



REQUEST FOR TENDER No. 22-003

Chase River Pump Station Upgrades

Addendum 1

Issued: February 1, 2022

29 pages

Closing Date & Time: on or before 3:00 PM Pacific Time on March 3, 2022

This addendum shall be read in conjunction with and considered as an integral part of the Request for Tender. Revisions supersede the information contained in the original Tender or previously issued Addendum. No consideration will be allowed for any extras due to any Vendor not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

Tender Addendum

1. Note – Sealed structural drawing CRPS-S-202 has been revised and Rev 2 is attached. (1 page)
2. Note – Sealed structural drawing CRPS-S-203 has been revised and Rev 2 is attached. (1 page)
3. Note – Unsealed and unprotected copies of the mechanical and structural drawings are attached for bidder convenience only. The sealed versions of the drawings remain the official RFT documents. (26 pages)

End of Addendum 1

CHASE RIVER - PUMP STATION UPGRADES

GENERAL DRAWINGS

DRAWING NO.	PROJECT	TITLE
CRPS:G:006	CHASE RIVER PUMP STATION UPGRADES	COVER SHEET-KEY PLAN DRAWING INDEX AND GENERAL NOTES

CIVIL DRAWINGS

DRAWING NO.	PROJECT	TITLE
CRPS:C:117	CHASE RIVER PUMP STATION UPGRADES	SITE PLAN

PROCESS DRAWINGS

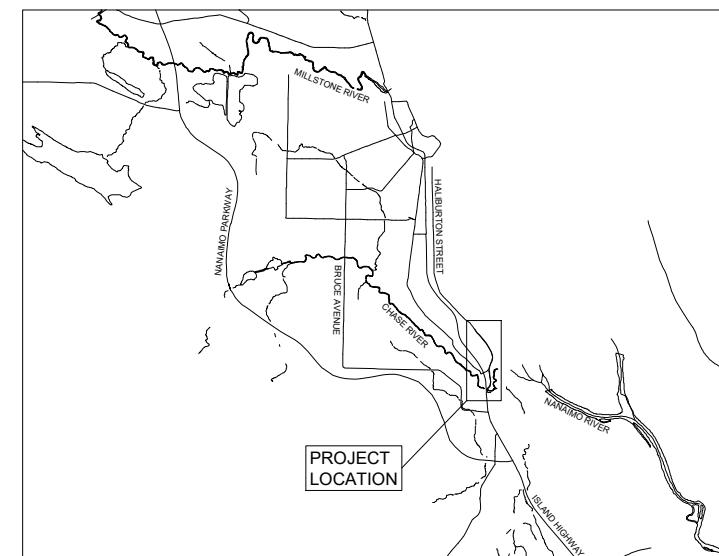
DRAWING NO.	PROJECT	TITLE
CRPS:P:001	CHASE RIVER PUMP STATION UPGRADES	LEGEND AND ABBREVIATIONS
CRPS:P:101	CHASE RIVER PUMP STATION UPGRADES	PROCESS FLOW DIAGRAM
CRPS:P:102	CHASE RIVER PUMP STATION UPGRADES	PUMP STATION

MECHANICAL DRAWINGS

DRAWING NO.	PROJECT	TITLE
CRPS:M:20 DEMO	CHASE RIVER PUMP STATION UPGRADES	FLOOR PLAN DEMOLITION
CRPS:M:20	CHASE RIVER PUMP STATION UPGRADES	FLOOR PLAN
CRPS:M:20 DEMO	CHASE RIVER PUMP STATION UPGRADES	FLOOR PLAN DEMOLITION
CRPS:M:20	CHASE RIVER PUMP STATION UPGRADES	FLOOR PLAN
CRPS:M:210	CHASE RIVER PUMP STATION UPGRADES	STANDARD DETAILS
CRPS:M:211	CHASE RIVER PUMP STATION UPGRADES	SECTION VIEW
CRPS:M:212 DEMO	CHASE RIVER PUMP STATION UPGRADES	SECTIONS DEMOLITION
CRPS:M:212	CHASE RIVER PUMP STATION UPGRADES	SECTIONS AND DETAILS
CRPS:M:216	CHASE RIVER PUMP STATION UPGRADES	PUMP BASE DETAILS
CRPS:M:221	CHASE RIVER PUMP STATION UPGRADES	PUMP #1 DISCHARGE ISOMETRIC
CRPS:M:222	CHASE RIVER PUMP STATION UPGRADES	PUMP #2 DISCHARGE ISOMETRIC
CRPS:M:223	CHASE RIVER PUMP STATION UPGRADES	PUMP #3 DISCHARGE ISOMETRIC
CRPS:M:224	CHASE RIVER PUMP STATION UPGRADES	PUMP #4 DISCHARGE ISOMETRIC
CRPS:M:225	CHASE RIVER PUMP STATION UPGRADES	PUMP #5 DISCHARGE ISOMETRIC
CRPS:M:226	CHASE RIVER PUMP STATION UPGRADES	PUMP #2 AND PUMP #4 BYPASS DISCHARGE ISOMETRIC
CRPS:M:227	CHASE RIVER PUMP STATION UPGRADES	PUMP HEADER ISOMETRIC
CRPS:LDT:001	CHASE RIVER PUMP STATION UPGRADES	LINE DESIGNATION TABLE LINE LIST
CRPS:LDT:002	CHASE RIVER PUMP STATION UPGRADES	LINE DESIGNATION TABLE LINE LIST

STRUCTURAL DRAWINGS

DRAWING NO.	PROJECT	TITLE
CRPS:S:202	CHASE RIVER PUMP STATION UPGRADES	PUMP PLATFORM PLAN AND DETAILS
CRPS:S:203	CHASE RIVER PUMP STATION UPGRADES	PUMP PLATFORM PLAN AND DETAILS



LOCATION PLAN
1:50000

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS			REVISIONS			



PROJECT NAME CHASE RIVER PUMP STATION UPGRADES			
DRAWN JH	CHASE RIVER PUMP STATION GENERAL COVER SHEET, KEY PLAN DRAWING INDEX AND GENERAL NOTES		
DESIGNED MP			
CHECKED JG			
APPROVED JG			
DRAWING NUMBER CRPS-G-006	SHEET -	PROJECT NO. 707564	SCALE NTS
		DATE APR 2021	REV 0

INSTRUMENT AND FUNCTION SYMBOLS

TYPICAL INSTRUMENT IDENTIFICATION (ISA S5.1)

OUTPUT — AREA FUNCTION CODE (OPTIONAL)
 25 — FUNCTIONAL IDENTIFICATION CODE (DEVICE)
 PDIT — BASIC INSTRUMENT
 123 — PROCESS IDENTIFIER
 A — DEVICE SUFFIX

INPUT — XXXX — INSTRUMENT FIELD MOUNTED
 XX — INSTRUMENT PANEL MOUNTED
 XXXX — INSTRUMENT BACK OR REAR OF PANEL MOUNTED
 XX — INDICATING LIGHT FIELD MOUNTED
 XXXX — INDICATING LIGHT PANEL MOUNTED
 XX — PLC TAG
 XXXX — SCADA POINT
 XXX — INSTRUMENT WITH PLC I/O

AIR RELIEF VALVE
 FLOW STREAM TO CONNECTION NOT SHOWN ON OTHER DRAWING
 ROCK TRAP
 SPECTACLE BLIND TO BE REMOVED
 DRAIN
 ANNULAR SEAL

INSTRUMENT SERVICES:
 DC DIRECT CURRENT POWER SUPPLY
 TW TEMPERATURE WELL
 AC AC ELECTRICAL SUPPLY
 PE PRESSURE ELEMENT
 AS AIR SUPPLY
 TE TEMPERATURE ELEMENT
 LE LEVEL ELEMENT
 WS WATER SUPPLY

GATE VALVE SYMBOL
 VALVE NORMALLY OPERATED OPEN
 VALVE NORMALLY OPERATED CLOSED
 GLOBE VALVE
 NEEDLE VALVE
 ANGLE VALVE
 BUTTERFLY VALVE
 CHECK VALVE
 BALL VALVE
 KNIFE GATE VALVE
 PLUG VALVE
 AIR VACUUM VALVE (ANTI-SIPHON)
 UNION
 THREE WAY VALVE
 THREE WAY VALVE NORMALLY OPERATED LEFT PORT SHUT
 THREE WAY VALVE NORMALLY OPERATED RIGHT PORT SHUT
 VACUUM RELIEF VALVE
 PRESSURE RELIEF VALVE
 PRESSURE REGULATING VALVE
 BACK PRESSURE REGULATING VALVE
 DIAPHRAGM OPERATED VALVE
 MOTOR OPERATED VALVE
 PISTON OPERATED VALVE
 SPRING OPPOSED SINGLE ACTING PISTON ACTUATOR
 DOUBLE ACTING PISTON ACTUATOR

INSTRUMENT AND FUNCTION SYMBOLS

DIAPHRAGM SEAL
 INTERLOCK
 VORTEX FLOW SENSOR
 PITOT TUBE
 SONIC FLOWMETER
 PROPELLER OR TURBINE METER
 THERMAL FLOW ELEMENT
 SIGHT GLASS
 FLOW STRAIGHTENING VANES
 VENTURI OR FLOW TUBE
 ORIFICE PLATE
 ANNUNCIATOR HORN
 ANNUBAR
 MAGNETIC FLOWMETER
 I TO P TRANSDUCER
 FILTER-REGULATOR AIRSET
 FLUME FLOWMETER ELEMENT
 ROTAMETER
 STRAINER
 HOSE STATION
 LINE BLANKED OFF
 SOLENOID OPERATED VALVE
 VARIABLE SPEED
 STROKE ADJUST

PNEUMATIC SYMBOLS (ISO 1219)

NUMBER OF SQUARES EQUALS NUMBER OF POSITIONS
 2 POSITION 3 POSITION
 PIPEWORK IS SHOWN CONNECTED TO PORTS WITH SOLENOID IN UNOPERATED POSITION. PORTS ARE NUMBERED

ARROWS SHOW FLOW DIRECTION IN EACH POSITION
 T ⊥ INTERNAL FLOW BLOCK
 SOLENOID OPERATOR
 PILOT OPERATOR
 SPRING RETURN OPERATOR

EXAMPLE: 2 POSITION, 3 PORT, 3 WAY NORMALLY CLOSED SOLENOID VALVE
 EXAMPLE: 2 POSITION, 5 PORT, 4 WAY DUAL SOLENOID VALVE

MOTOR
 VENTILATION FAN
 PUMP WITH MOTOR
 SUMP PUMP
 METERING PUMP

INSTRUMENT BLOCK DIAGRAM SYMBOLS

PERSONAL COMPUTER
 SINGLE LOOP CONTROLLER
 CIRCULAR CHART RECORDER
 PROGRAMMABLE LOGIC CONTROLLER

MODEM
 TELEPHONE
 PANEL INDICATOR
 ANNUNCIATOR PANEL
 MCC
 RADIO TRANSCEIVER

INSTRUMENT ELECTRICAL WIRING

CONNECTION TO DEDICATED INSTRUMENT GROUND.
 CONNECTION TO ELECTRICAL SUPPLY GROUND.
 SHIELD TERMINATION TO BE LEFT UNCONNECTED CLOSE CUT SHIELD DRAIN WIRE AND INSULATE EXPOSED SHIELD.

INSTRUMENT LINE SYMBOLS

INSTRUMENT SUPPLY OR CONNECTION TO PROCESS
 PNEUMATIC SIGNAL
 ELECTRICAL SIGNAL
 CAPILLARY TUBE
 VENDOR PACKAGE BOUNDARY
 GUIDED SONIC OR ELECTROMAGNETIC
 UN-GUIDED SONIC OR ELECTROMAGNETIC
 PNEUMATIC BINARY SIGNAL
 ELECTRIC BINARY SIGNAL
 DIGITAL COMMUNICATION
 MECHANICAL LINKAGE
 TELEPHONE LINE

PIPING/EQUIPMENT LINE

PRIMARY PROCESS FLOW
 SECONDARY PROCESS FLOW

EXISTING PIPE MATERIALS

AC	ASBESTOS CEMENT
DI	DUCTILE IRON
RC	REINFORCED CONCRETE

COMMODITIES

DCW	DOMESTIC COLD WATER	RWW	RAW WASTEWATER
DHW	DOMESTIC HOT WATER	SA	SERVICE AIR
DR	DRAIN	SEP	SEPTAGE
FC	FERROUS CHLORIDE	SW	SANITARY WATER
IA	INSTRUMENT AIR	VAP	VENTILATION AIR PIPING
PSW	PLANT SERVICE WATER	VE	VENT

PIPE MATERIAL CODES

A1	STEEL	F1	CAST IRON - GRAVITY
A10	STEEL	G1	COPPER TYPE K
A15	STEEL/STAINLESS	G2	COPPER TYPE L
316L	STAINLESS GR. 316L	G3	COPPER
E1	PVC - PRESSURE	H2	STAINLESS STEEL
E4	PVC - GRAVITY AND SEWER	HDPE	HIGH-DENSITY POLYETHYLENE
E8	FRP	DI	DUCTILE IRON

TREATMENT CODES

(C)	INTERNALLY LINED COAL TAR EPOXY
(E)	EXTERNALLY COATED HIGH BUILD EPOXY
(G)	EXTERNALLY COATED COAL TAR EPOXY
(I)	INSULATED

LINE IDENTIFICATION

100 - RWW - A1 (3)

TREATMENT CODE
 PIPE MATERIAL CODE
 COMMODITY
 LINE SIZE (IN MILLIMETRES)

INSTRUMENT TAGS

FUNCTIONAL IDENTIFICATION CODE (ISA S5.1)														
FIRST LETTER		REMAINING LETTERS												
VARIABLE	MODIFIER	PASSIVE FUNCTIONS	OUTPUT FUNCTION	MODIFIER	PRIMARY ELEMENT	INDICATING TRANSMITTER	INDICATING TRANSMITTER	INDICATING CONTROLLER	RECORDER	SWITCH DEVICE VALVE	SELF ACTUATED VALVE	SAFETY VALVE	ALARM	
					-E	-TF	-IT	-IC	-R	-S	-V	-CV	-SV	-A
A	ANALYTICAL		ALARM		AE	AT	AIT	AIC	AR					AA
B	BURNER, COMBUSTION				BE	BT	BIT	BIC						BA
C	CONDUCTIVITY		CONTROL STATION	CLOSED										
D	DENSITY	DIFFERENTIAL												
E	VOLTAGE		SENSE ELEMENT		EE	ET	EIT							
F	FLOW	RATIO/FRACTION	FAULT, FAILURE	FAST, FOWARD	FE	FT	FIT	FC	FR	FS	FV	FCV	FV	FA
G	GENERAL, GROUPED		GLASS VIEW ELEMENT											GA
H	HAND/HEATER			HIGH				HIC		HS	HV			
I	ELECTRIC CURRENT		INDICATE		IT	IT	JIT							IA
J	POWER				JT									JA
K	TIME	TIMED								KS				KA
L	LEVEL			LOW	LE	LT	LIT	LIC	LR	LS	LV	LCV		LA
M	MOTOR/DRIVE			MIDDLE										
N	CONSISTENCY													
O			ORIFICE	OPEN										
P	PRESSURE, VACUUM		POINT CONNECTION		PE	PT	PIT	PIC	PR	PS	PV	PCV	PSV	PA
Q	QUANTITY	INTERGRATE												
R	DRIVES/LOGIC		RECORDER	REVERSE, RUN										
S	SPEED, FREQUENCY	SAFETY		SWITCH	SE	ST	SIT	SIC	SR	SS				SA
T	TEMPERATURE			TRANSMIT	TE	TT	TIT	TIC	TR	TS	TV	TCV	TSV	TA
U	MULTIVARIABLE													
V	VIBRATION, VISCOSITY		VALVE		VE	VT	VIT		VR					VA
W	WEIGHT, FORCE		WELL		WE	WT	WIT		WS					WA
X	MISC.	X AXIS												
Y	EVENT	Y AXIS	SIGNAL TRANSDUCER	RELAY										
Z	POSITION	Z AXIS		FINAL CONTROL ELEMENT	ZE	ZT	ZIT		ZS					ZA
/				CONVERSION										

ADDITIONAL SPECIFIC TAGS

MC = MOTOR CONTROL	MSP = MOTOR PERMISSIVE	MO = MOTOR OUTPUT - SIGNAL TO COIL/STARTER
MI = MOTOR RUN INDICATION	MM = ACTUAL PUMP	MP = MOTOR PERMISSIVE
MSM = MOTOR FEEDBACK	MV = SOLENOID VALVE	M = ACTUAL DRIVE
MOM = MOTOR COIL	MS = MOTOR RUN STATUS - FEEDBACK	H = HEATER

INSTRUMENT ABBREVIATIONS

SLC	SINGLE LOOP CONTROLLER	L/R	LOCAL-REMOTE SELECTION	PV or MV	PROCESS OR MEASURED VARIABLE
PLC	PROGRAMMABLE LOGIC CONTROLLER	L-O-R	LOCAL-OFF REMOTE SELECTOR	OP	OUTPUT
RES CL2	RESIDUAL CHLORINE	O-S-C	OPEN-STOP-CLOSE SELECTOR	RSP	REMOTE SETPOINT
PH	pH	ESD	EMERGENCY SHUTDOWN	NC	NORMALLY OPERATED CLOSED
DO	DISSOLVED OXYGEN	ACK	ACKNOWLEDGE (ALARM)		
O2	OXYGEN	ENBL	ENABLE		
H/A	HAND-AUTO SELECTION	FC	FAIL CLOSED		
HOA	HAND-OFF-AUTO SELECTION	FL	FAIL LAST		
JOA	JOG-OFF-AUTO SELECTION	FO	FAIL OPEN		
L/L	LEAD-LAG SELECTION	STAT	STATUS		
F/S	FAST-SLOW SELECTION	ALM	ALARM		
OCA	OPEN-CLOSE-AUTO SELECTION	EXH	EXHAUST		
SEL	SELECTOR SWITCH	SP	SETPOINT		
M/A	MANUAL-AUTO SELECTION				

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS	0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG
				REVISIONS			



