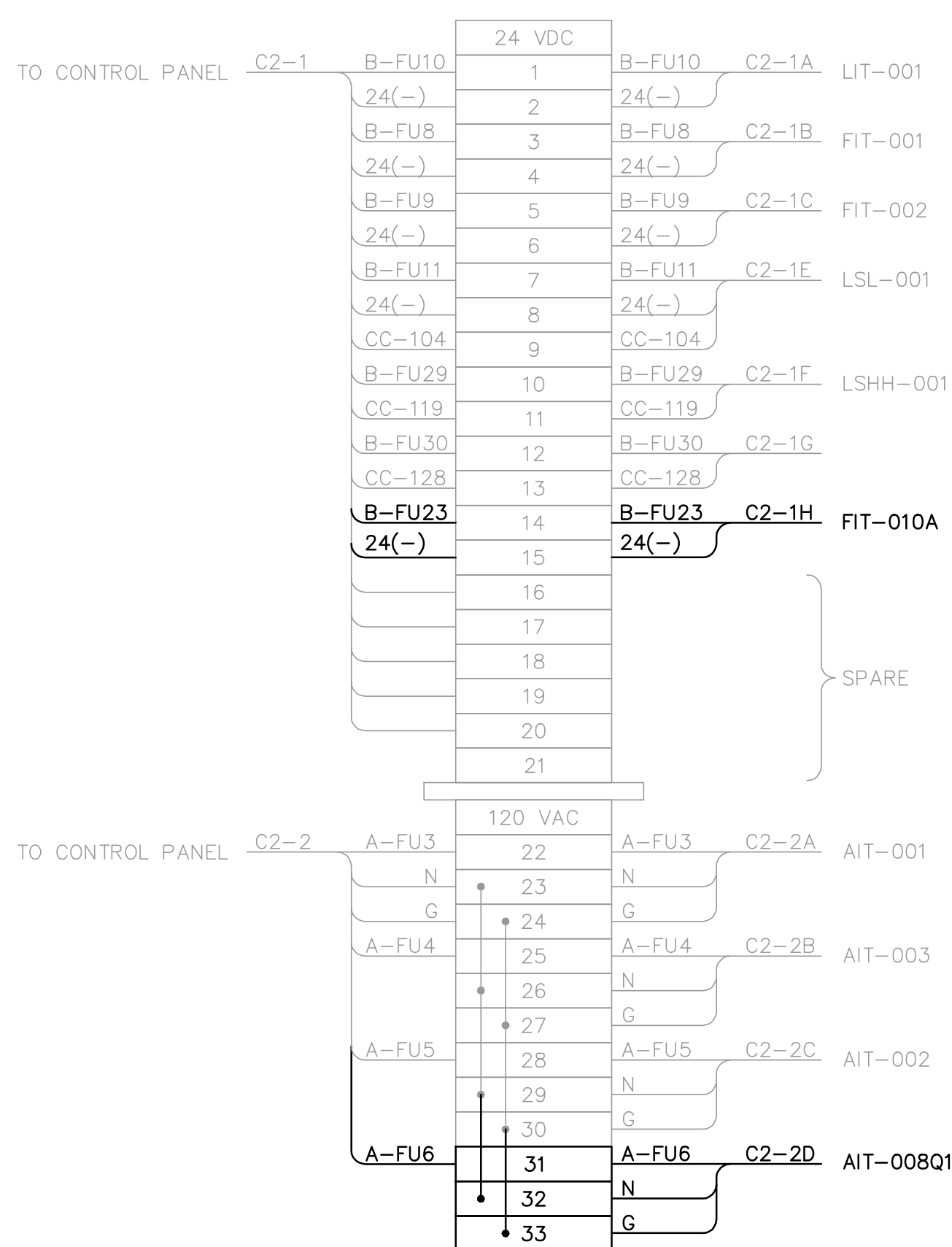
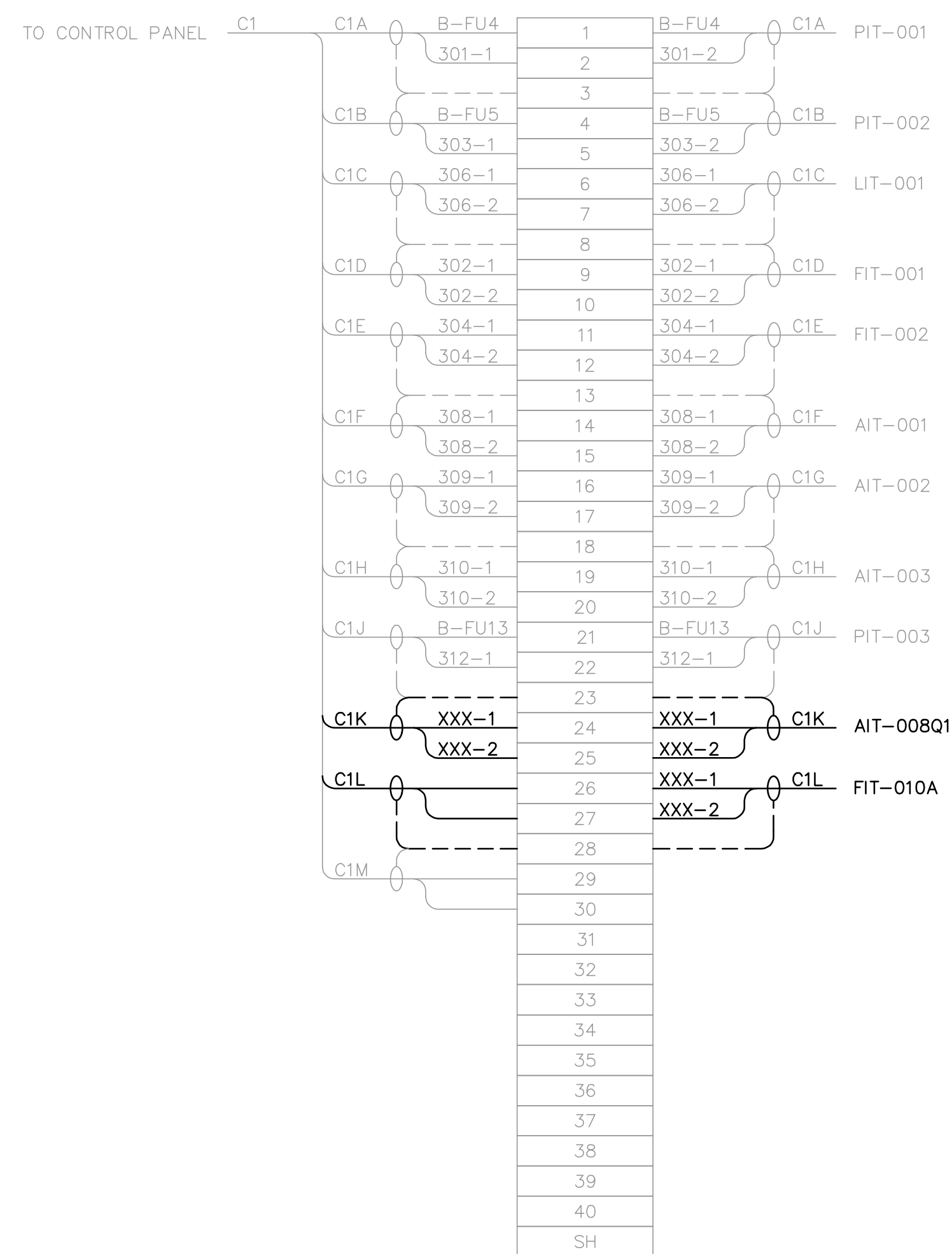


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

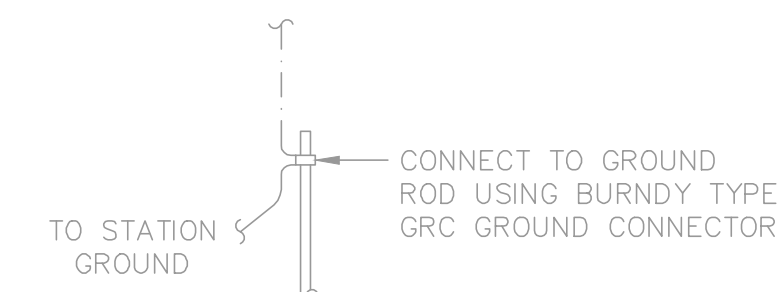
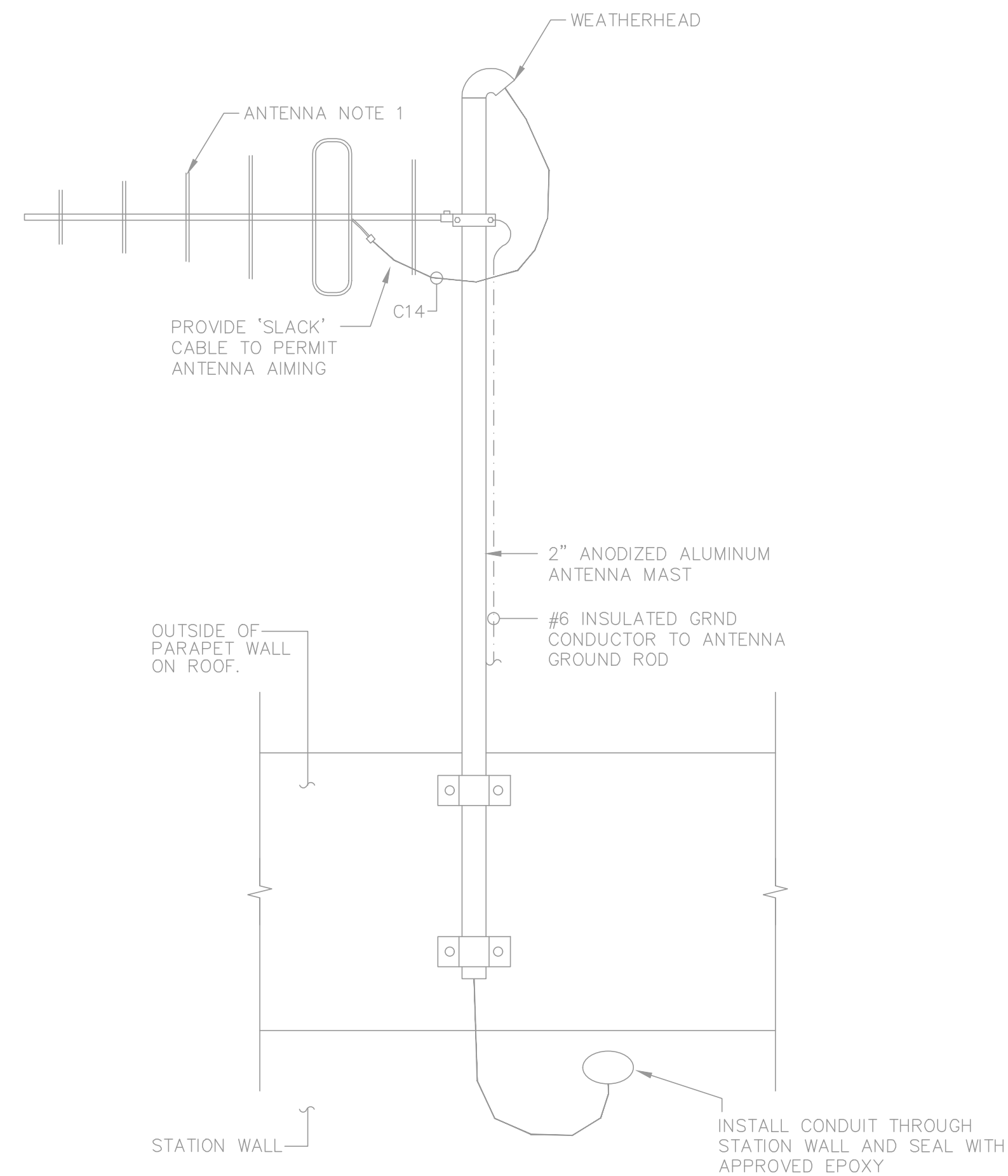
WIRING DIAGRAMS - PUMP VFDs

FILENAME	E240 WIRING DIAGRAMS - PUMP VFDs.DWG	SHEET
SCALE	AS NOTED	E240



NOTES:

- CONTRACTOR TO VERIFY AVAILABLE SPARE TERMINALS AND INSTALL NEW TERMINALS AS REQUIRED.

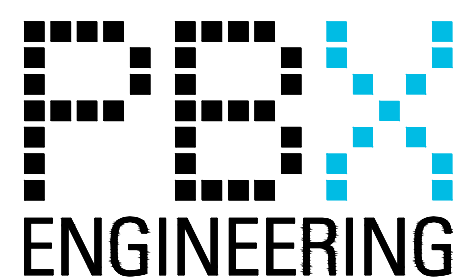


RECORD DRAWING NOTES:

- PROVIDE 900mm CLEARANCE IN ALL DIRECTIONS FROM ANTENNA.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

Whistler, BC

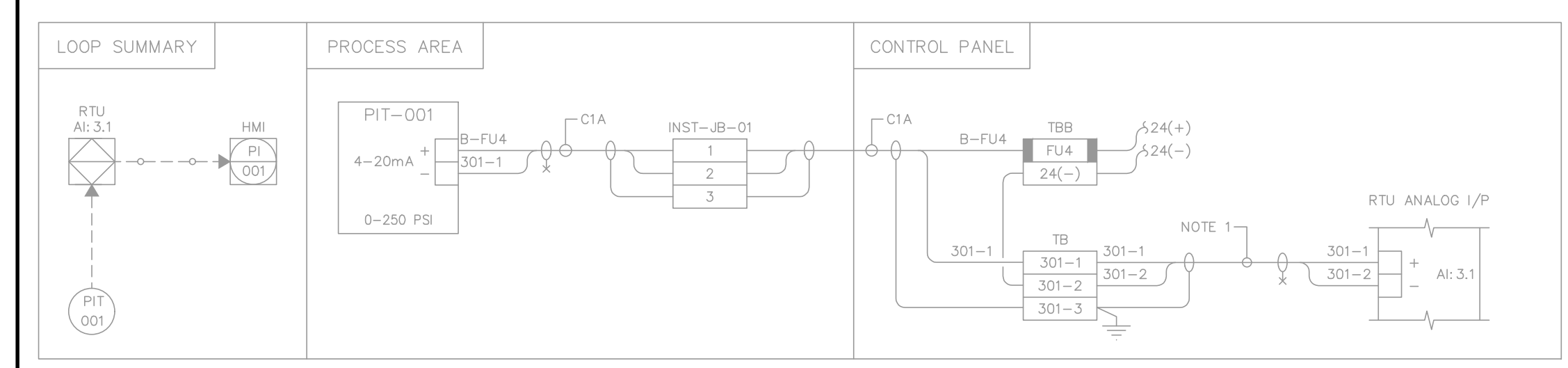
2023

P279 - PUMP STATION MODIFICATIONS

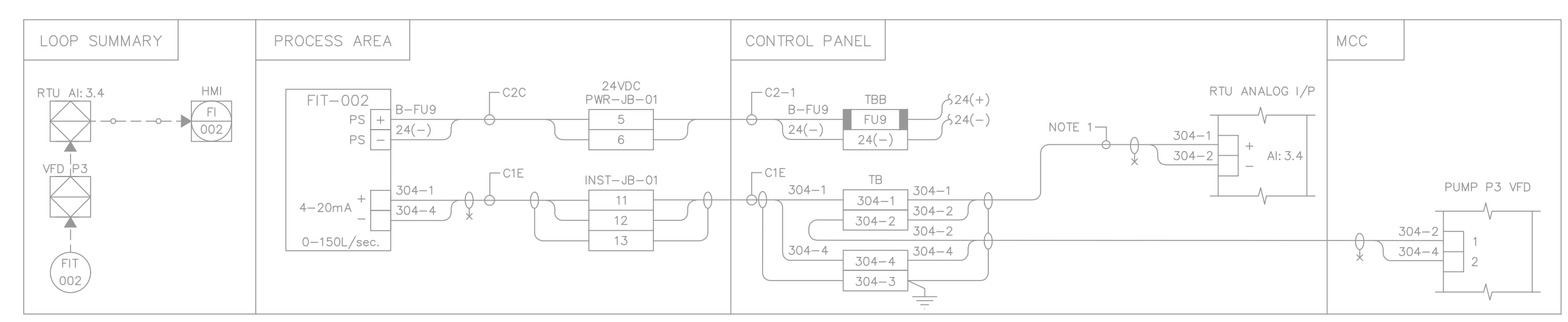
DETAILS - JUNCTION BOX WIRING DIAGRAM & MISC. DETAILS

FILENAME | E201 DETAILS - JUNCTION BOX WIRING DIAGRAM & MISC. DETAILS.DWG
SCALE | AS NOTED

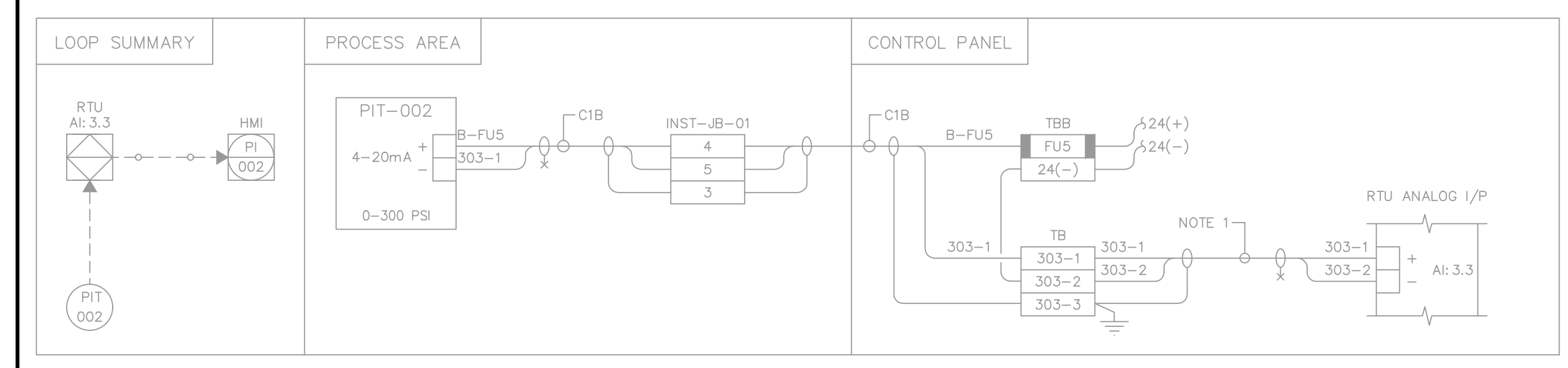
SHEET
E250



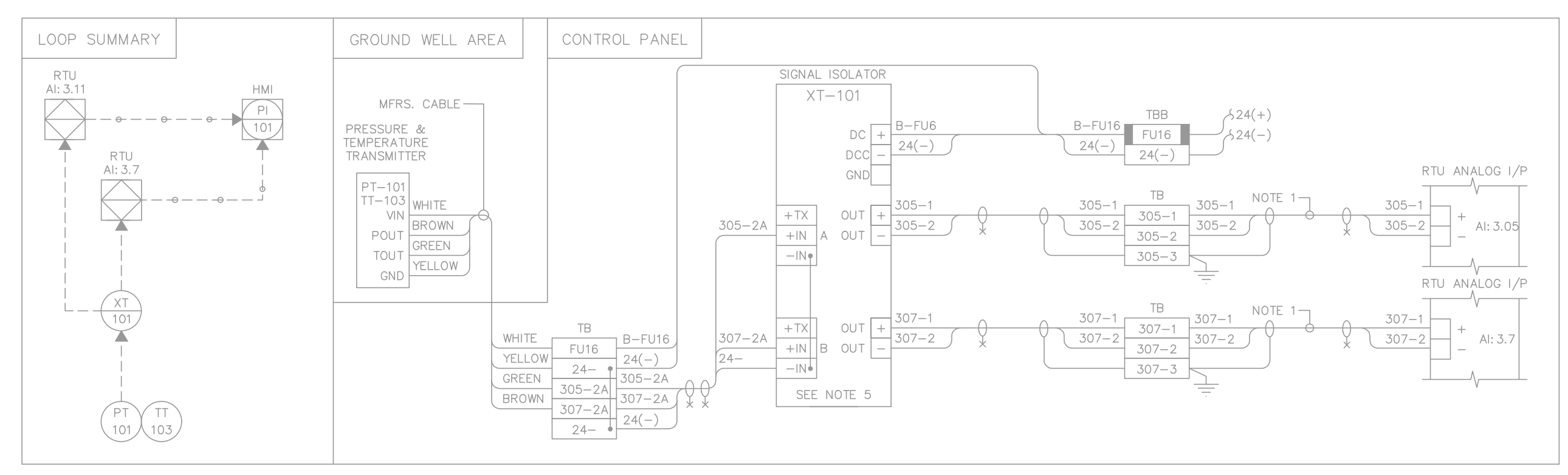
WAV RESERVOIR DISCHARGE PRESSURE TRANSMITTER PIT-001 - LOOP DIAGRAM
N.T.S.



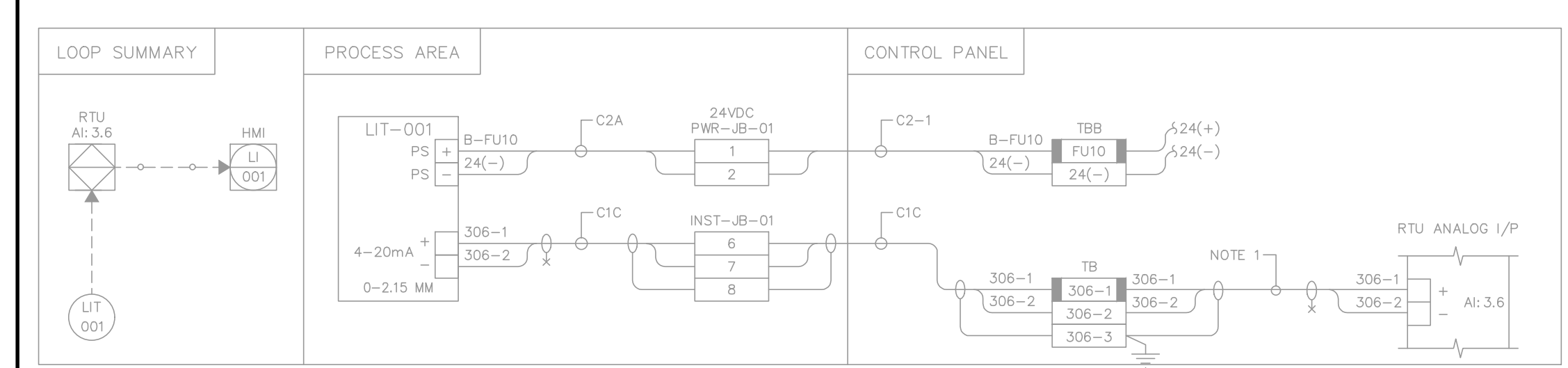
WAV PUMP STATION DISCHARGE FLOW TRANSMITTER FIT-002 - LOOP DIAGRAM
N.T.S.



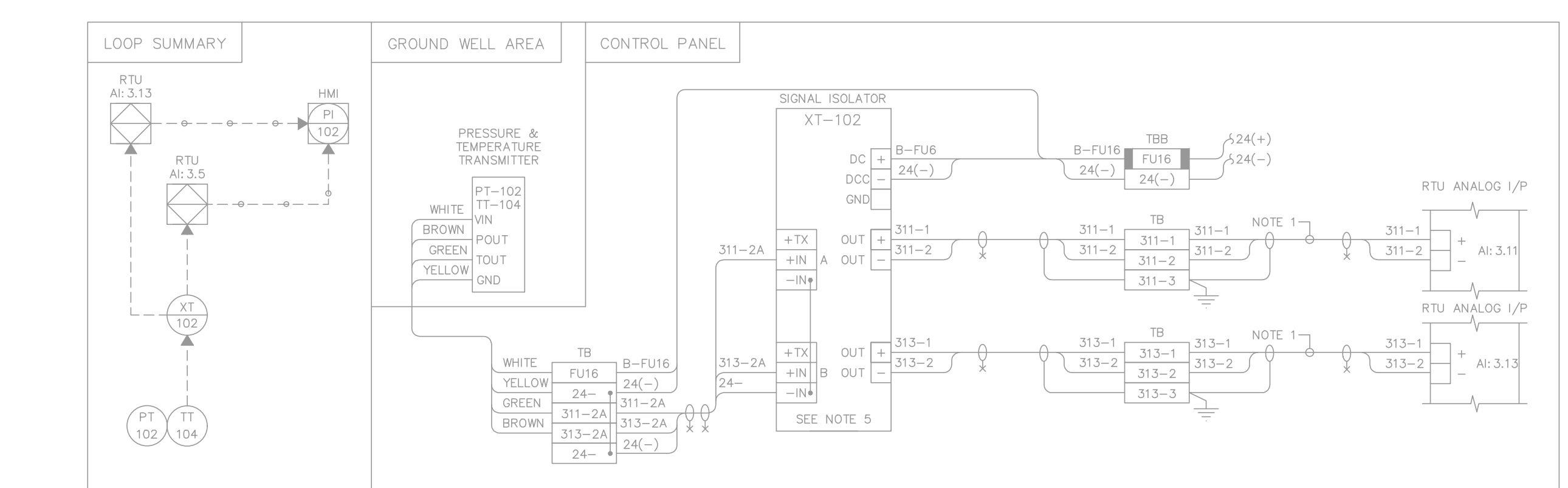
JUNCTION PUMP STATION DISCHARGE PRESSURE TRANSMITTER PIT-002 - LOOP DIAGRAM
N.T.S.



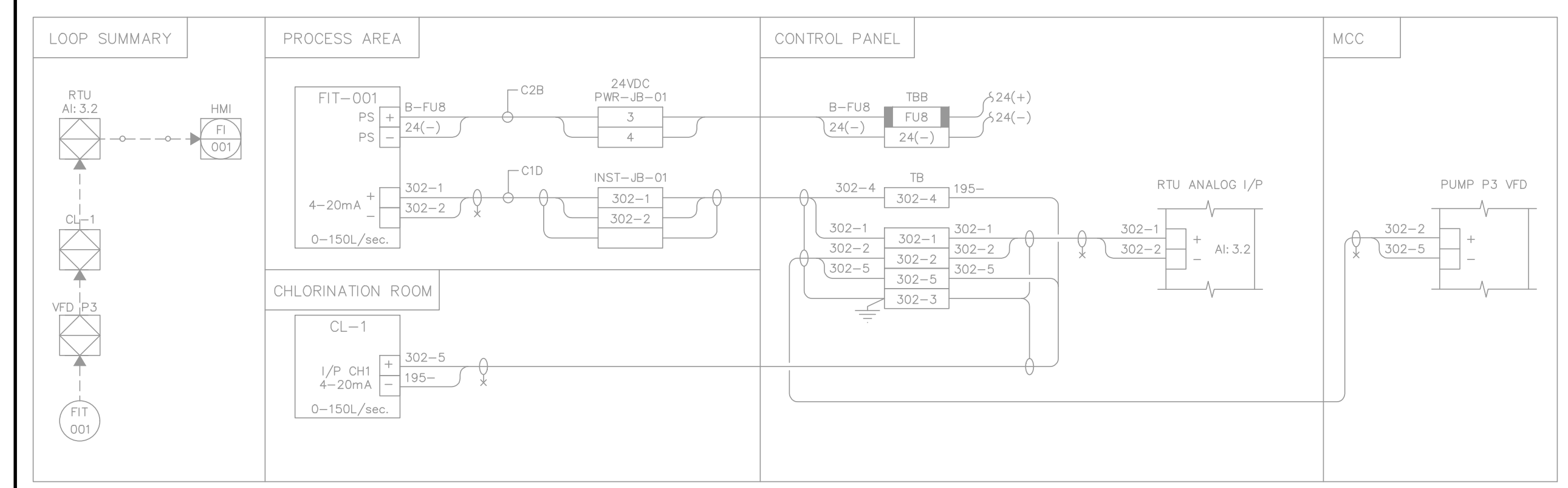
GROUND WELL PRESSURE & TEMPERATURE TRANSMITTER PT-101, TT-103 - LOOP DIAGRAM
N.T.S.



CLEAR WELL LEVEL TRANSMITTER LIT-001 - LOOP DIAGRAM
N.T.S.



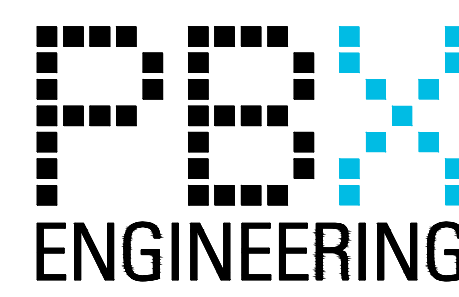
GROUND WELL BACKUP PRESSURE & TEMPERATURE TRANSMITTER PT-102, TT-104 - LOOP DIAGRAM
N.T.S.



GROUND WELL FLOW TRANSMITTER FIT-001 - LOOP DIAGRAM
N.T.S.

- NOTES:
- PROVIDE 1PR. #18 SINGLE TWISTED PAIR OVERALL SHIELD CABLE BELDEN CAT. NO. 8760 OR EQUAL.
 - SHIELD TERMINALS SHALL BE GROUNDED VIA INSULATED #14 GROUND CONDUCTOR WHERE INDICATED AT TBA-G.
 - ALL LOOP FUSES 1/4 AMP.
 - FIT CLEAR TUBING OVER ALL SHIELD DRAIN WIRES.
 - OUTPUT LOOP POWERED SIGNAL ISOLATOR MOORE TYPE ECT. PROVIDE TERMINAL BELOW ISOLATOR FOR SHIELD TERMINATION.