PROJECT NAME: CHASE RIVER PUMP STATION UPGRADES

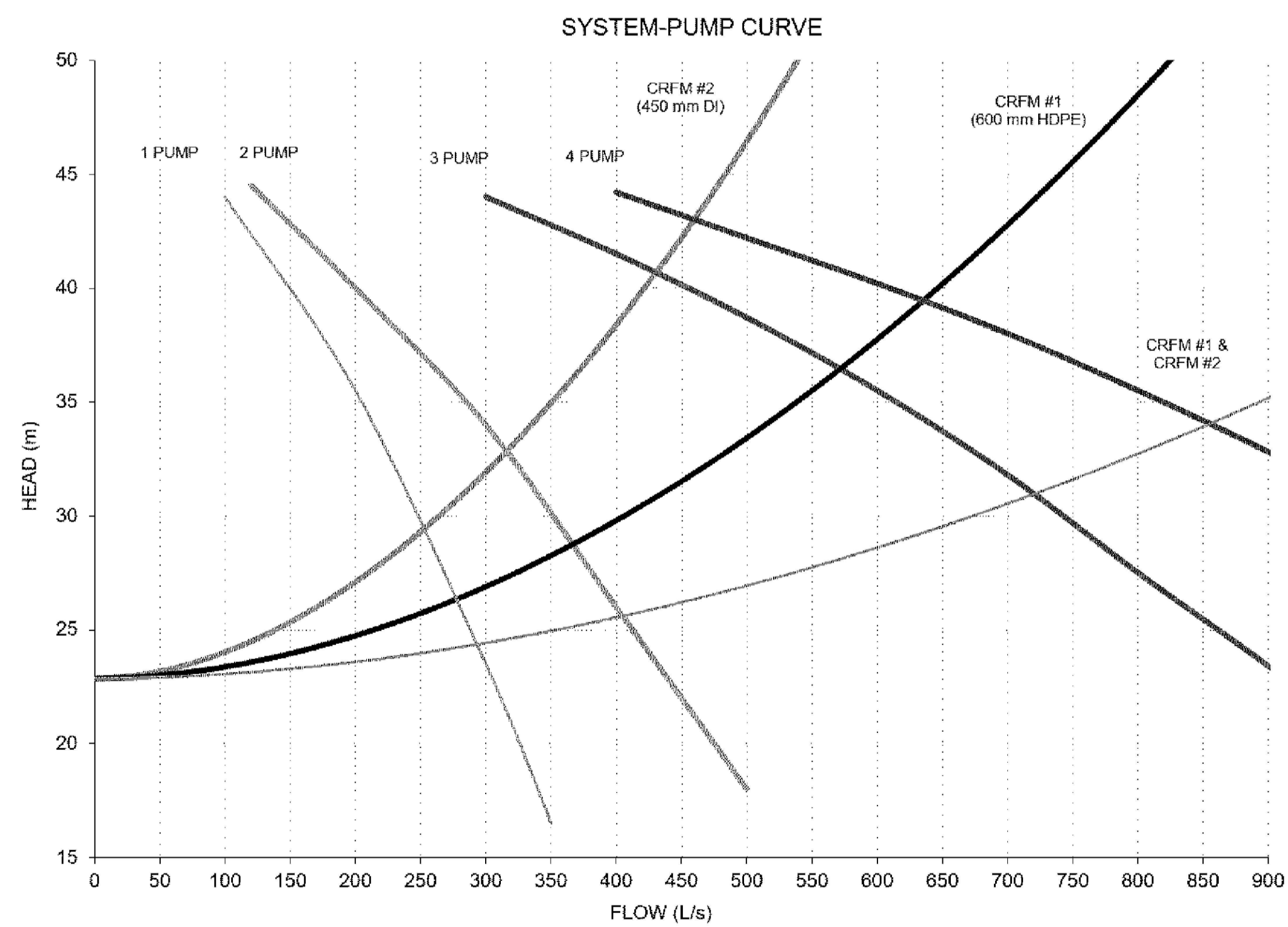
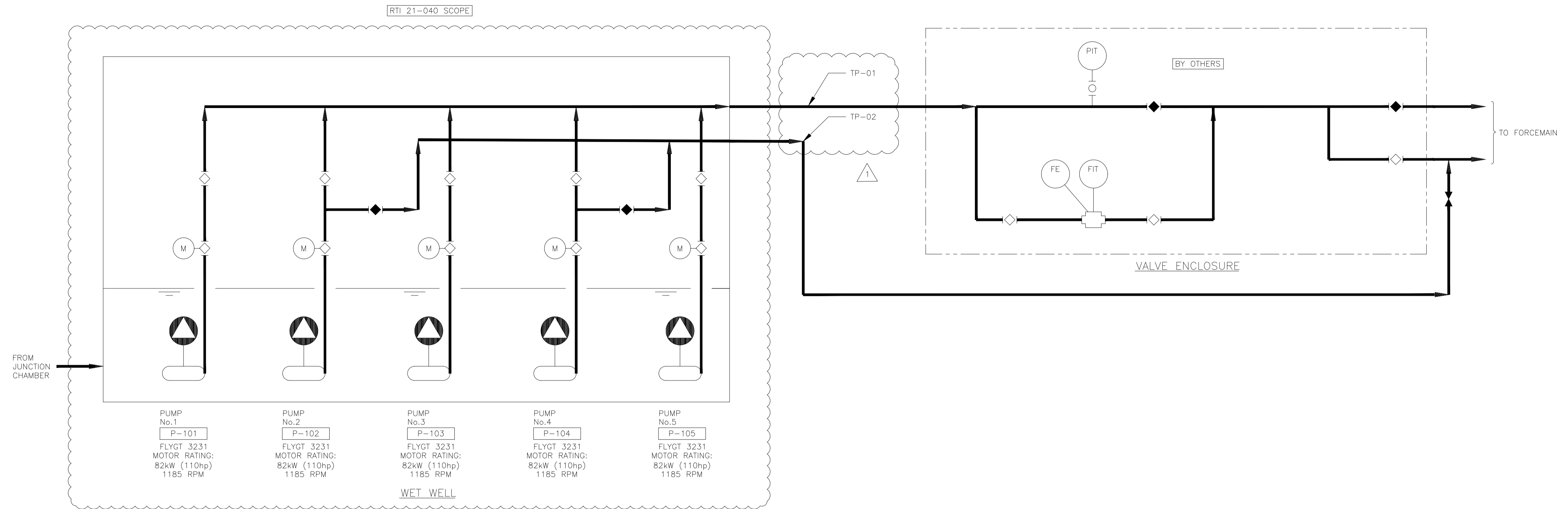
DRAWN: DW
 DESIGNED: RN
 CHECKED: JG
 APPROVED: JG

CHASE RIVER PUMP STATION
 PROCESS
 GENERAL - MECHANICAL/INSTRUMENTATION
 LEGEND AND ABBREVIATIONS

PROJECT NO. 707564
 SCALE N.T.S.
 DATE APR 2021
 REV 0

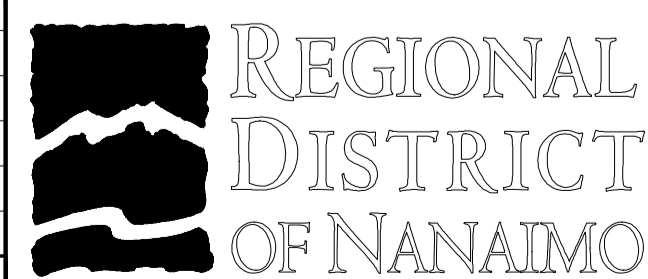
JACOBS

DRAWING NUMBER: CRPS-P-001
 SHEET: []



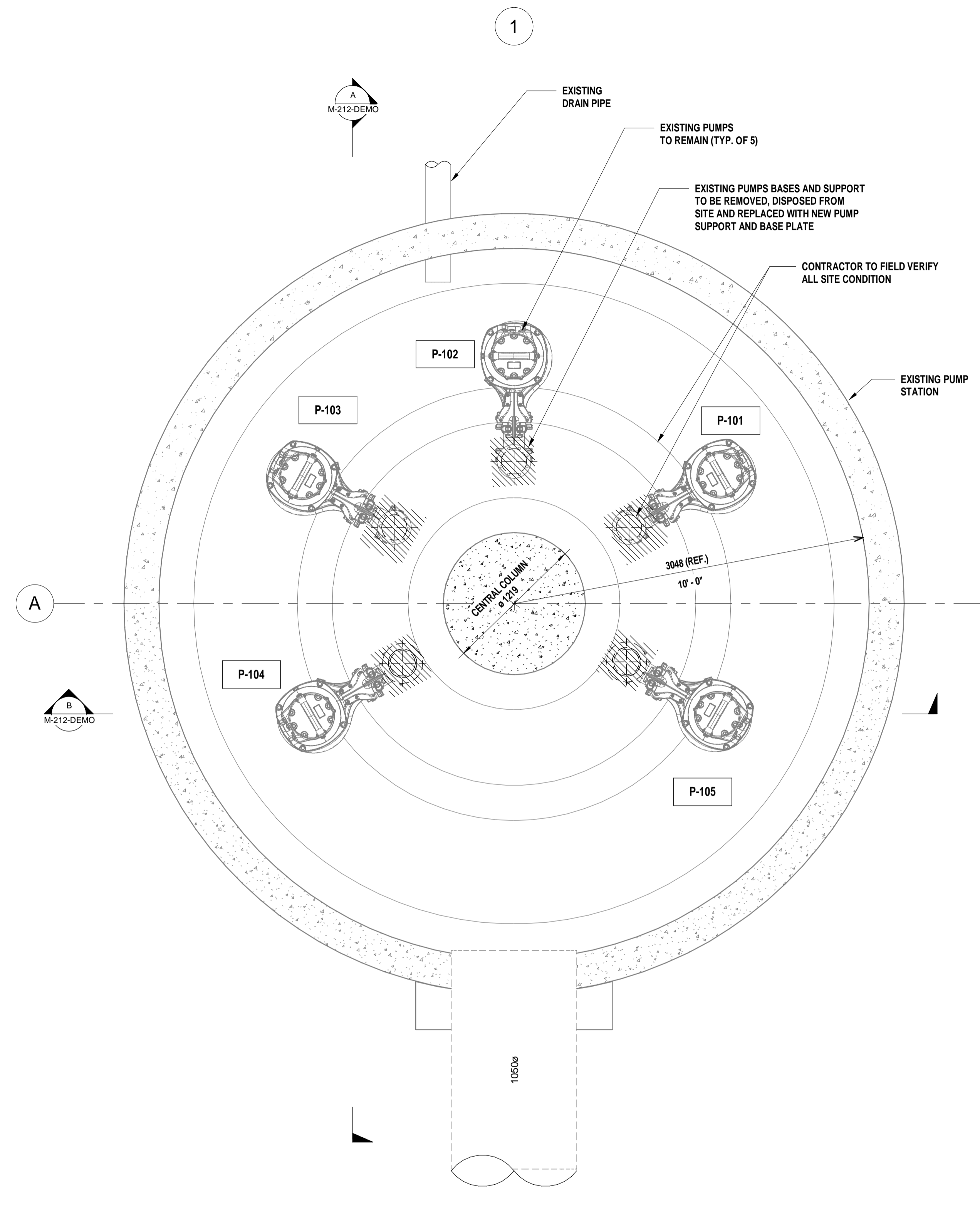
PUMP PERFORMANCE CURVE

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
		1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG
	REFERENCE DRAWINGS			REVISIONS			

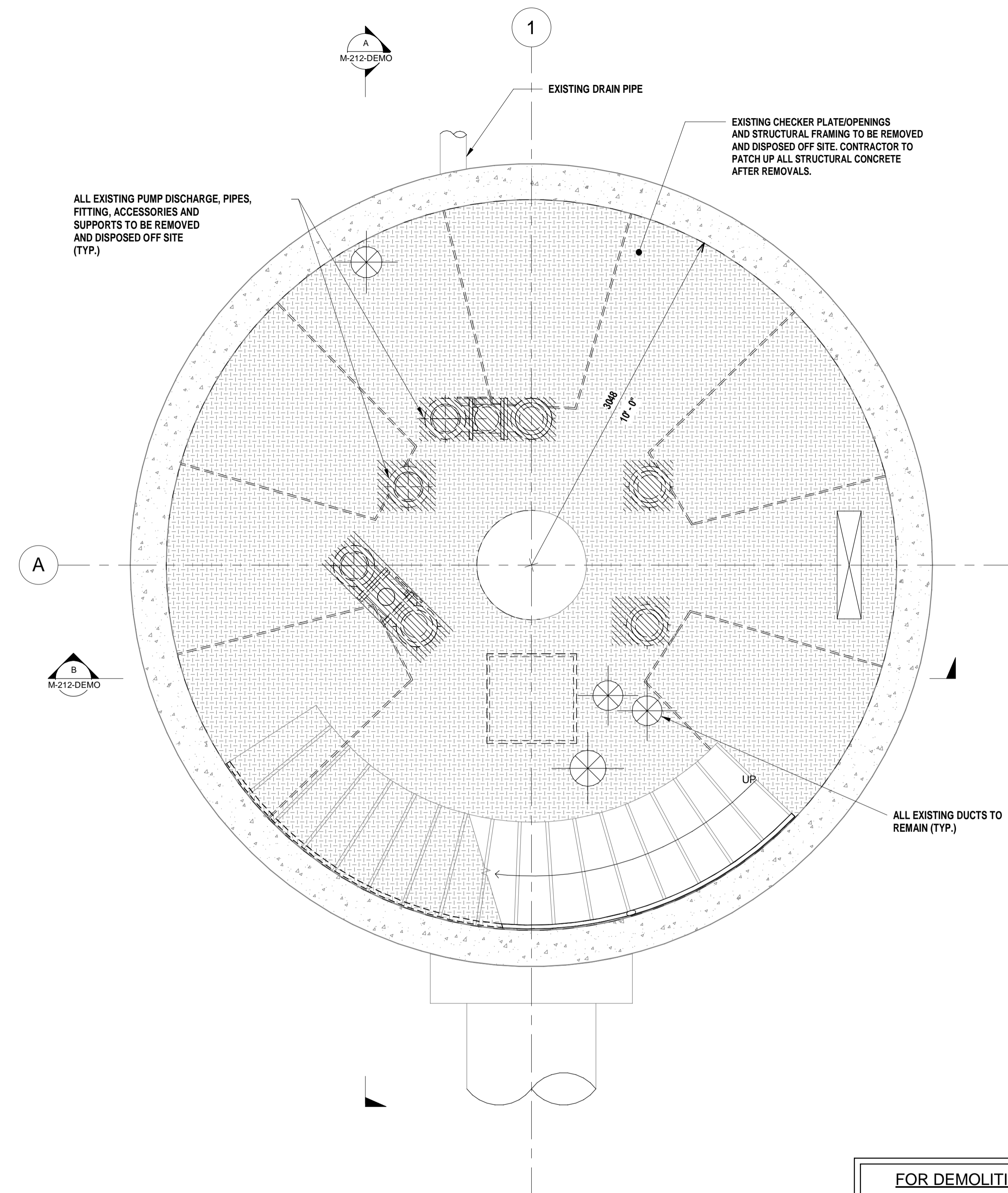


PROJECT NAME			
CHASE RIVER PUMP STATION UPGRADES			
DRAWN	DW	CHASE RIVER PUMP STATION REGIONAL DISTRICT OF NANAIMO PROCESS PROCESS FLOW DIAGRAM	
DESIGNED	CW		
CHECKED	JG		
APPROVED	JG	DRAWING NUMBER	CRPS-P-101
		SHEET	
		DATE	APR 2021
		SCALE	N.T.S.
		REV	1



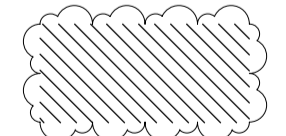


WET WELL @ EL. -4.88m



T/O PLATFORM @ EL. -2.13m

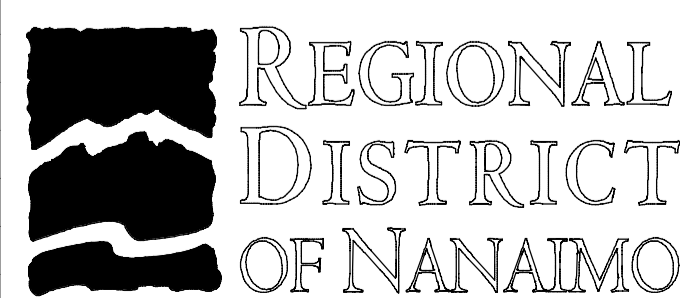
FOR DEMOLITION ONLY
 DISTRICT OF NANAIMO
 CHASE RIVER PUMP STATION UPGRADE PROJECT

 DENOTES ITEMS TO BE DEMOLISHED

DRAWING BECOMES VOID UPON COMPLETION

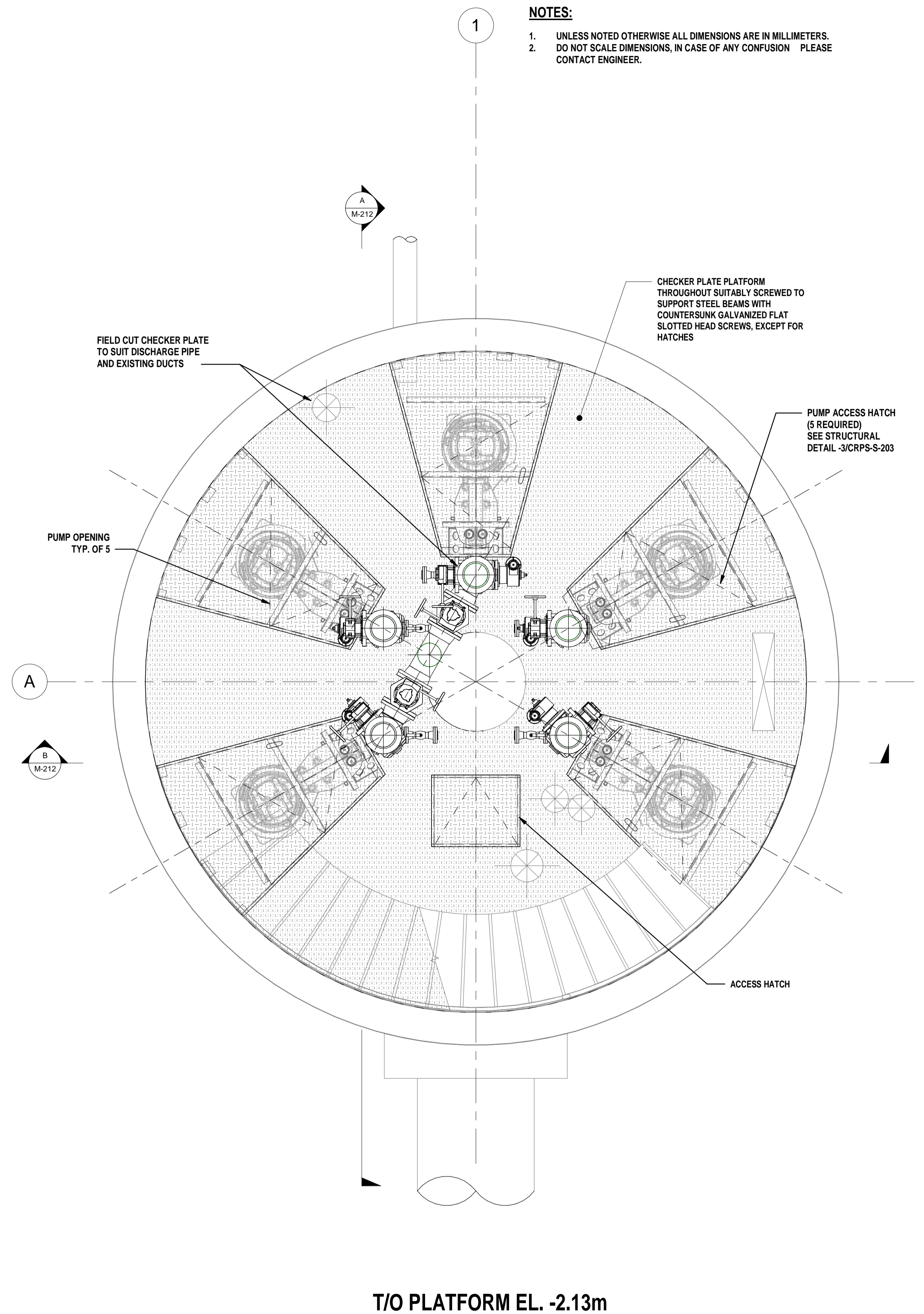
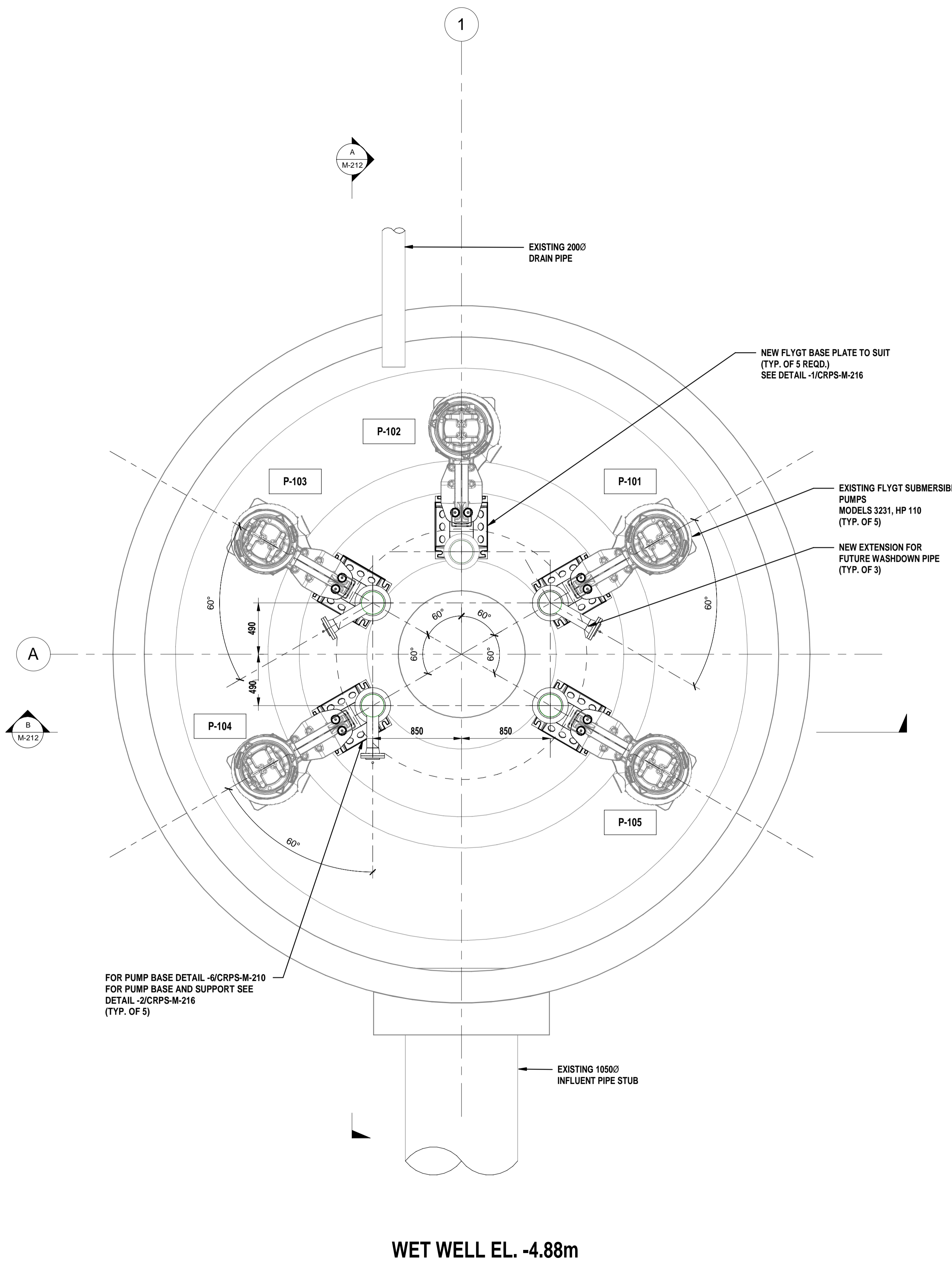
NOTE:
 1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN MILLIMETERS.

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
CRPS-M-212-DEMO	CHASE RIVER PUMP STATION - MECHANICAL SECTIONS - DEMOLITION	0	JUN 2020	ISSUED FOR CONSTRUCTION	SR	JG	JG
REFERENCE DRAWINGS							

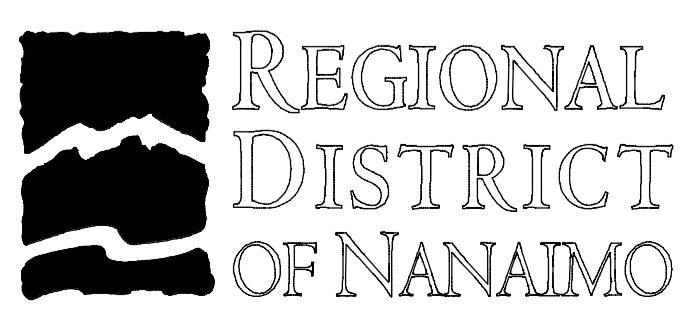


PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAW	SR	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS - DEMOLITION	JACOBS [®]
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	SCALE
APPROVE	JG	707564	N.T.S
DRAWING NUMBER		DAT	RE
CRPS- M- 208- DEMO		APR 2021	0

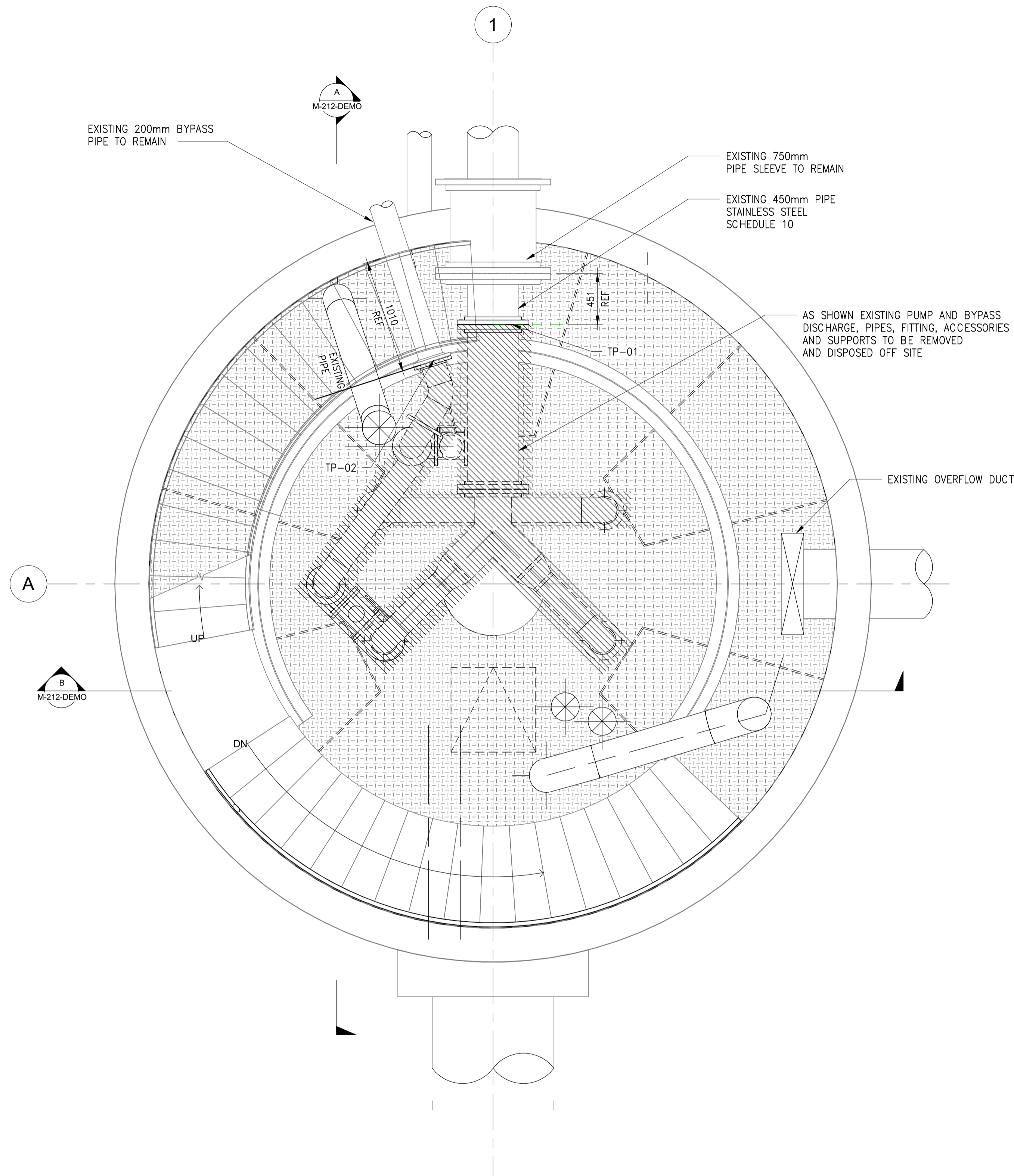
- NOTES:**
- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETERS.
 - DO NOT SCALE DIMENSIONS, IN CASE OF ANY CONFUSION PLEASE CONTACT ENGINEER.



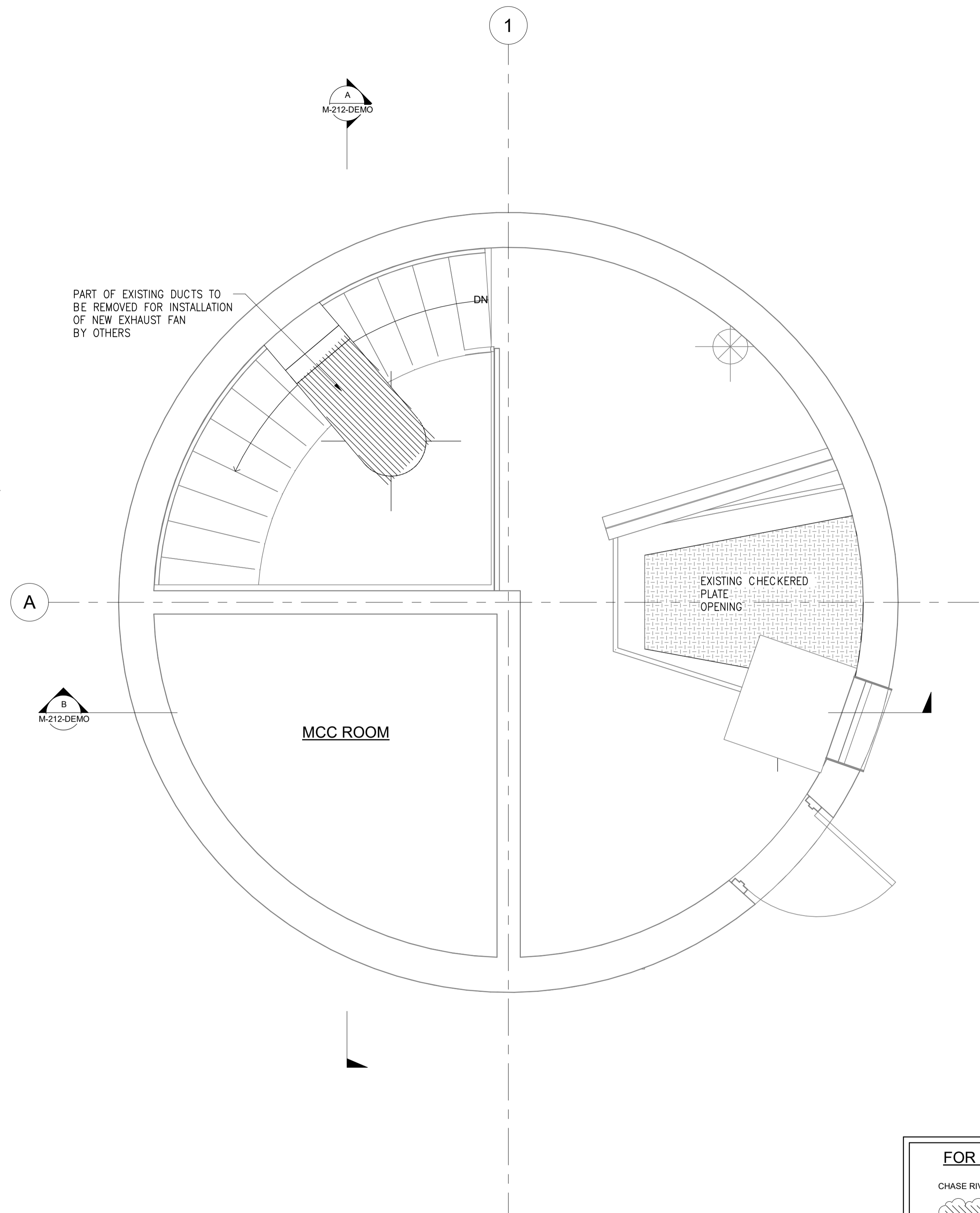
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
CRPS-M-212	CHASE RIVER PUMP STATION MECHANICAL SECTIONS AND DETAILS	0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG
	REFERENCE DRAWINGS			REVISION			



PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAW	SR	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS	JACOBS
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	707564
APPROVE	JG	DAT	APR 2021
DRAWING NUMBER		CRPS- M- 208	SCALE
SHEET		-	N.T.S
		RE	0



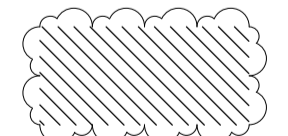
T/O PLATFORM EL. 6.00m



FINISHED GRADE EL. 4.30m

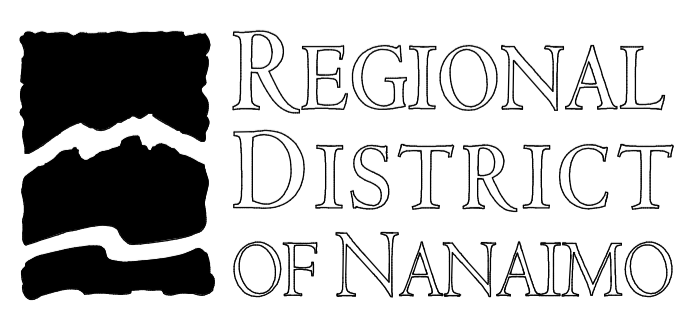
NOTE:
1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN MILLIMETERS.

FOR DEMOLITION ONLY
DISTRICT OF NANAIMO
CHASE RIVER PUMP STATION UPGRADE PROJECT

 DENOTES ITEMS TO BE DEMOLISHED

DRAWING BECOMES VOID UPON COMPLETION

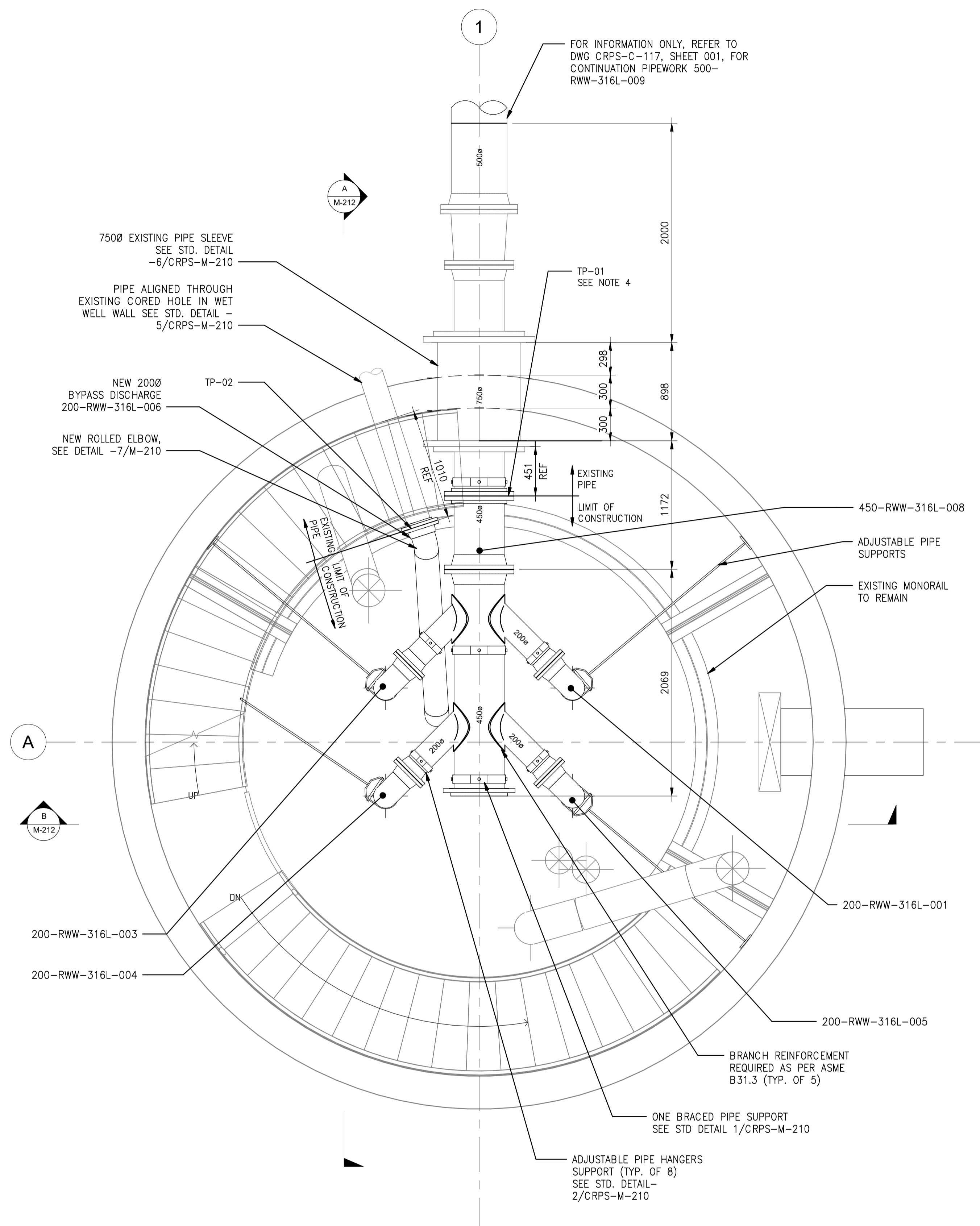
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
CRPS-M-212-DEMO	CHASE RIVER PUMP STATION - MECHANICAL SECTIONS - DEMOLITION	2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	JG	JG
		1	DEC 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG
	REFERENCE DRAWINGS			REVISION			