FOR INFORMATION ONLY



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



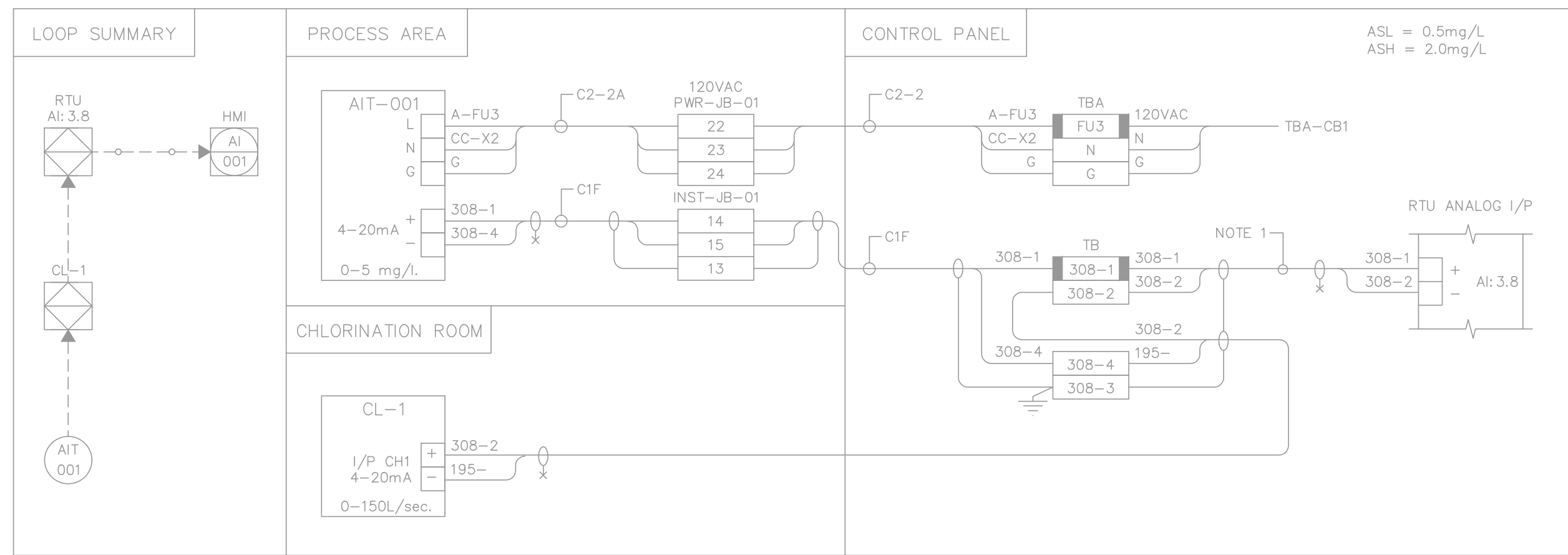
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

2023

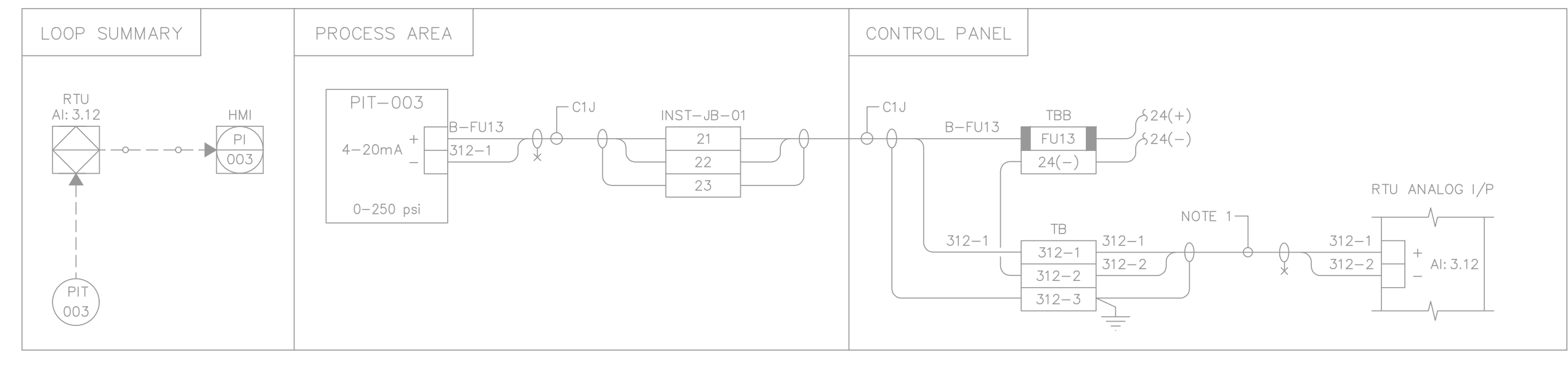
P279 - PUMP STATION MODIFICATIONS

DETAILS - LOOP DIAGRAMS (1 OF 3)

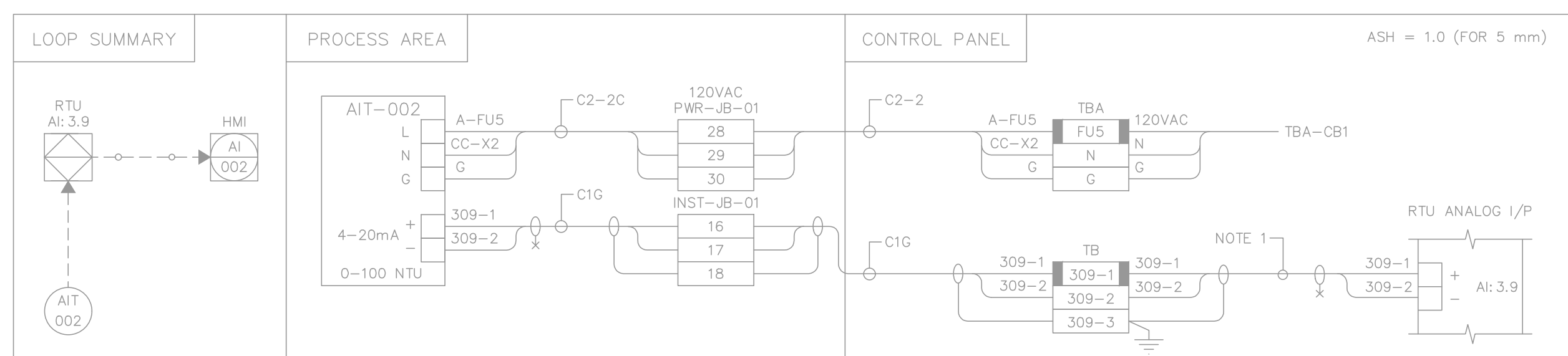
FILENAME	SCALE	SHEET
E251 DETAILS - LOOP DIAGRAMS (1 OF 3).DWG	AS NOTED	E251



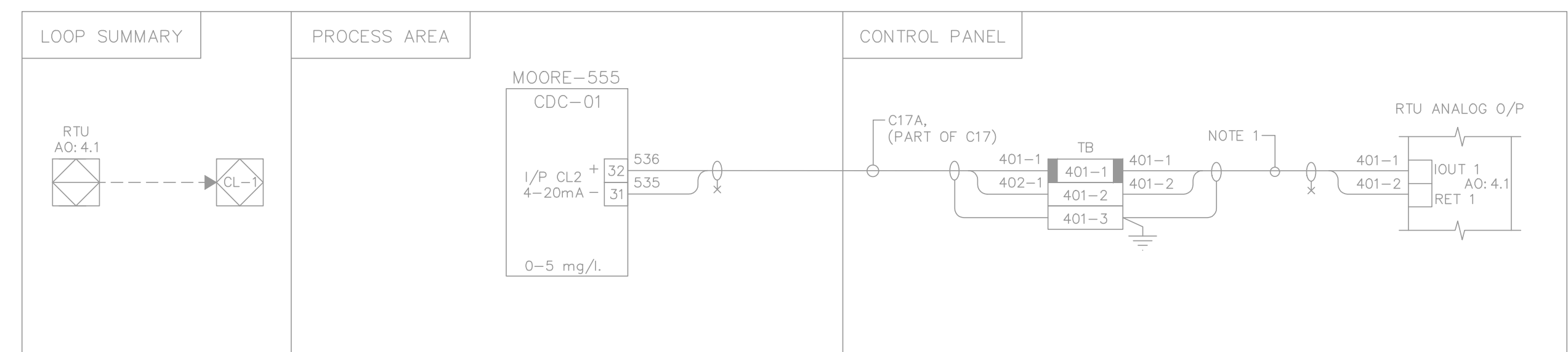
RESIDUAL FEEDBACK CHLORINE ANALYSER AIT-001 – LOOP DIAGRAM
N.T.S.



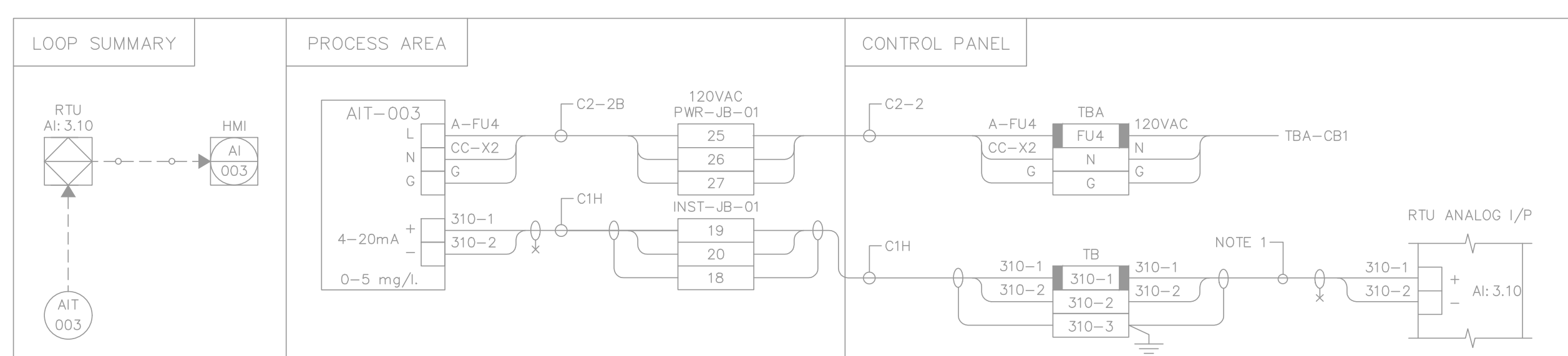
FUNCTION JUNCTION PUMP STATION SUCTION PRESSURE TRANSMITTER PIT-003 – LOOP DIAGRAM
N.T.S.



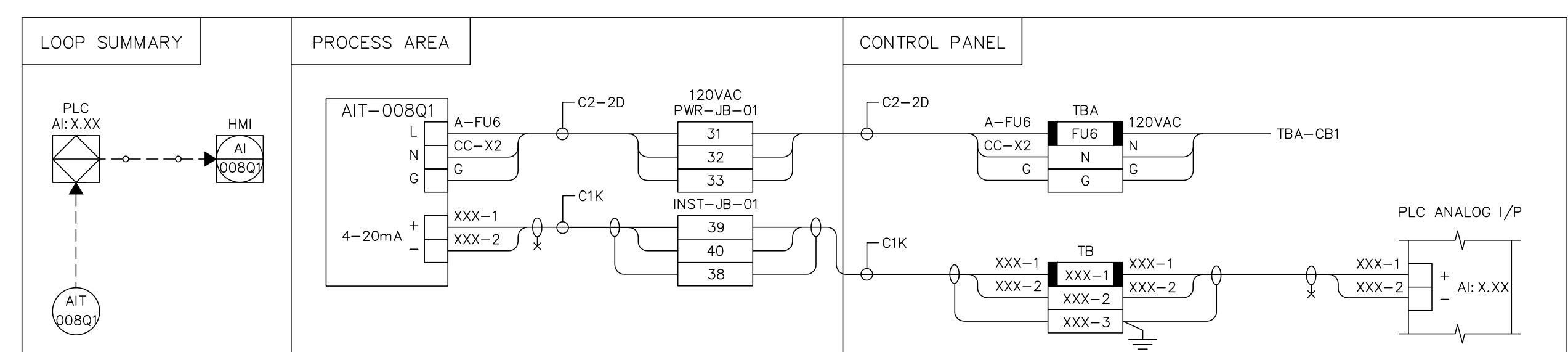
TURBIDITY ANALYSER AIT-002 – LOOP DIAGRAM
N.T.S.



RESIDUAL FEEDBACK CHLORINE TO CHLORINE CONTROLLER CL-2 – LOOP DIAGRAM
N.T.S.



CONTACT TIME CHLORINE ANALYSER AIT-003 – LOOP DIAGRAM
N.T.S.

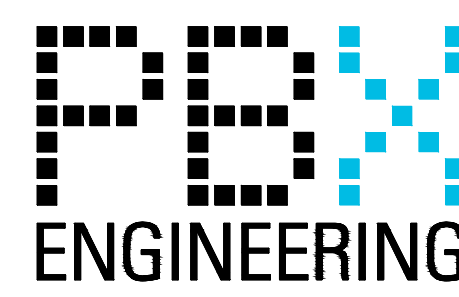


pH ANALYSER AIT-008Q1 – LOOP DIAGRAM
N.T.S.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

- NOTES:
- PROVIDE 1PR. #18 SINGLE TWISTED PAIR OVERALL SHIELD CABLE BELDEN CAT. NO. 8760 OR EQUAL.
 - SHIELD TERMINALS SHALL BE GROUNDED VIA INSULATED #14 GROUND CONDUCTOR WHERE INDICATED AT TBA-G.
 - ALL LOOP FUSES 1/4 AMP.
 - FIT CLEAR TUBING OVER ALL SHIELD DRAIN WIRES.
 - OUTPUT LOOP POWERED SIGNAL ISOLATOR MOORE TYPE ECT. PROVIDE TERMINAL BELOW ISOLATOR FOR SHIELD TERMINATION.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

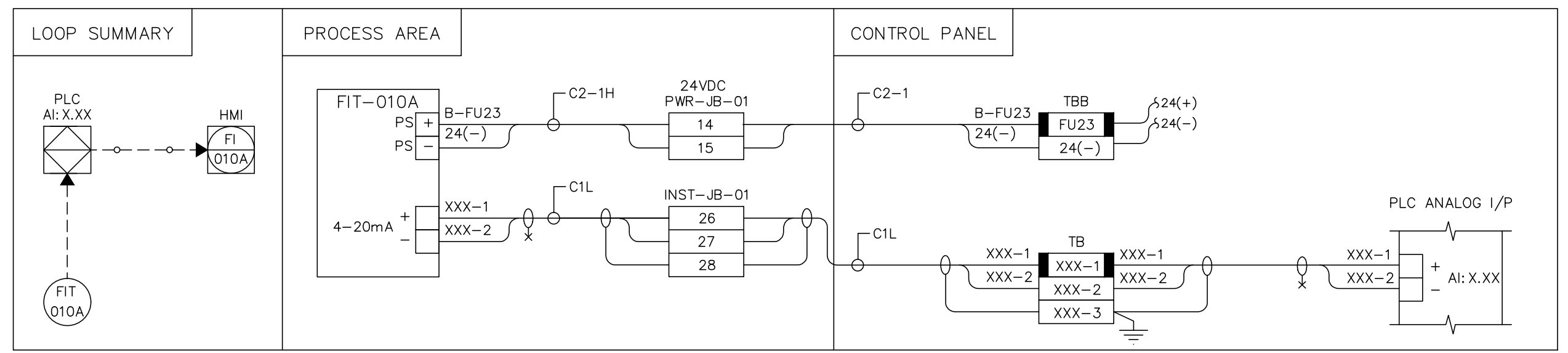


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

DETAILS - LOOP DIAGRAMS (2 OF 3)

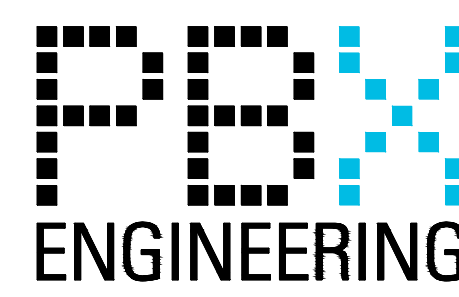
FILENAME	E252 DETAILS - LOOP DIAGRAMS (2 OF 3).DWG	SHEET
SCALE	AS NOTED	E252



FLOW TRANSMITTER FIT-010A – LOOP DIAGRAM
N.T.S.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

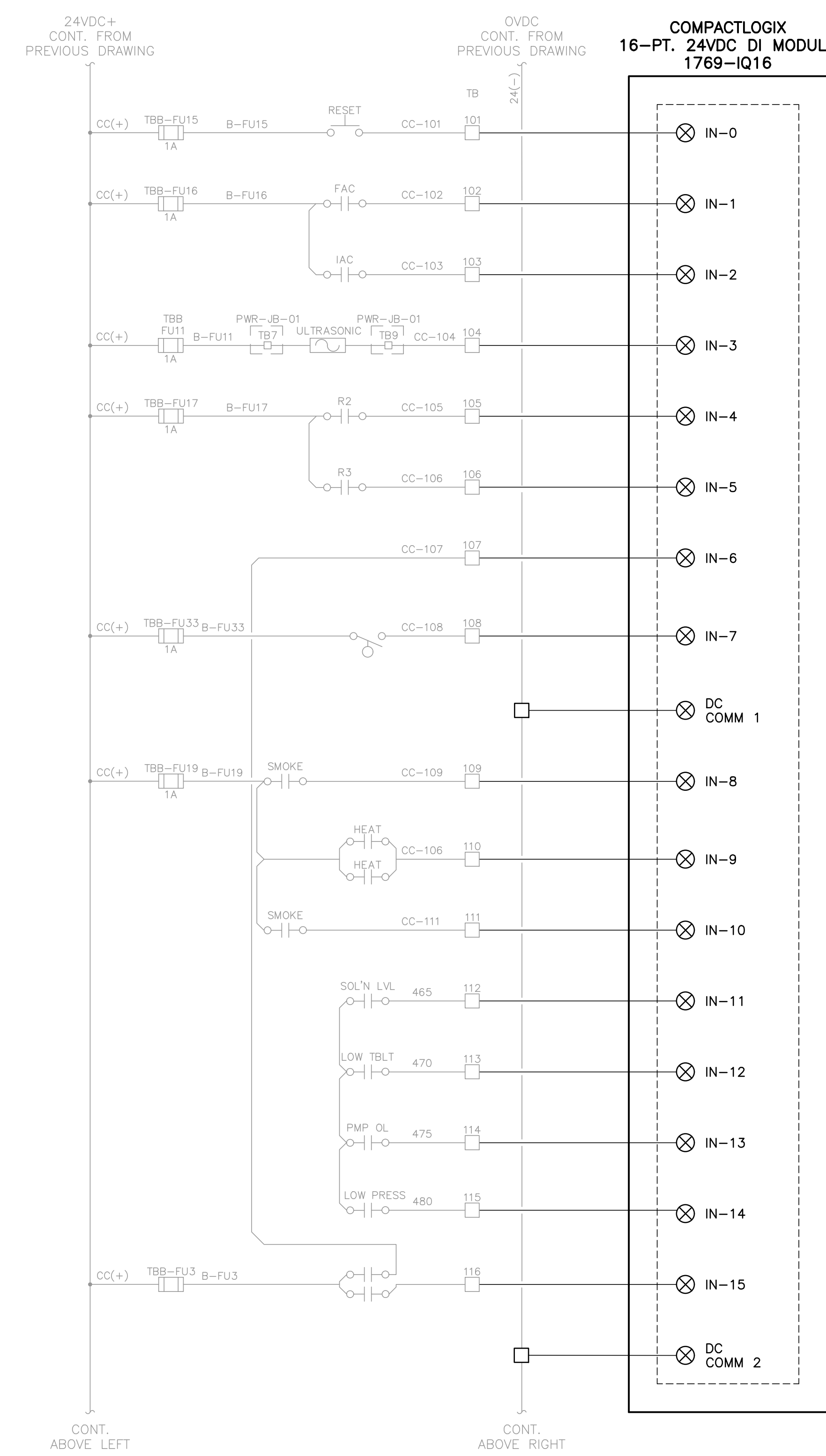


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

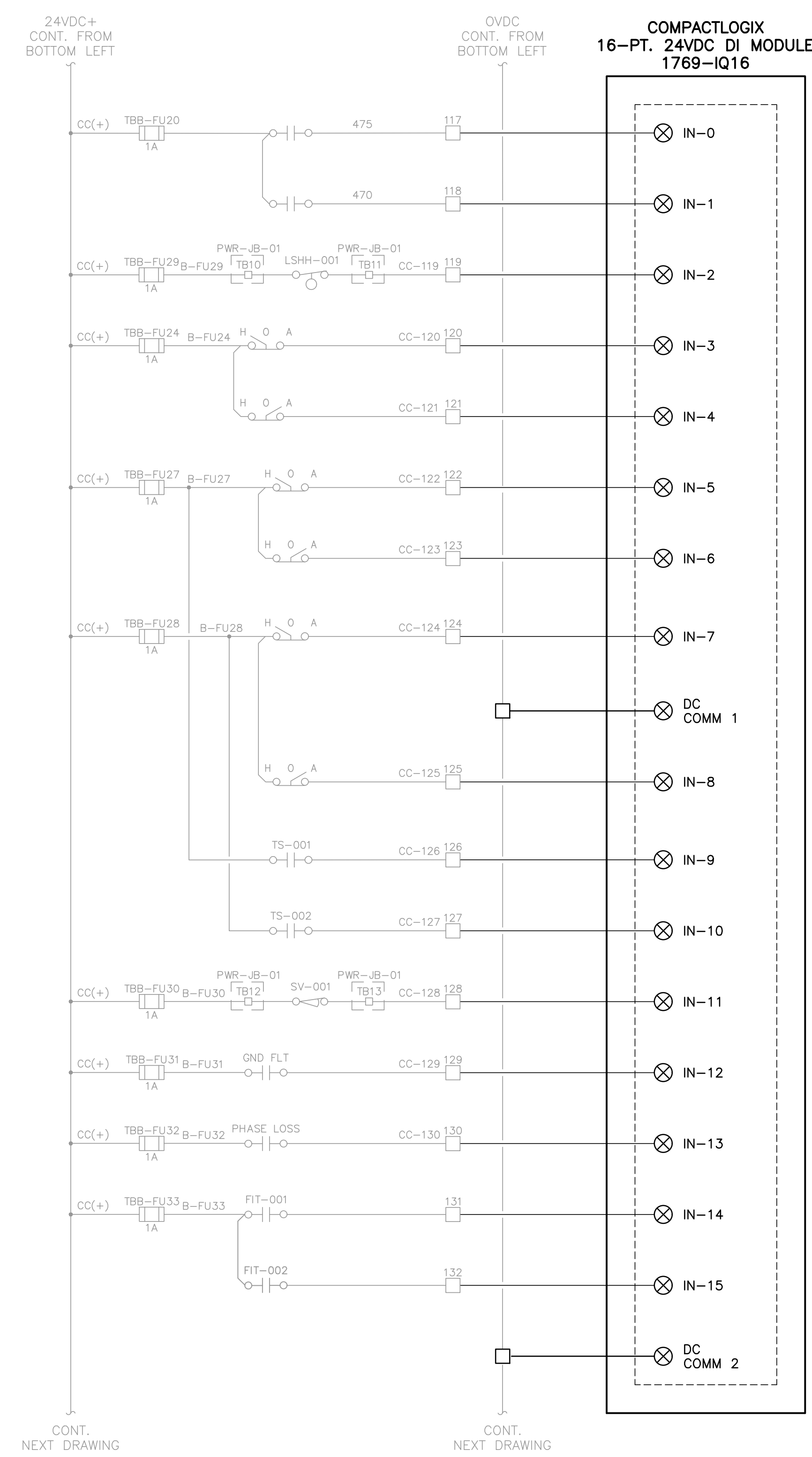
P279 - PUMP STATION MODIFICATIONS

DETAILS - LOOP DIAGRAMS (3 OF 3)

FILENAME	E203 DETAILS - LOOP DIAGRAMS (3 OF 3).DWG	SHEET
SCALE	AS NOTED	E253



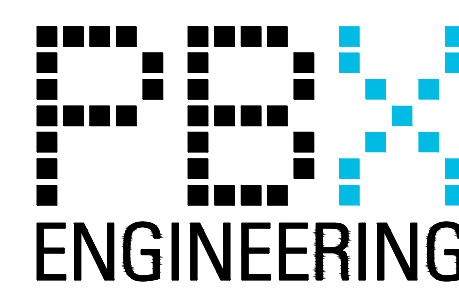
- IN-0 SYSTEM RESET
- IN-1 FIRE ALARM
- IN-2 INTRUSION ALARM
- IN-3 CLEARWELL SAMPLE LEVEL SWITCH LOW
- IN-4 P3 RUNNING
- IN-5 P3 FAULT
- IN-6 P1 RUNNING
- IN-7 GALLERY HIGH LEVEL
- IN-8 DC COMM 1
- IN-8 PUMP STN. SMOKE ALARM
- IN-9 CHLORINATOR RM. HEAT ALARM /W PUMP STN.
- IN-10 CHLORINATOR RM. SMOKE ALARM
- IN-11 CHLORINATOR SOLN. LEVEL ALARM
- IN-12 CHLORINATOR LOW TABLET ALARM
- IN-13 CHLORINATOR PUMP OVERLOAD ALARM
- IN-14 CHLORINATOR LOW PRESSURE ALARM
- IN-15 P1 FAULT
- DC COMM 2



- IN-0 P2 RUNNING
- IN-1 P2 FAULT
- IN-2 CLEARWELL LEVEL SWITCH HIGH HIGH
- IN-3 P1 HAND
- IN-4 P1 AUTO
- IN-5 P2 HAND
- IN-6 P2 AUTO
- IN-7 P3 HAND
- IN-8 DC COMM 1
- IN-8 P3 AUTO
- IN-9 P1 TEMPERATURE SWITCH
- IN-10 P2 TEMPERATURE SWITCH
- IN-11 SURGE ANTICIPATOR VALVE LIMIT SWITCH
- IN-12 MAIN BREAKER GROUND FAULT
- IN-13 PHASE LOSS
- IN-14 FIT-001 PULSE (RESERVED)
- IN-15 FIT-002 PULSE (RESERVED)
- DC COMM 2

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

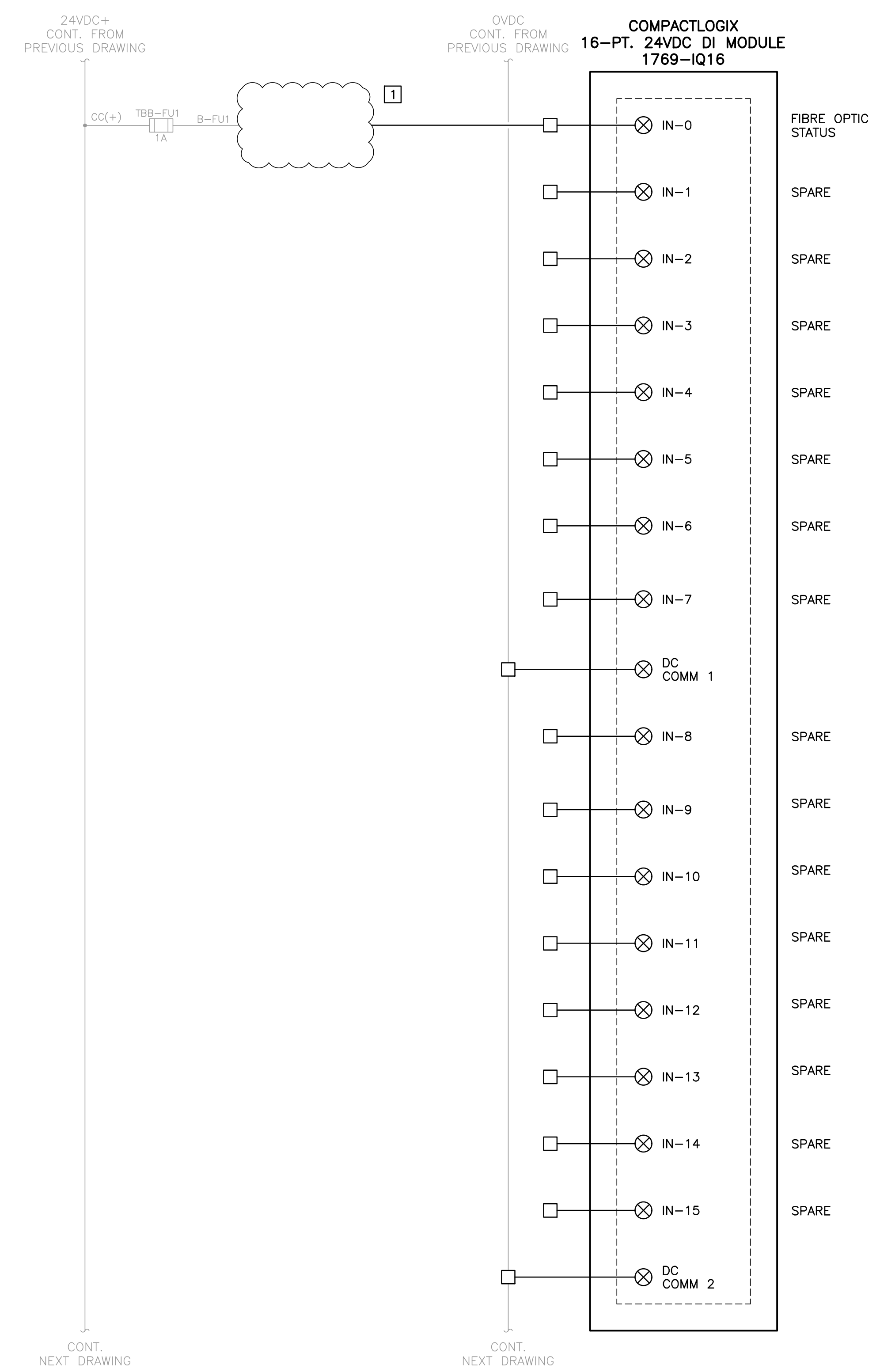


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

DETAILS - LADDER LOGIC (1 OF 6)

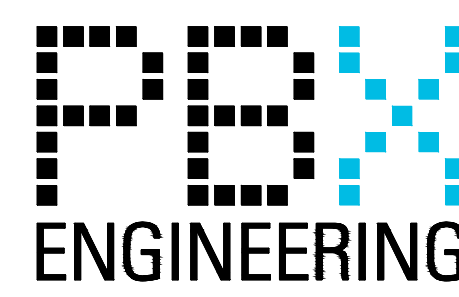
FILENAME	E254 DETAILS - LADDER LOGIC (1 OF 6).DWG	SHEET
SCALE	AS NOTED	E254



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

NOTES:
 1 CONTRACTOR TO CONFIRM FIELD CONNECTIONS.

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



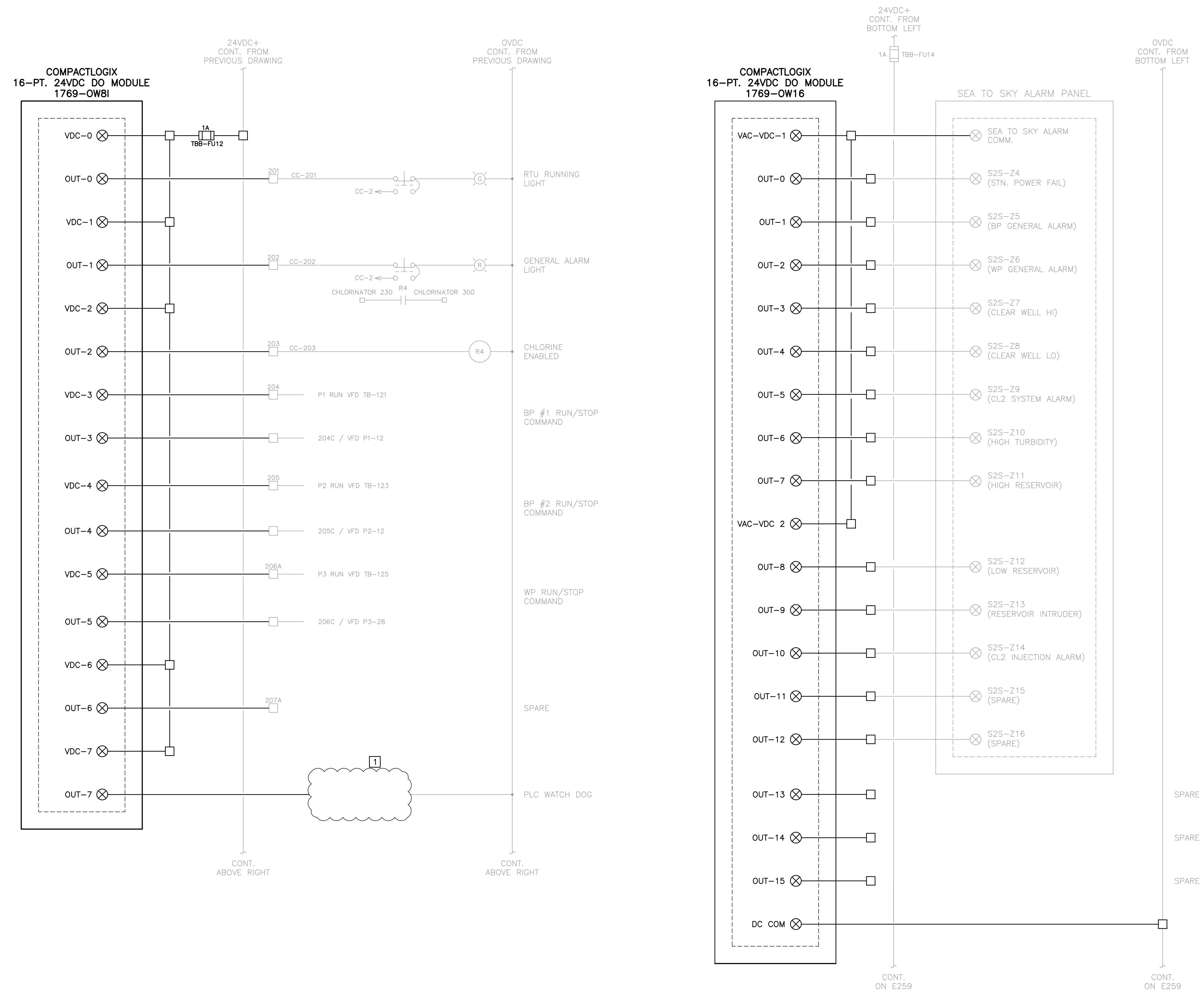
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

2023

P279 - PUMP STATION MODIFICATIONS

DETAILS - LADDER LOGIC (2 OF 6)

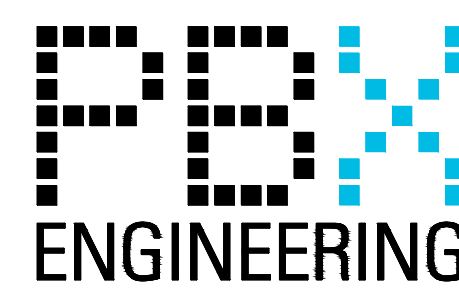
FILENAME	SCALE	SHEET
E255 DETAILS - LADDER LOGIC (2 OF 6).DWG	AS NOTED	E255



- NOTES:**
- 1 CONTACTOR TO CONFIRM FIELD CONNECTIONS.
- RECORD DRAWING NOTES:**
1. ALL I/O CARDS SHALL USE REMOVABLE TERMINAL BLOCKS AND CONNECT TO DIN RAIL MOUNTED TERMINAL BLOCKS.
 2. ALL ANALOG INPUT FUSES 1/4 AMP.
 3. NON FUSED ANALOG SIGNAL TERMINALS SHALL BE KNIFE-SWITCH TYPE.
 4. REFER TO LOOP DRAWINGS FOR ANALOG WIRING DETAILS.
 5. OUTPUT RESIDUAL FEEDBACK CHLORINE VALUE (AIT-001) TO CHLORINATOR MOORE 555 CONTROLLER.
 6. OUTPUT GROUND WELL FLOW VALUE (FIT-001) TO CHLORINE CONTROLLER (CL-1) INPUT CHANNEL 1.
 7. FIT-001 FLOW DETECT CONTACT LOCATED IN CHLORINATOR.
 8. CLEARWELL MOTOR OVERTEMP. N.C. CONTACT TO INTERLOCK WITH VFD'S.
 9. ITEMS SHOWN GRAY NOT INSTALLED AT TIME OF RECORD DWG.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