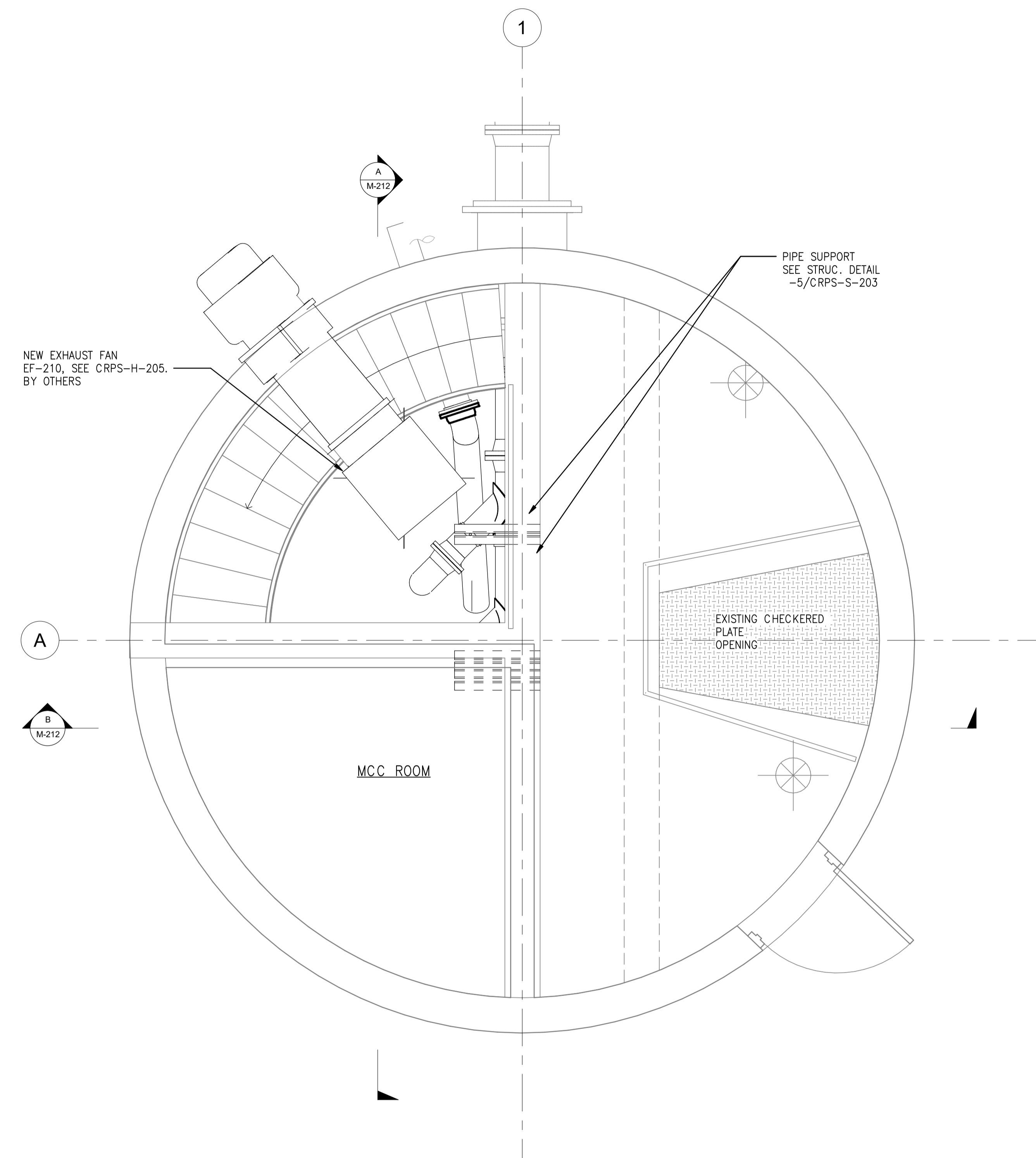
PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS - DEMOLITION	JACOBS
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	SCALE
APPROVED	JG	707564	1 : 25
		DATE	REV
		APR 2021	2
DRAWING NUMBER		SHEET	
CRPS-M-209-DEMO		-	

NOTES:

1. PLUG VALVES TO BE ORIENTATED WITH SEAT IN UPWARD POSITION.
2. INSTALL NEW PUMP DISCHARGE PIPING, VALVES, FITTINGS AND SUPPORTS.
3. UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETERS.
4. EXTENT OF CONTRACT. CONFIRM PIPE ELEVATION AND REFERENCE DIMENSIONS. NOTE RAISED FLANGE HAS BEEN INSTALLED.
5. DO NOT SCALE DIMENSIONS, IN CASE OF ANY CONFUSION, CONTACT ENGINEER-IN-CHARGE

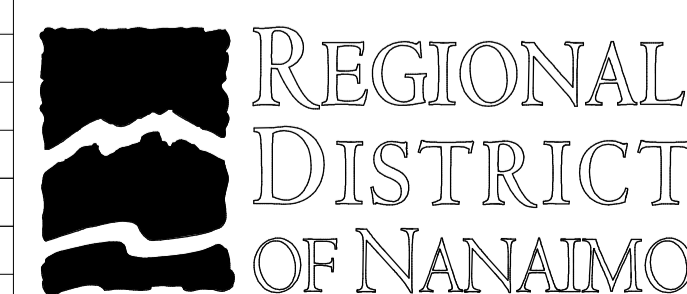


T/O PLATFORM EL. 6.0m
SCALE: 1 : 25

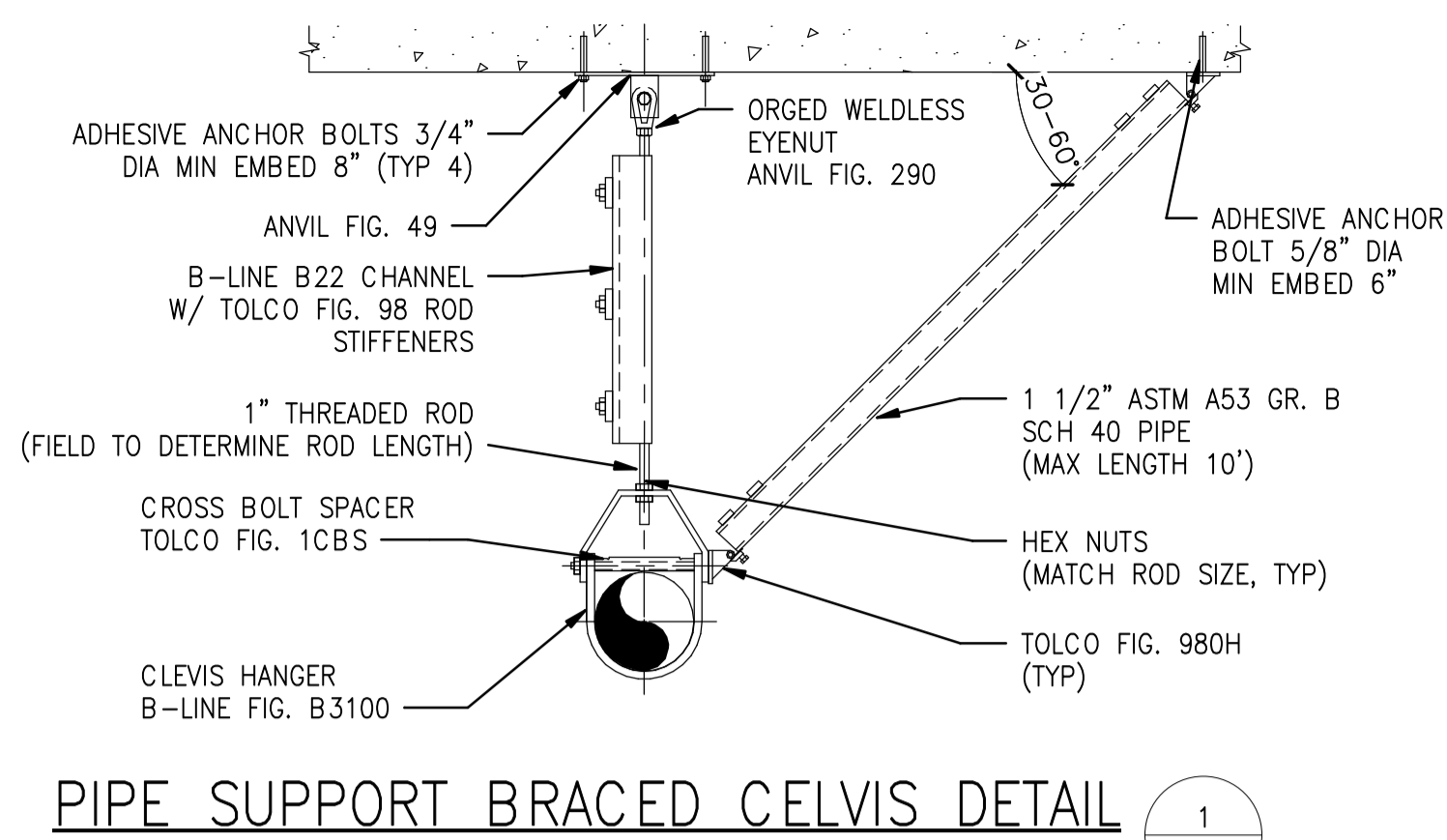


MAIN FLOOR EL. 4.30m
SCALE: 1 : 25

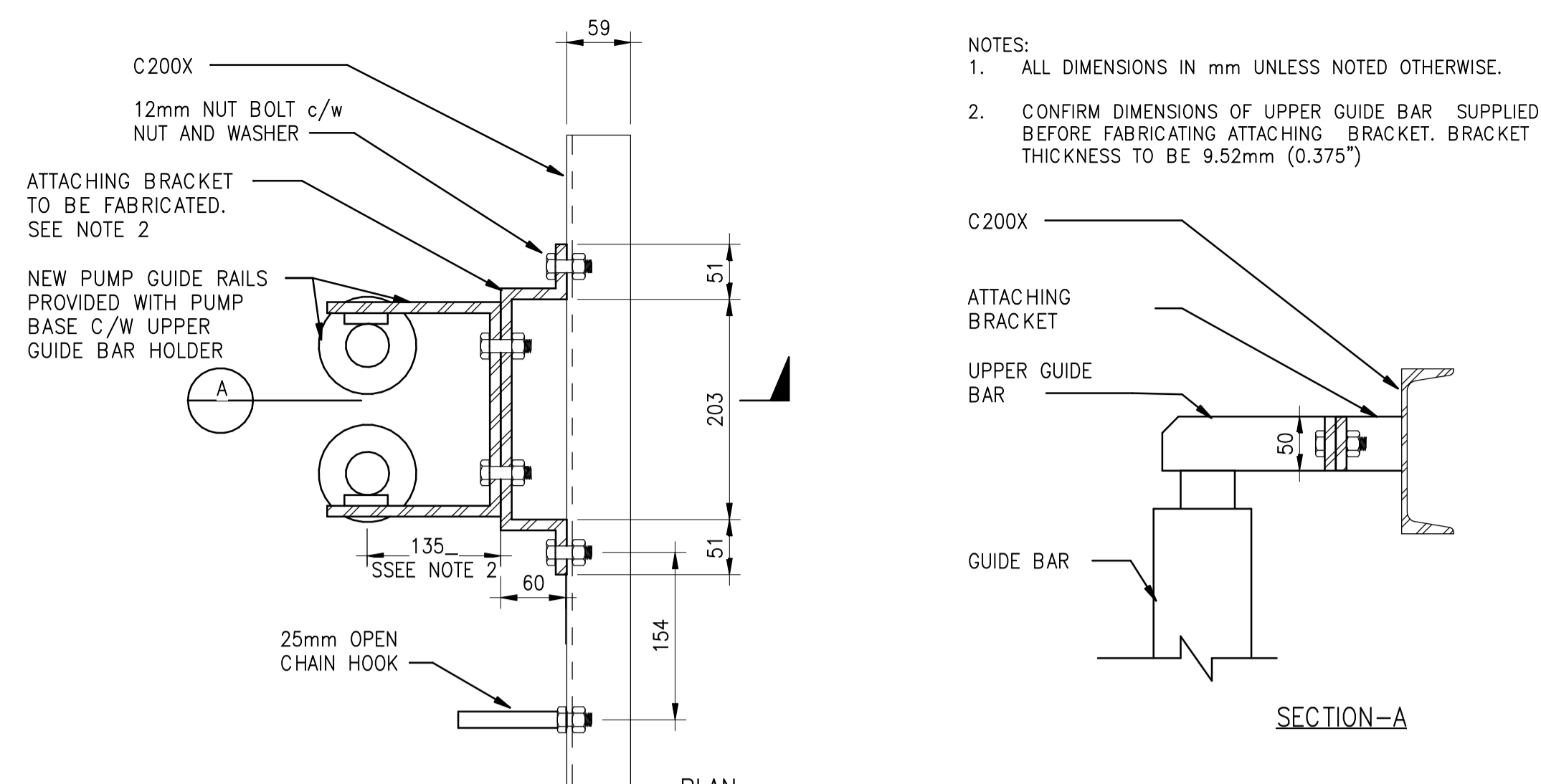
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
		2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	JG	JG
		1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
CRPS-C-117	CHASE RIVER PUMP STATION UPGRADES SITE PLAN	0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG
	REFERENCE DRAWINGS			REVISION			



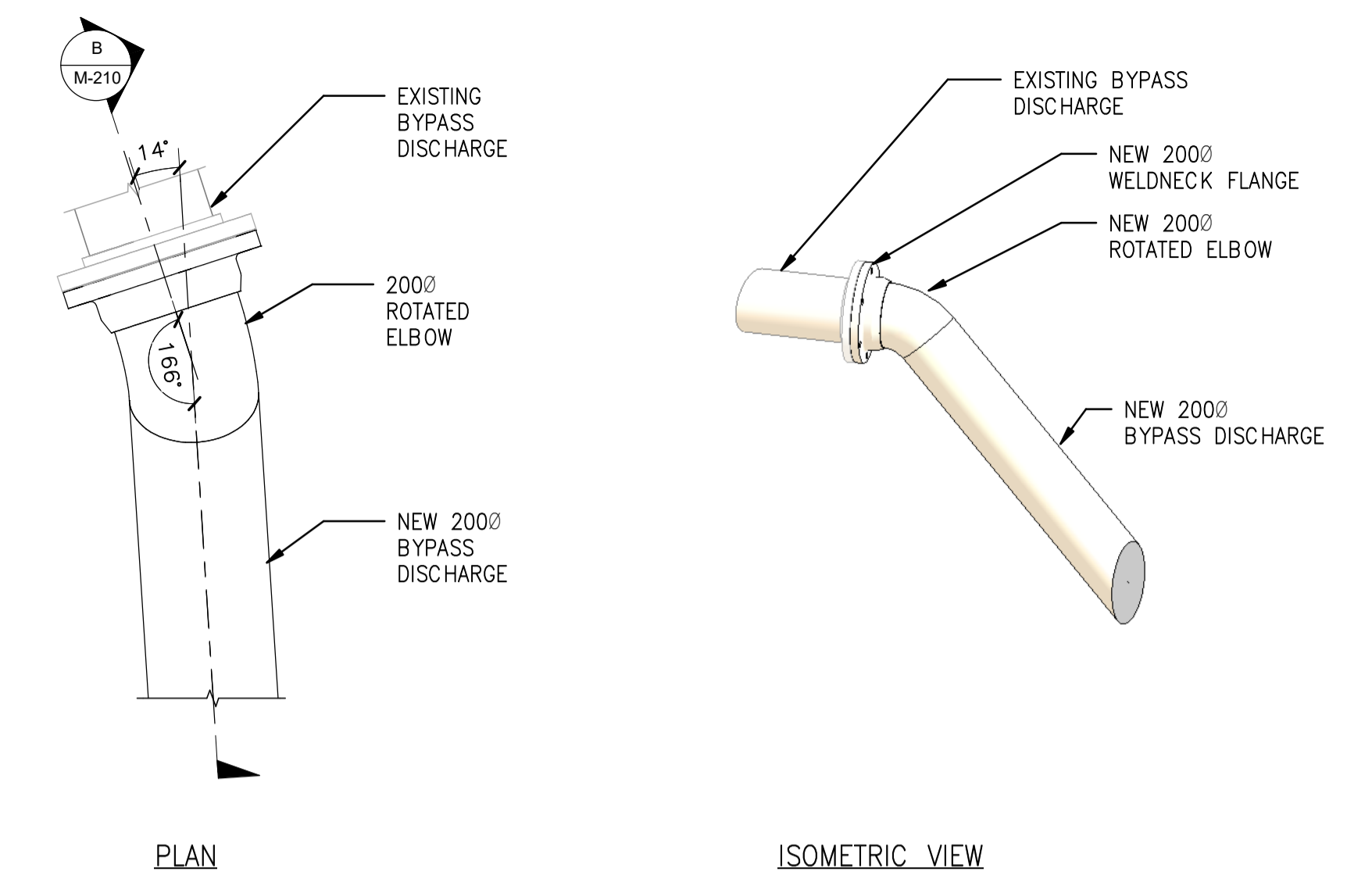
PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS	JACOBS [®]
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	707564
APPROVED	JG	SCALE	1 : 25
		DATE	APR 2021
		REV	2
DRAWING NUMBER		CRPS-M-209	
SHEET		-	



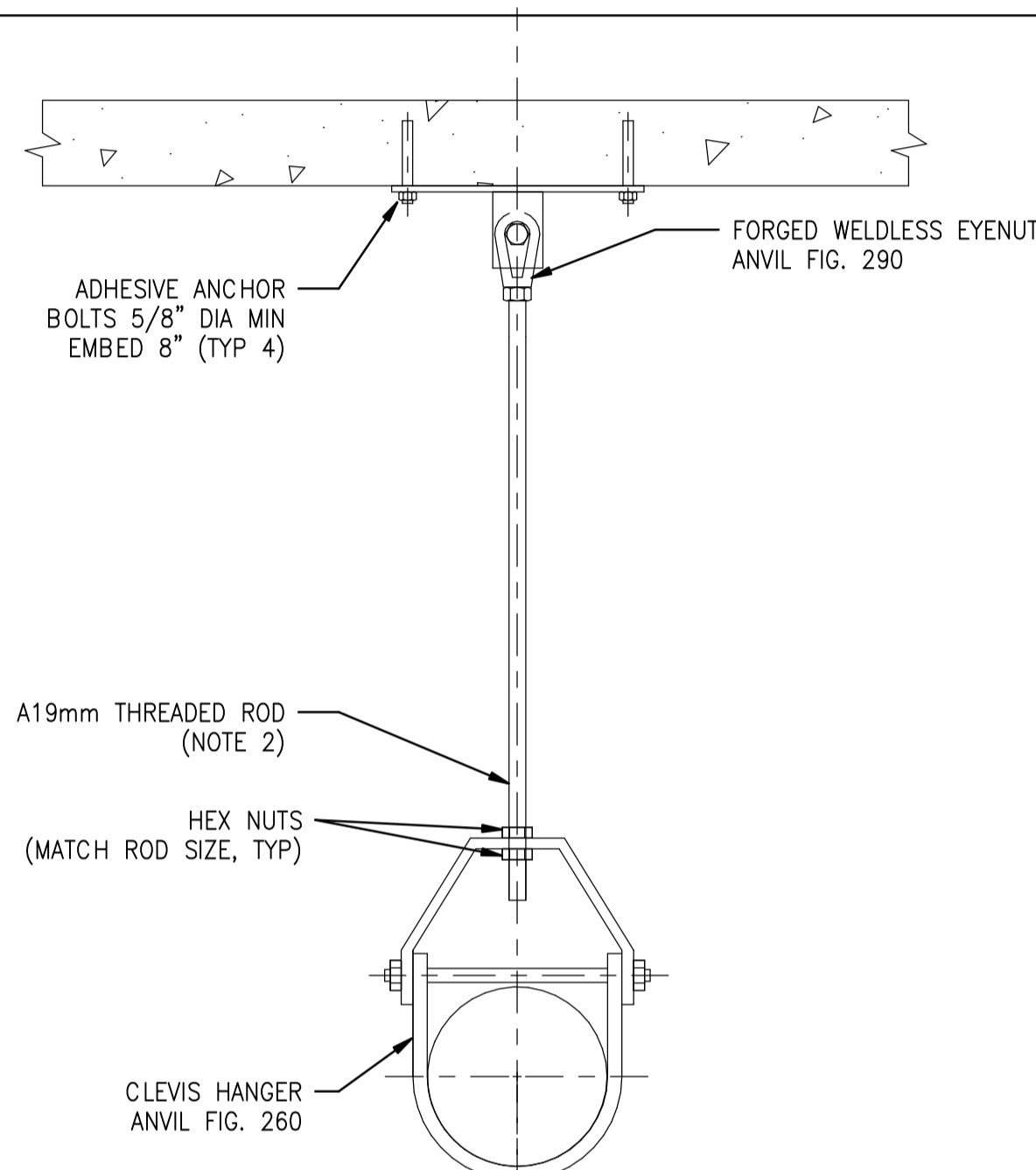
PIPE SUPPORT BRACED CELVIS DETAIL 1 M-209