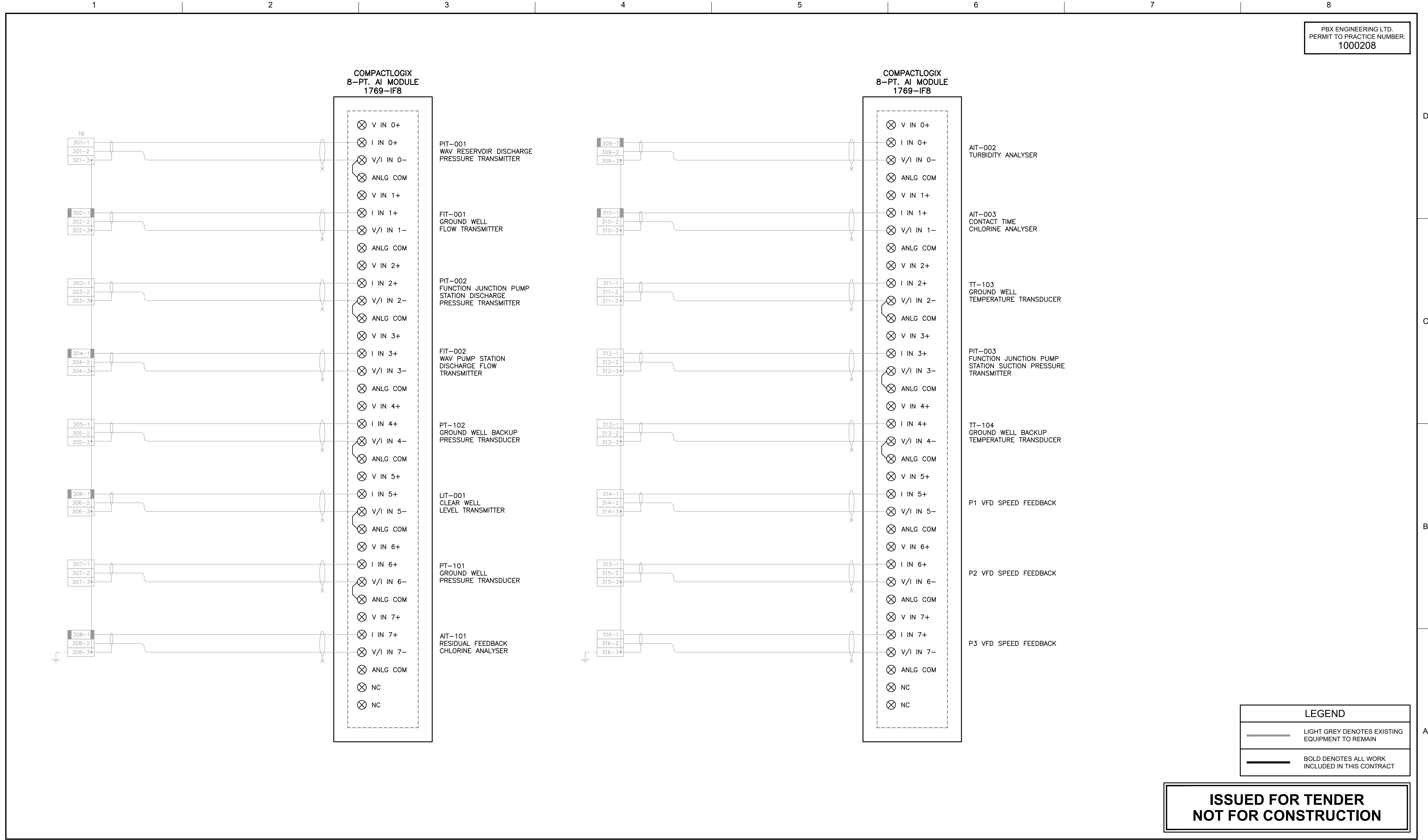


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

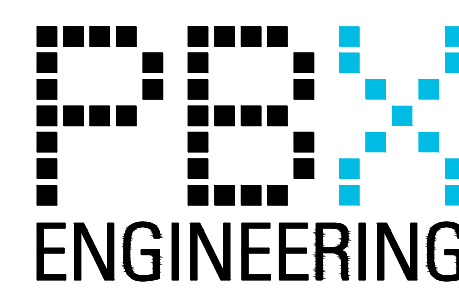
DETAILS - LADDER LOGIC (3 OF 6)

FILENAME	SCALE	SHEET
E256 DETAILS - LADDER LOGIC (3 OF 6) DWG	AS NOTED	E256



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

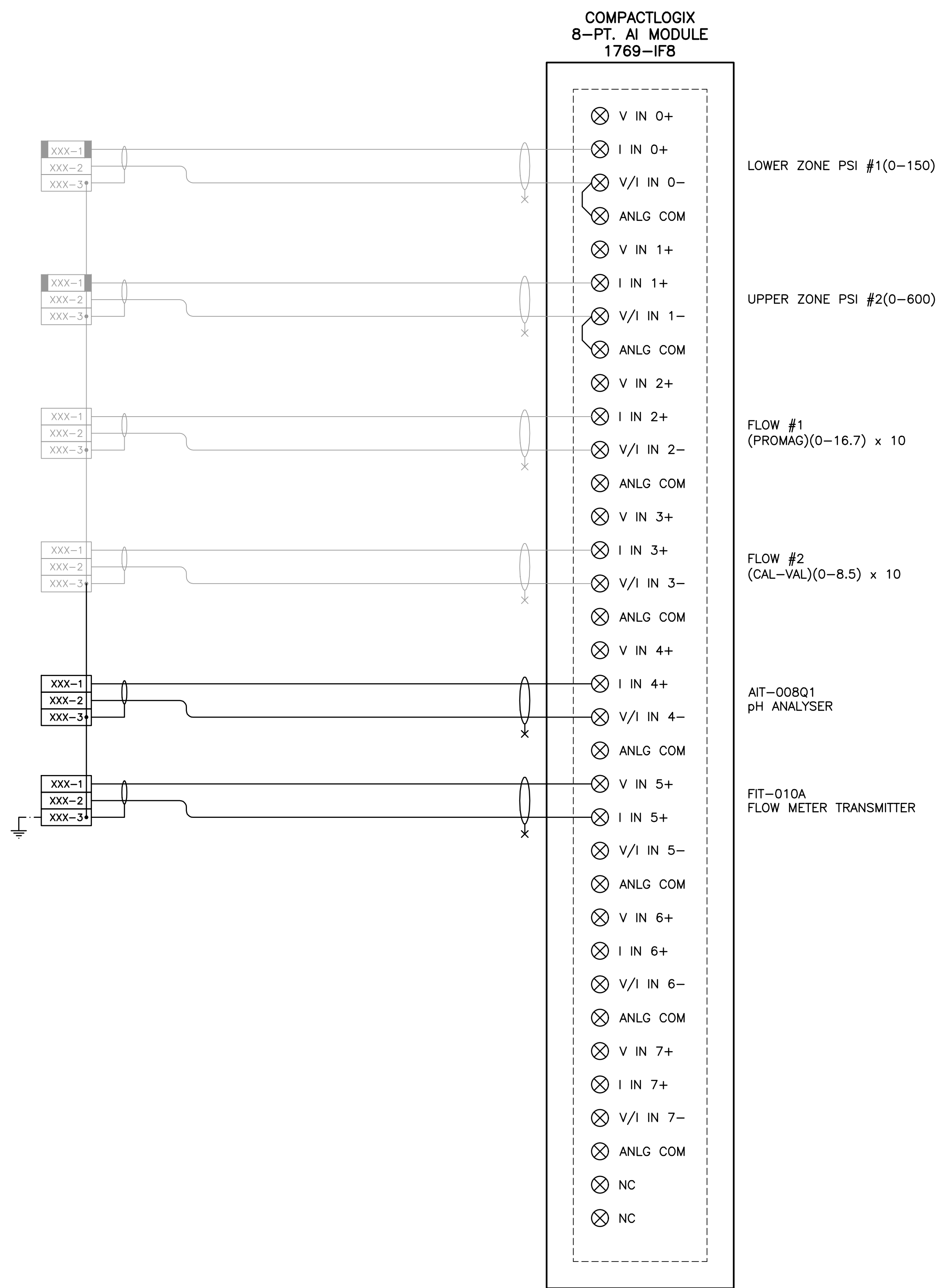


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

P279 - PUMP STATION MODIFICATIONS

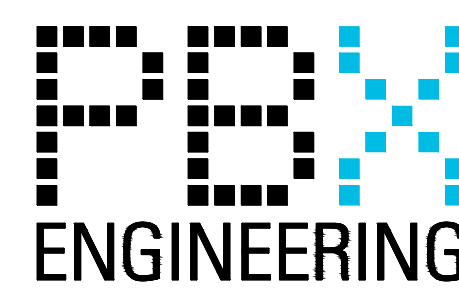
DETAILS - LADDER LOGIC (4 OF 6)

FILENAME	E257 DETAILS - LADDER LOGIC (4 OF 6).DWG	SHEET
SCALE	AS NOTED	E257



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED



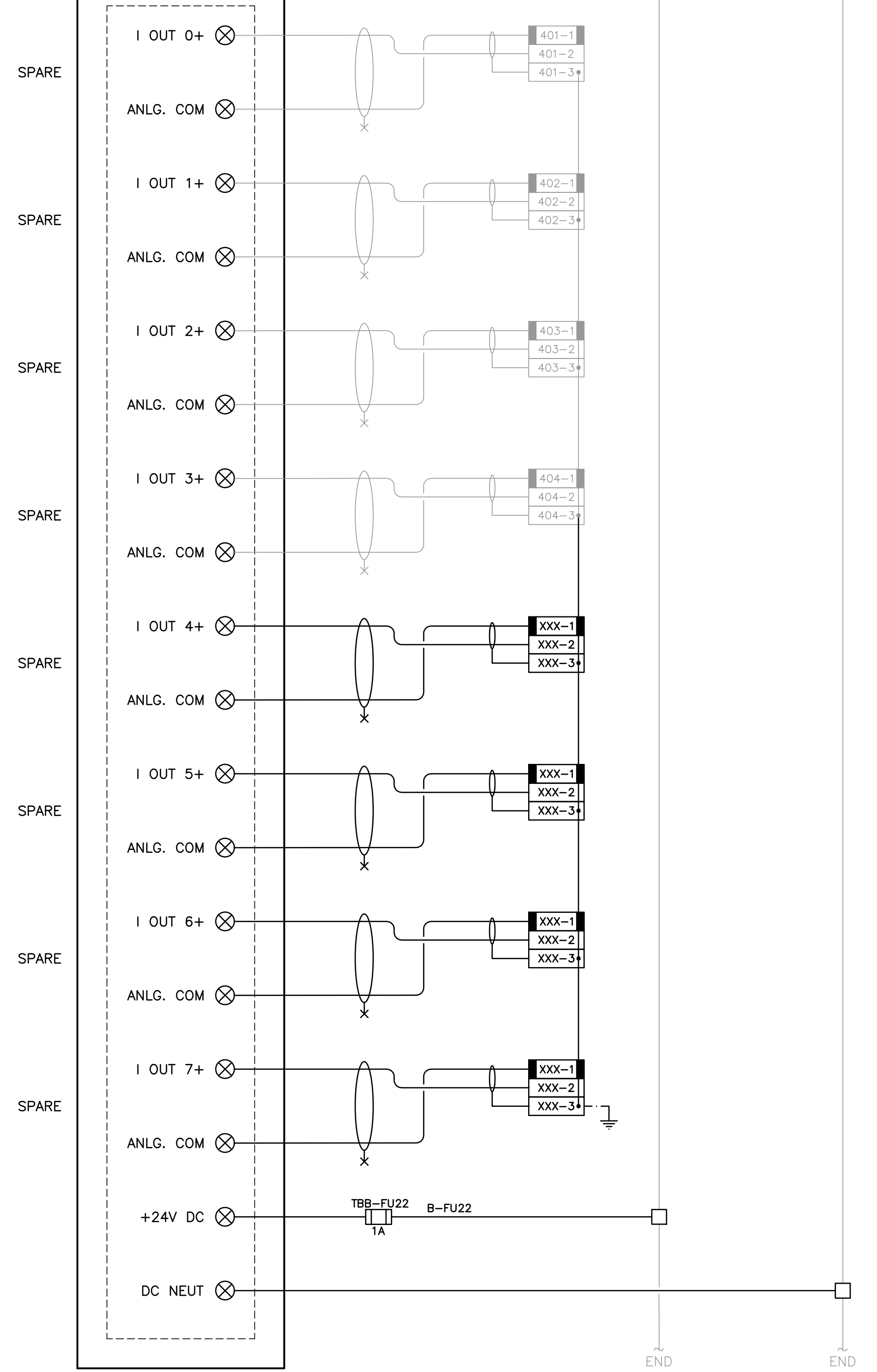
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

P279 - PUMP STATION MODIFICATIONS

DETAILS - LADDER LOGIC (5 OF 6)

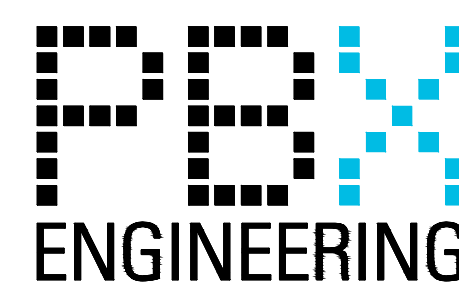
FILENAME	SCALE	SHEET
E258 DETAILS - LADDER LOGIC (5 OF 6).DWG	AS NOTED	E258

COMPACTLOGIX
8-PT. 24VDC AO MODULE
1769-OF8C



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

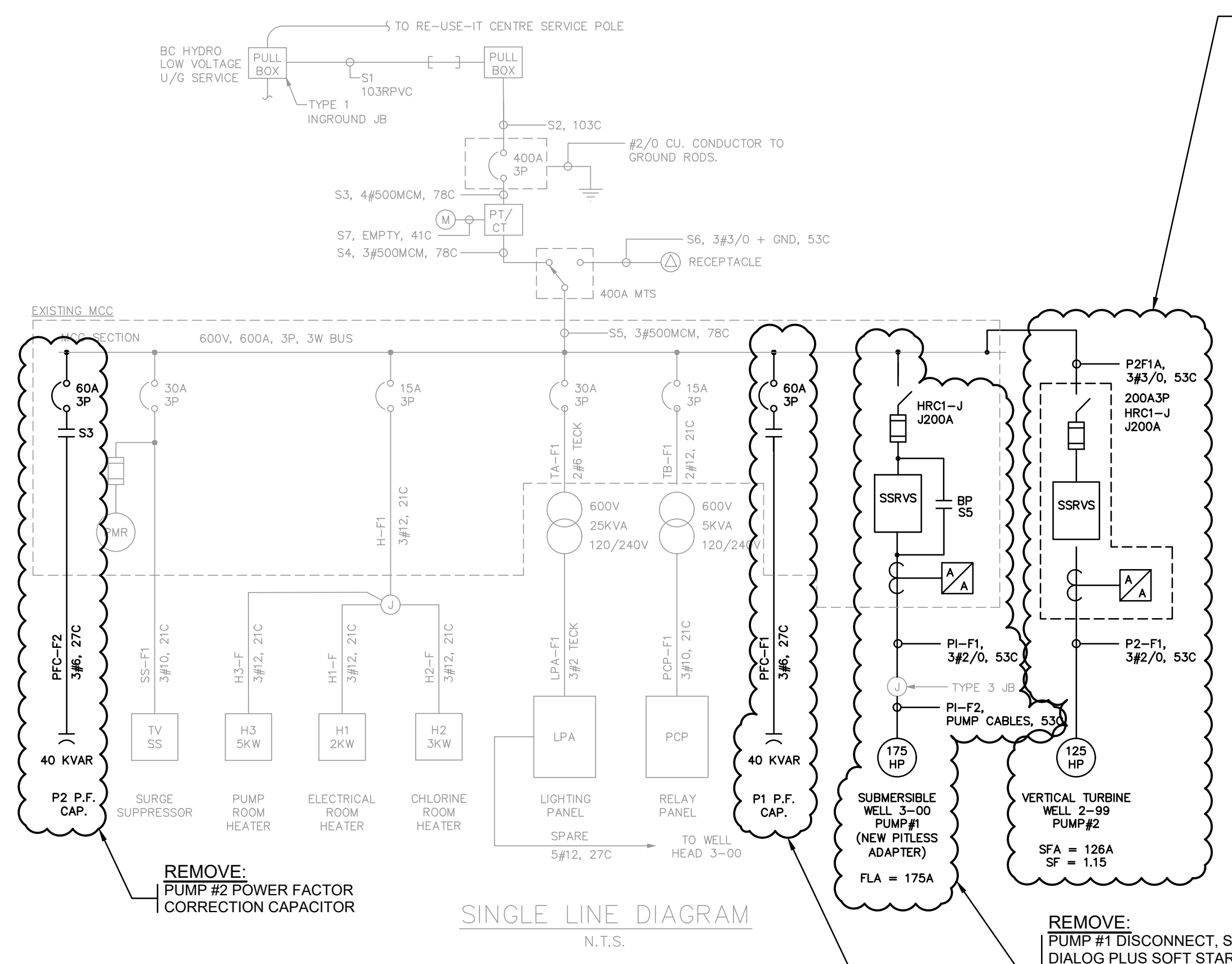


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P279 - PUMP STATION MODIFICATIONS

DETAILS - LADDER LOGIC (6 OF 6)

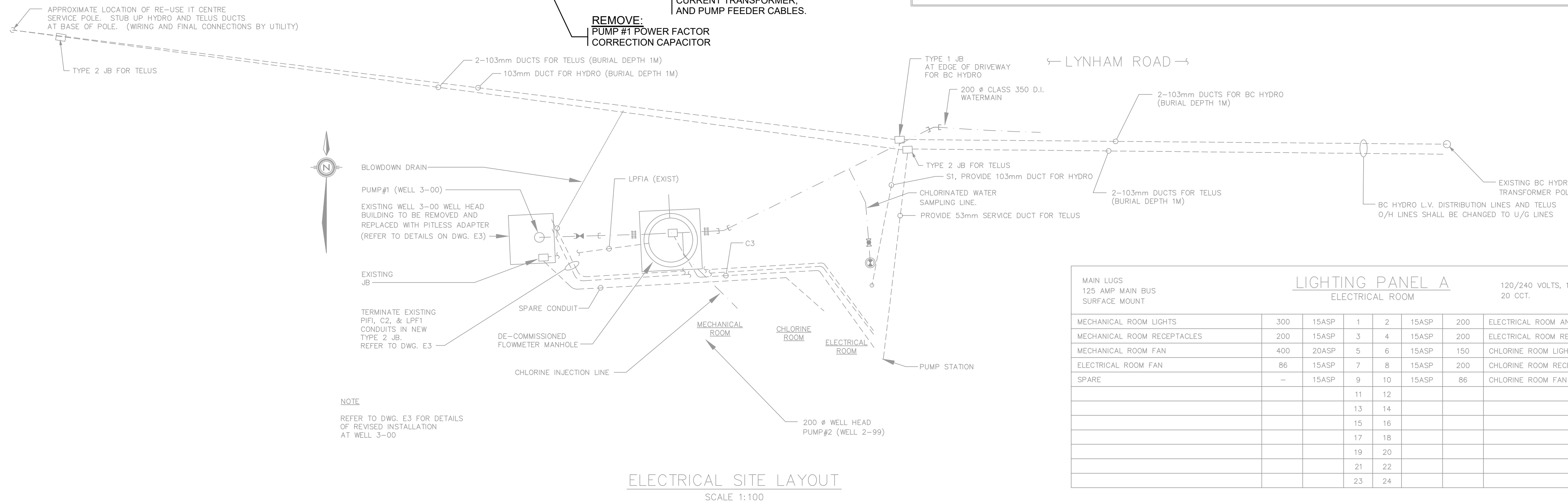
FILENAME	E259 DETAILS - LADDER LOGIC (6 OF 6).DWG	SHEET
SCALE	AS NOTED	E259



REMOVE:
PUMP #2, DISCONNECT, SOFT STARTER,
CURRENT TRANSFORMER, PUMP FEEDER
CABLES, AND ALL OTHER EQUIPMENT
INTERNAL TO PUMP #2 MCC SECTION
DECOMMISSION:
ENTIRE PUMP #2 MCC SECTION AND
REMOVE FROM PUMP STATION

SYMBOL LEGEND

SINGLE LINE		SCHEMATIC	
	DISCONNECT SWITCH		SERVICE ENTRY WEATHERHEAD
	FUSE		UTILITY METER
	POWER TRANSFORMER		POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER		CAPACITOR
	RELAY OR CONTACTOR		SELECTOR SWITCH H/O/A = HAND OFF AUTO
	PUSH TO TEST INDIC. LIGHT - LETTER INDICATES COLOUR: R = RED G = GREEN A = AMBER B = BLUE		PRESSURE SWITCH (N.O.)
	CONTROL FUSE		NORMALLY OPEN CONTACT, ON DELAY
	NORMALLY OPEN PUSHBUTTON		HUMIDISTAT
	NORMALLY CLOSED PUSHBUTTON		NORMALLY CLOSED CONTACT, OFF DELAY
	NORMALLY OPEN CONTACT		INDICATING LIGHT (REFER TO SCHEMATIC FOR COLOUR & TEST FEATURES)
	NORMALLY CLOSED CONTACT		SELECTOR SWITCH
	FLUORESCENT FIXTURE - LETTER REFERS TO FIXTURE SCHEDULE IN SPEC. - LETTER & NO. REFERS TO PANEL & CIRCUIT NO.		JUNCTION BOX
	H.I.D. OR INCANDESCENT FIXTURE - TYPE F		WIRING (DASHES INDICATE NO. OF CONDUCTORS)
	LIGHT SWITCH 3 - DENOTES 3 WAY		MOTOR - ELECTRICAL/MECHANICAL CONNECTION
	DUPLEX RECEPTACLE - LETTER & NO. REFER TO PANEL & CIRCUIT NO.		ABOVE FINISHED FLOOR
	RECEPTACLE APPROVED FOR DIV. 1 ZONE 2 LOCATION		INSTRUMENT & CONTROL EQUIPMENT: PS = PRESSURE SWITCH A = AMMETER M = UTILITY METER T = THERMOSTAT
	SMOKE DETECTOR		HEAT DETECTOR
	SURFACE MOUNTED PANEL (NEW) SEE PANEL SCHEDULE FOR RATINGS		UNIT HEATER
	TERMINAL SYMBOLS		HOME RUN WIRING TO PANEL "C"
	PLC OUTPUT		SURFACE RUN WIRING
	PLC INPUT		UNDERGROUND WIRING OR BELOW FLOOR SLAB WIRING
	PLC CABINET TERMINAL		DOOR POSITION SENSOR
	FIELD TERMINAL		SPEED CONTROL FOR FAN
	DEVICE TERMINAL		
	WIRE NUMBER		
	CONNECTION		
	ZENER BARRIER		

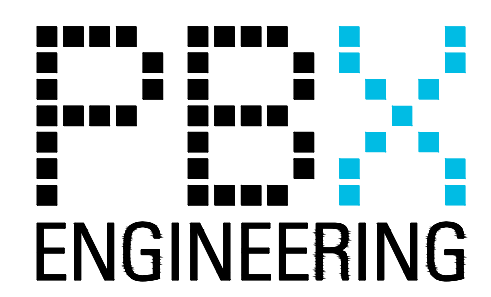


LIGHTING PANEL A
ELECTRICAL ROOM

120/240 VOLTS, 1 PHASE, 3 WIRE
20 CCT.

DESCRIPTION	QTY	WATTAGE	1	2	15ASP	200	DESCRIPTION
MECHANICAL ROOM LIGHTS	300	15ASP	1	2	15ASP	200	ELECTRICAL ROOM AND EXTERIOR LIGHTS
MECHANICAL ROOM RECEPTACLES	200	15ASP	3	4	15ASP	200	ELECTRICAL ROOM RECEPTACLES
MECHANICAL ROOM FAN	400	20ASP	5	6	15ASP	150	CHLORINE ROOM LIGHTS
ELECTRICAL ROOM FAN	86	15ASP	7	8	15ASP	200	CHLORINE ROOM RECEPTACLES
SPARE	-	15ASP	9	10	15ASP	86	CHLORINE ROOM FAN
			11	12			
			13	14			
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

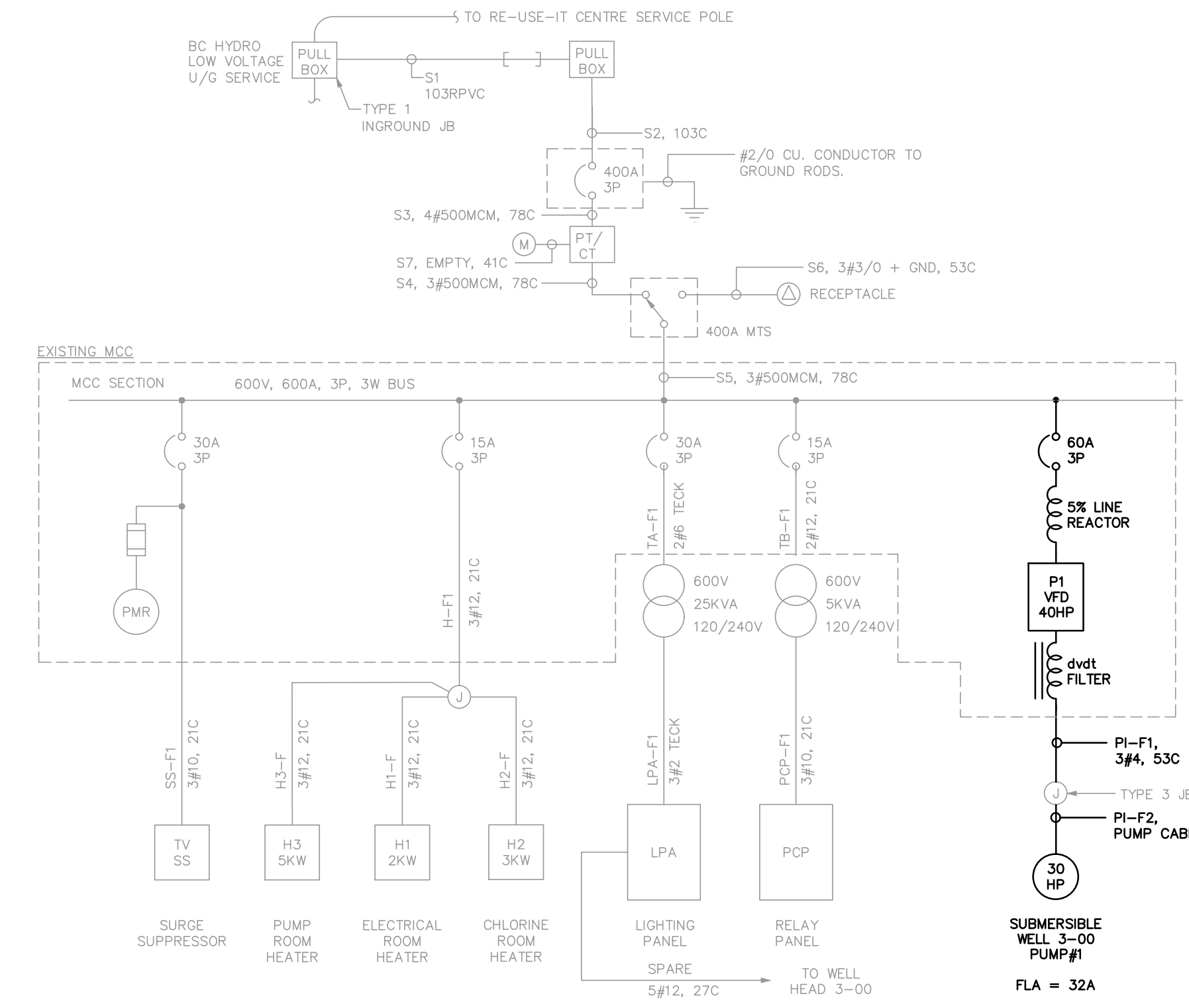
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

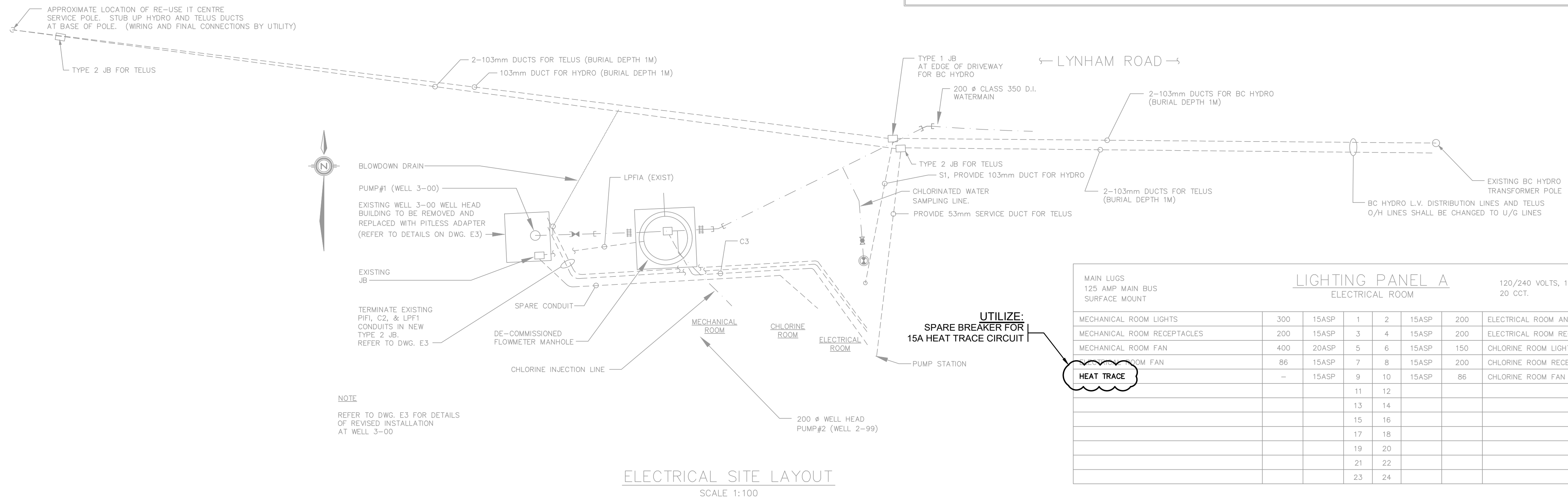
**W212 - PUMP STATION MODIFICATIONS
SINGLE LINE DIAGRAM, SITE PLAN,
SYMBOL LEGEND - EXISTING**



SINGLE LINE DIAGRAM
N.T.S.

SYMBOL LEGEND

SINGLE LINE		SCHEMATIC	
	DISCONNECT SWITCH		SERVICE ENTRY WEATHERHEAD
	FUSE		UTILITY METER
	POWER TRANSFORMER		POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER		CAPACITOR
	RELAY OR CONTACTOR		SELECTOR SWITCH H/O/A = HAND OFF AUTO
	PUSH TO TEST INDIC. LIGHT - LETTER INDICATES COLOUR: R = RED G = GREEN A = AMBER B = BLUE		NORMALLY OPEN CONTACT, ON DELAY
	CONTROL FUSE		HUMIDISTAT
	NORMALLY OPEN PUSHBUTTON		NORMALLY CLOSED CONTACT, OFF DELAY
	NORMALLY CLOSED PUSHBUTTON		INDICATING LIGHT (REFER TO SCHEMATIC FOR COLOUR & TEST FEATURES)
	NORMALLY OPEN CONTACT		SELECTOR SWITCH
	NORMALLY CLOSED CONTACT		JUNCTION BOX
	FLUORESCENT FIXTURE - LETTER REFERS TO FIXTURE SCHEDULE IN SPEC. - LETTER & NO. REFERS TO PANEL & CIRCUIT NO.		WIRING (DASHES INDICATE NO. OF CONDUCTORS)
	H.I.D. OR INCANDESCENT FIXTURE - TYPE F		MOTOR - ELECTRICAL/MECHANICAL CONNECTION
	LIGHT SWITCH 3 - DENOTES 3 WAY		ABOVE FINISHED FLOOR
	DUPLEX RECEPTACLE - LETTER & NO. REFER TO PANEL & CIRCUIT NO.		INSTRUMENT & CONTROL EQUIPMENT: PS = PRESSURE SWITCH A = AMMETER M = UTILITY METER T = THERMOSTAT
	RECEPTACLE APPROVED FOR DIV. 1 ZONE 2 LOCATION		HEAT DETECTOR
	SMOKE DETECTOR		SURFACE MOUNTED PANEL (NEW) SEE PANEL SCHEDULE FOR RATINGS
			UNIT HEATER
			HOME RUN WIRING TO PANEL "C"
			SURFACE RUN WIRING
			UNDERGROUND WIRING OR BELOW FLOOR SLAB WIRING
			DOOR POSITION SENSOR
			SPEED CONTROL FOR FAN
			ZENER BARRIER
			PLC OUTPUT
			PLC INPUT
			PLC CABINET TERMINAL
			FIELD TERMINAL
			DEVICE TERMINAL
			WIRE NUMBER
			CONNECTION
			OVERLOAD



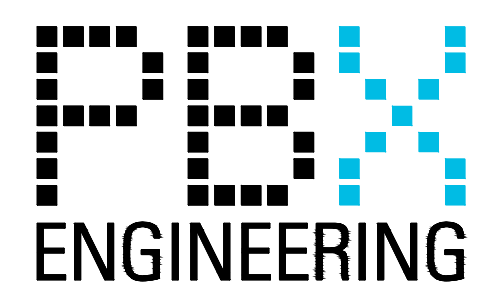
ELECTRICAL SITE LAYOUT
SCALE 1:100

LIGHTING PANEL A		ELECTRICAL ROOM		120/240 VOLTS, 1 PHASE, 3 WIRE 20 CCT.			
MECHANICAL ROOM LIGHTS	300	15ASP	1	2	15ASP	200	ELECTRICAL ROOM AND EXTERIOR LIGHTS
MECHANICAL ROOM RECEPTACLES	200	15ASP	3	4	15ASP	200	ELECTRICAL ROOM RECEPTACLES
MECHANICAL ROOM FAN	400	20ASP	5	6	15ASP	150	CHLORINE ROOM LIGHTS
MECHANICAL ROOM FAN	86	15ASP	7	8	15ASP	200	CHLORINE ROOM RECEPTACLES
		15ASP	9	10	15ASP	86	CHLORINE ROOM FAN
			11	12			
			13	14			
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			

NOTES:
1 CONTRACTOR TO INSTALL NEW PUMP FEEDER CABLES IN EXISTING CONDUIT.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

ISSUED FOR TENDER
NOT FOR CONSTRUCTION



PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

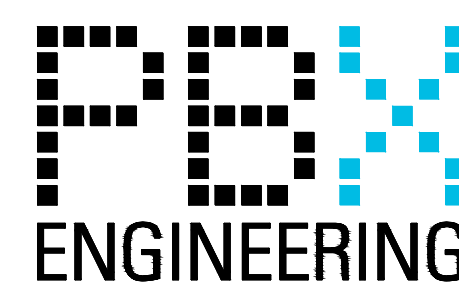
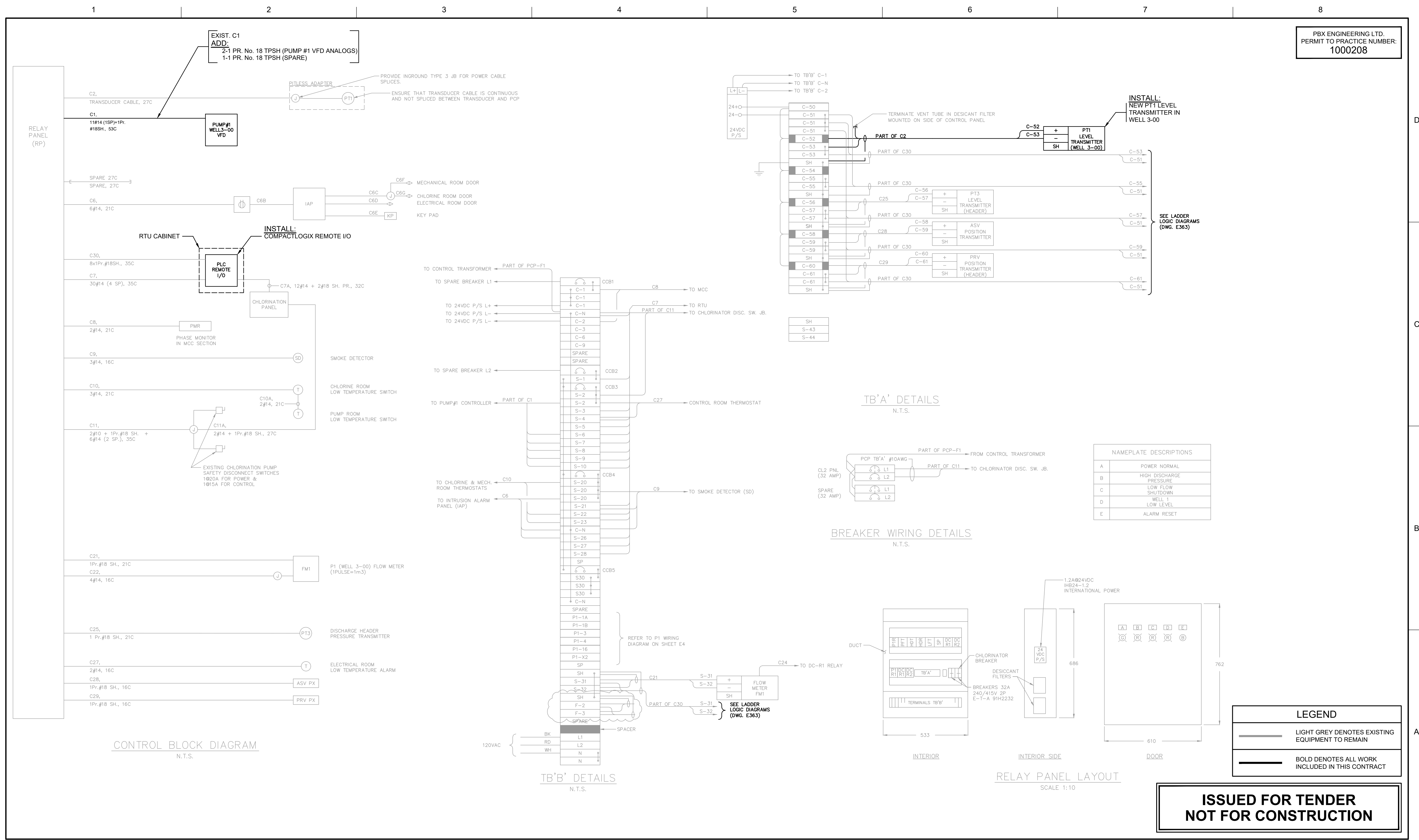
ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

ORIGINAL SEALED



SOUTH WHISTLER WATER SUPPLY
PHASE 2

W212 - PUMP STATION MODIFICATIONS
SINGLE LINE DIAGRAM, SITE PLAN,
SYMBOL LEGEND - PROPOSED



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER		M. DAY
CIVIL		
STRUCTURAL		
ARCHITECTURAL		
PROCESS		
MECHANICAL		
ELECTRICAL		BW
INSTRUMENTATION		
PROJECT NUMBER	E20307	

ORIGINAL SEALED

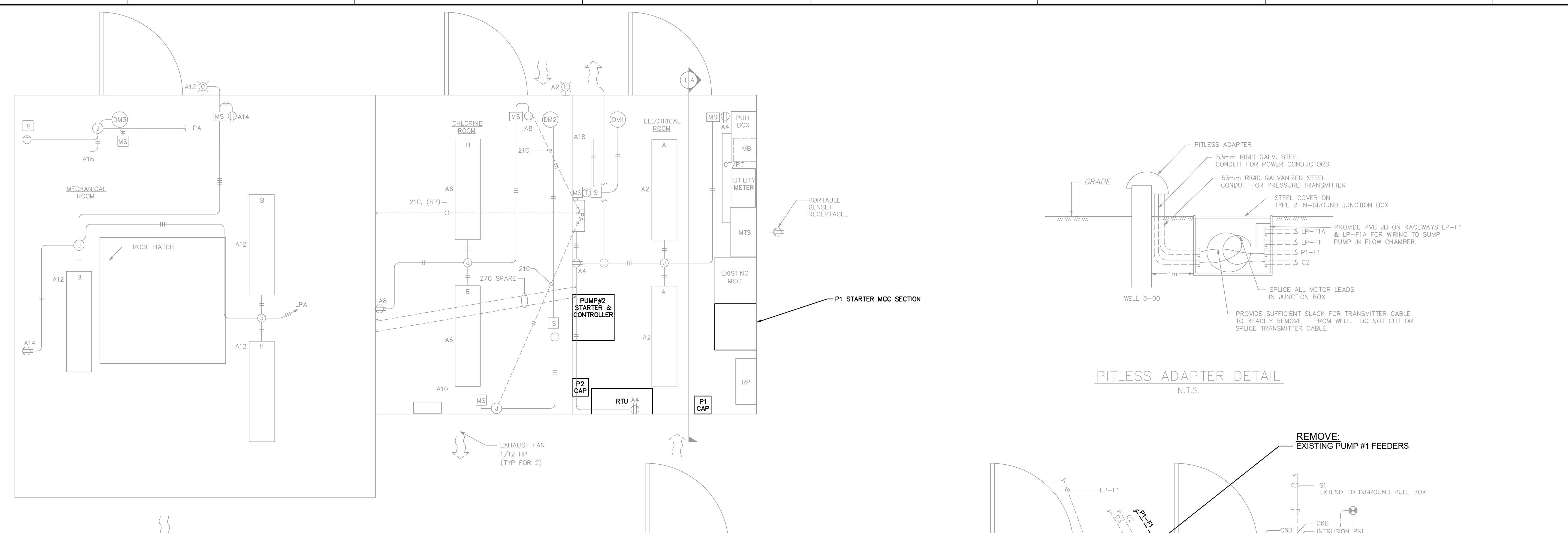


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

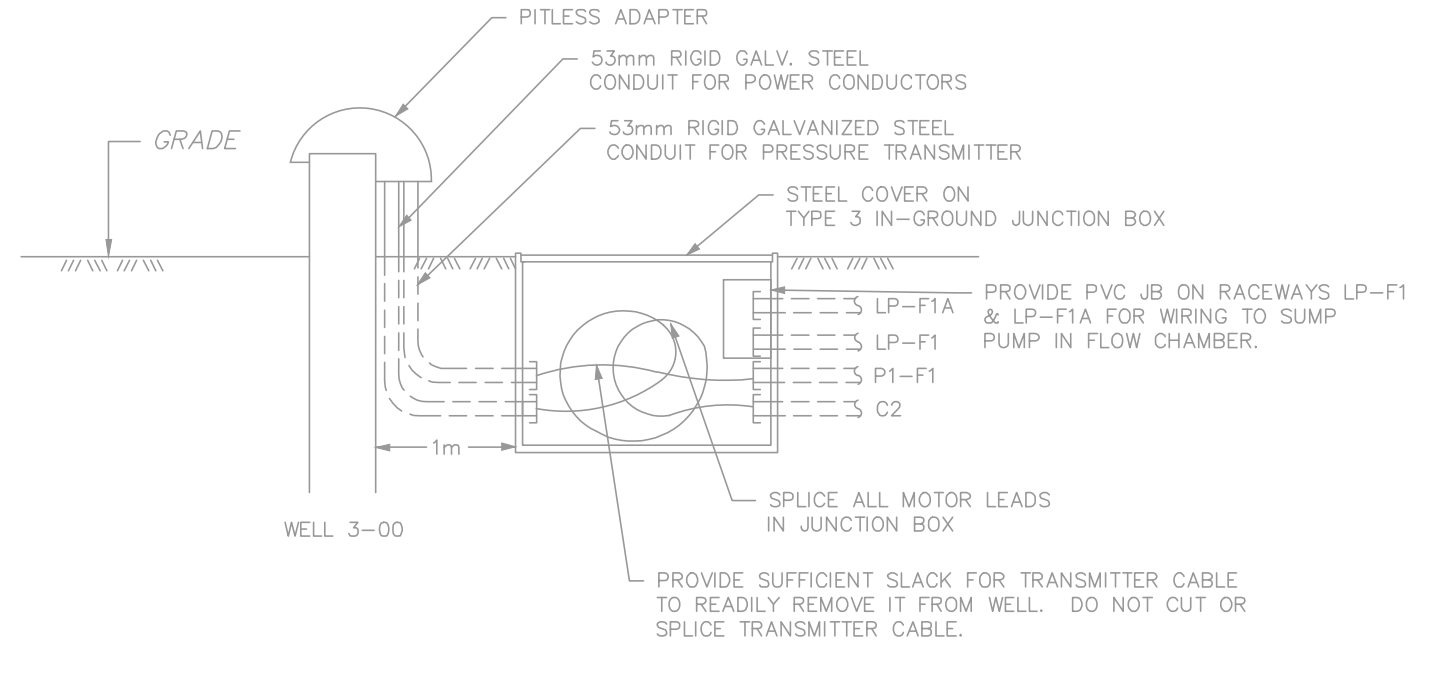
W212 - PUMP STATION MODIFICATIONS

CONTROL BLOCK DIAGRAM - PROPOSED

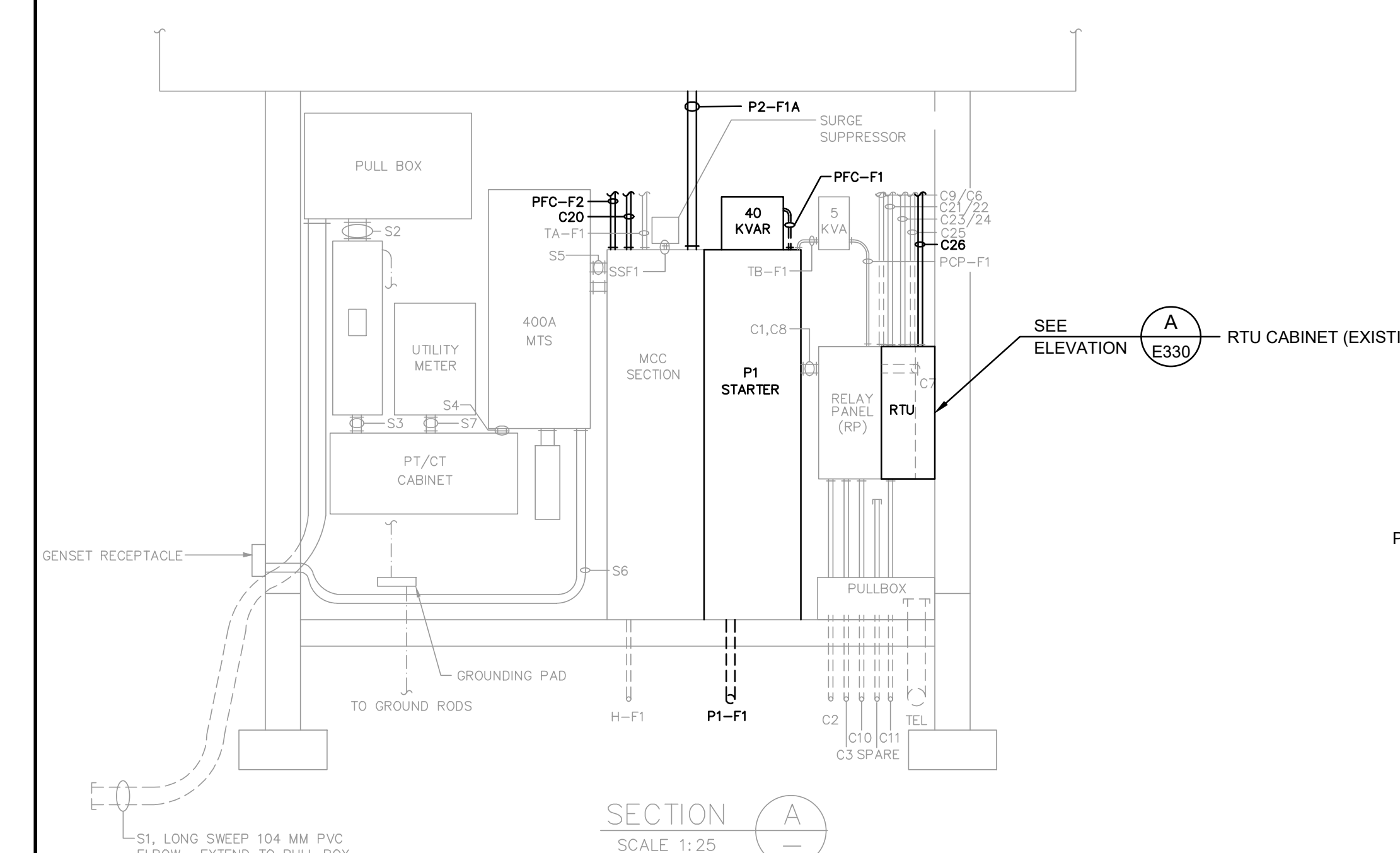
FILENAME	E311 CONTROL BLOCK DIAGRAM - PROPOSED.DWG	SHEET
SCALE	AS NOTED	E311



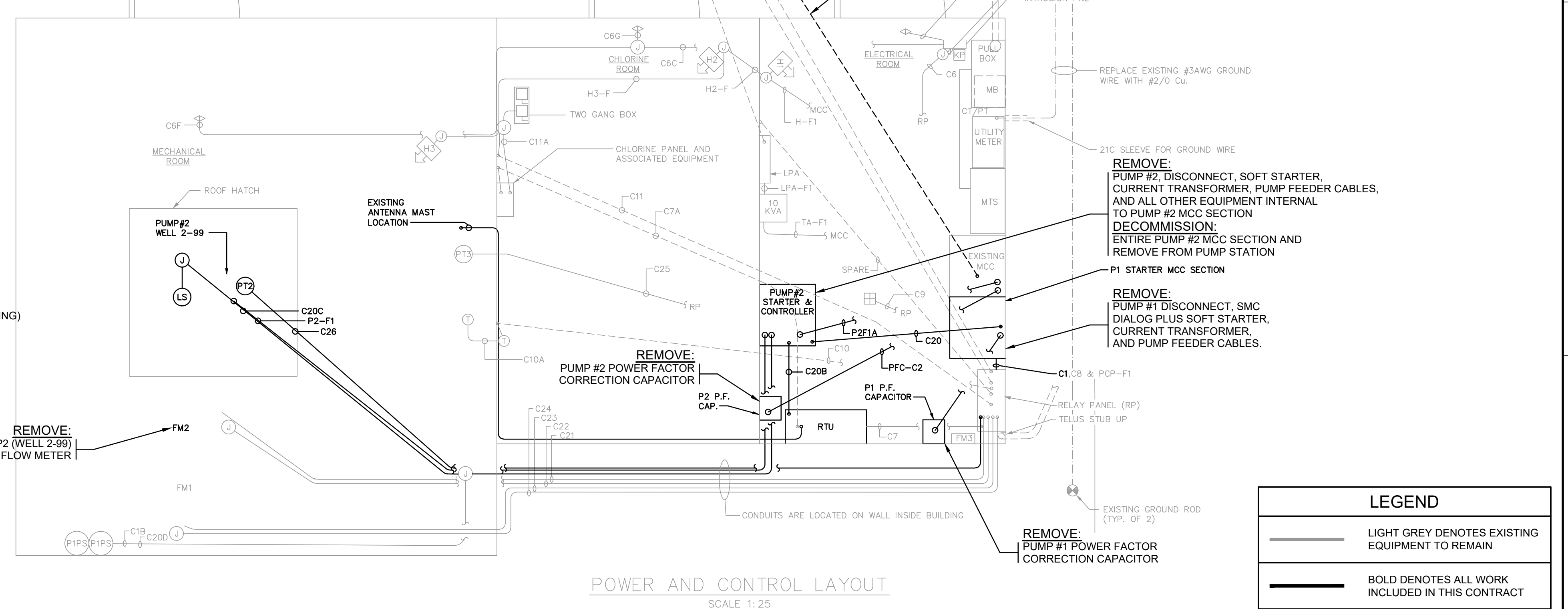
LIGHTING LAYOUT
SCALE 1:25



PITLESS ADAPTER DETAIL
N.T.S.



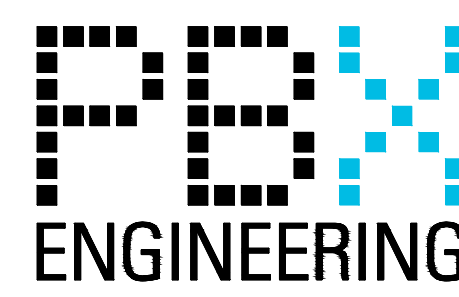
SECTION A
SCALE 1:25



POWER AND CONTROL LAYOUT
SCALE 1:25

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

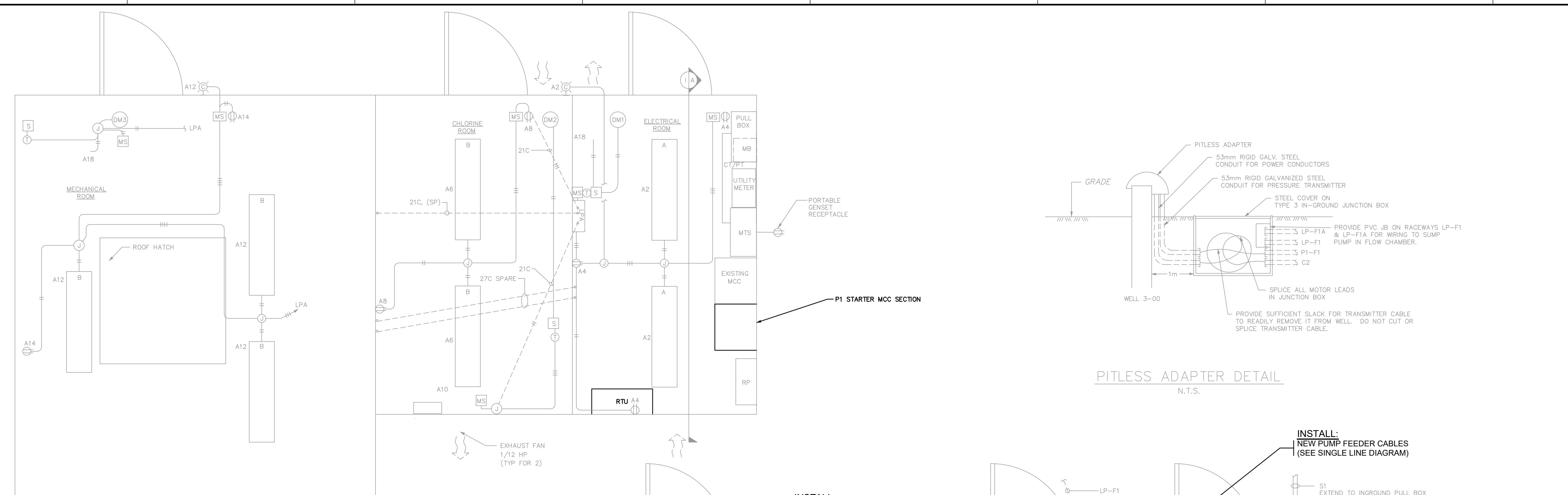
ORIGINAL SEALED



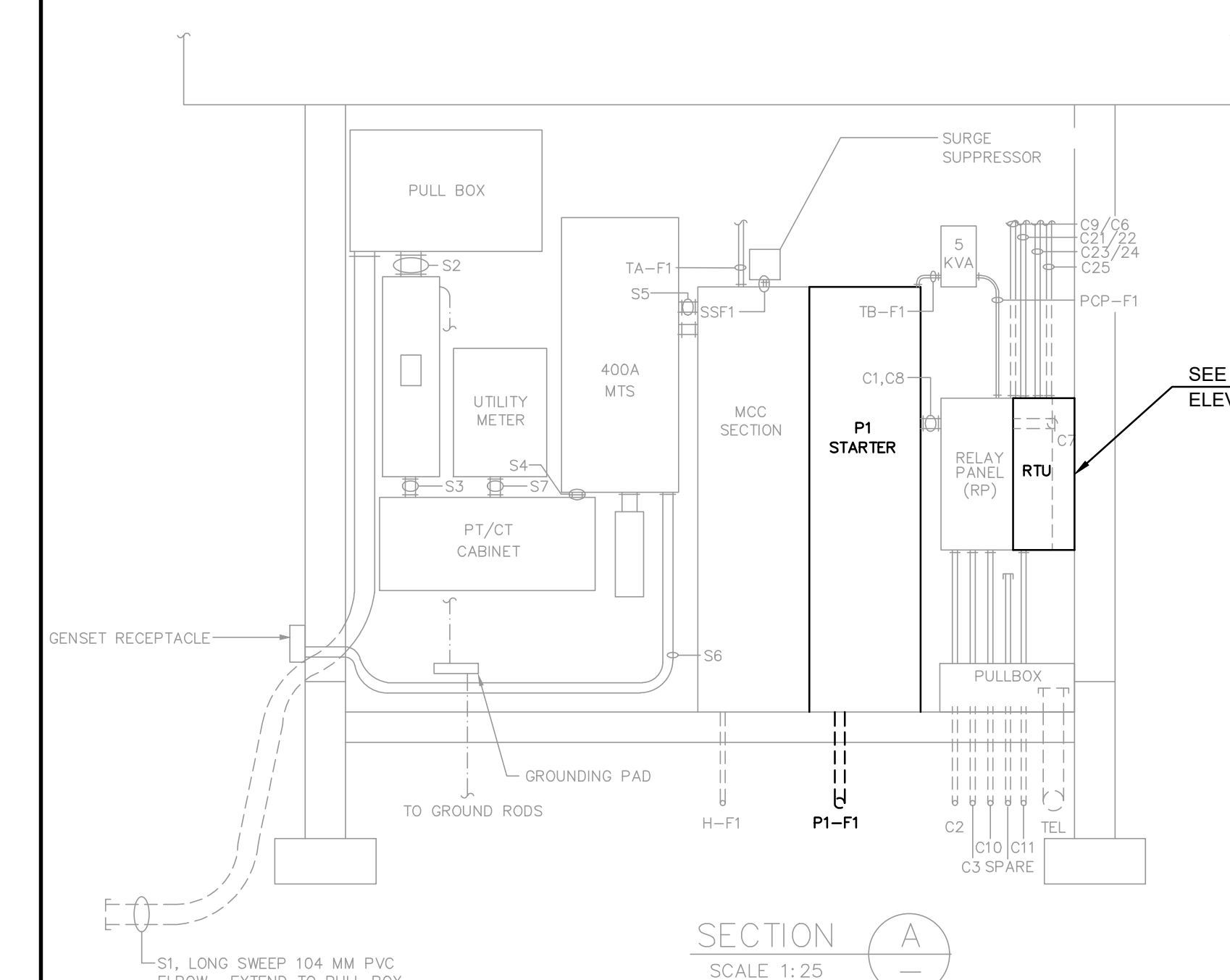
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
LIGHTING AND POWER & CONTROL
LAYOUTS - EXISTING**

FILENAME	SCALE	SHEET
E20307-LIGHTING-AND-POWER-&-CONTROL-LAYOUTS-EXISTING.DWG	AS NOTED	E320



LIGHTING LAYOUT
SCALE 1:25

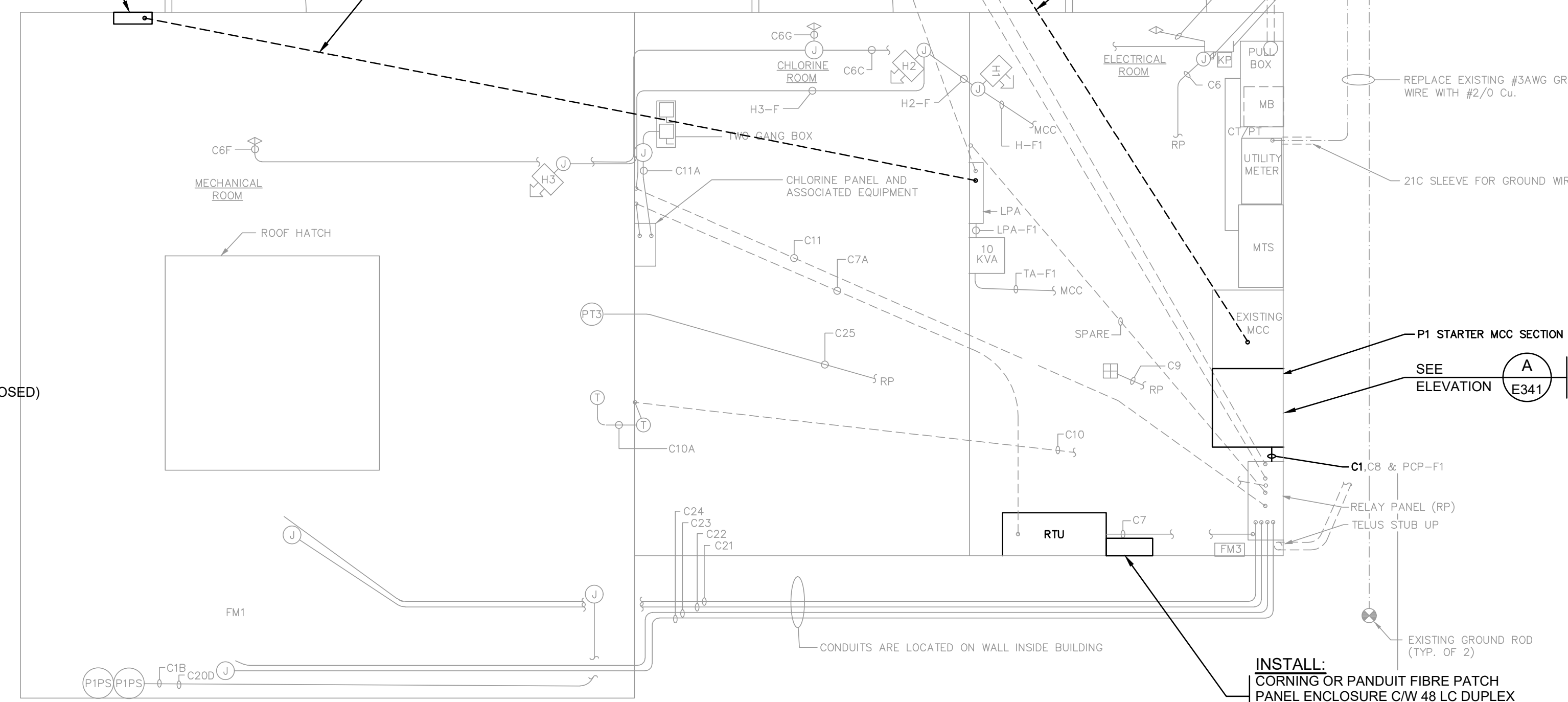


SECTION A
SCALE 1:25

INSTALL:
300x300mm RPVC
JUNCTION BOX C/W
TERMINALS

INSTALL:
1-27mm EMT (120V)
2 No. 12 (HEAT TRACE CCT.)
1 No. 14 BOND

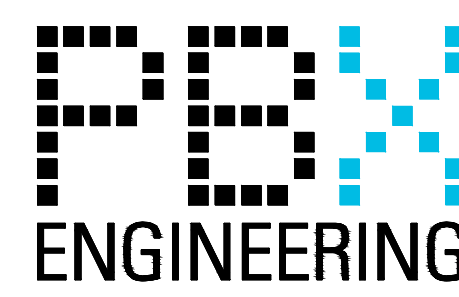
INSTALL:
NEW PUMP FEEDER CABLES
(SEE SINGLE LINE DIAGRAM)



POWER AND CONTROL LAYOUT
SCALE 1:25

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

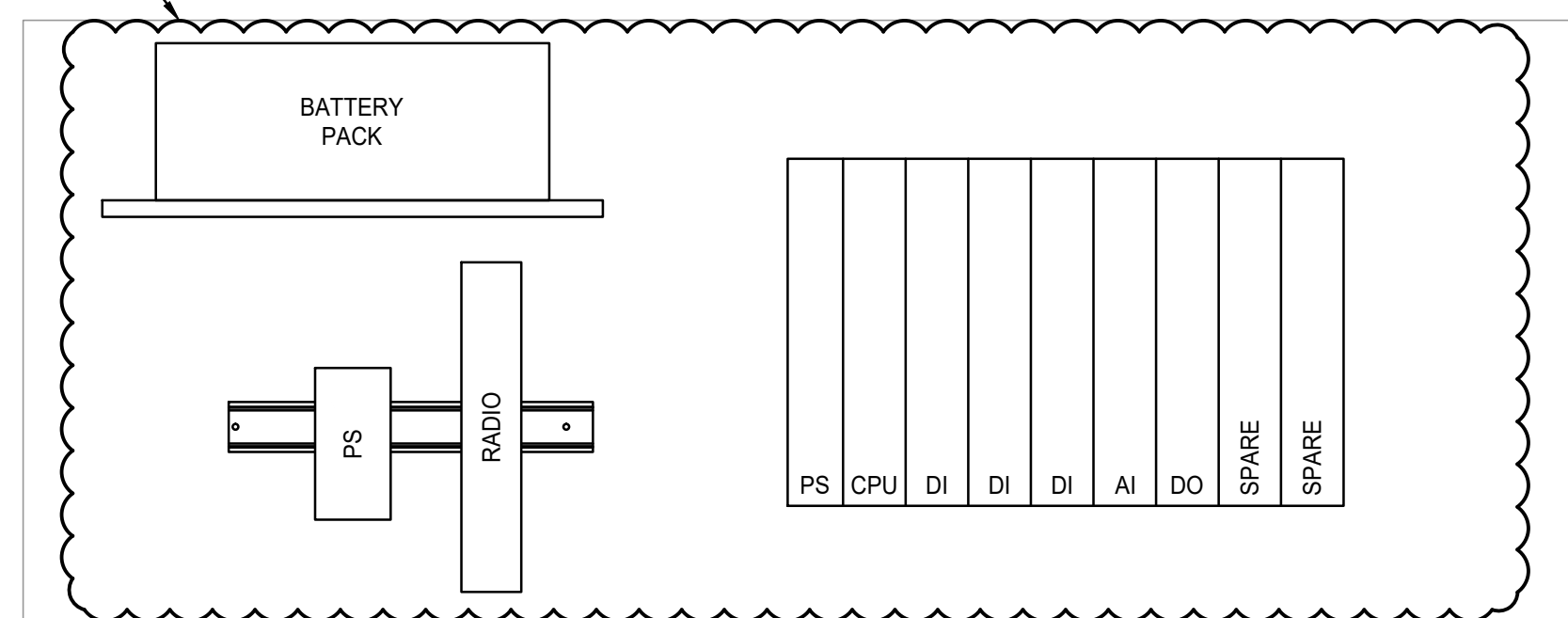


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

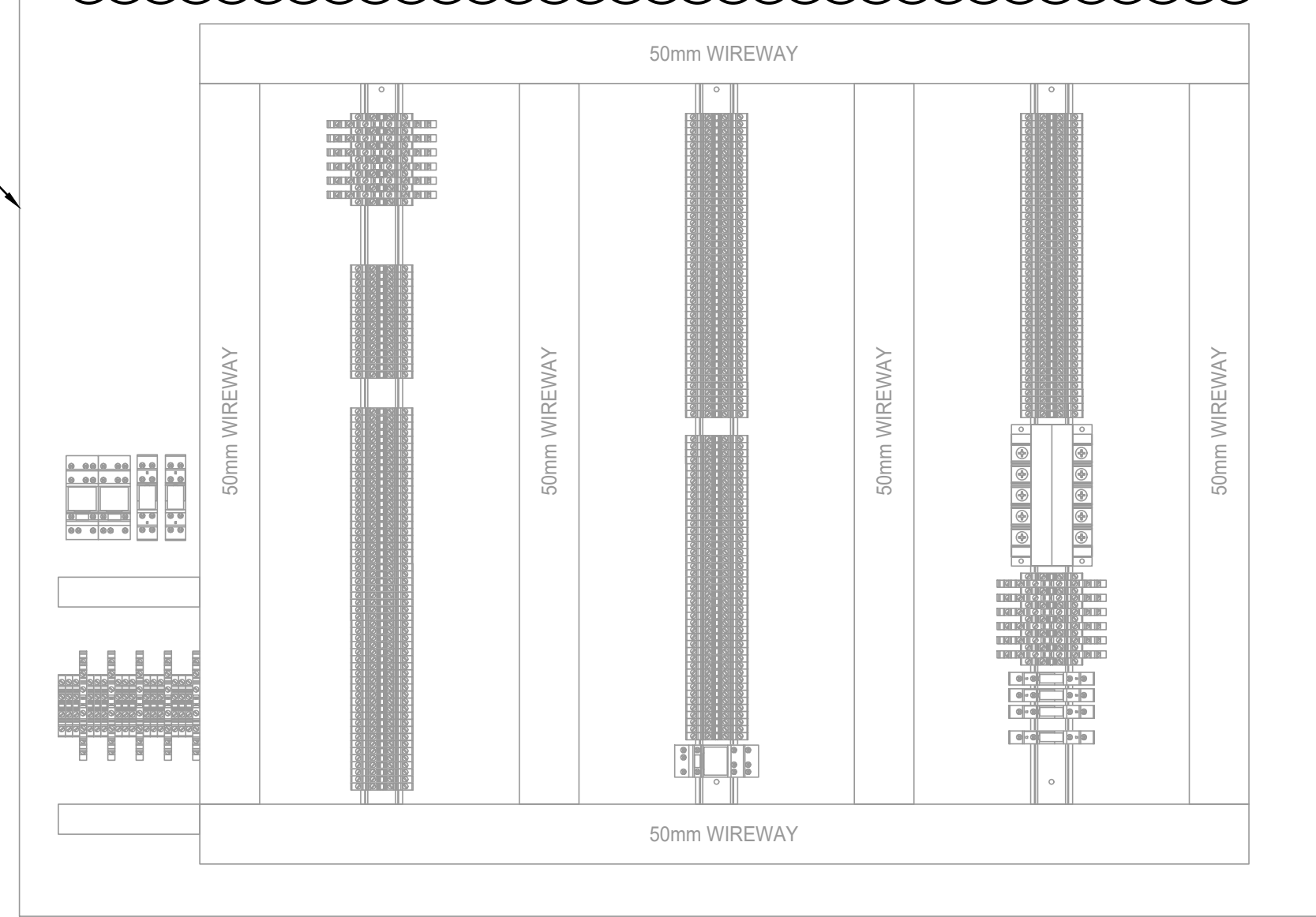
**W212 - PUMP STATION MODIFICATIONS
LIGHTING AND POWER & CONTROL
LAYOUTS - PROPOSED**