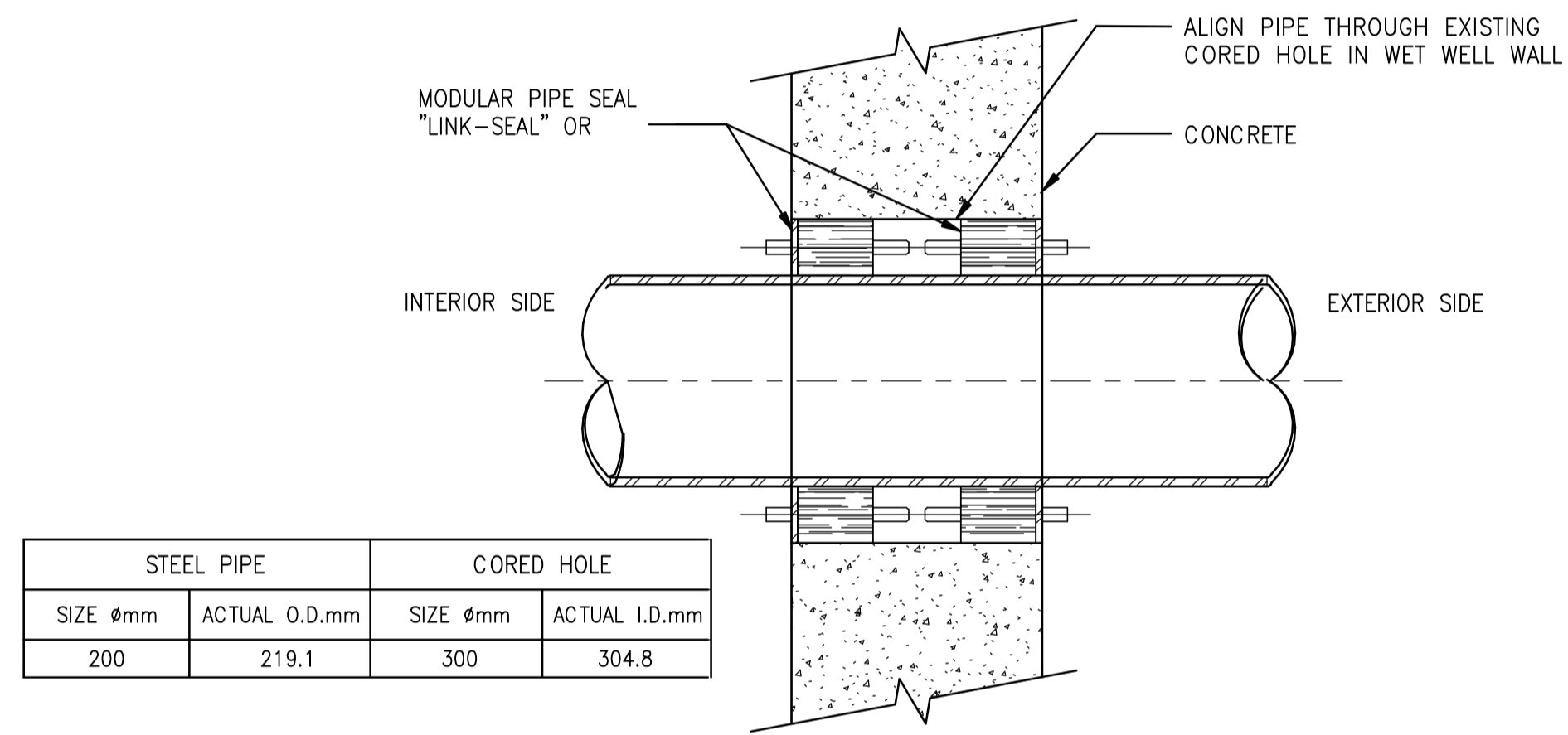
PUMP GUIDE BAR HOLDER AND BRACKET DETAIL 4 M-212



PLAN ISOMETRIC VIEW

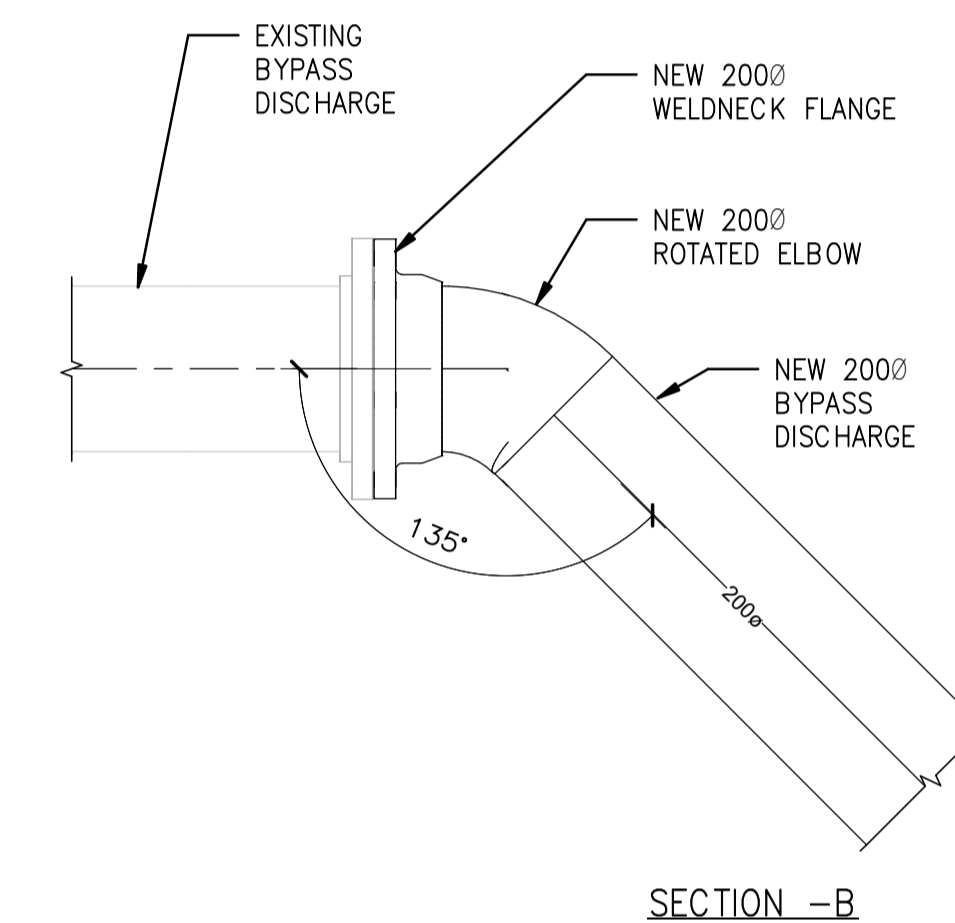


PIPE SUPPORT CELVIS DETAIL 2 M-209

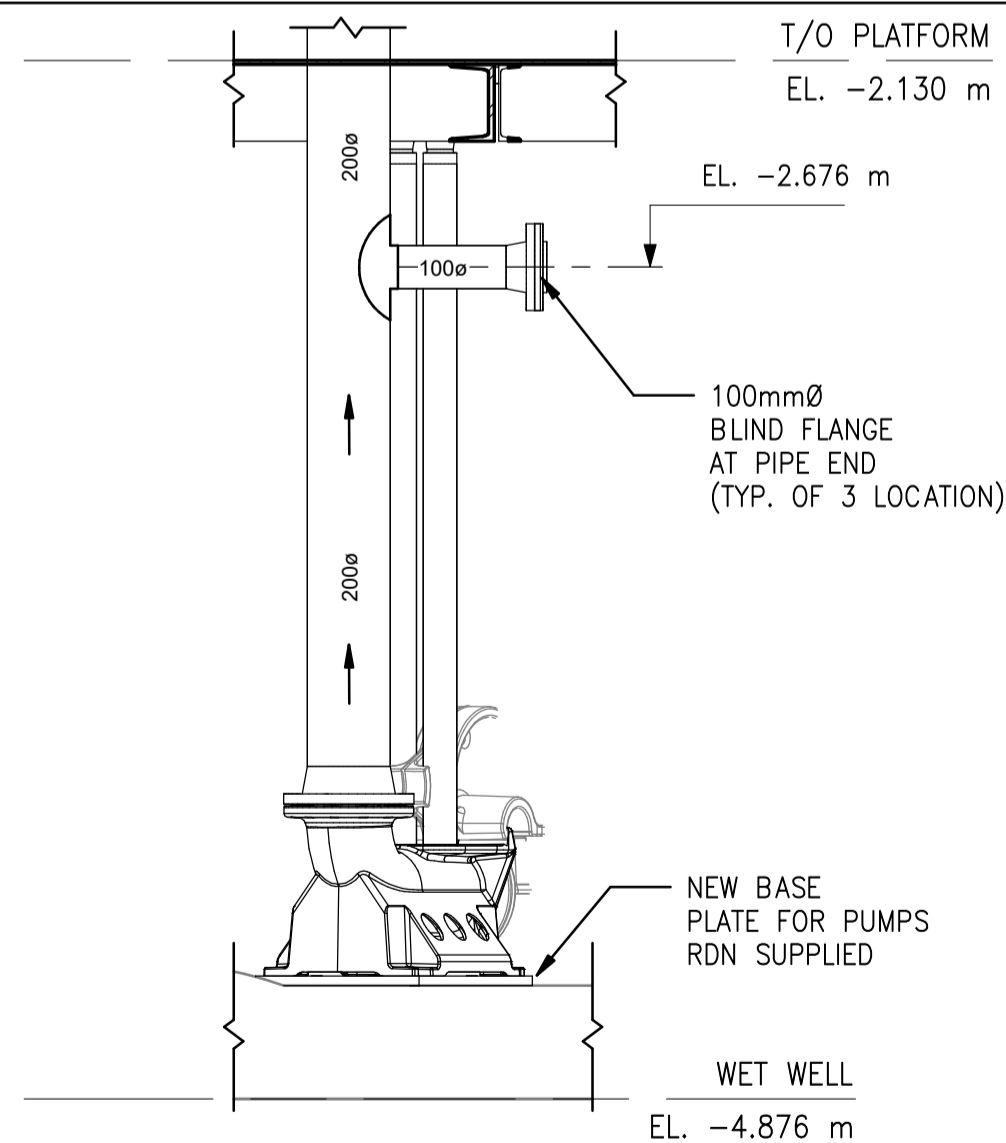


BYPASS PIPE SLEEVE DETAIL 5 M-209

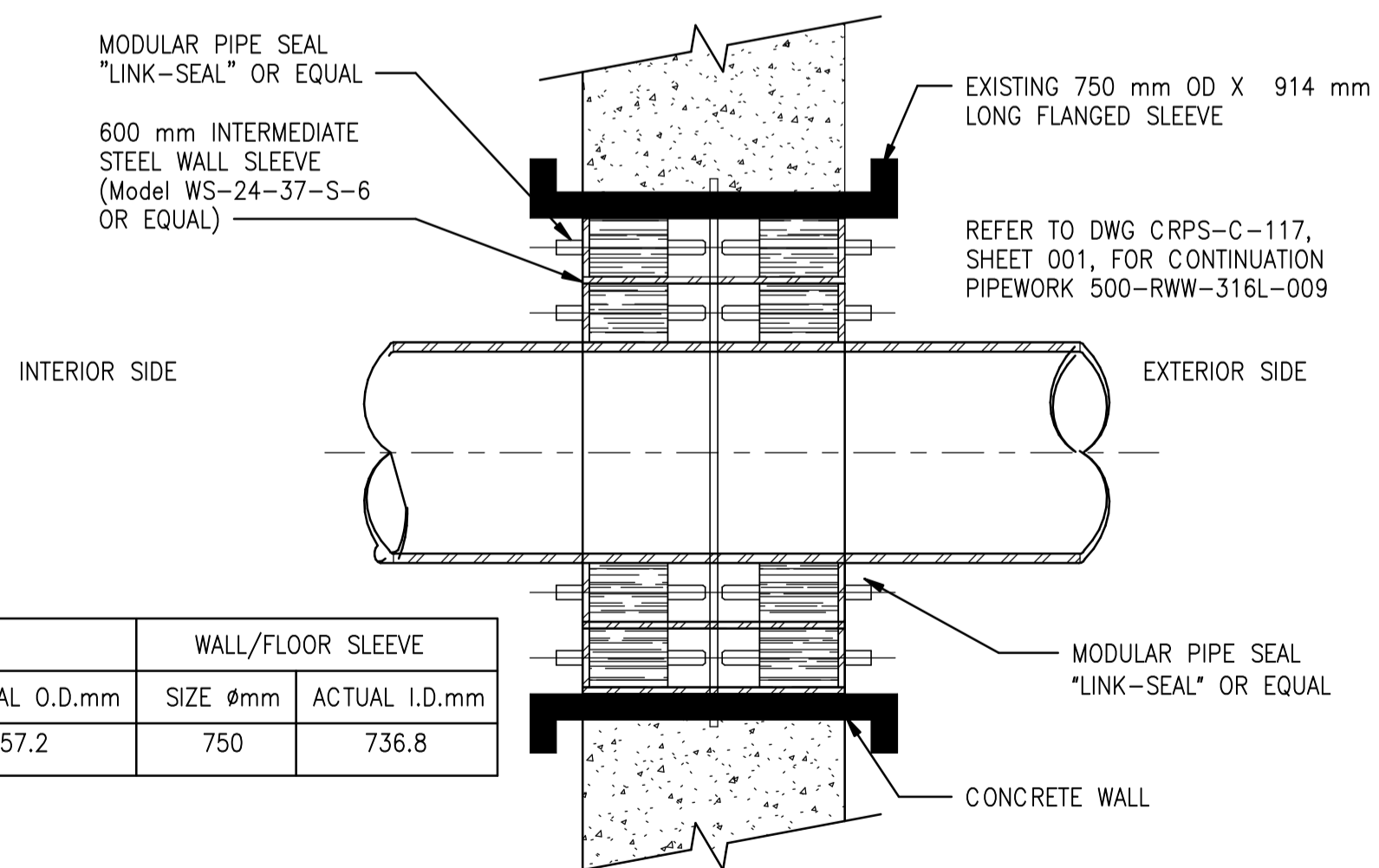
STEEL PIPE		CORED HOLE	
SIZE Ømm	ACTUAL O.D.mm	SIZE Ømm	ACTUAL I.D.mm
200	219.1	300	304.8



ROLLED ELBOW DETAIL 7 M-210

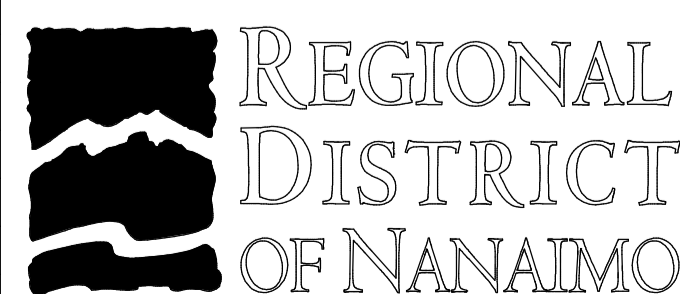


FUTURE WET WELL WASHDOWN PIPE CONNECTION DETAIL 3 M-208



HEADER PIPE SLEEVE DETAIL 6 M-209

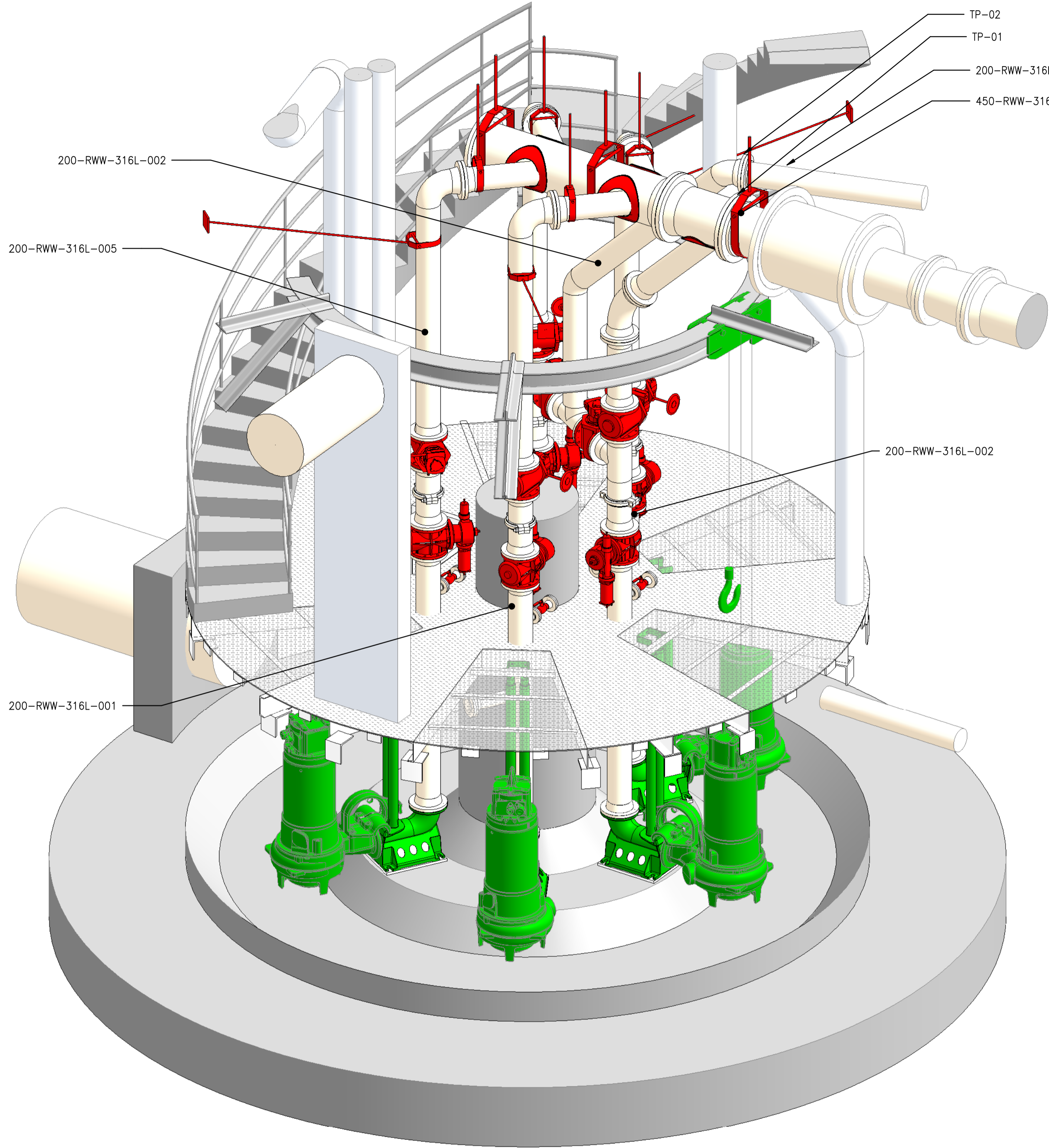
STEEL PIPE		WALL/FLOOR SLEEVE	
SIZE Ømm	ACTUAL O.D.mm	SIZE Ømm	ACTUAL I.D.mm
450	457.2	750	736.8