FILENAME	SCALE	SHEET
E212 LIGHTING AND POWER & CONTROL LAYOUTS - PROPOSED.DWG	AS NOTED	E321

REMOVE:
 ACE3600 RTU, BATTERY PACK,
 RADIO, POWER SUPPLY, CABLING
 AND MOUNTING FIXTURES

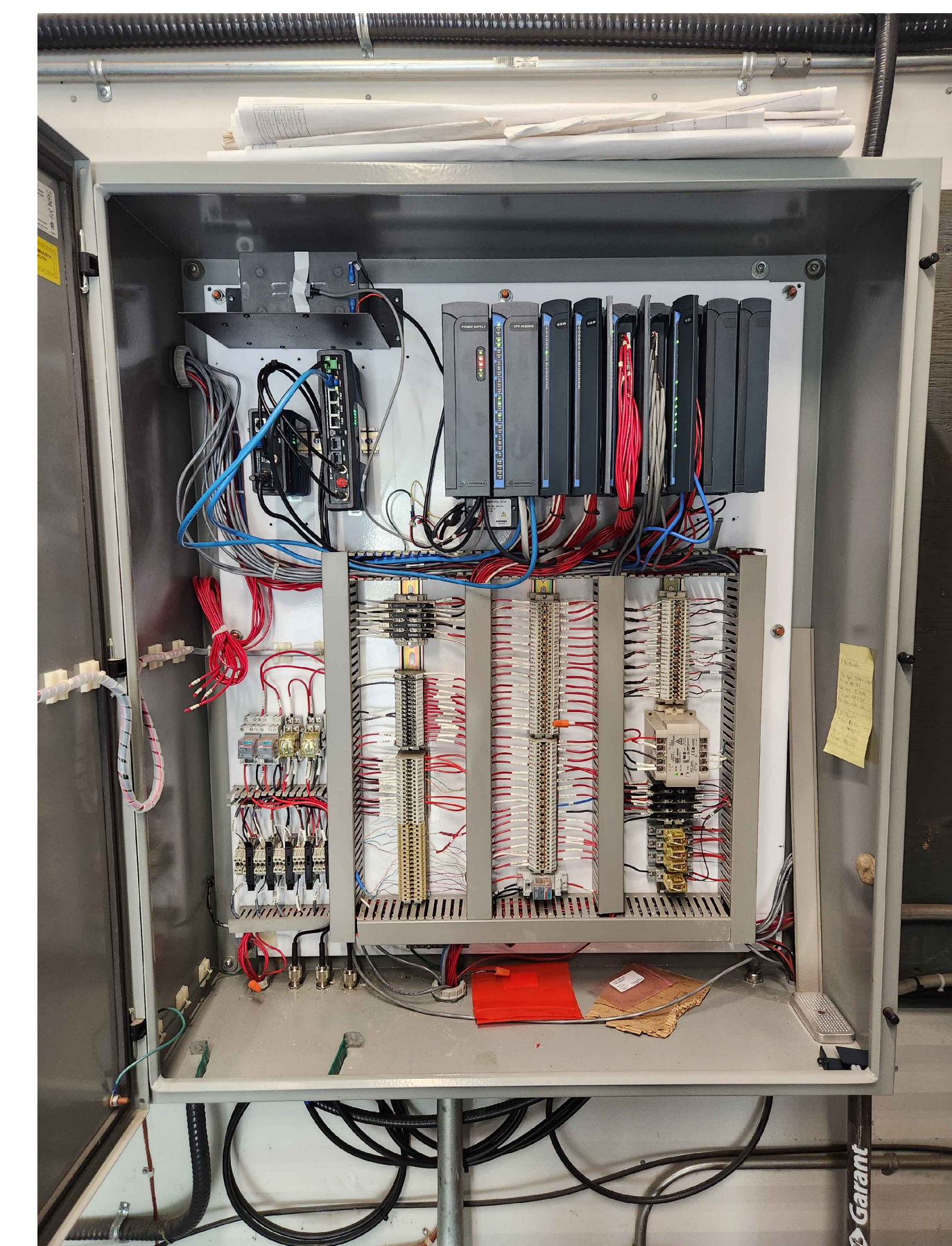


REMOVE:
 EXISTING HMI ON
 FRONT PANEL DOOR
 (NOT SHOWN)



BACK PANEL

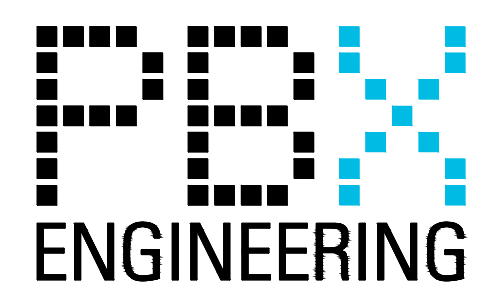
ELEVATION **A** RTU CABINET (EXISTING)
 1:5
 E330
 0 1:5 250mm



DETAIL **1** RTU CABINET (EXISTING)
 N.T.S.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
 SEALED

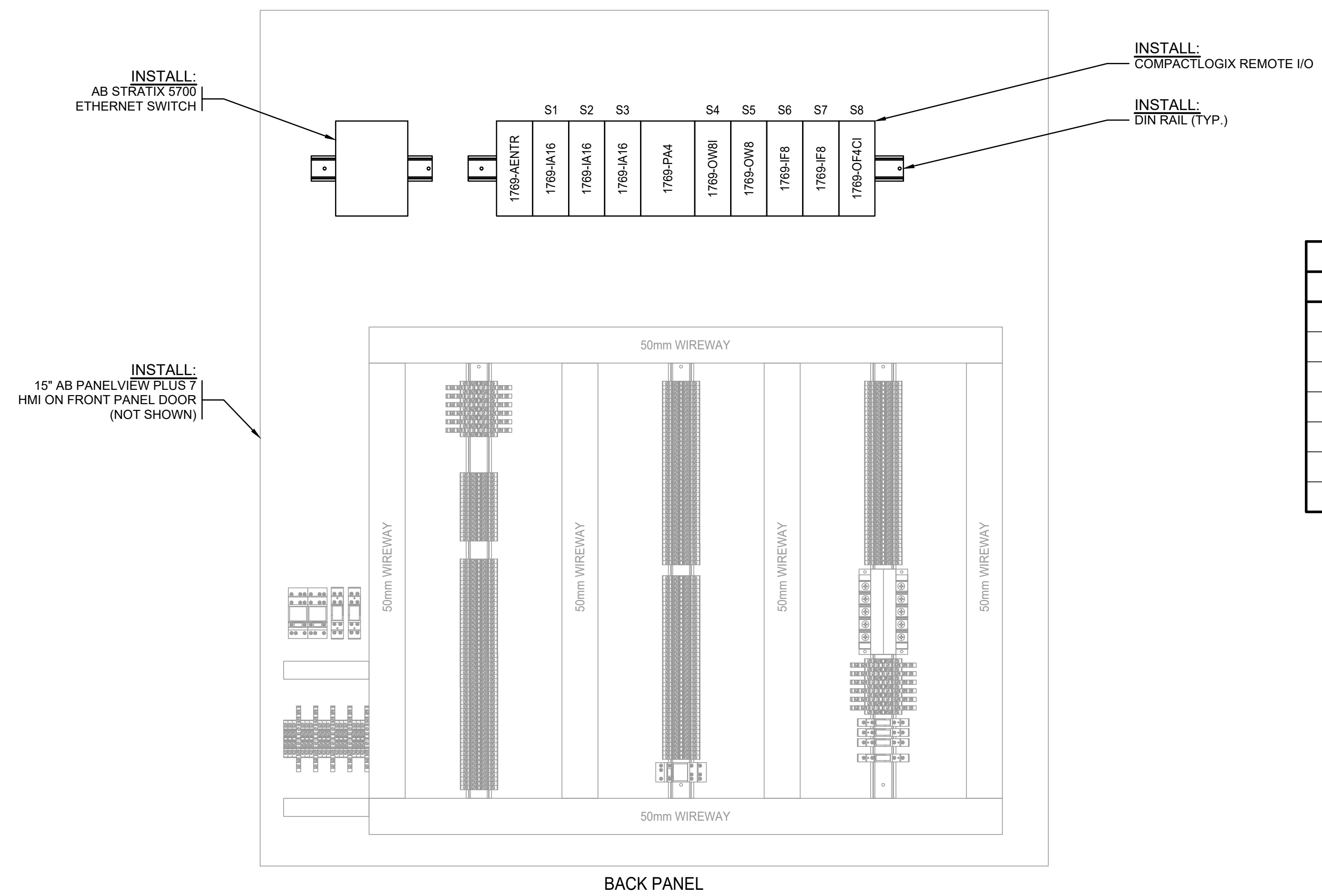


SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

W212 - PUMP STATION MODIFICATIONS

ELEVATION - RTU CABINET
 EXISTING

FILENAME	E330 ELEVATION - RTU CABINET EXISTING.DWG	SHEET
SCALE	AS NOTED	E330



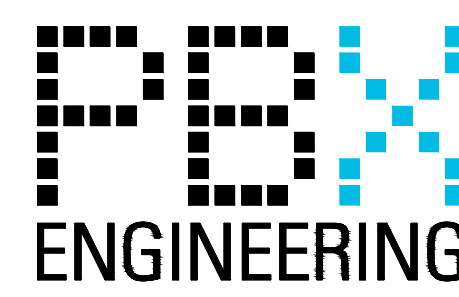
REMOTE I/O EQUIPMENT LIST		
QTY.	DESCRIPTION	PART NUMBER
1	POWER SUPPLY, COMPACTLOGIX, AC, 85-132VAC	1769-PA4
1	1769 NETWORK ADAPTOR, ETHERNET, 69-I/O, 24VDC, DUAL PORT	1769-AENTR
3	INPUT MODULE, COMPACTLOGIX, AC DIGITAL, 16 POINT, 79-132VAC	1769-IA16
1	OUTPUT MODULE, COMPACTLOGIX, RELAY DIGITAL, 8 ISOLATED CONTACTS	1769-OW8I
1	COMPACTLOGIX 8 POINT D/O RELAY MODULE	1769-OW8
2	COMPACTLOGIX 8 POINT ANALOG INPUT MODULE	1769-IF8
1	OUTPUT MODULE, COMPACTLOGIX, ANALOG, 4 ISOLATED POINT, CURRENT ONLY	1769-OF4CI

ELEVATION **A** RTU CABINET (PROPOSED)
1:5
0 1:5 250mm

- NOTES:**
- ENSURE A MINIMUM CLEARANCE OF 2" ON ALL SIDES OF COMPACTLOGIX REMOTE I/O RACK.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

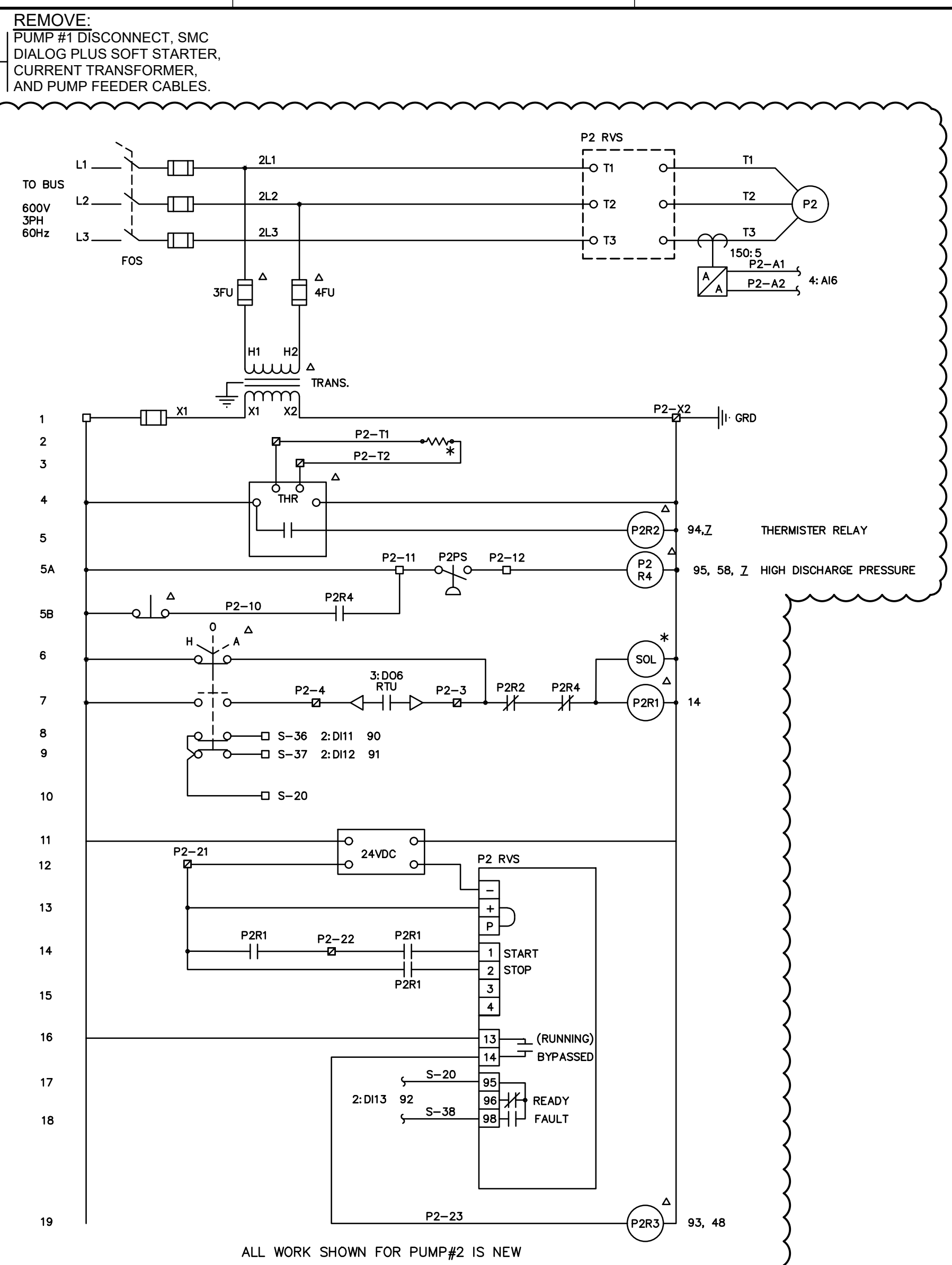
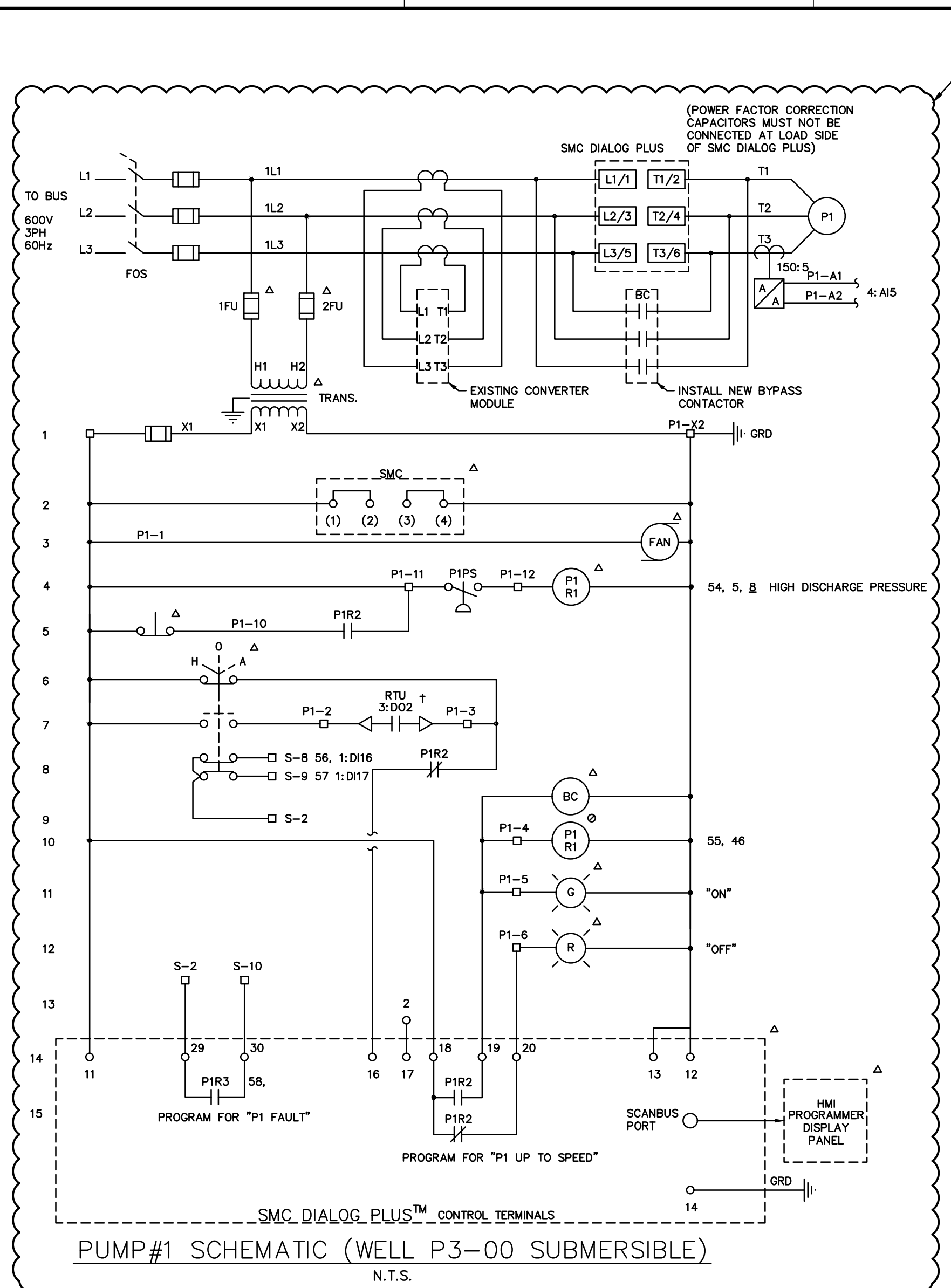
ORIGINAL
SEALED



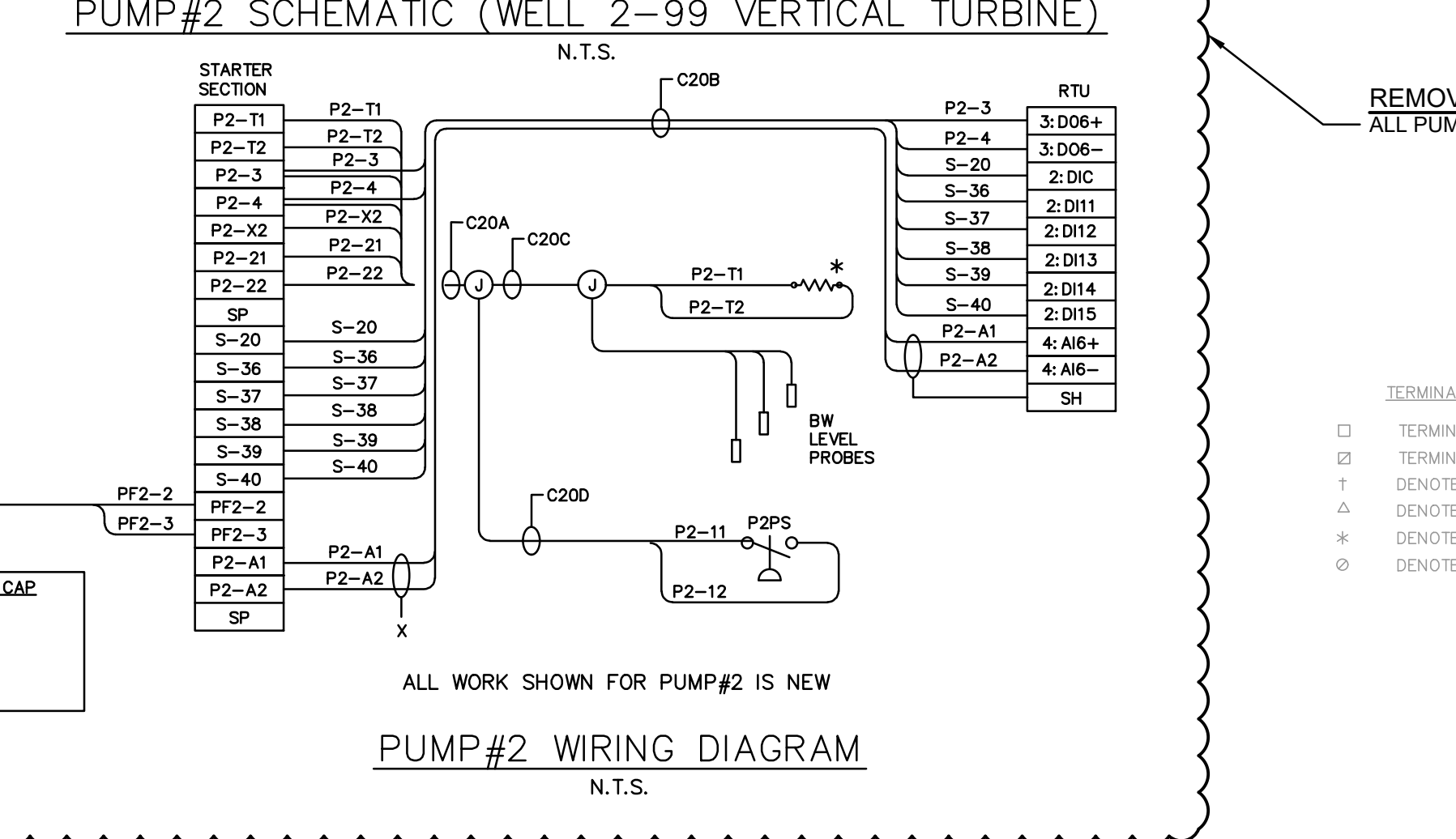
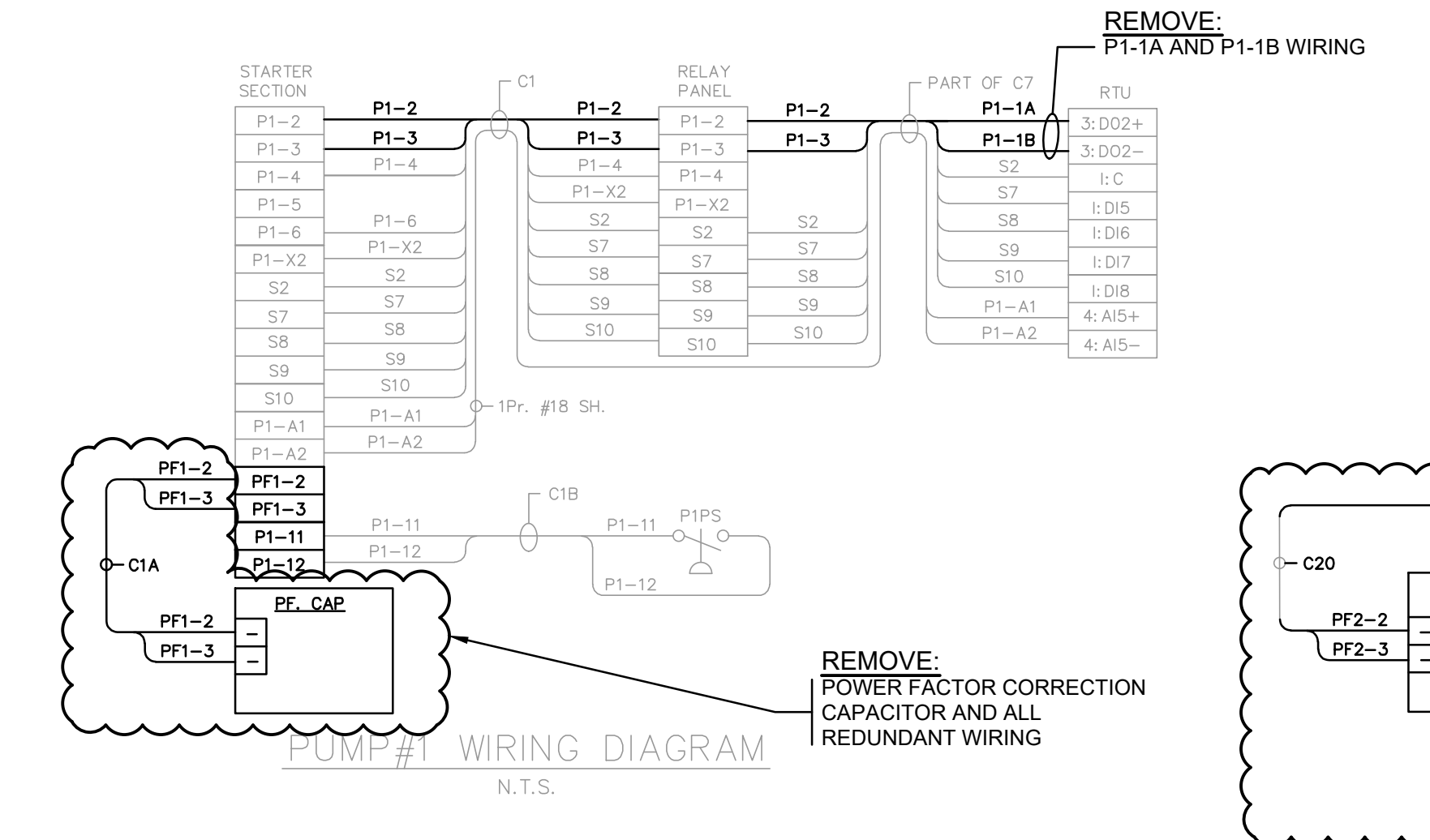
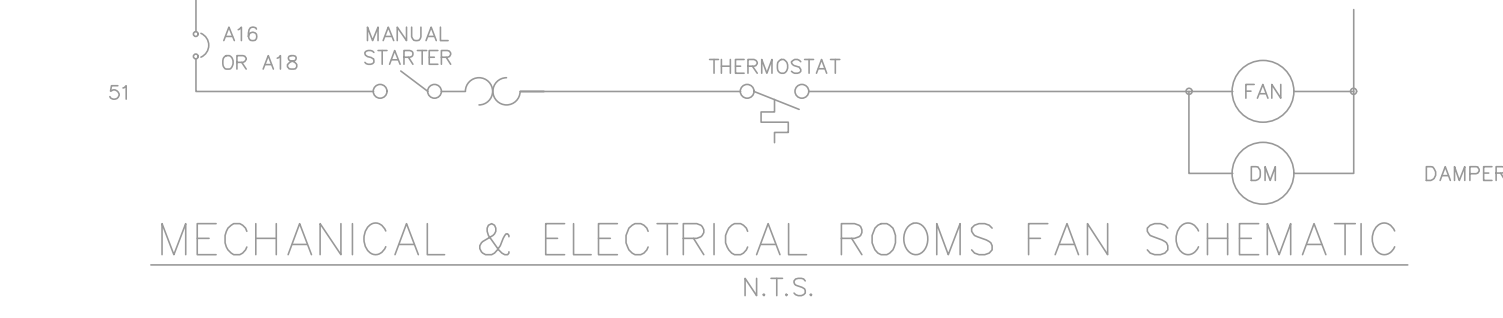
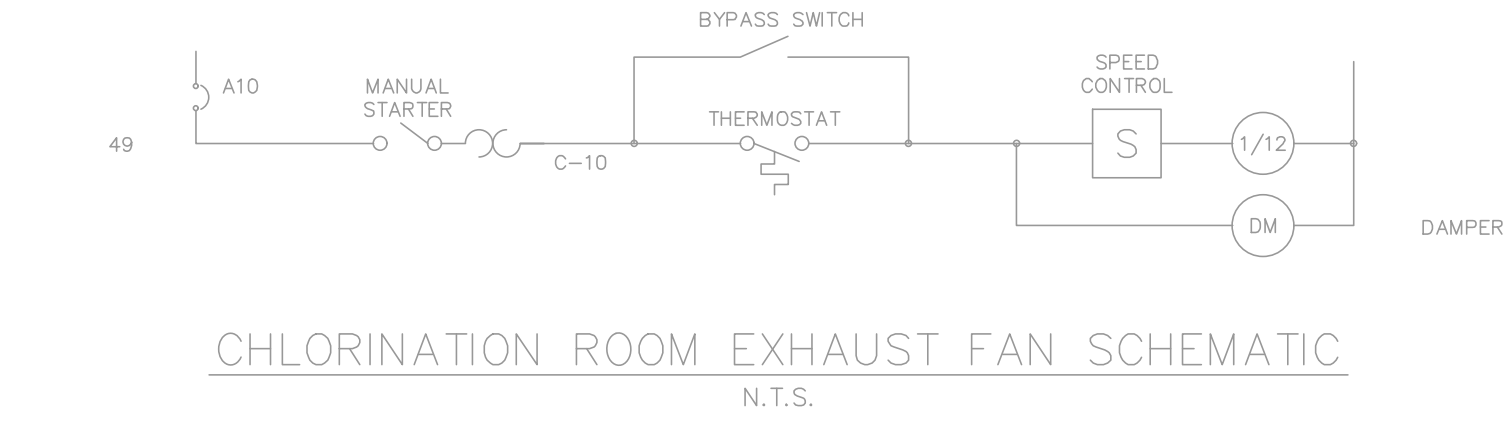
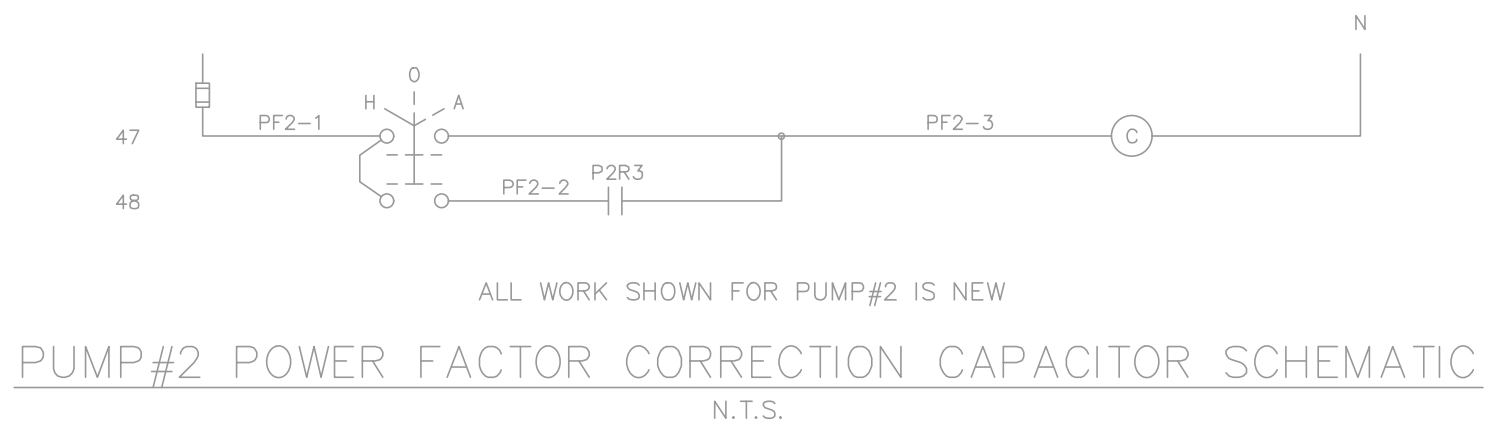
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
ELEVATION - RTU CABINET
PROPOSED**

FILENAME	E331 ELEVATION - RTU CABINET PROPOSED.DWG	SHEET
SCALE	AS NOTED	E331



PUMP #1 POWER FACTOR CORRECTION CAPACITOR SCHEMATIC
N.T.S.

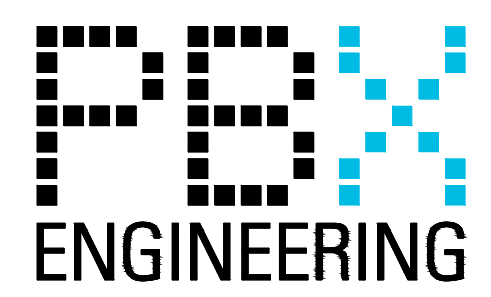


REMOVE:
ALL PUMP #2 CONTROL WIRING

TERMINAL / LOCATION LEGEND
 □ TERMINAL IN RELAY PANEL
 □ TERMINAL IN STARTER CUBICLE
 † DENOTES DEVICE LOCATED IN RTU
 △ DENOTES DEVICE LOCATED IN STARTER CUBICLE
 * DENOTES DEVICE LOCATED IN FIELD
 ○ DENOTES DEVICE LOCATED IN RELAY PANEL

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER M. DAY	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

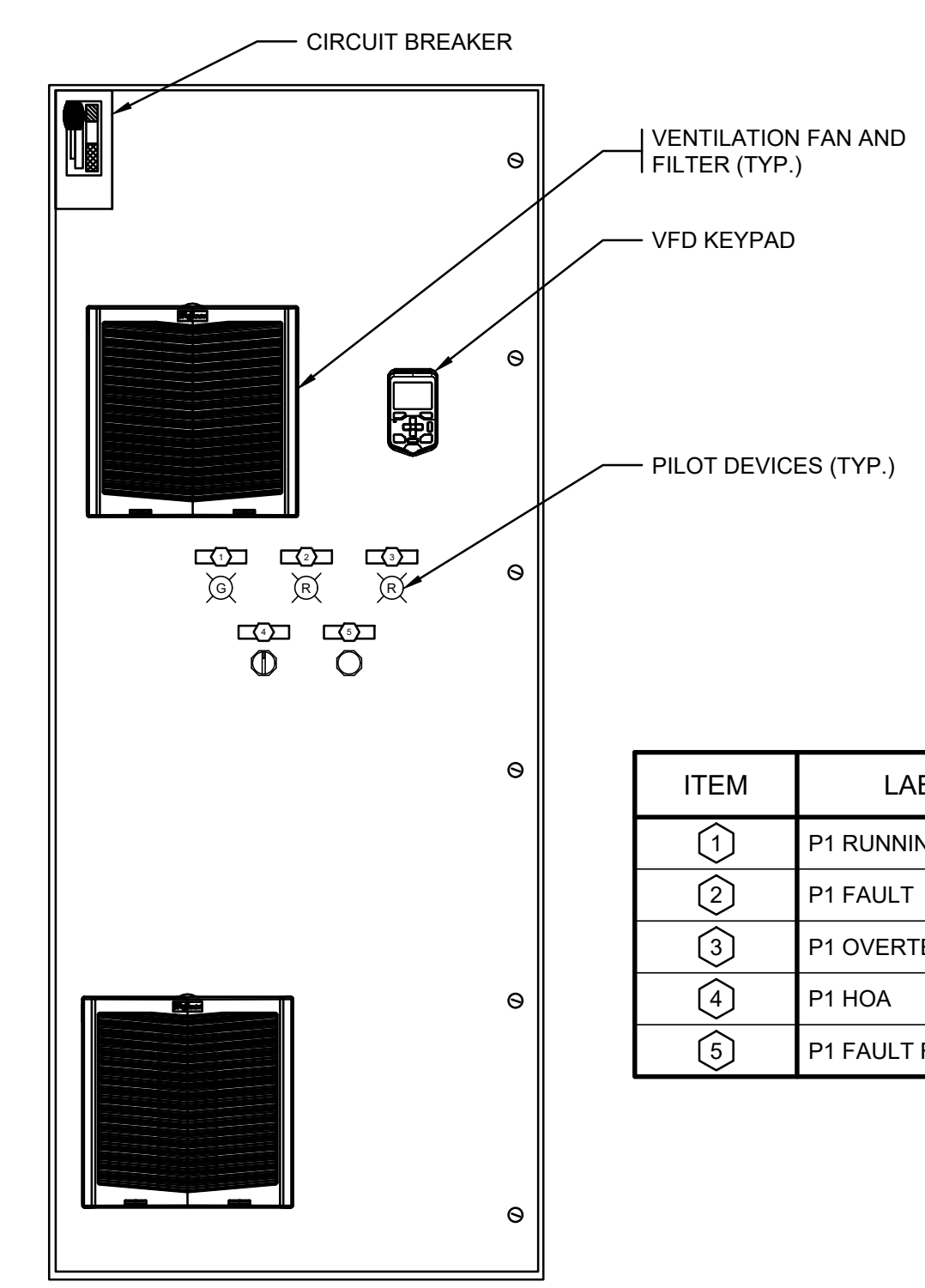
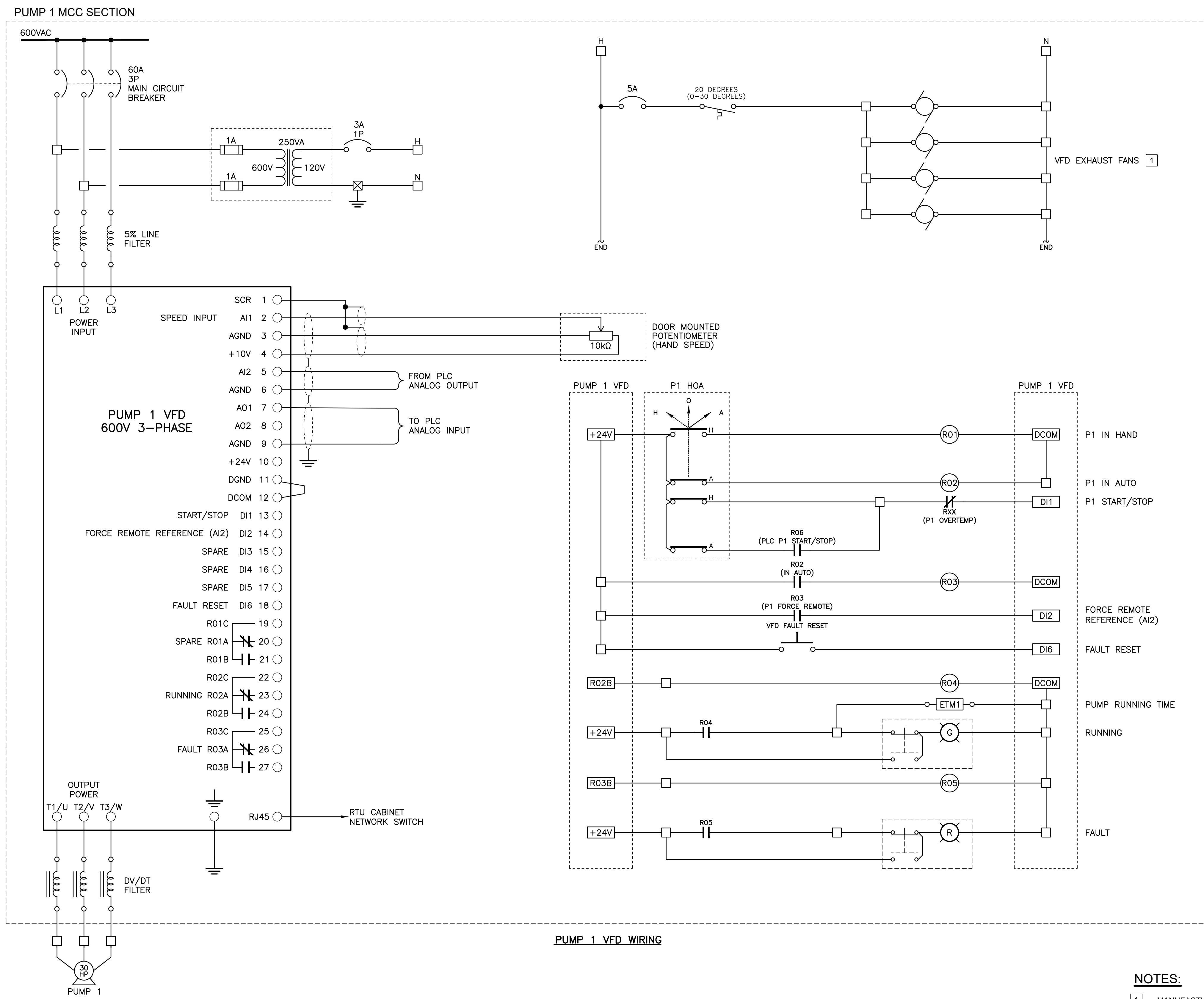
ORIGINAL
SEALED



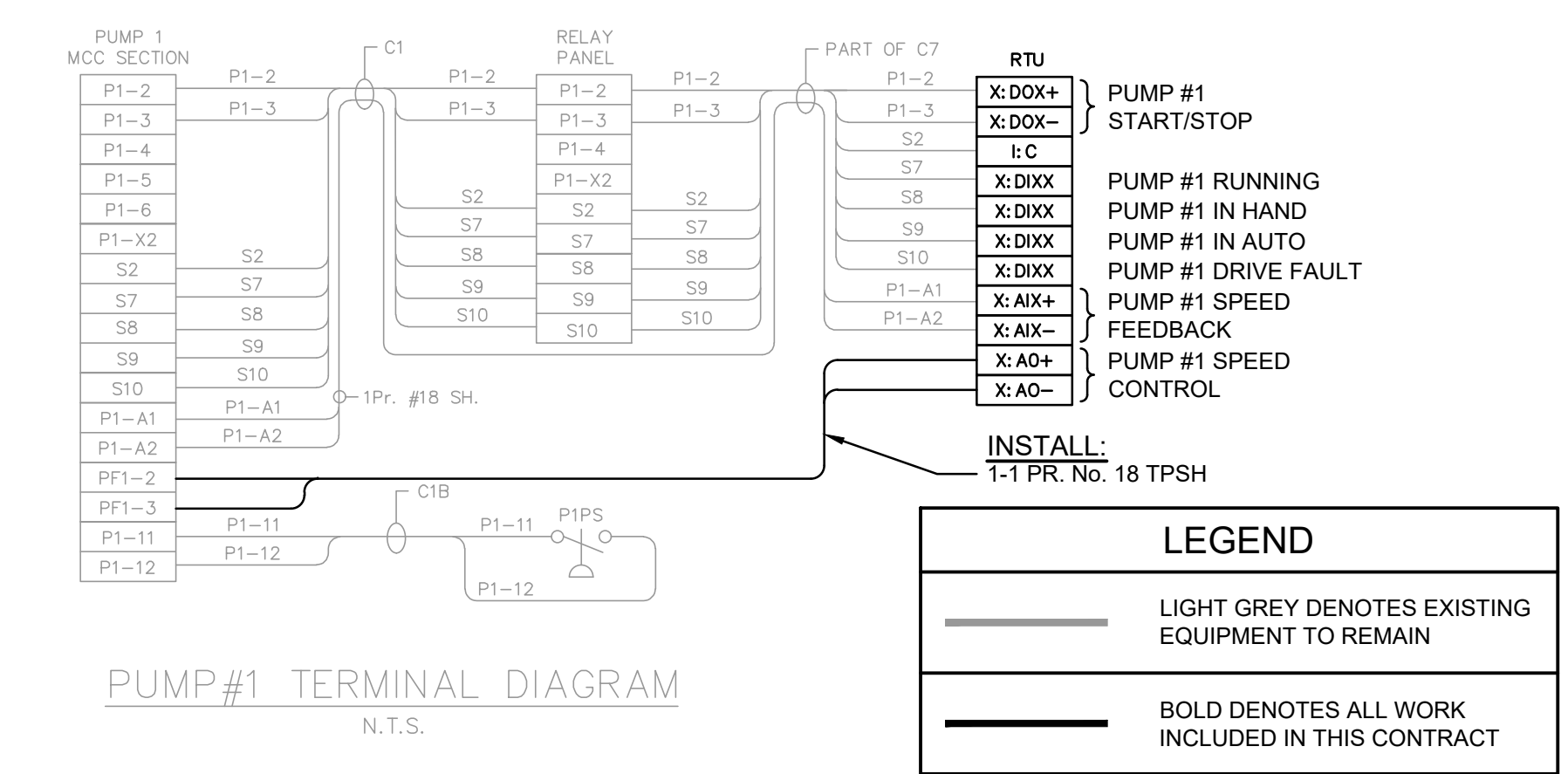
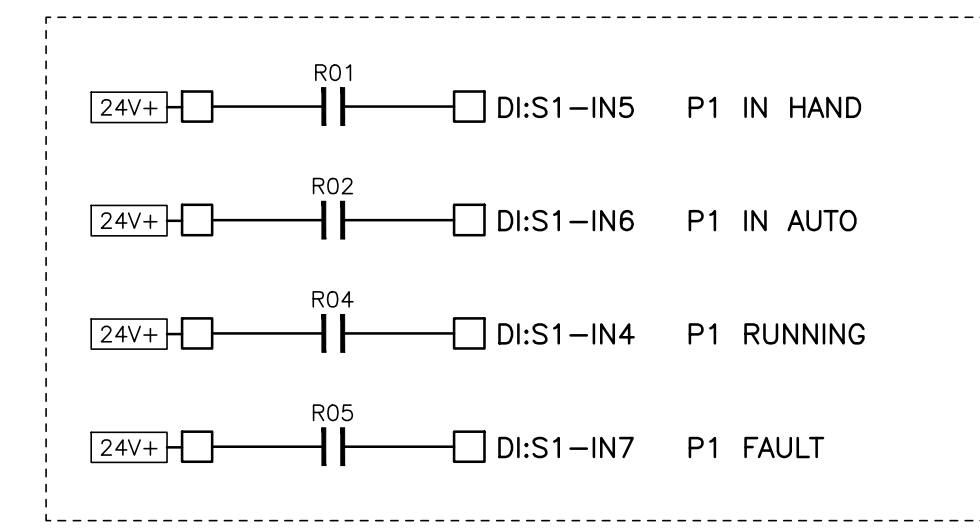
**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
DEVICE WIRING - EXISTING**

FILENAME	E340 DEVICE WIRING - EXISTING.DWG	SHEET
SCALE	AS NOTED	E340



ITEM	LABEL	PILOT DEVICE
1	P1 RUNNING	GREEN PUSH-TO-TEST LIGHT
2	P1 FAULT	RED PUSH-TO-TEST LIGHT
3	P1 OVERTEMP	RED PUSH-TO-TEST LIGHT
4	P1 HOA	THREE-WAY SWITCH
5	P1 FAULT RESET	PUSHBUTTON



LEGEND

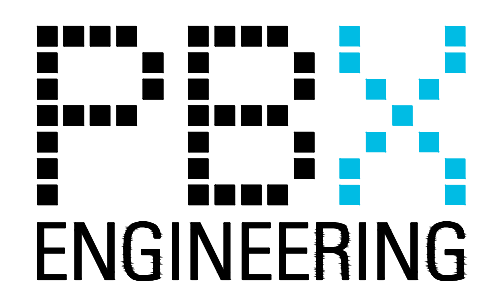
— LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN

— BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

NOTES:

1 MANUFACTURER TO PERFORM HEAT LOAD CALCULATIONS AND PROVIDE VENTILATION WITHIN THE MCC COMPARTMENT FOR ADEQUATE COOLING TO PREVENT OVERTEMPERATURE FAULTS IN THE VFDs AND FILTER EQUIPMENT.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED

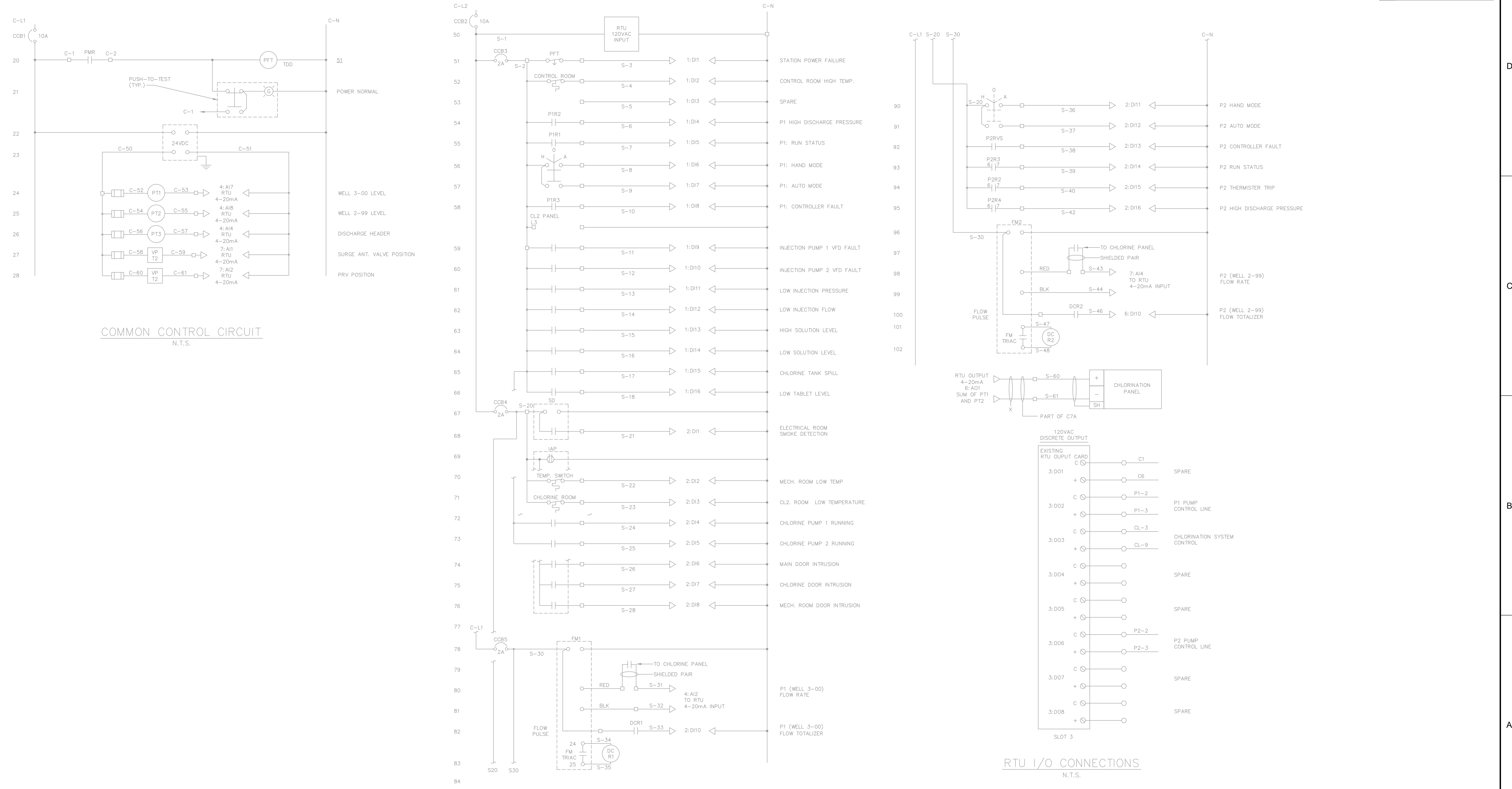


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

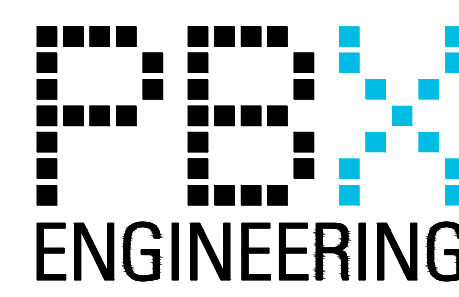
**W212 - PUMP STATION MODIFICATIONS
DEVICE WIRING - PUMP 1 VFD
PROPOSED**

FILENAME: E:\DEVICE WIRING - PUMP 1 VFD PROPOSED.DWG
SCALE: AS NOTED

SHEET
E341



FOR INFORMATION ONLY



PROJECT MANAGER		M. DAY
CIVIL		
STRUCTURAL		
ARCHITECTURAL		
PROCESS		
MECHANICAL		
ELECTRICAL		BW
INSTRUMENTATION		
PROJECT NUMBER	E20307	

ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

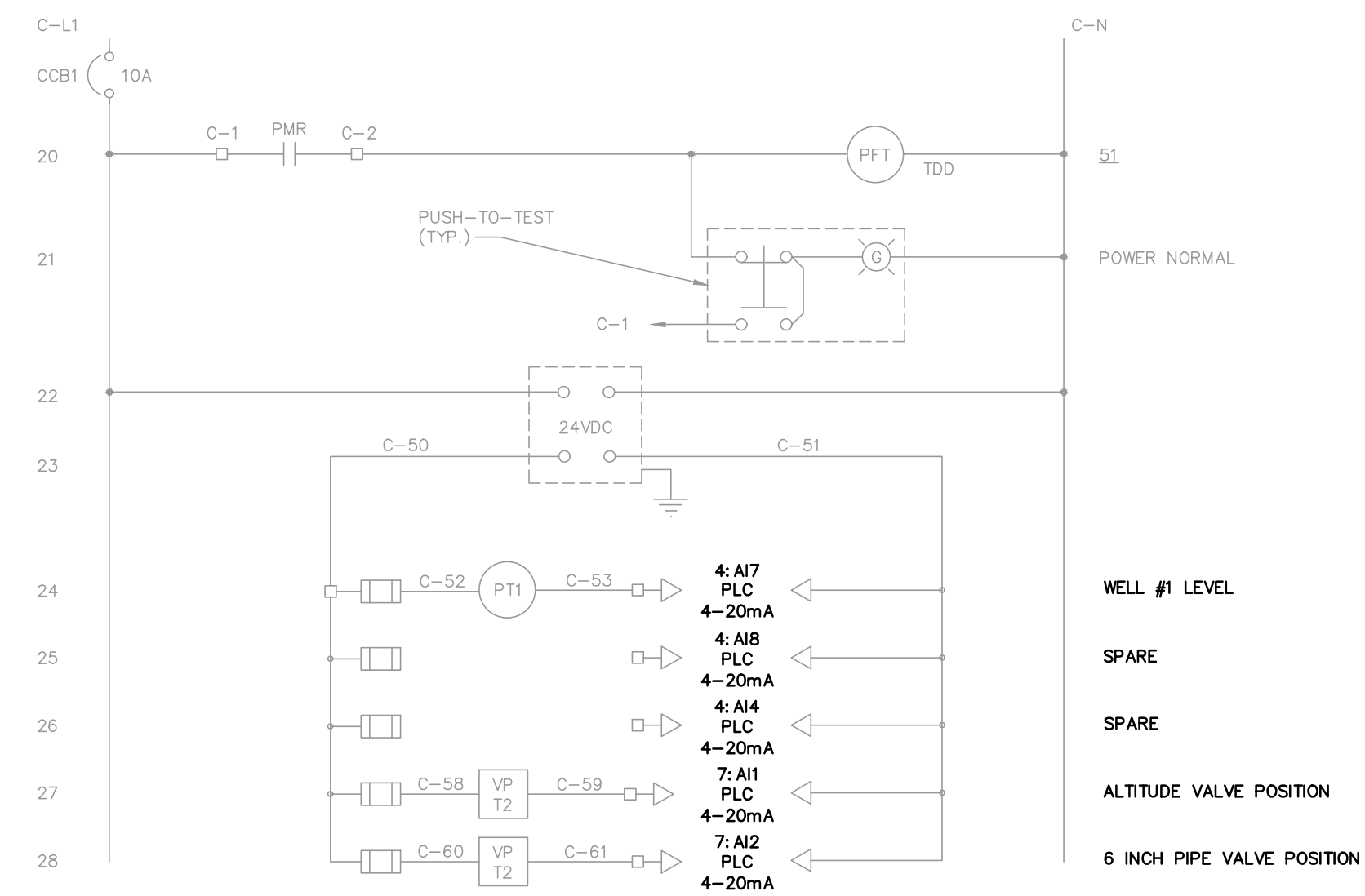
ORIGINAL
SEALED



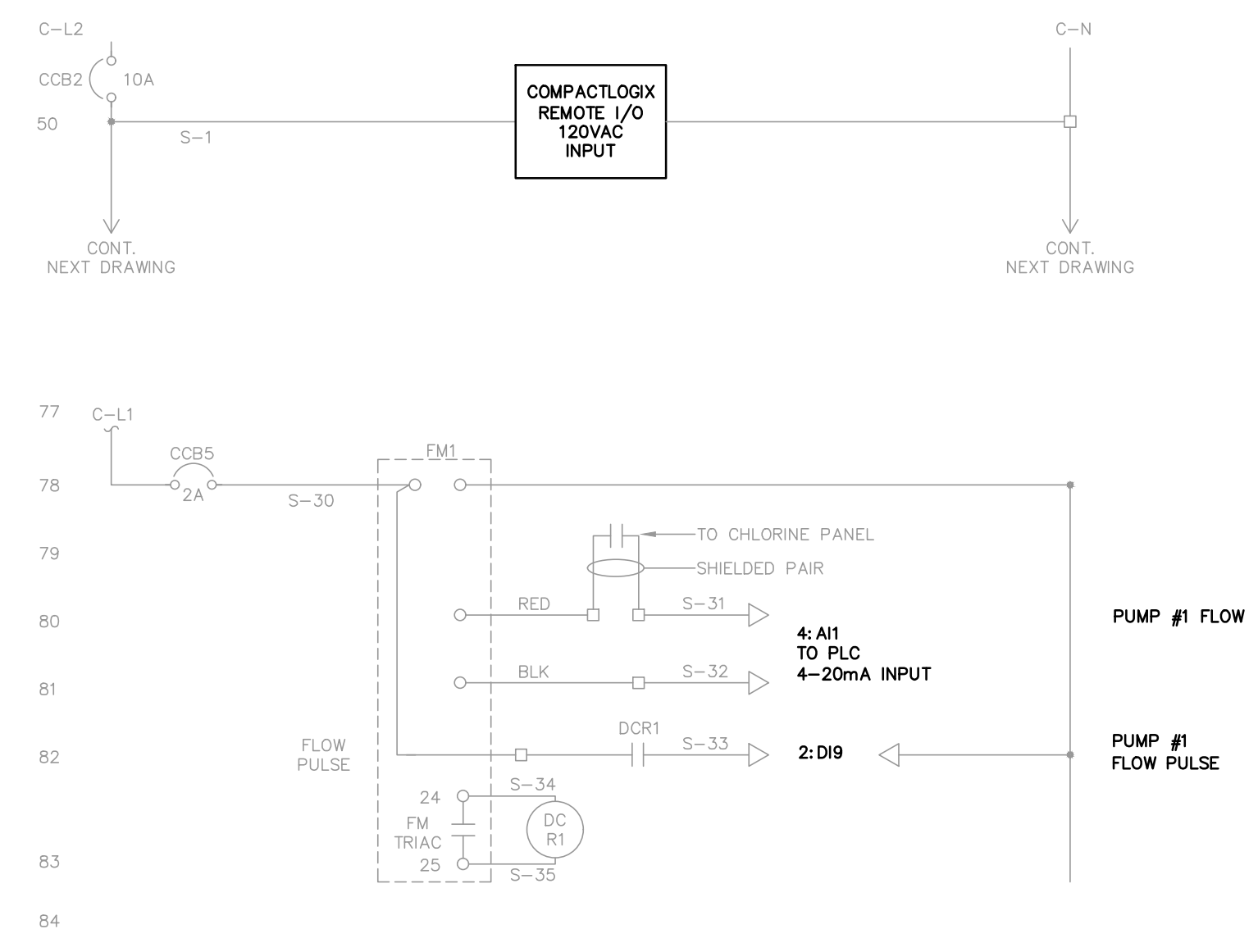
**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
 COMMON CONTROL SCHEMATIC &
 RTU DIAGRAM - EXISTING**

FILENAME	E203 COMMON CONTROL SCHEMATIC & RTU DIAGRAM - EXISTING.DWG	SHEET
SCALE	AS NOTED	E350

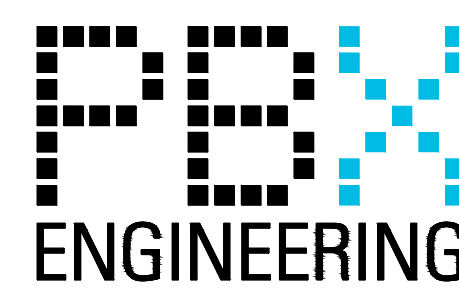


COMMON CONTROL CIRCUIT
 N.T.S.



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

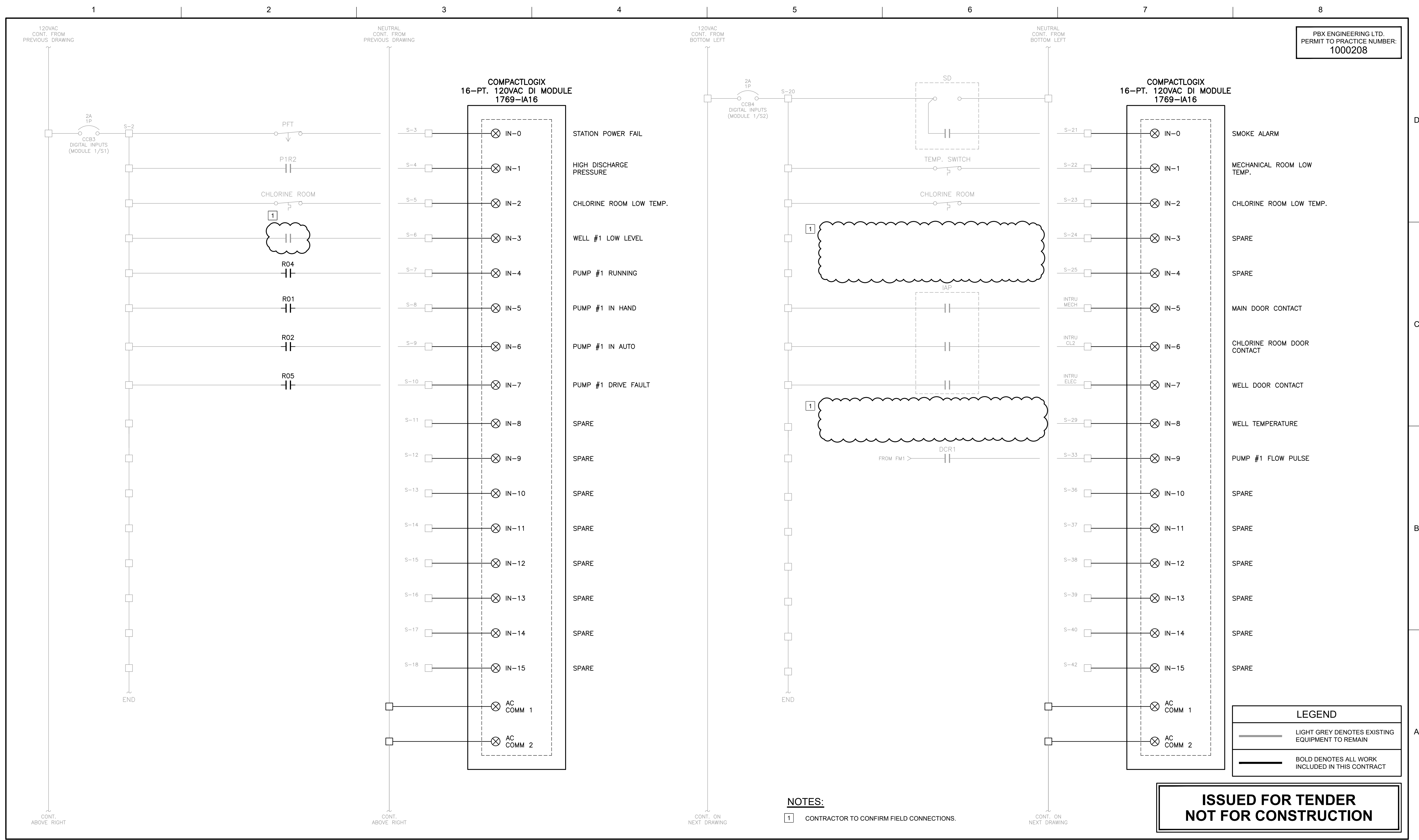
ORIGINAL
 SEALED



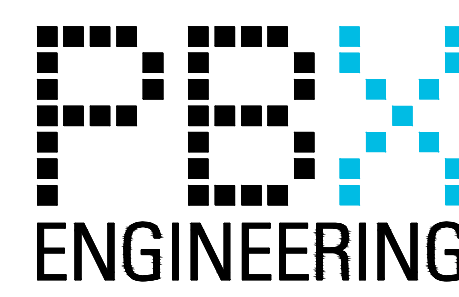
SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

W212 - PUMP STATION MODIFICATIONS
 COMMON CONTROL SCHEMATIC &
 RTU DIAGRAM - PROPOSED

FILENAME	SCALE	SHEET
E212 COMMON CONTROL SCHEMATIC & RTU DIAGRAM - PROPOSED	AS NOTED	E351



**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

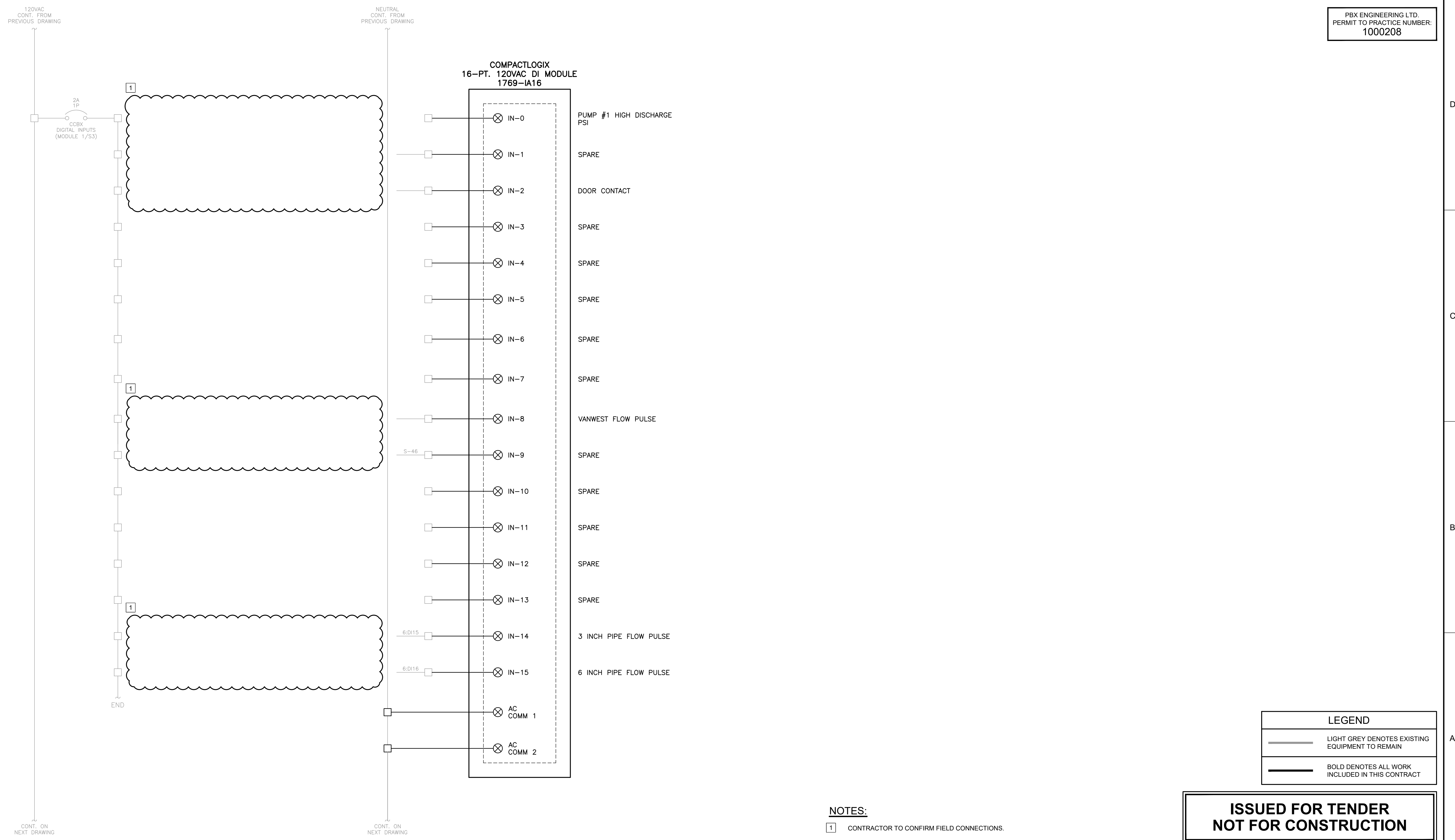
ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
DETAILS - LADDER LOGIC (1 OF 5)**

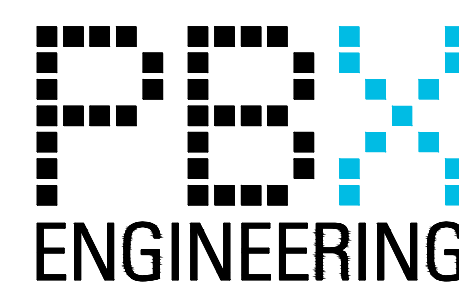
FILENAME	E360 DETAILS - LADDER LOGIC (1 OF 5).DWG	SHEET
SCALE	AS NOTED	E360



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

NOTES:
 1 CONTRACTOR TO CONFIRM FIELD CONNECTIONS.