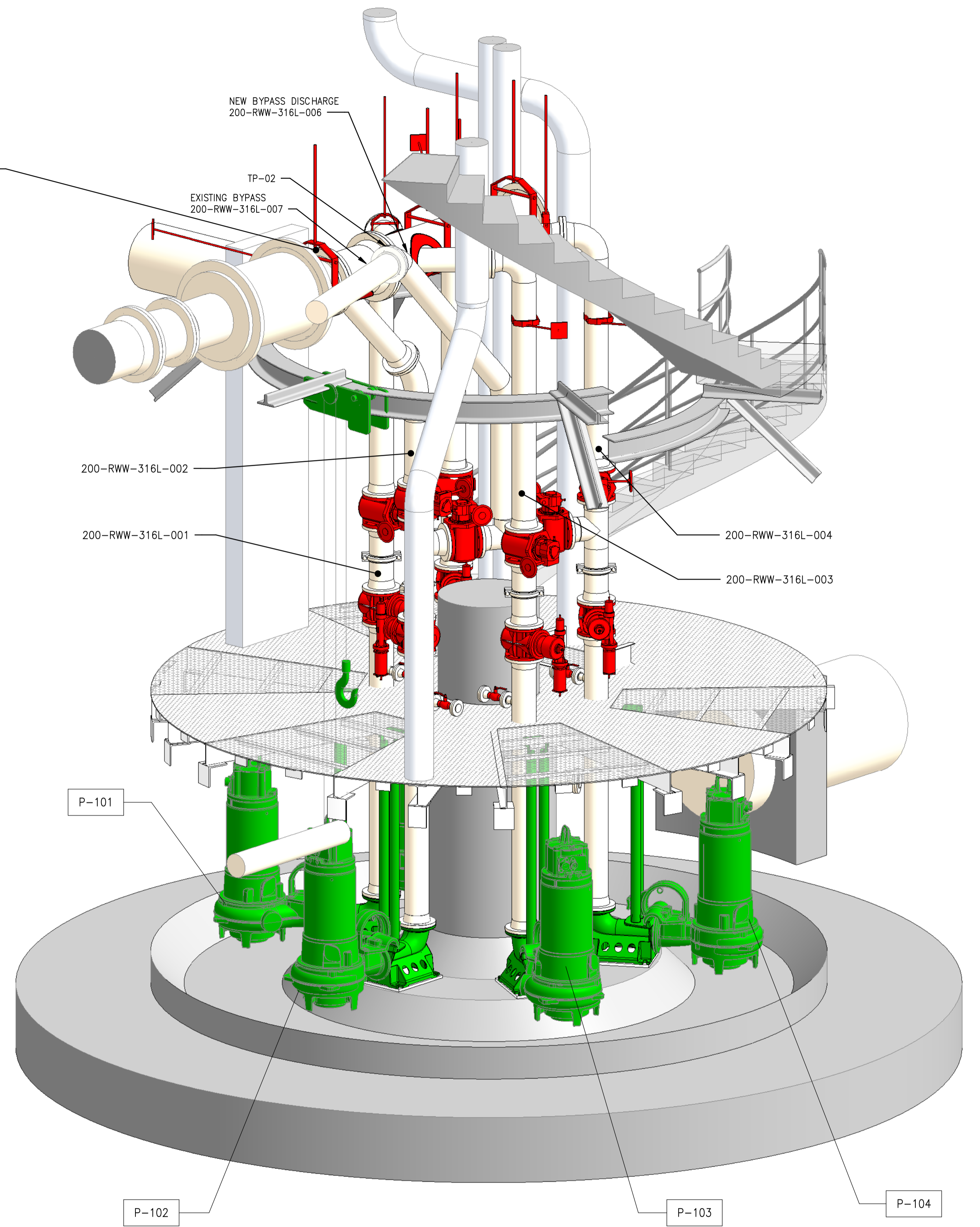
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
CRPS-M-212	CHASE RIVER PUMP STATION MECHANICAL SECTION AND DETAILS	2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	JG	JG
CRPS-M-209	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS	1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
CRPS-M-208	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS	0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG
REFERENCE DRAWINGS		REVISION					

PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION MECHANICAL STANDARD DETAILS	
DESIGNED	CW		
CHECKED	JG		
APPROVED	JG		
DRAWING NUMBER		CRPS-M-210	
SHEET		-	
PROJECT NO.		707564	
SCALE		As indicated	
DATE		APR 2021	
REV		2	



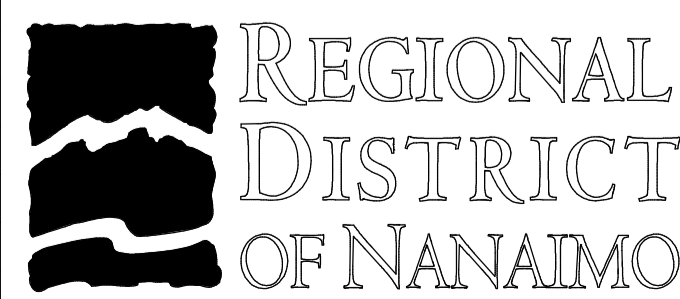


3D VIEW-1
(LOOKING SOUTH-WEST)

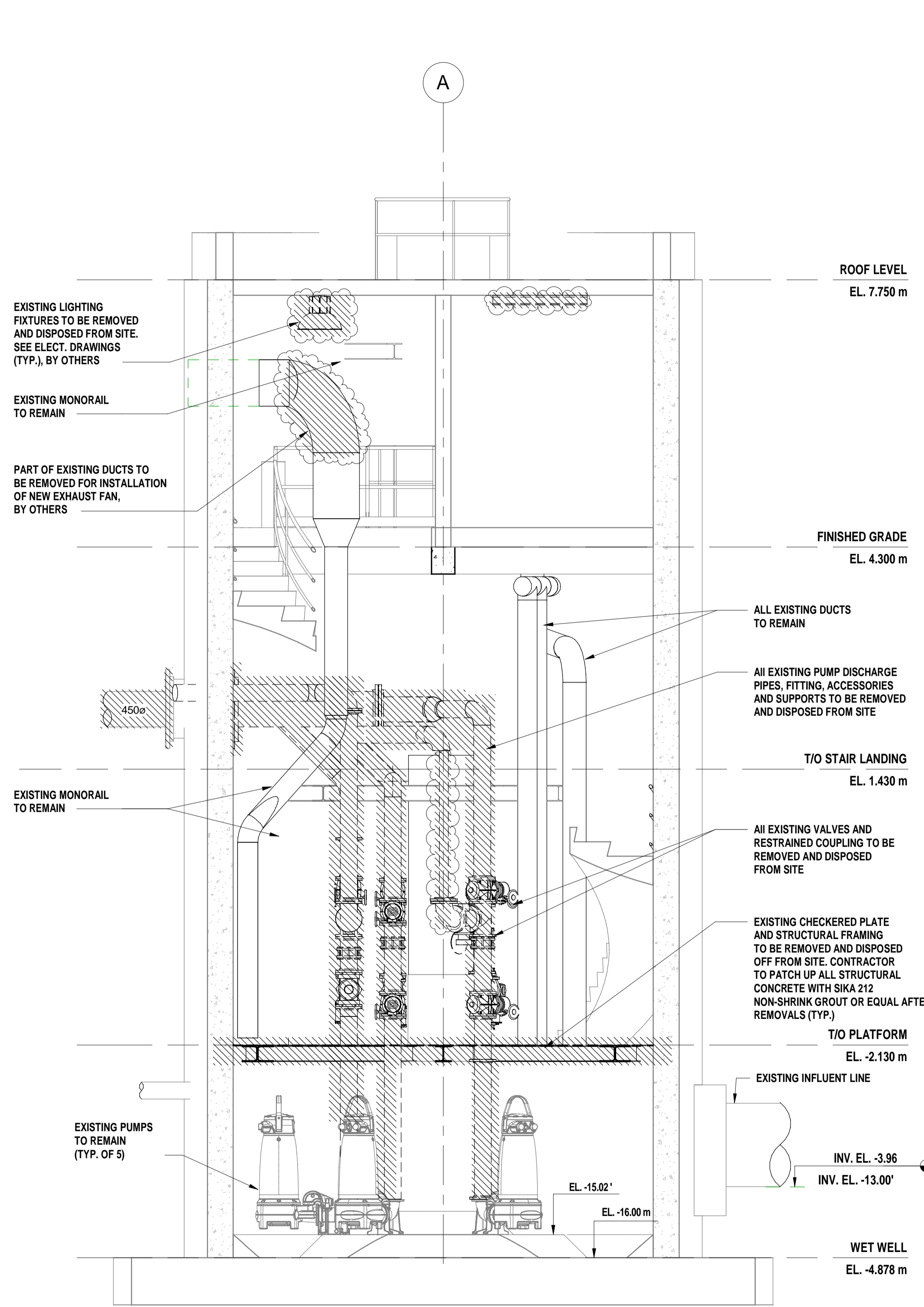


3D VIEW-2
(LOOKING SOUTH-EAST)

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS						
		2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	JG	JG
		1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG

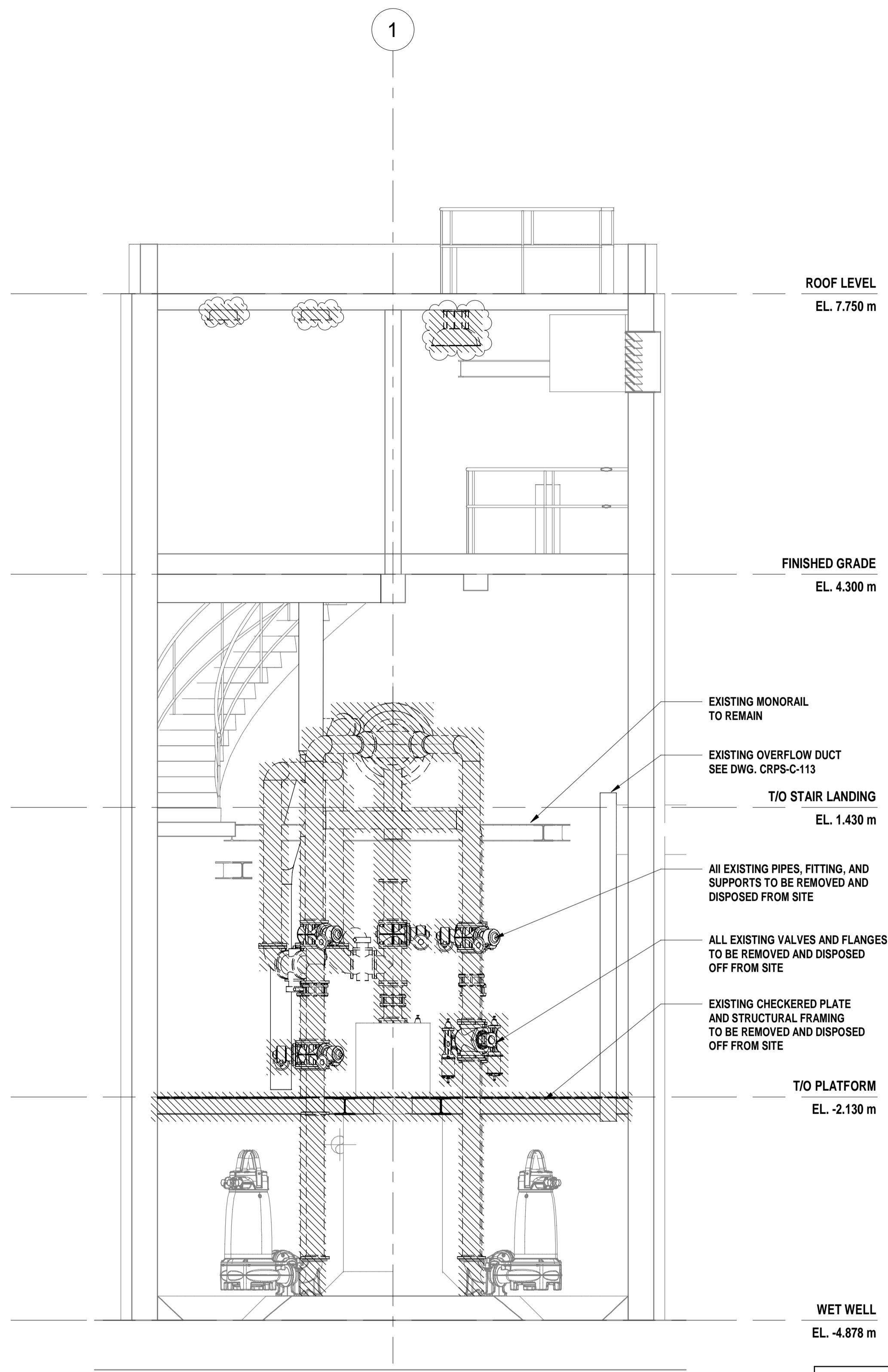


PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION MECHANICAL 3D VIEW	JACOBS [®]
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	SCALE
APPROVED	JG	707564	
		DATE	REV
		APR 2021	2
DRAWING NUMBER		SHEET	
CRPS-M-211		-	

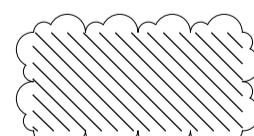


SECTION A
M-208-DEMO

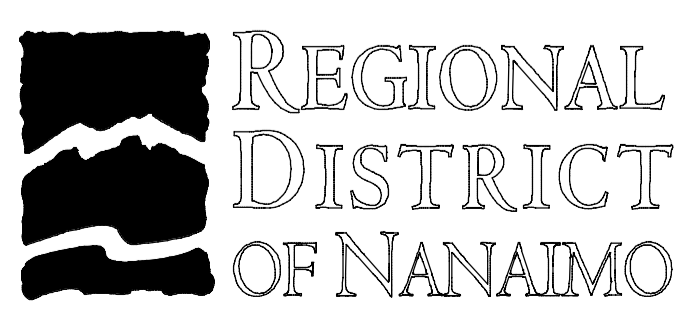
NOTE:
1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN MILLIMETERS.




SECTION B
M-208-DEMO

FOR DEMOLITION ONLY
DISTRICT OF NANAIMO
CHASE RIVER PUMP STATION UPGRADE PROJECT
 DENOTES ITEMS TO BE DEMOLISHED
DRAWING BECOMES VOID UPON COMPLETION

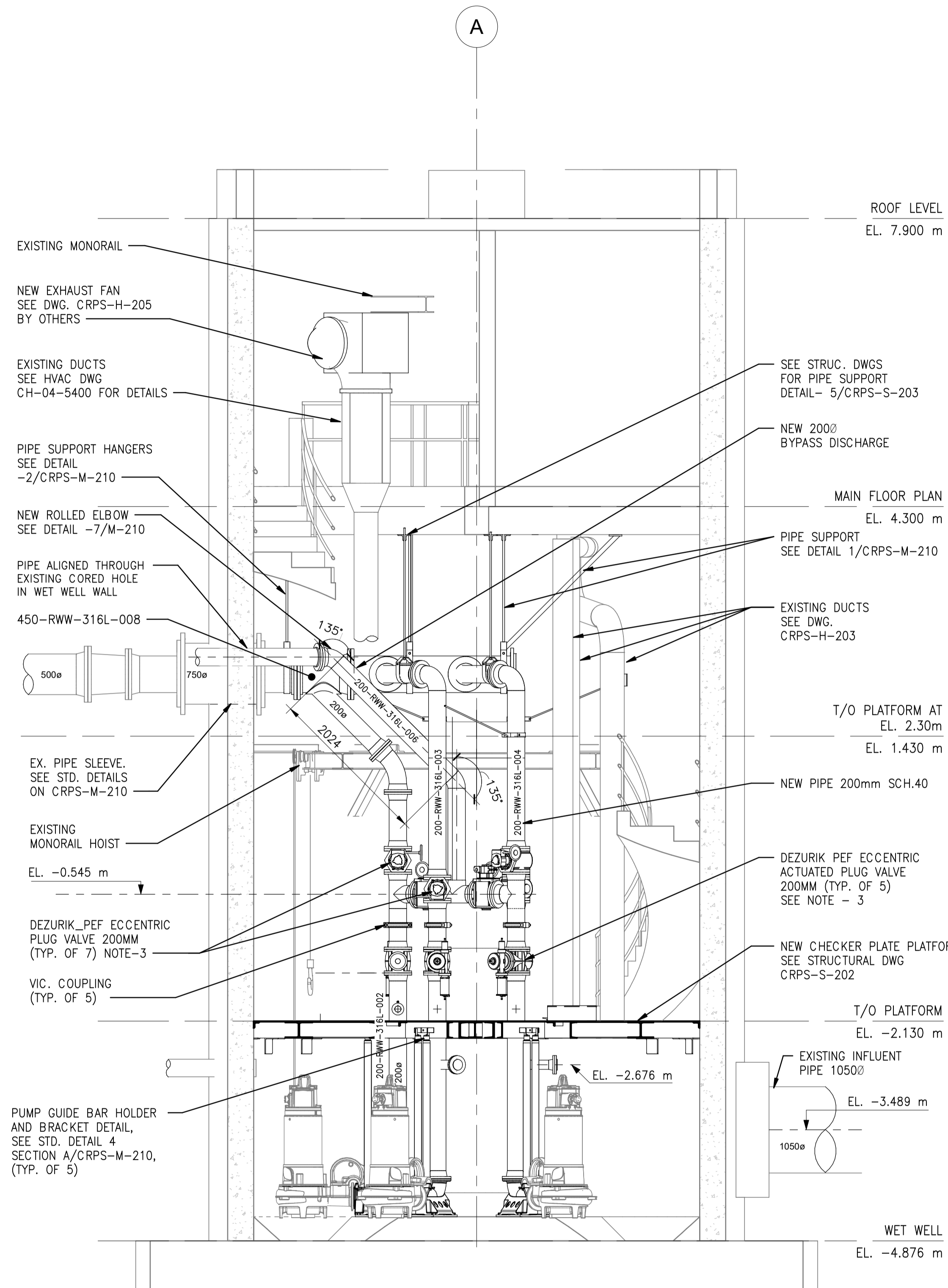
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
CRPS-M-209-DEMO	CHASE RIVER PUMP STATION - MECHANICAL FLOOR PLANS - DEMOLITION	0	JUN 2020	ISSUED FOR CONSTRUCTION	SR	JG	JG
	REFERENCE DRAWINGS			REVISION			