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

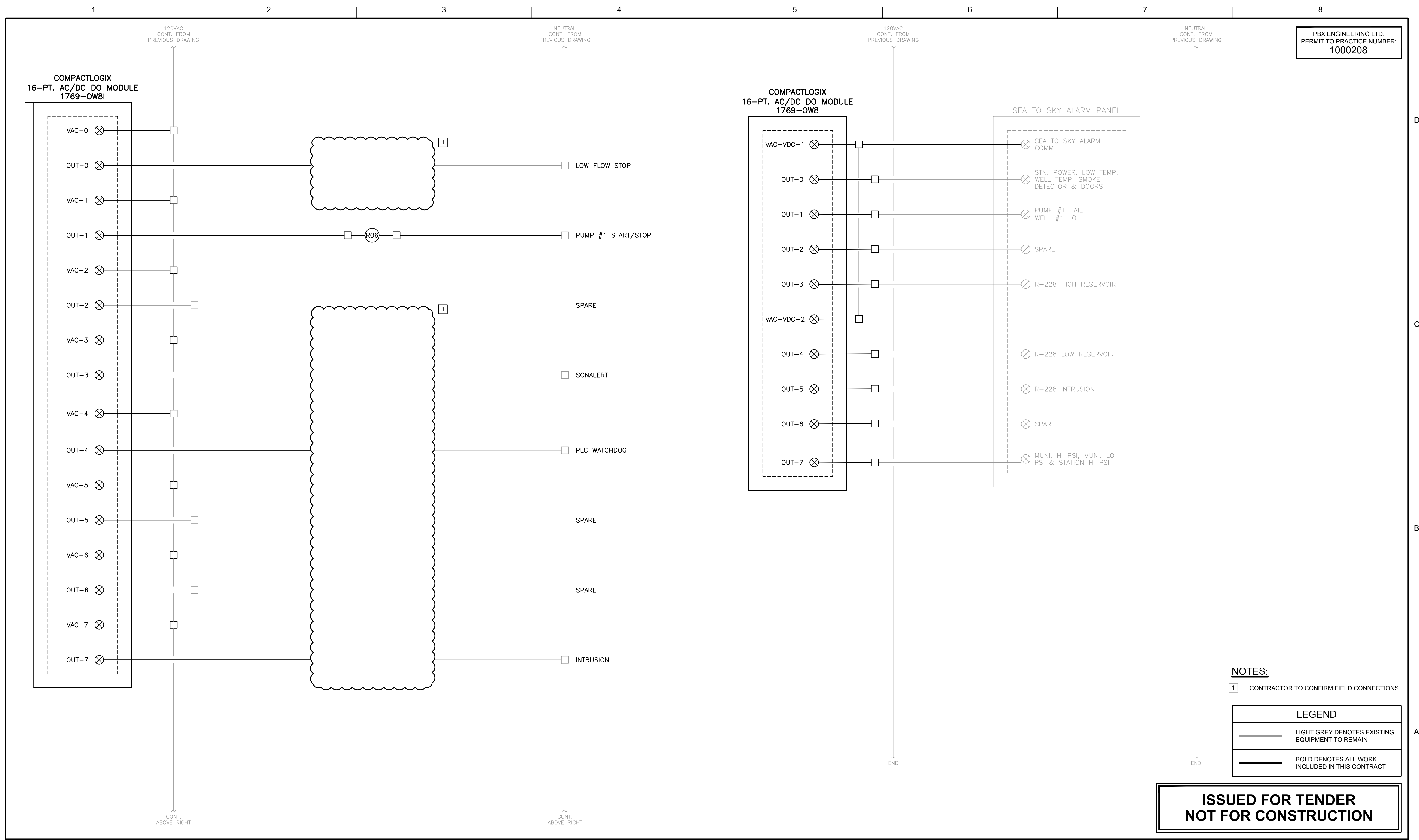
ORIGINAL SEALED



**SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
 DETAILS - LADDER LOGIC (2 OF 5)**

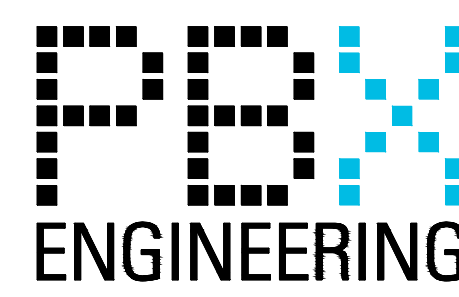
FILENAME	E361 DETAILS - LADDER LOGIC (2 OF 5).DWG	SHEET
SCALE	AS NOTED	E361



NOTES:
1 CONTRACTOR TO CONFIRM FIELD CONNECTIONS.

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

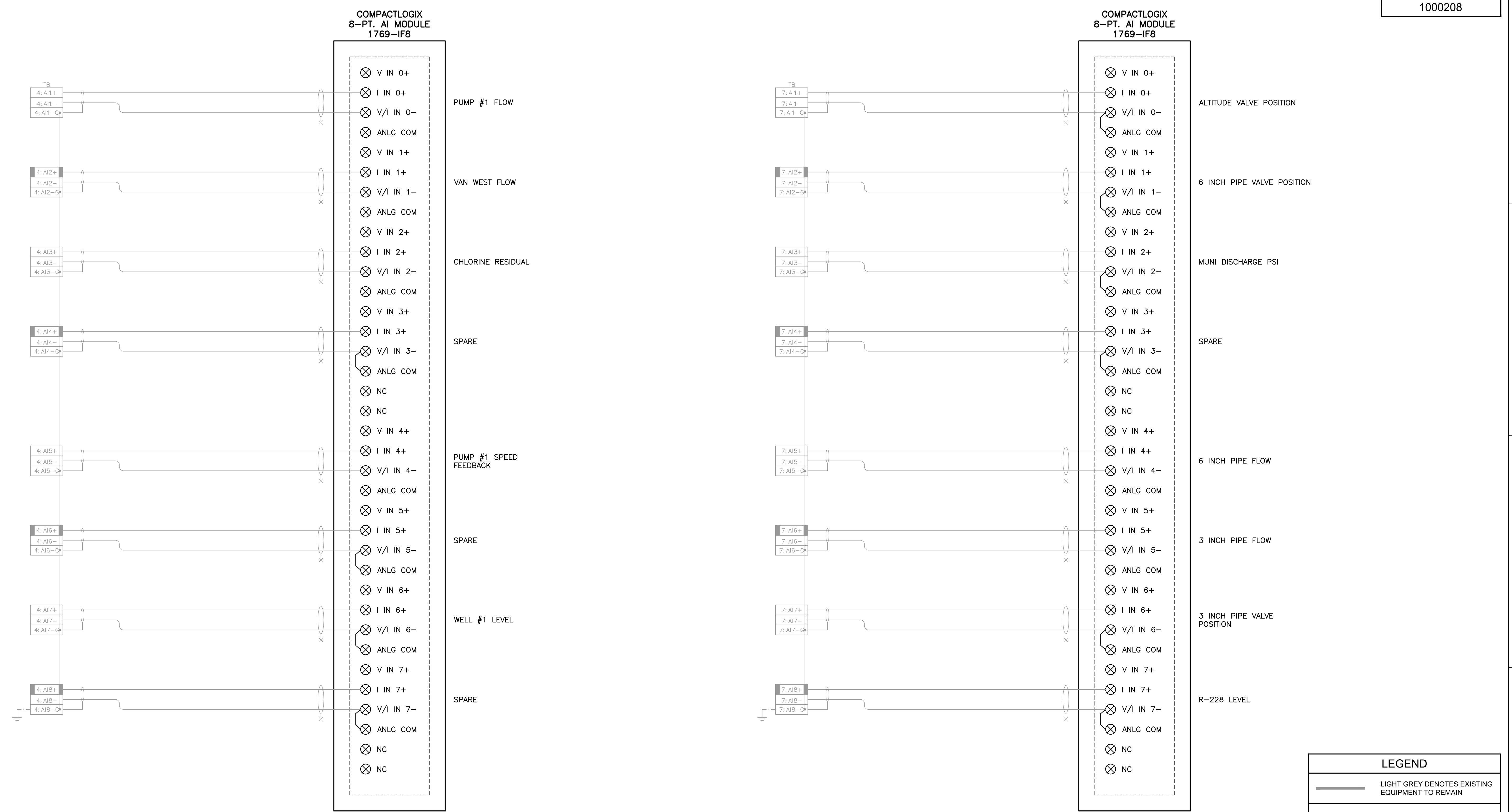
ORIGINAL SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

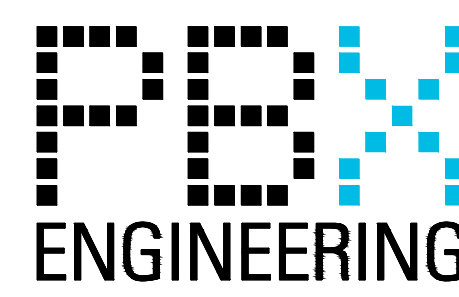
**W212 - PUMP STATION MODIFICATIONS
DETAILS - LADDER LOGIC (3 OF 5)**

FILENAME	E362 DETAILS - LADDER LOGIC (3 OF 5).DWG	SHEET
SCALE	AS NOTED	E362



LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED

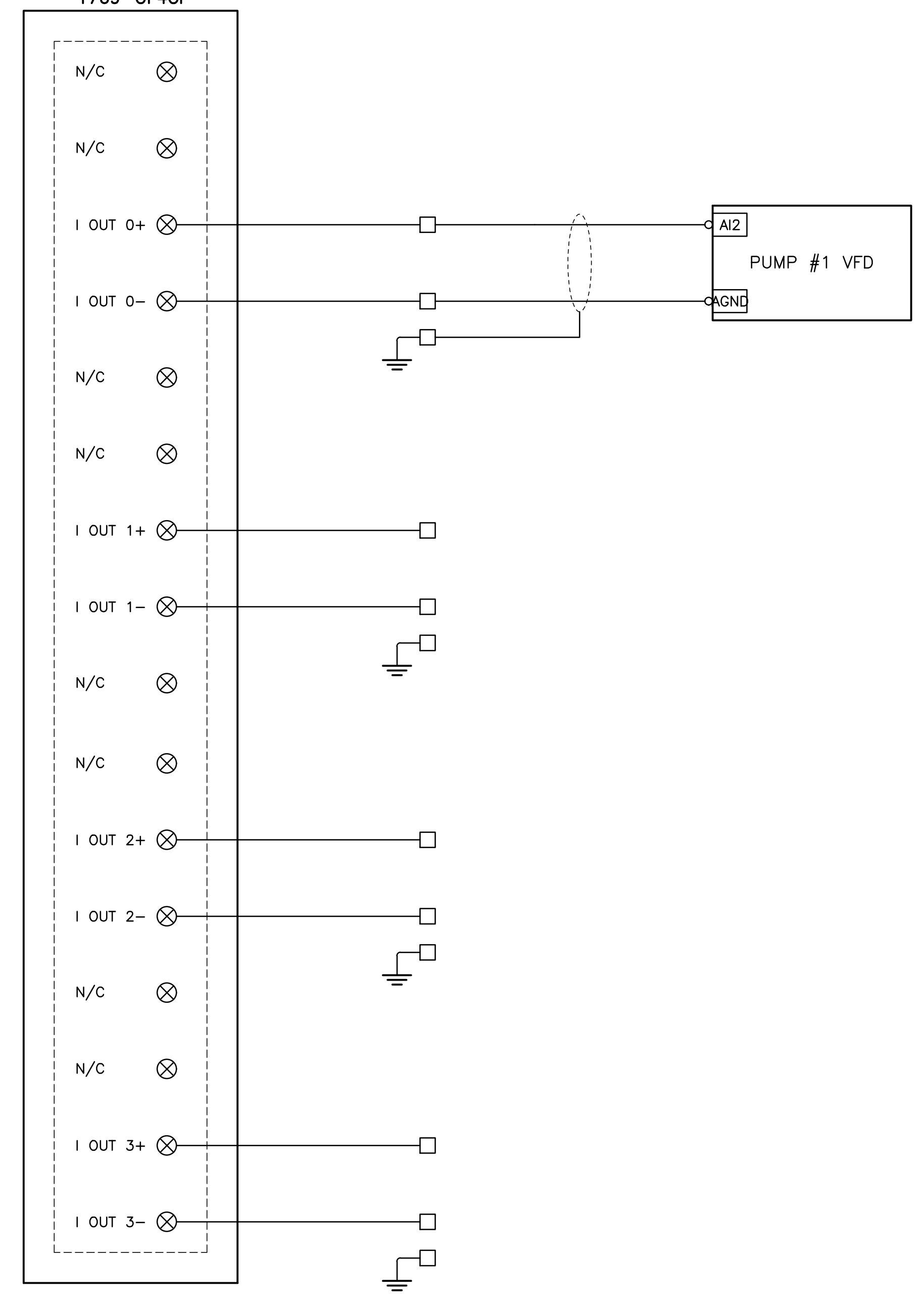


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**W212 - PUMP STATION MODIFICATIONS
DETAILS - LADDER LOGIC (4 OF 5)**

FILENAME	E363 DETAILS - LADDER LOGIC (4 OF 5).DWG	SHEET	E363
SCALE	AS NOTED		

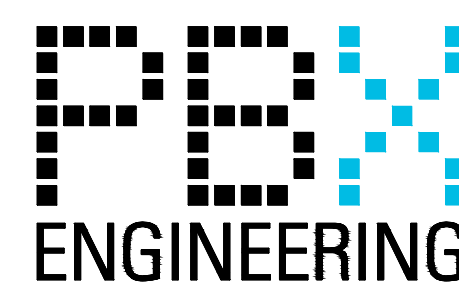
COMPACTLOGIX
 4-CHANNEL, ISOLATED CURRENT
 AO MODULE
 1769-OF4CI



PUMP #1
 SPEED CONTROL

LEGEND	
	LIGHT GREY DENOTES EXISTING EQUIPMENT TO REMAIN
	BOLD DENOTES ALL WORK INCLUDED IN THIS CONTRACT

**ISSUED FOR TENDER
 NOT FOR CONSTRUCTION**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

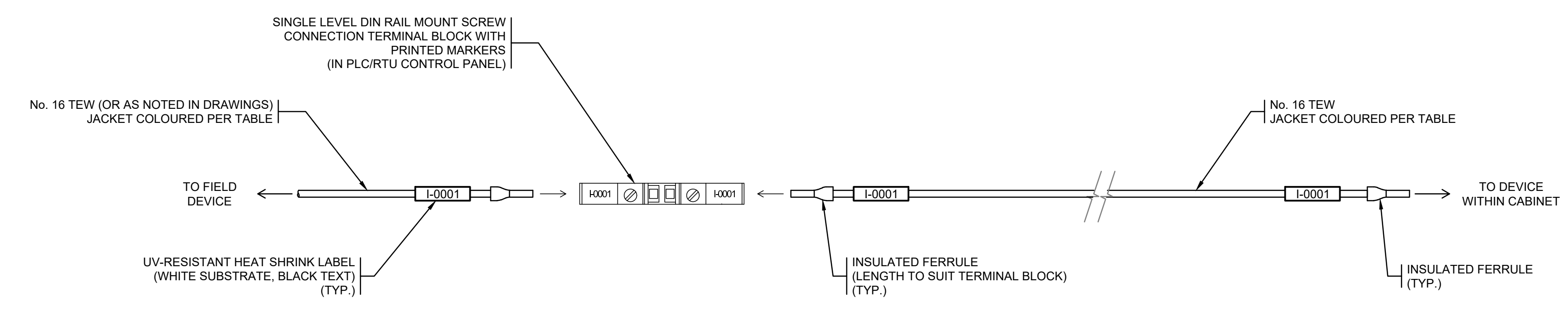
ORIGINAL
 SEALED



SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

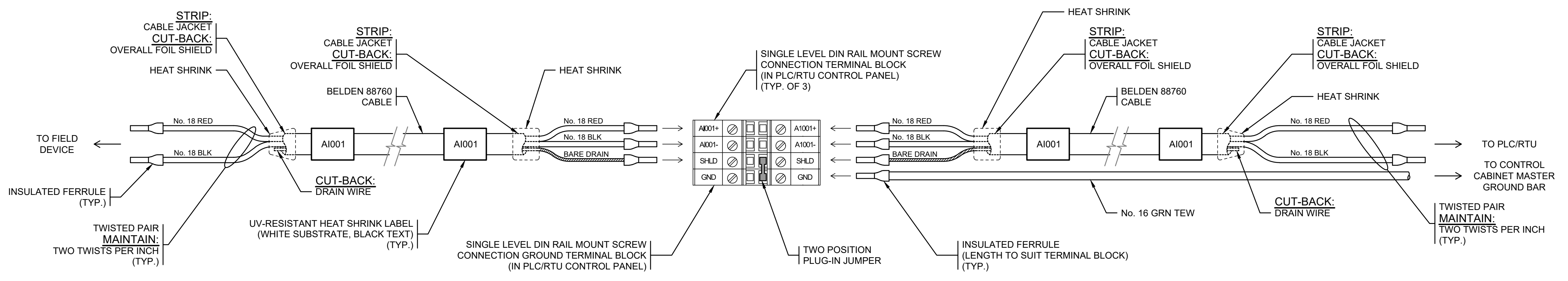
W212 - PUMP STATION MODIFICATIONS
 DETAILS - LADDER LOGIC (5 OF 5)

FILENAME	SHEET
E364 DETAILS - LADDER LOGIC (5 OF 5).DWG	E364
SCALE	AS NOTED

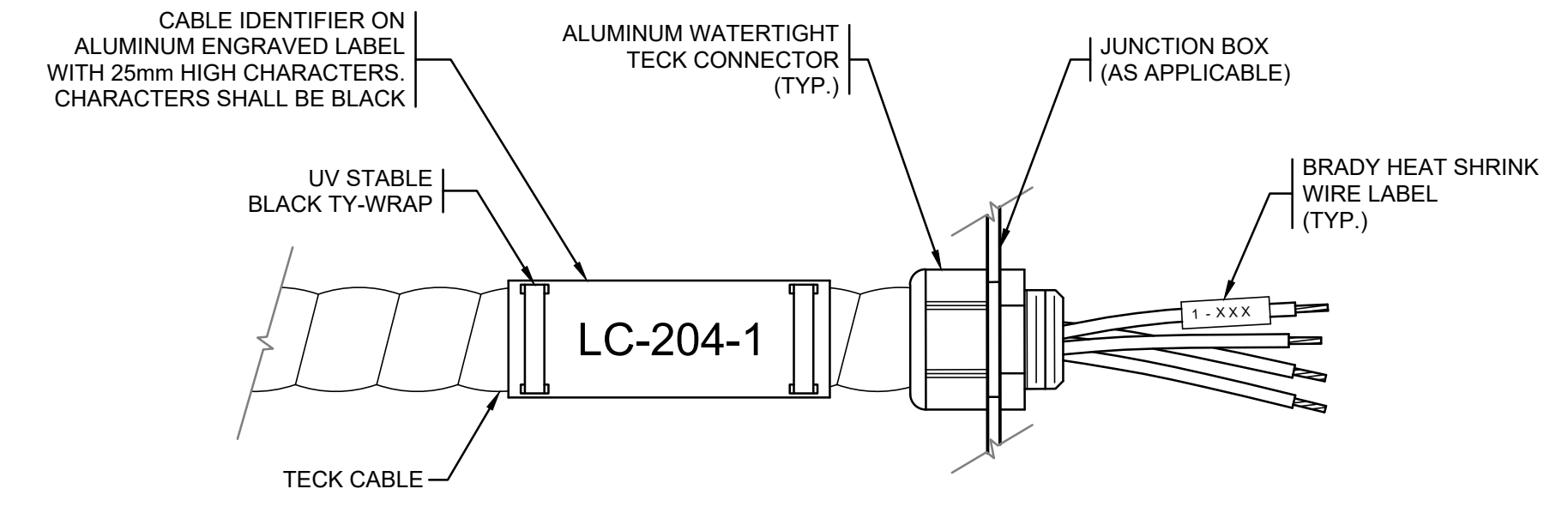


DETAIL 1 TYPICAL DISCRETE CONTROL FIELD WIRING TERMINATION METHOD
N.T.S.

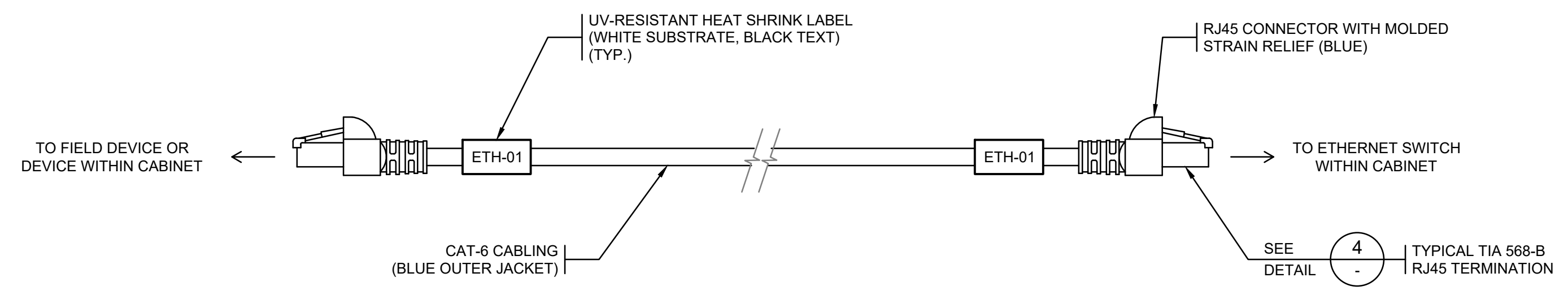
INSTRUMENTATION FIELD WIRING COLOUR CODE	
FUNCTION	COLOUR
AC HOT	BLACK
AC NEUTRAL	WHITE
DC POSITIVE	BLUE
DC NEGATIVE	GREY
GENERATOR START	YELLOW
GROUND	GREEN



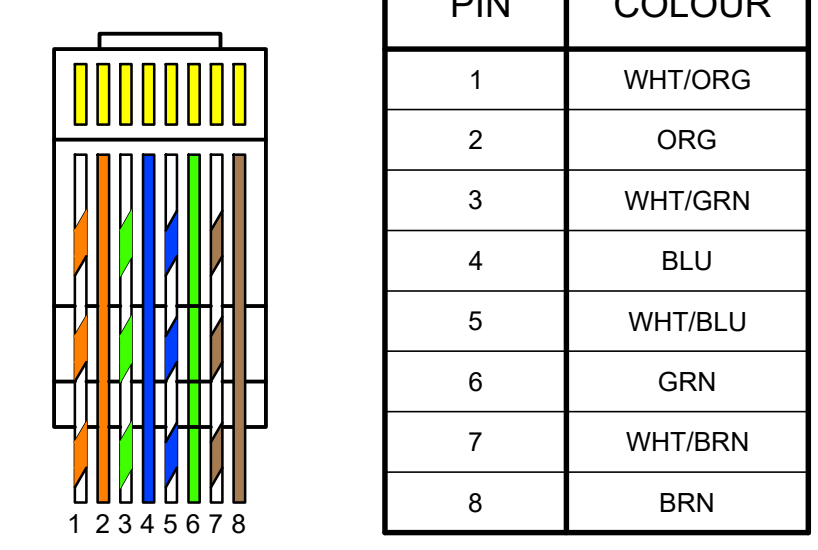
DETAIL 2 TYPICAL ANALOG CONTROL FIELD WIRING TERMINATION METHOD
N.T.S.



DETAIL 5 TECK CABLE TERMINATION
N.T.S.



DETAIL 3 TYPICAL ETHERNET CABLING TERMINATION METHOD
N.T.S.

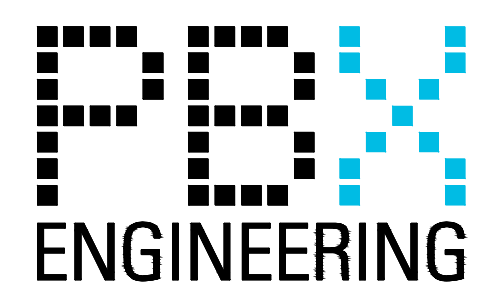


DETAIL 4 TYPICAL TIA 568-B RJ45 TERMINATION (CLIP FACING AWAY)
N.T.S.

NOTES:
1. TYPICAL WIRING AND WORKMANSHIP EXAMPLES ONLY. REFER TO SINGLE-LINE DIAGRAM FOR CIRCUIT BREAKER/FUSE REQUIREMENTS.

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

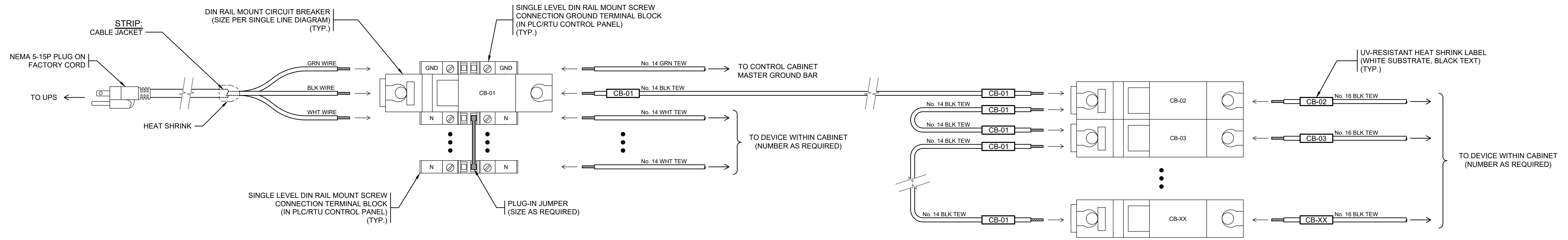
PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL SEALED

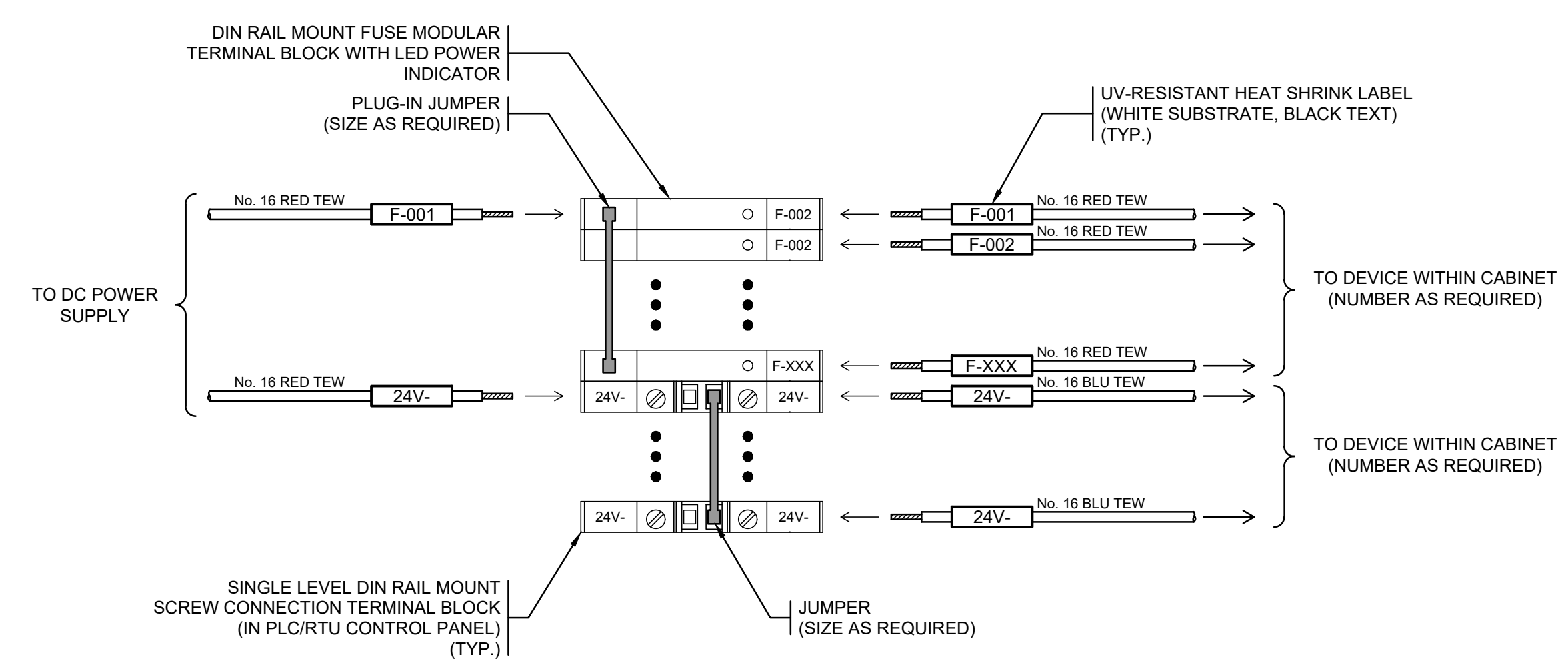


SOUTH WHISTLER WATER SUPPLY PHASE 2

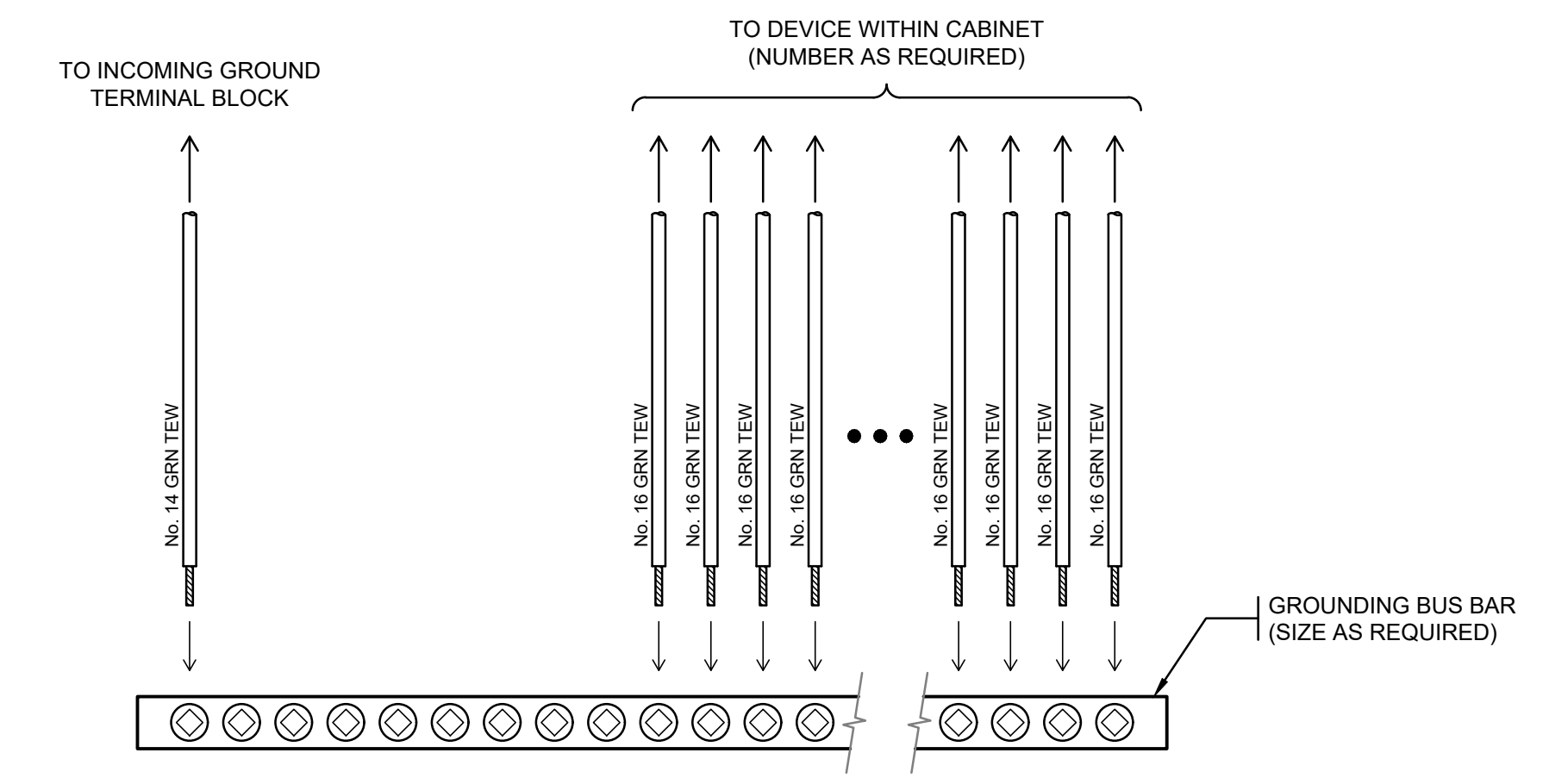
P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY
TYPICAL PLC RTU CABINET WIRING TERMINATIONS (1 OF 2)



DETAIL 1 TYPICAL 120V AC DISTRIBUTION
N.T.S. WIRING TERMINATION METHOD



DETAIL 2 TYPICAL DC DISTRIBUTION
N.T.S. WIRING TERMINATION METHOD

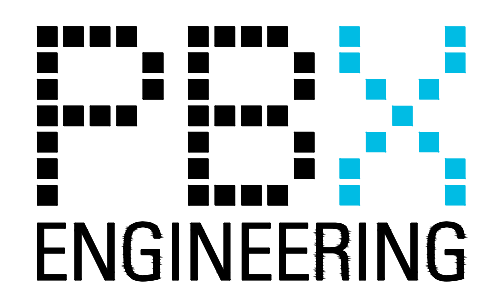


DETAIL 3 TYPICAL MASTER GROUND BUS
N.T.S. TERMINATION METHOD

**ISSUED FOR TENDER
NOT FOR CONSTRUCTION**

**ALL EQUIPMENT IS PROPOSED
UNLESS NOTED OTHERWISE**

NOTES:
1. TYPICAL WIRING AND WORKMANSHIP EXAMPLES ONLY. REFER TO SINGLE-LINE DIAGRAM FOR CIRCUIT BREAKER/FUSE REQUIREMENTS.