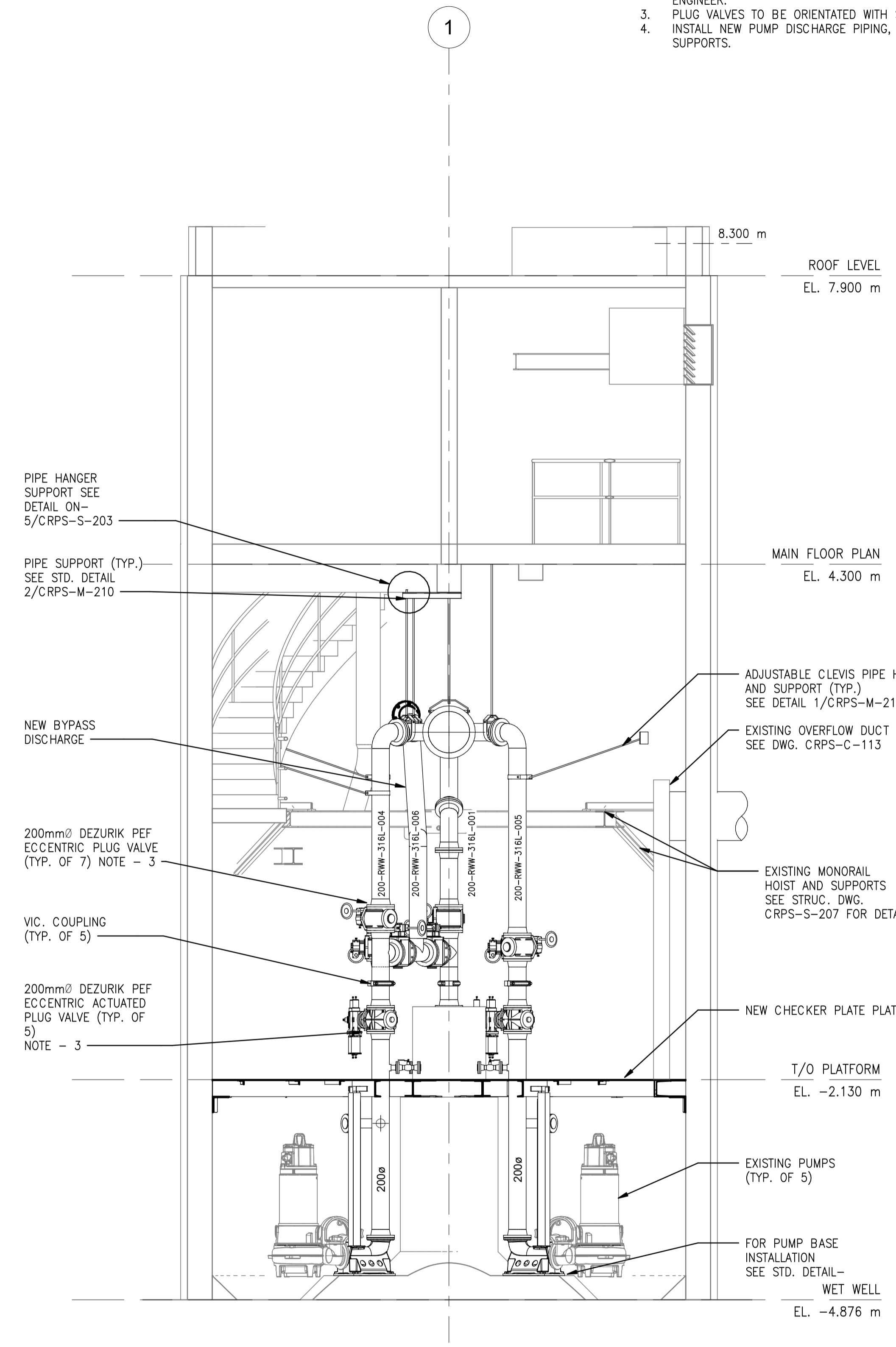
PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES					
DRAW	SR	CHASE RIVER PUMP STATION MECHANICAL SECTIONS - DEMOLITION					
DESIGNED	CW						
CHECKED	JG						
APPROVE	JG						
DRAWING NUMBER		CRPS- M- 212- DEMO		PROJECT NO.	707564	SCALE	N.T.S
SHEET		-		DAT	APR 2021	RE	0

NOTES:

1. UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE DIMENSIONS, IN CASE OF ANY CONFUSION PLEASE CONTACT ENGINEER.
3. PLUG VALVES TO BE ORIENTATED WITH SEAT IN UPWARD POSITION.
4. INSTALL NEW PUMP DISCHARGE PIPING, VALVES, FITTINGS AND SUPPORTS.

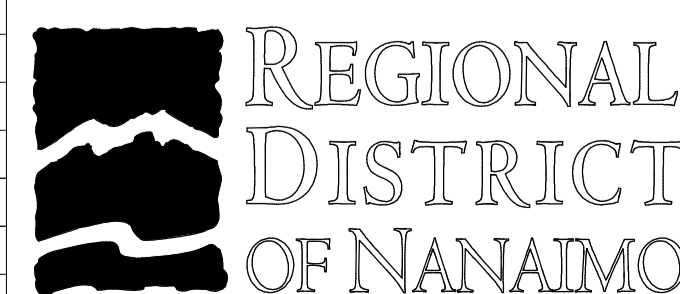


SECTION A
M-208

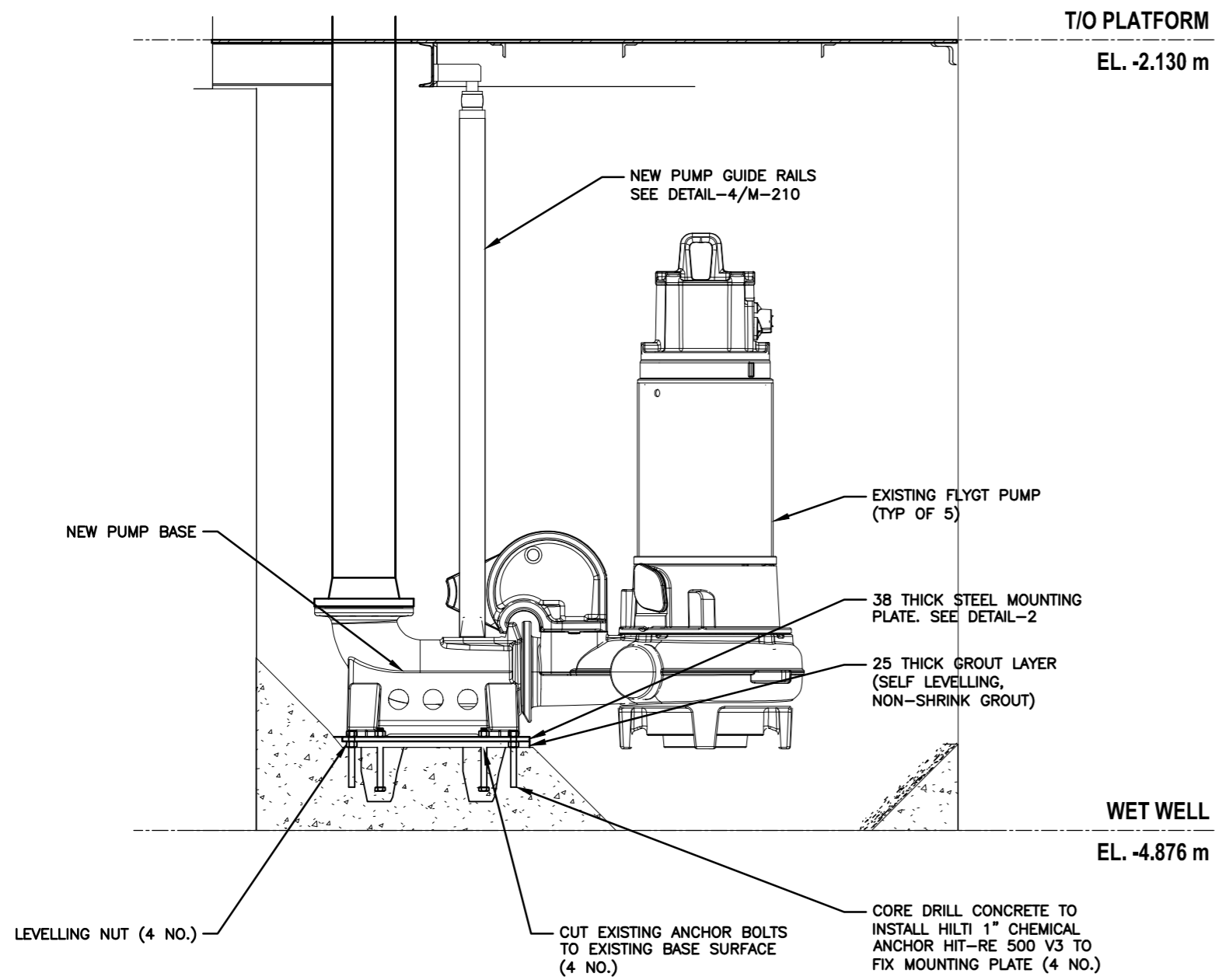


SECTION B
M-208

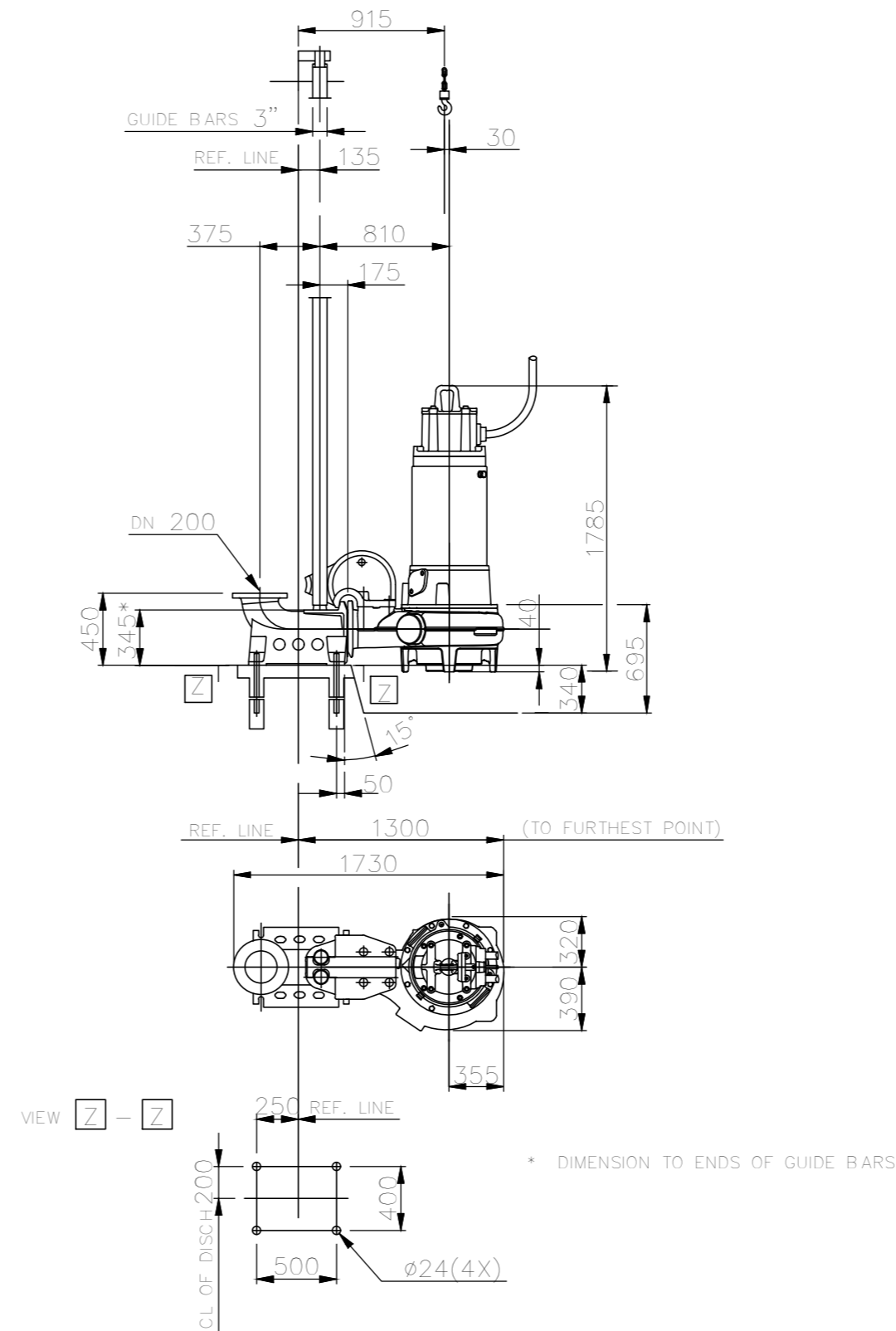
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
		2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	JG	JG
		1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
CRPS-M-208	CHASE RIVER PUMP STATION MECHANICAL FLOOR PLANS	0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	JG	JG
	REFERENCE DRAWINGS			REVISION			



PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION MECHANICAL SECTIONS AND DETAILS	JACOBS
DESIGNED	CW		
CHECKED	JG	PROJECT NO.	707564
APPROVED	JG	SCALE	1 : 40
		DATE	APR 2021
		REV	2
DRAWING NUMBER		CRPS-M-212	
SHEET		-	



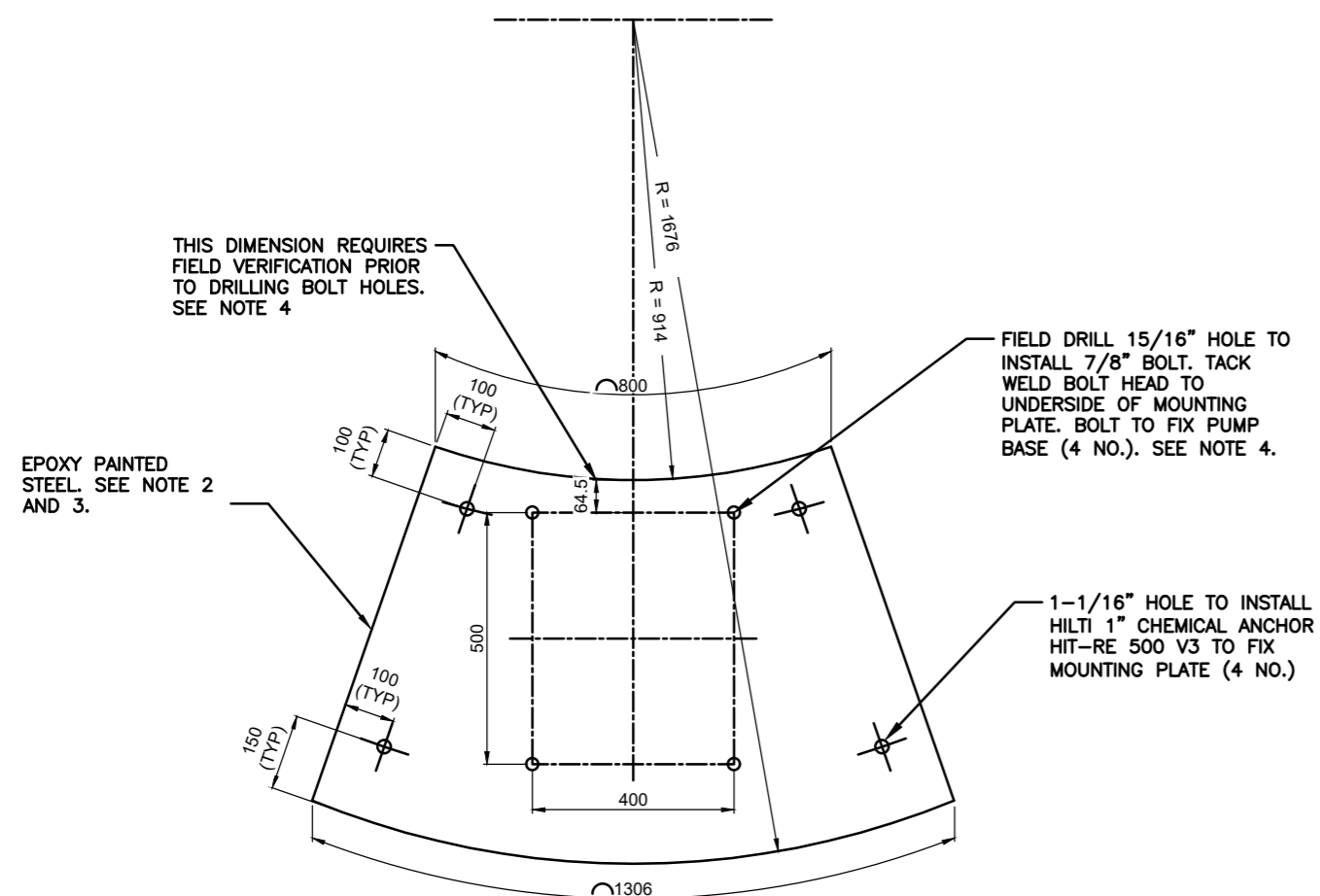
PUMP BASE AND MOUNTING PLATE 1
SCALE: NTS M-208



PUMP BASE AND SUPPORT DETAIL 3
SCALE: NTS M-208

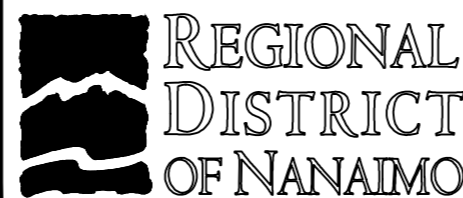
NOTES

1. DIMENSIONS SHOWN IN mm UNLESS NOTED OTHERWISE.
2. STEEL FOR MOUNTING PLATE: ASTM C1045.
3. FOR REQUIREMENTS FOR EPOXY PAINT COATING REFER TO SPECIFICATIONS.
4. FIELD VERIFY LOCATION OF EXISTING PUMP AND PUMP BASES TO POSITION BASE PLATE ON MOUNTING PLATE. VERIFY PROPOSED PUMP BASE POSITION MATCHES EXISTING LOCATION PRIOR TO DRILLING PUMP BASE HOLES.