ISSUE	DATE	DESCRIPTION
0	2023-09-22	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	BW
INSTRUMENTATION	
PROJECT NUMBER	E20307

ORIGINAL
SEALED



**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY**
TYPICAL PLC RTU CABINET WIRING TERMINATIONS (2 OF 2)

PRIMARY ELEMENT SYMBOLOGY		INSTRUMENT SYMBOLS					ABBREVIATIONS		INSTRUMENT IDENTIFICATION LETTERS EXCERPTED FROM ISA 55.1; SEE COMPLETE ISA DOCUMENT FOR MORE INFORMATION.																																																																																																																																																																																																															
		<table border="1"> <tr> <th></th> <th>CONTROL ROOM LOCATION ACCESSIBLE TO OPERATOR</th> <th>CONTROL ROOM LOCATION INACCESSIBLE TO OPERATOR</th> <th>LOCAL LOCATION ACCESSIBLE TO OPERATOR</th> <th>LOCAL LOCATION INACCESSIBLE TO OPERATOR</th> <th>FIELD LOCATED</th> <th>INSTRUMENT LIGHTED</th> </tr> <tr> <td>DISCRETE INSTRUMENTS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>HMI FROM DISTRIBUTED CONTROL SYSTEM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SCADA DISPLAY / COMPUTER FUNCTION</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PROGRAMMABLE LOGIC CONTROLLER</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						CONTROL ROOM LOCATION ACCESSIBLE TO OPERATOR	CONTROL ROOM LOCATION INACCESSIBLE TO OPERATOR	LOCAL LOCATION ACCESSIBLE TO OPERATOR	LOCAL LOCATION INACCESSIBLE TO OPERATOR	FIELD LOCATED	INSTRUMENT LIGHTED	DISCRETE INSTRUMENTS							HMI FROM DISTRIBUTED CONTROL SYSTEM							SCADA DISPLAY / COMPUTER FUNCTION							PROGRAMMABLE LOGIC CONTROLLER							<p>AER AERATOR AI ANALOG INPUT ALM ALARM AO ANALOG OUTPUT ATM ATMOSPHERE B BLOWER CAT6 CATEGORY 6 ETHERNET CL CLOSE CO CARBON MONOXIDE (ANALYZER MODIFIER) CO2 CARBON DIOXIDE (ANALYZER MODIFIER) CP CONTROL PANEL DEG DEGASSER DI DIGITAL INPUT DO DIGITAL OUTPUT DO DISSOLVED OXYGEN (ANALYZER MODIFIER) EXH HEAT EXCHANGER FO FIBER OPTIC CABLE FNVR FULL VOLTAGE NON-REVERSING GMT GAS MANAGEMENT TOWER I/O INPUT/OUTPUT IP INSTRUMENT PANELBOARD KSK KIOSK LOR LOCAL OFF REMOTE M MOTOR MCC MOTOR CONTROL CENTER MOV MOTOR OPERATED VALVE MSC MANUFACTURER SUPPLIED CABLE NC NORMALLY CLOSED NO NORMALLY OPEN OIT OPERATOR INTERFACE TERMINAL O2 OXYGEN (ANALYZER MODIFIER) O3 OZONE O/F OVERFLOW OP OPEN OSC OPEN STOP CLOSE P PUMP P&ID PROCESS AND INSTRUMENTATION DIAGRAM PLC PROGRAMMABLE LOGIC CONTROLLER STR STRAINER TEMP TEMPERATURE TGH TROUGH TK TANK TWR TOWER UPS UNINTERRUPTIBLE POWER SUPPLY UVT ULTRAVIOLET VFD VARIABLE FREQUENCY DRIVE V VENDOR WS WATER SOFTENER</p> <p>FOR ABBREVIATIONS NOT RELATED TO AQUACULTURE WATER PROCESS, REFER TO GENERAL OR ELECTRICAL LEGEND(S)</p>		<table border="1"> <tr> <th></th> <th colspan="2">FIRST LETTER</th> <th colspan="3">SUCCEEDING LETTERS</th> </tr> <tr> <th></th> <th>MEASURED OR INITIATING VARIABLE</th> <th>MODIFIER</th> <th>READOUT OR PASSIVE FUNCTION</th> <th>OUTPUT FUNCTION</th> <th>MODIFIER</th> </tr> <tr> <td>A</td> <td>ANALYSIS</td> <td></td> <td>ALARM</td> <td></td> <td></td> </tr> <tr> <td>B</td> <td>BURNER, COMBUSTION</td> <td></td> <td>USERS CHOICE</td> <td>USERS CHOICE</td> <td>USERS CHOICE</td> </tr> <tr> <td>C</td> <td>USERS CHOICE</td> <td></td> <td></td> <td>CONTROL</td> <td>CLOSED</td> </tr> <tr> <td>D</td> <td>USERS CHOICE</td> <td>DIFFERENTIAL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>E</td> <td>VOLTAGE</td> <td></td> <td>SENSOR (PRIMARY ELEMENT)</td> <td></td> <td></td> </tr> <tr> <td>F</td> <td>FLOW RATE</td> <td>RATIO (FRACTION)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>USER'S CHOICE</td> <td></td> <td>GLASS, VIEWING DEVICE</td> <td></td> <td></td> </tr> <tr> <td>H</td> <td>HAND</td> <td></td> <td></td> <td></td> <td>HIGH</td> </tr> <tr> <td>I</td> <td>CURRENT (ELECTRICAL)</td> <td></td> <td>INDICATE</td> <td></td> <td></td> </tr> <tr> <td>J</td> <td>POWER</td> <td>SCAN</td> <td></td> <td></td> <td></td> </tr> <tr> <td>K</td> <td>TIME, TIME SCHEDULE</td> <td>TIME RATE OF CHANGE</td> <td></td> <td>CONTROL STATION</td> <td></td> </tr> <tr> <td>L</td> <td>LEVEL</td> <td></td> <td>LIGHT</td> <td></td> <td>LOW</td> </tr> <tr> <td>M</td> <td>USER'S CHOICE</td> <td>MOMENTARY</td> <td></td> <td></td> <td>MIDDLE, INTERMEDIATE</td> </tr> <tr> <td>N</td> <td>USER'S CHOICE</td> <td></td> <td>USER'S CHOICE</td> <td>USER'S CHOICE</td> <td>USER'S CHOICE</td> </tr> <tr> <td>O</td> <td>USER'S CHOICE</td> <td></td> <td>ORIFICE, RESTRICTION</td> <td></td> <td></td> </tr> <tr> <td>P</td> <td>PRESSURE, VACUUM</td> <td></td> <td>POINT (TEST) CONNECTION</td> <td></td> <td></td> </tr> <tr> <td>Q</td> <td>QUANTITY</td> <td>INTEGRATE, TOTALIZE</td> <td></td> <td></td> <td></td> </tr> <tr> <td>R</td> <td>RADIATION</td> <td></td> <td>RECORD</td> <td></td> <td></td> </tr> <tr> <td>S</td> <td>SPEED, FREQUENCY</td> <td>SAFETY</td> <td></td> <td>SWITCH</td> <td></td> </tr> <tr> <td>T</td> <td>TEMPERATURE</td> <td></td> <td></td> <td>TRANSMIT</td> <td></td> </tr> <tr> <td>U</td> <td>MULTIVARIABLE</td> <td></td> <td>MULTIFUNCTION</td> <td>MULTIFUNCTION</td> <td>MULTIFUNCTION</td> </tr> <tr> <td>V</td> <td>VIBRATION, MECH. ANALYSIS</td> <td></td> <td></td> <td>VALVE, DAMPER, LOUVER</td> <td></td> </tr> <tr> <td>W</td> <td>WEIGHT, FORCE</td> <td></td> <td>WELL</td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>UNCLASSIFIED</td> <td>X AXIS</td> <td>UNCLASSIFIED</td> <td>UNCLASSIFIED</td> <td>UNCLASSIFIED</td> </tr> <tr> <td>Y</td> <td>EVENT, STATE OR PRESENCE</td> <td>Y AXIS</td> <td></td> <td>RELAY, COMPUTE, CONVERT</td> <td></td> </tr> <tr> <td>Z</td> <td>POSITION, DIMENSION</td> <td>Z AXIS</td> <td></td> <td>DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT</td> <td></td> </tr> </table>						FIRST LETTER		SUCCEEDING LETTERS				MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	A	ANALYSIS		ALARM			B	BURNER, COMBUSTION		USERS CHOICE	USERS CHOICE	USERS CHOICE	C	USERS CHOICE			CONTROL	CLOSED	D	USERS CHOICE	DIFFERENTIAL				E	VOLTAGE		SENSOR (PRIMARY ELEMENT)			F	FLOW RATE	RATIO (FRACTION)				G	USER'S CHOICE		GLASS, VIEWING DEVICE			H	HAND				HIGH	I	CURRENT (ELECTRICAL)		INDICATE			J	POWER	SCAN				K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION		L	LEVEL		LIGHT		LOW	M	USER'S CHOICE	MOMENTARY			MIDDLE, INTERMEDIATE	N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE	O	USER'S CHOICE		ORIFICE, RESTRICTION			P	PRESSURE, VACUUM		POINT (TEST) CONNECTION			Q	QUANTITY	INTEGRATE, TOTALIZE				R	RADIATION		RECORD			S	SPEED, FREQUENCY	SAFETY		SWITCH		T	TEMPERATURE			TRANSMIT		U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION	V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER, LOUVER		W	WEIGHT, FORCE		WELL			X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT		Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	
	CONTROL ROOM LOCATION ACCESSIBLE TO OPERATOR	CONTROL ROOM LOCATION INACCESSIBLE TO OPERATOR	LOCAL LOCATION ACCESSIBLE TO OPERATOR	LOCAL LOCATION INACCESSIBLE TO OPERATOR	FIELD LOCATED	INSTRUMENT LIGHTED																																																																																																																																																																																																																		
DISCRETE INSTRUMENTS																																																																																																																																																																																																																								
HMI FROM DISTRIBUTED CONTROL SYSTEM																																																																																																																																																																																																																								
SCADA DISPLAY / COMPUTER FUNCTION																																																																																																																																																																																																																								
PROGRAMMABLE LOGIC CONTROLLER																																																																																																																																																																																																																								
	FIRST LETTER		SUCCEEDING LETTERS																																																																																																																																																																																																																					
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER																																																																																																																																																																																																																			
A	ANALYSIS		ALARM																																																																																																																																																																																																																					
B	BURNER, COMBUSTION		USERS CHOICE	USERS CHOICE	USERS CHOICE																																																																																																																																																																																																																			
C	USERS CHOICE			CONTROL	CLOSED																																																																																																																																																																																																																			
D	USERS CHOICE	DIFFERENTIAL																																																																																																																																																																																																																						
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)																																																																																																																																																																																																																					
F	FLOW RATE	RATIO (FRACTION)																																																																																																																																																																																																																						
G	USER'S CHOICE		GLASS, VIEWING DEVICE																																																																																																																																																																																																																					
H	HAND				HIGH																																																																																																																																																																																																																			
I	CURRENT (ELECTRICAL)		INDICATE																																																																																																																																																																																																																					
J	POWER	SCAN																																																																																																																																																																																																																						
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION																																																																																																																																																																																																																				
L	LEVEL		LIGHT		LOW																																																																																																																																																																																																																			
M	USER'S CHOICE	MOMENTARY			MIDDLE, INTERMEDIATE																																																																																																																																																																																																																			
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE																																																																																																																																																																																																																			
O	USER'S CHOICE		ORIFICE, RESTRICTION																																																																																																																																																																																																																					
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION																																																																																																																																																																																																																					
Q	QUANTITY	INTEGRATE, TOTALIZE																																																																																																																																																																																																																						
R	RADIATION		RECORD																																																																																																																																																																																																																					
S	SPEED, FREQUENCY	SAFETY		SWITCH																																																																																																																																																																																																																				
T	TEMPERATURE			TRANSMIT																																																																																																																																																																																																																				
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION																																																																																																																																																																																																																			
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER, LOUVER																																																																																																																																																																																																																				
W	WEIGHT, FORCE		WELL																																																																																																																																																																																																																					
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED																																																																																																																																																																																																																			
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT																																																																																																																																																																																																																				
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT																																																																																																																																																																																																																				
<p>LINE LEGEND</p> <p>* FOR PACKAGE SYSTEMS, FIELD ASSEMBLY MAY BE REQ'D AND MAY INCLUDE PROVIDING INTERCONNECTIVE PLUMBING AND WIRING. ITEMS IDENTIFIED WITH A (V) ARE EXPECTED TO BE SHIPPED LOOSE.</p>		<p>VALVE SYMBOLS</p>					<p>PLC I/O SIGNALS</p>																																																																																																																																																																																																																	
<p>ACTUATOR SYMBOLOGY</p> <p>NOTE: ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC) XX: NO =NORMALLY OPEN NC =NORMALLY CLOSED FLP=FAIL TO LAST POSITION CS-1 CONSTANT SPEED CS-2 TWO SPEED AS ADJUSTABLE SPEED</p>		<p>PIPE SYMBOLS</p>					<p>INTERFACE SYMBOLS</p> <p>S = SOURCE DRAWING NO. D = DESTINATION DRAWING NO.</p>																																																																																																																																																																																																																	
		<p>MISCELLANEOUS SYMBOLS</p>																																																																																																																																																																																																																						



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED EGBC #1001547



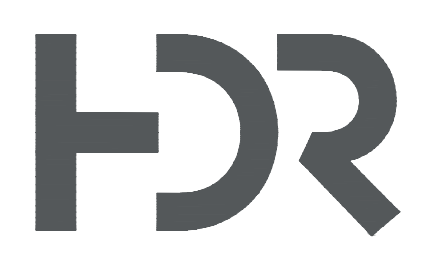
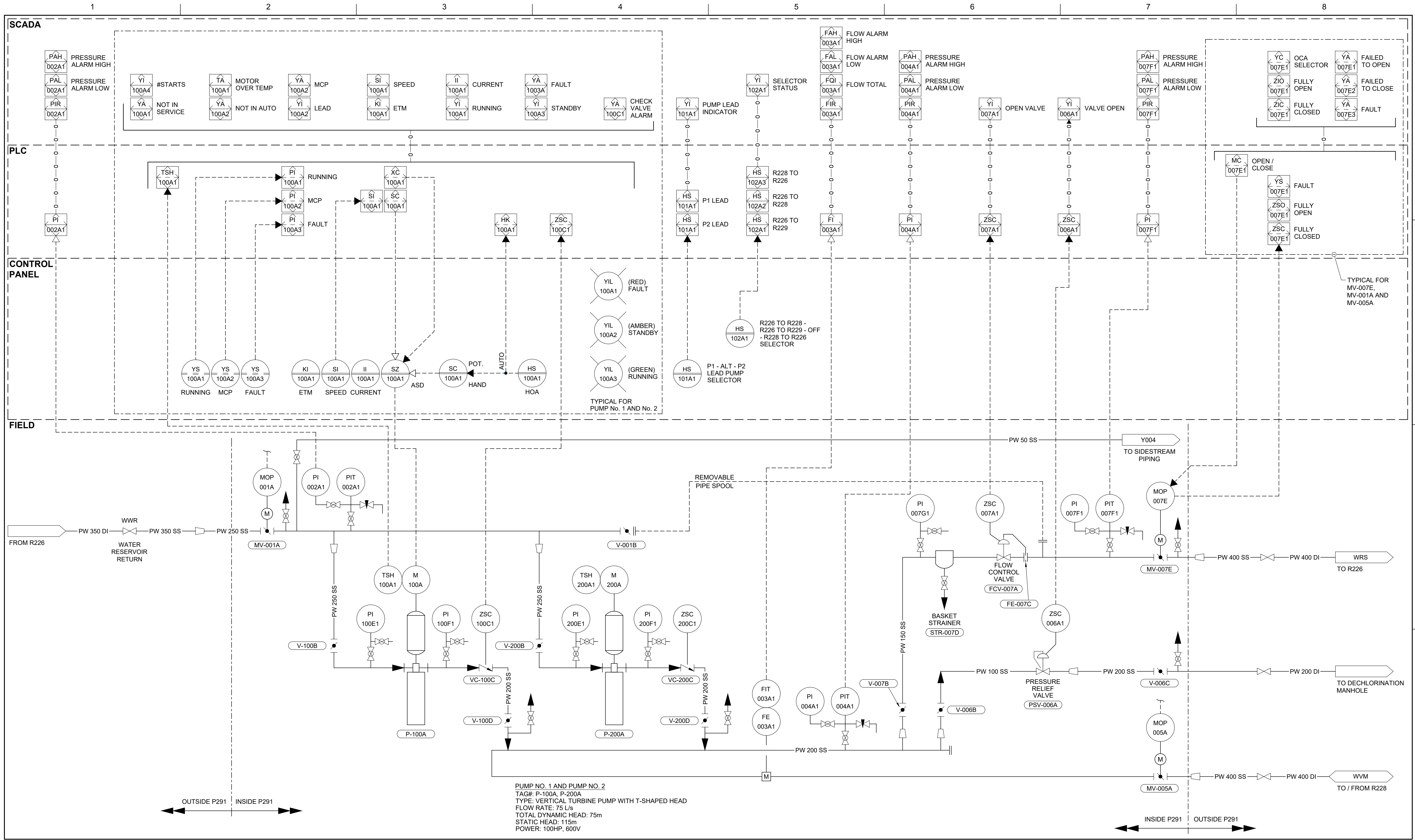
SOUTH WHISTLER WATER SUPPLY PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP STATION AND WATER TREATMENT FACILITY

LEGEND AND NOTES

FILENAME	10299470-Y01-201-Y001.dwg
SCALE	NO SCALE

SHEET Y001



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED
EGBC
#1001547

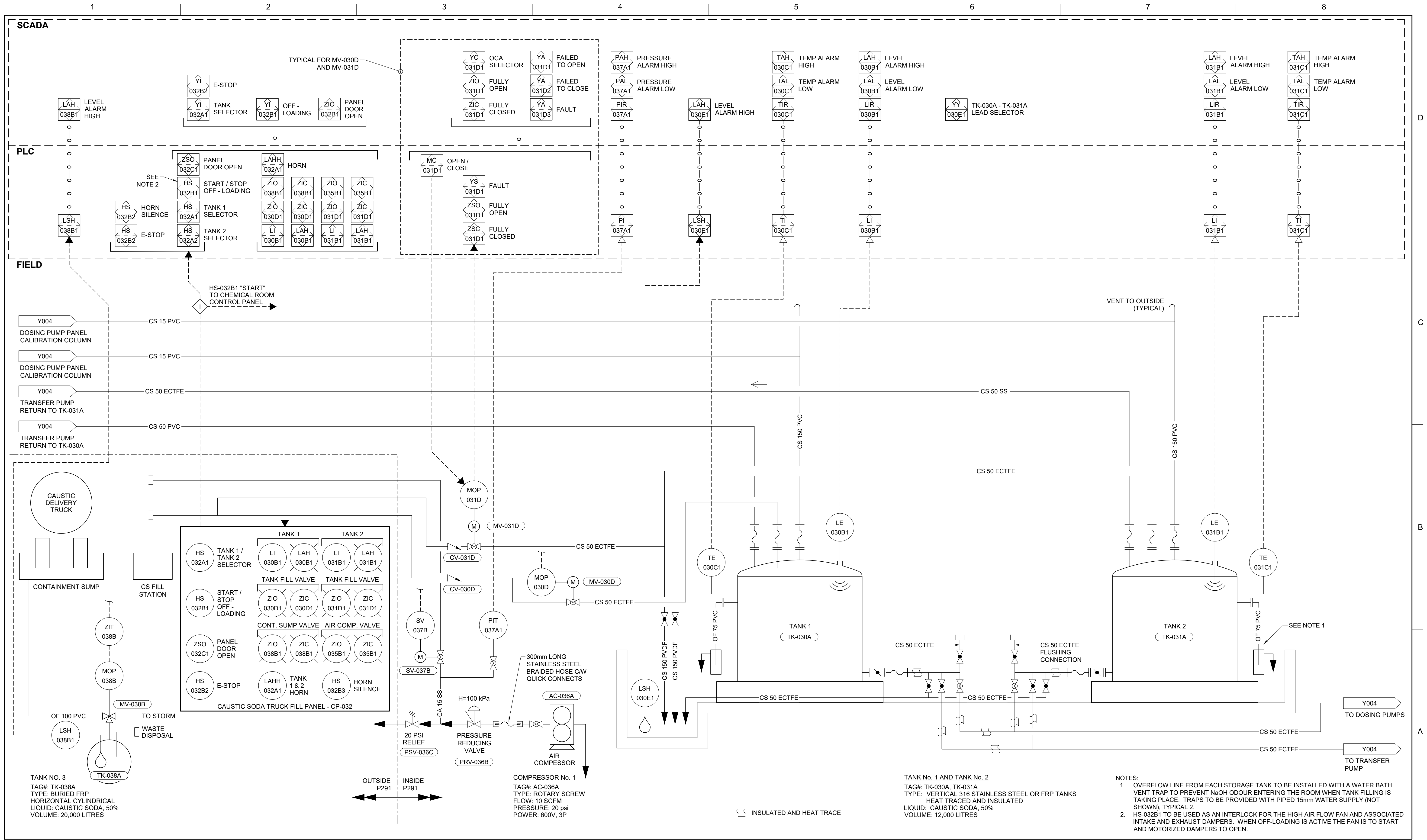


SOUTH WHISTLER
WATER SUPPLY
PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PROCESS AND INSTRUMENTATION DIAGRAM
PROCESS PUMPING AND PIPING

FILENAME	10299470-Y01-201-Y002.dwg	SHEET	Y002
SCALE	NO SCALE		

2023



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

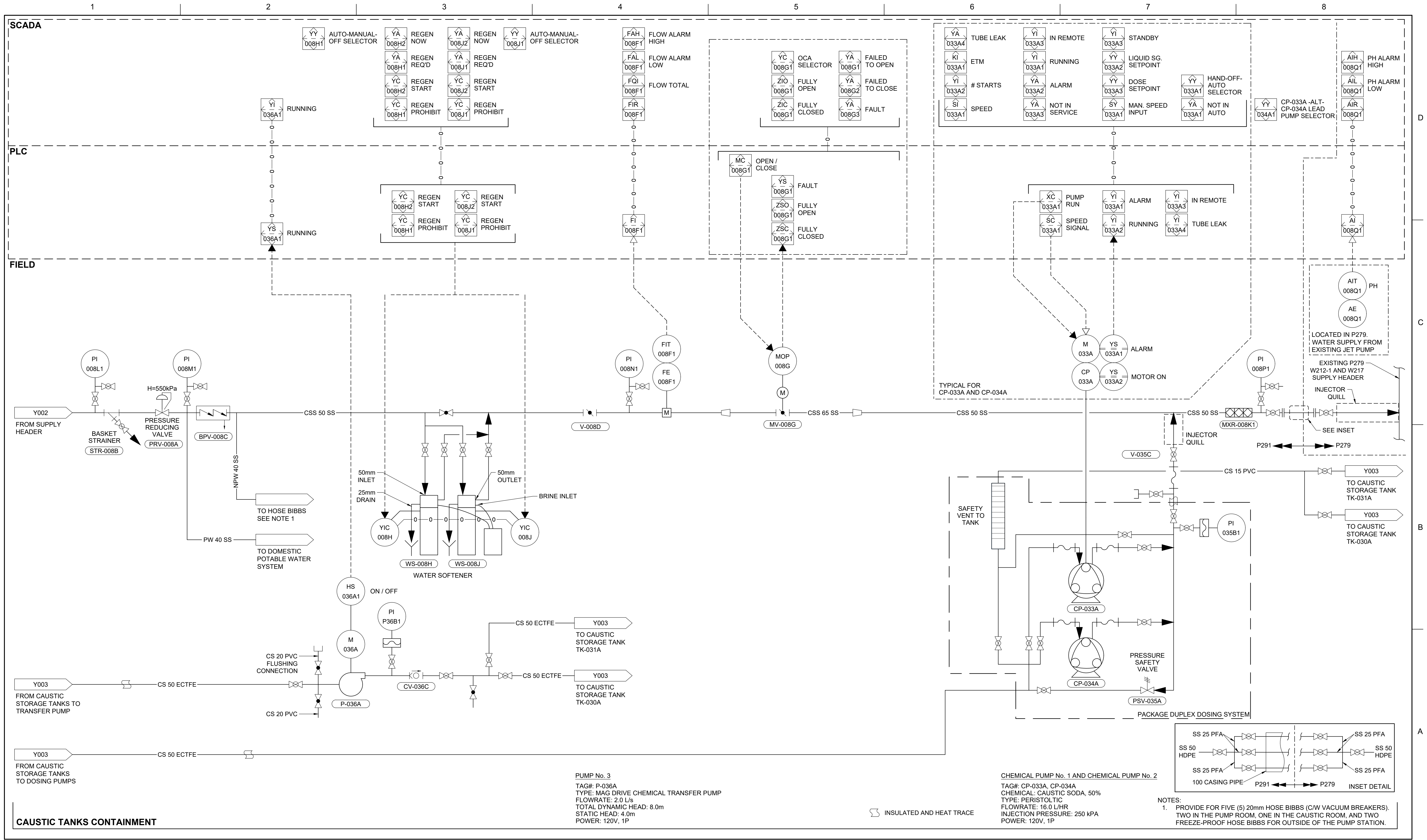
ORIGINAL
SEALED
EGBC
#1001547



SOUTH WHISTLER
WATER SUPPLY
PHASE 2

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PROCESS AND INSTRUMENTATION DIAGRAM
CAUSTIC STORAGE TANKS AND PIPING**

FILENAME | 10299470-Y01-201-Y002.dwg | SHEET
SCALE | NO SCALE | **Y003**



ISSUE	DATE	DESCRIPTION	PROJECT MANAGER	M. DAY
0	2023-09-19	ISSUED FOR TENDER	CIVIL	MD
			STRUCTURAL	MD
			ARCHITECTURAL	WB
			PROCESS	MM
			MECHANICAL	MM
			ELECTRICAL	MM
			INSTRUMENTATION	MM
			PROJECT NUMBER	E20307

ORIGINAL
SEALED
EGBC
#1001547

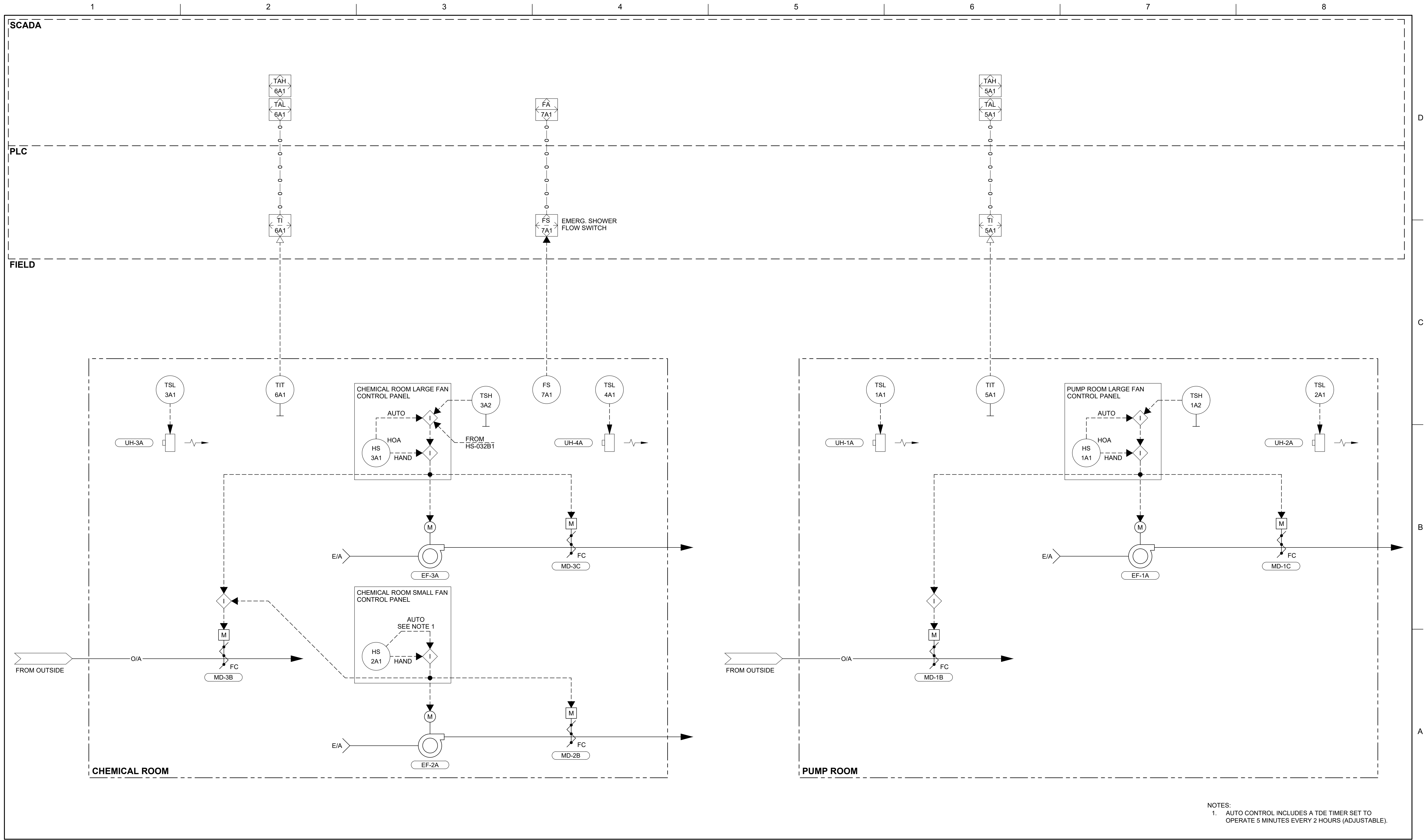


**SOUTH WHISTLER
WATER SUPPLY
PHASE 2**

**P291 - SOUTH WHISTLER BOOSTER PUMP
STATION AND WATER TREATMENT FACILITY
PROCESS AND INSTRUMENTATION DIAGRAM
SIDESTREAM SUPPLY, CAUSTIC DOSING PUMP
AND TRANSFER PUMP**

FILENAME	10299470-Y01-201-Y002.dwg	SHEET	Y004
SCALE	NO SCALE		

2023



NOTES:
 1. AUTO CONTROL INCLUDES A TDE TIMER SET TO OPERATE 5 MINUTES EVERY 2 HOURS (ADJUSTABLE).



ISSUE	DATE	DESCRIPTION
0	2023-09-19	ISSUED FOR TENDER

PROJECT MANAGER	M. DAY
CIVIL	MD
STRUCTURAL	
ARCHITECTURAL	WB
PROCESS	MM
MECHANICAL	MM
ELECTRICAL	
INSTRUMENTATION	MM
PROJECT NUMBER	E20307

ORIGINAL SEALED
 EGBC
 #1001547



SOUTH WHISTLER
 WATER SUPPLY
 PHASE 2

P291 - SOUTH WHISTLER BOOSTER PUMP
 STATION AND WATER TREATMENT FACILITY
 PROCESS AND INSTRUMENTATION DIAGRAM
 HVAC

FILENAME	10299470-Y01-201-Y002.dwg	SHEET	Y005
SCALE	NO SCALE		

2023