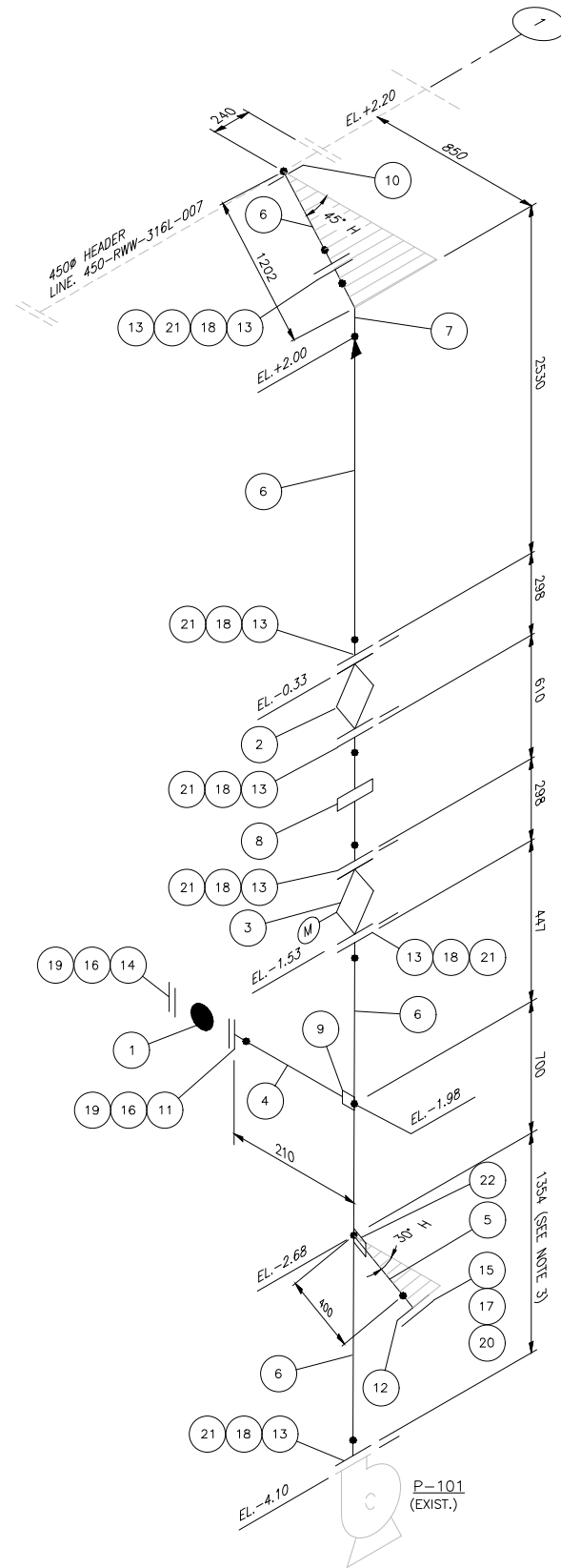


STEEL MOUNTING PLATE DETAIL (TYP 5 NO.) 2
SCALE: NTS M-208

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
-	-	1	DEC 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG
-	-	0	JUN 2021	ISSUED FOR CONSTRUCTION	SS	JG	JG
REFERENCE DRAWINGS		REVISIONS					



PROJECT NAME CHASE RIVER FORCEMAIN NO. 1 REPLACEMENT AND PUMP STATION UPGRADES			
DRAWN SS	DESIGNED MP		JACOBS
CHECKED JG	APPROVED JG		
DRAWING NUMBER CRPS-M-216		SHEET -	PROJECT NO. 707564
DATE JUNE 2021		SCALE NTS	REV 1



BILL OF MATERIAL			
ITEM NUMBER	SIZE (NPS)	QTY.	DESCRIPTION
1	50mm	1	BALL VALVE, FLANGED FLAT FACE, CLASS 150, FULL PORT, 316 STAINLESS STEEL, LOCKABLE HANDLE
2	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, HAND WHEEL OPERATED
3	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, ELECTRIC ACTUATED
4	50mm	0.1m	PIPE SCH 80, ASTM A312-TP316L STAINLESS STEEL
5	100mm	0.4m	PIPE SCH STD, ASTM A312-TP316L STAINLESS STEEL
6	200mm	5.7m	PIPE SCH STD, ASTM A774-TP316 L STAINLESS STEEL
7	200mm	1	ELBOW 90 DEG SHORT RADIUS, SCH STD, ASTM A774-TP316 L STAINLESS STEEL
8	200mm	1	COUPLING, VICTAULIC STANDARD FLEXIBLE COUPLING STYLE 77 OR EQUIVALENT, ASTM A-536, HOT DIPPED GALVANIZED, GRADE "M" NITRILE GASKET
9	50mm	1	WELDOLET, SCH 80, ASTM A182/182M - F316 L STAINLESS STEEL
10	200mm	1	BRANCH REINFORCEMENT ASME B31.3
11	50mm	1	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
12	100mm	1	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
13	200mm	7	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
14	50mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
15	100mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
16	50mm	2	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
17	100mm	1	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
18	200mm	6	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
19	16mm	2	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
20	16mm	1	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
21	20mm	6	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
22	100mm	1	WELDOLET, SCH 80, ASTM A182/182M - F316L STAINLESS STEEL

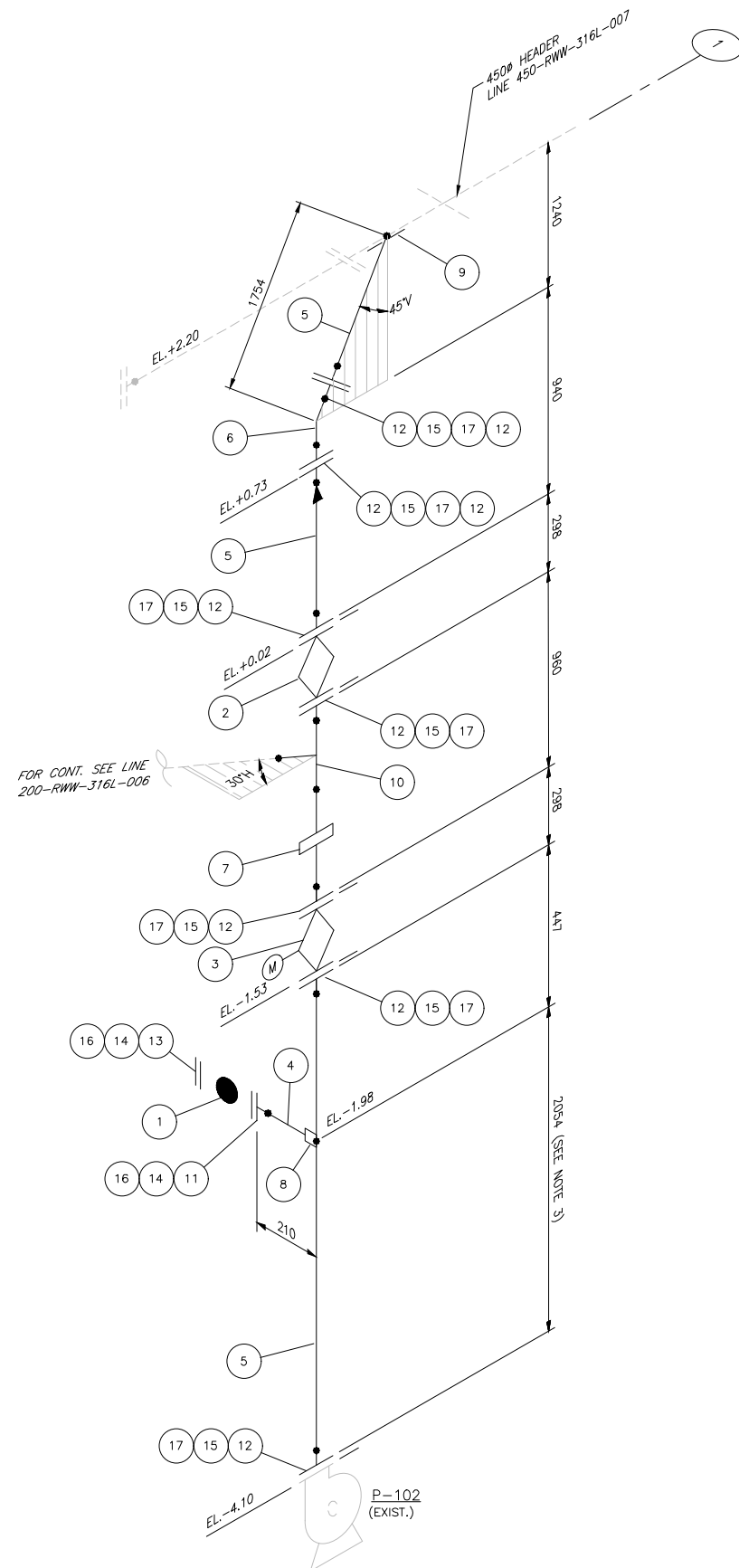
NOTES:

- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- CONFIRM LENGTH BASED ON FINAL ELEVATION OF MOUNTING PLATE - SEE DWG CRPS-M-216.

PROJECT NAME				LINE 200-RWW-316L-001			
DRAWN				CHASE RIVER PUMP STATION UPGRADES			
DESIGNED				CHASE RIVER PUMP STATION			
CHECKED				MECHANICAL			
APPROVED				PUMP #1 DISCHARGE ISOMETRIC			
DRAWING NUMBER		SHEET		PROJECT NO.		SCALE	
CRPS-M-221		0		707564		NTS	
DATE		REV		DATE		REV	
APR 2021		0		APR 2021		0	



DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS	0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG
REVISIONS							



NOTES:

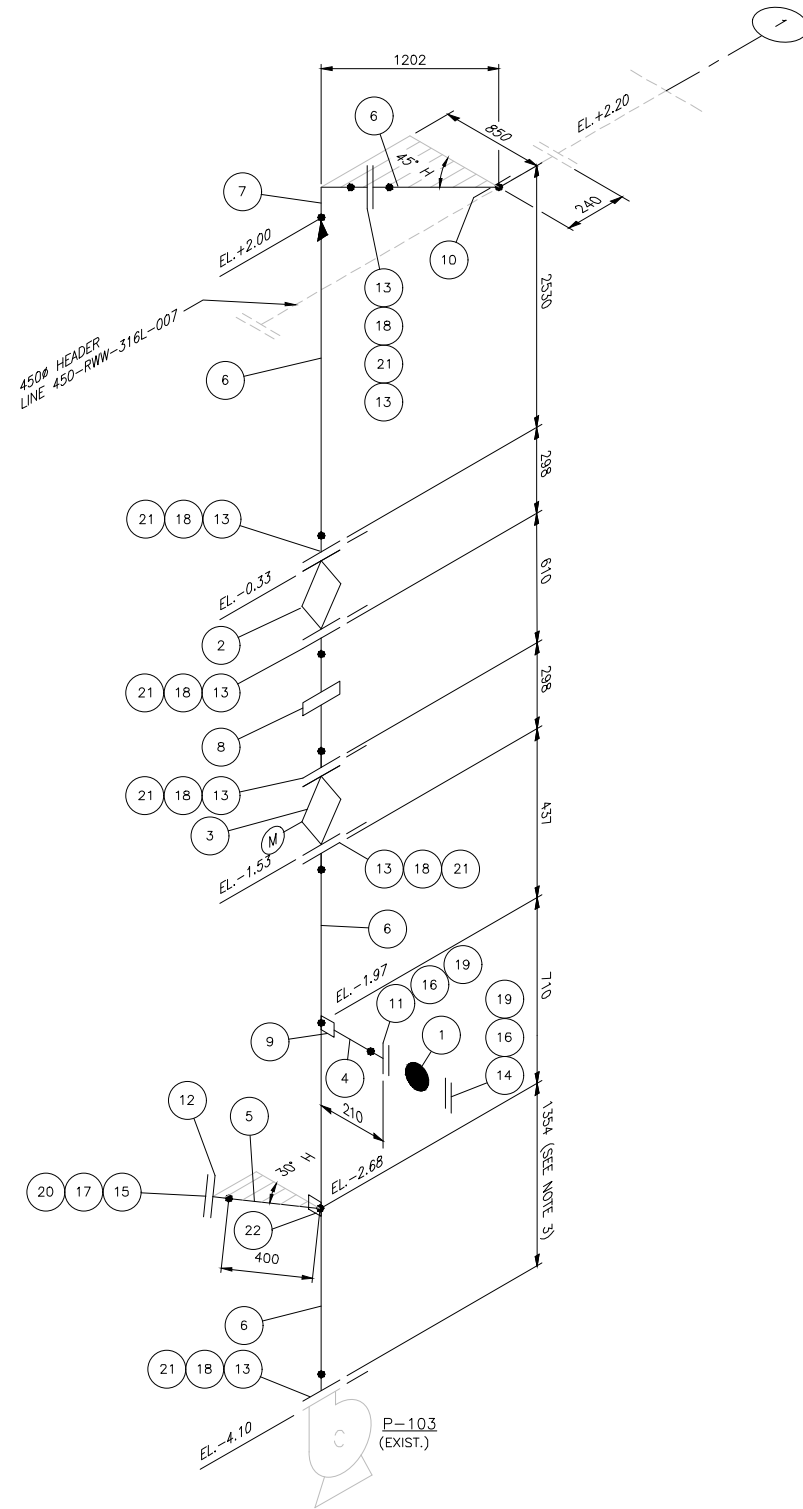
- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- CONFIRM LENGTH BASED ON FINAL ELEVATION OF MOUNTING PLATE - SEE DWG CRPS-M-216.

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS	0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG



PROJECT NAME				LINE 200-RWW-316L-002			
DRAWN				CHASE RIVER PUMP STATION UPGRADES			
DESIGNED				CHASE RIVER PUMP STATION MECHANICAL			
CHECKED				PUMP #2 DISCHARGE ISOMETRIC			
APPROVED				DRAWING NUMBER		SHEET	
				CRPS-M-222		DATE	
						REV	
						0	





BILL OF MATERIAL			
ITEM NUMBER	SIZE (NPS)	QTY.	DESCRIPTION
1	50mm	1	BALL VALVE, FLANGED FLAT FACE, CLASS 150, FULL PORT, 316 STAINLESS STEEL, LOCKABLE HANDLE
2	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, HAND WHEEL OPERATED
3	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, ELECTRIC ACTUATED
4	50mm	0.1m	PIPE SCH 80, ASTM A312-TP316L STAINLESS STEEL
5	100mm	0.4m	PIPE SCH STD, ASTM A312-TP316L STAINLESS STEEL
6	200mm	5.7m	PIPE SCH STD, ASTM A774-TP316 L STAINLESS STEEL
7	200mm	1	ELBOW 90 DEG SHORT RADIUS, SCH STD, ASTM A774-TP316 L STAINLESS STEEL
8	200mm	1	COUPLING, VICTAULIC STANDARD FLEXIBLE COUPLING STYLE 77 OR EQUIVALENT, ASTM A-536, HOT DIPPED GALVANIZED, GRADE "M" NITRILE GASKET
9	50mm	1	WELDOLET, SCH 80, ASTM A182/182M - F316 L STAINLESS STEEL
10	200mm	1	BRANCH REINFORCEMENT ASME B31.3
11	50mm	1	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
12	100mm	1	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
13	200mm	7	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
14	50mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
15	100mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
16	50mm	2	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
17	100mm	1	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
18	200mm	6	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
19	16mm	2	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
20	16mm	1	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
21	20mm	6	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
22	100mm	1	WELDOLET, SCH 80, ASTM A182/182M - F316 L STAINLESS STEEL

NOTES:

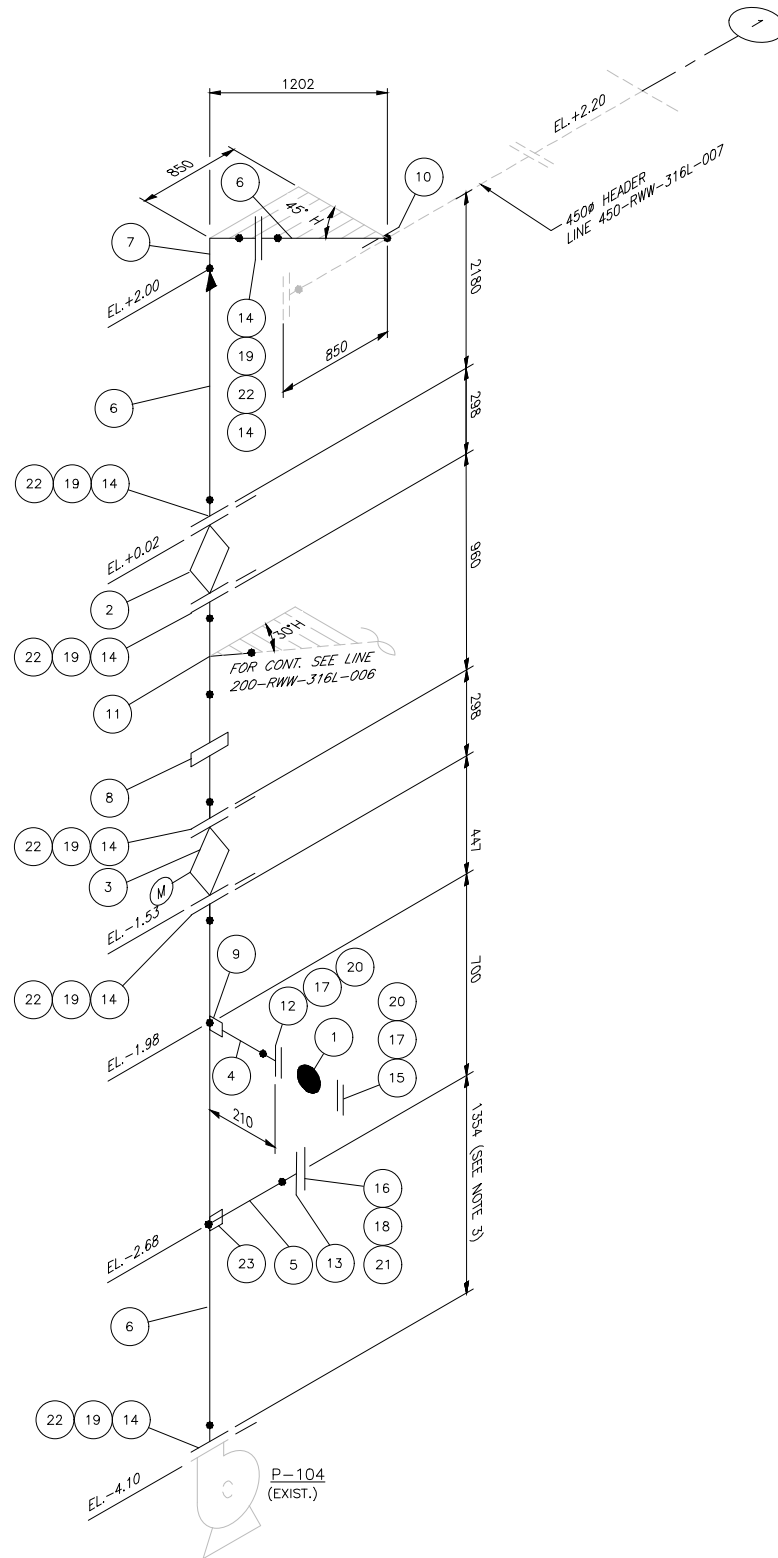
- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- CONFIRM LENGTH BASED ON FINAL ELEVATION OF MOUNTING PLATE - SEE DWG CRPS-M-216.

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS	0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG



PROJECT NAME				LINE 200-RWW-316L-003			
DRAWN				CHASE RIVER PUMP STATION UPGRADES			
DESIGNED				CHASE RIVER PUMP STATION MECHANICAL			
CHECKED				PUMP #3 DISCHARGE ISOMETRIC			
APPROVED				PROJECT NO.		SCALE	
DRAWING NUMBER				707564		NTS	
SHEET				DATE		REV	
CRPS-M-223				APR 2021		0	





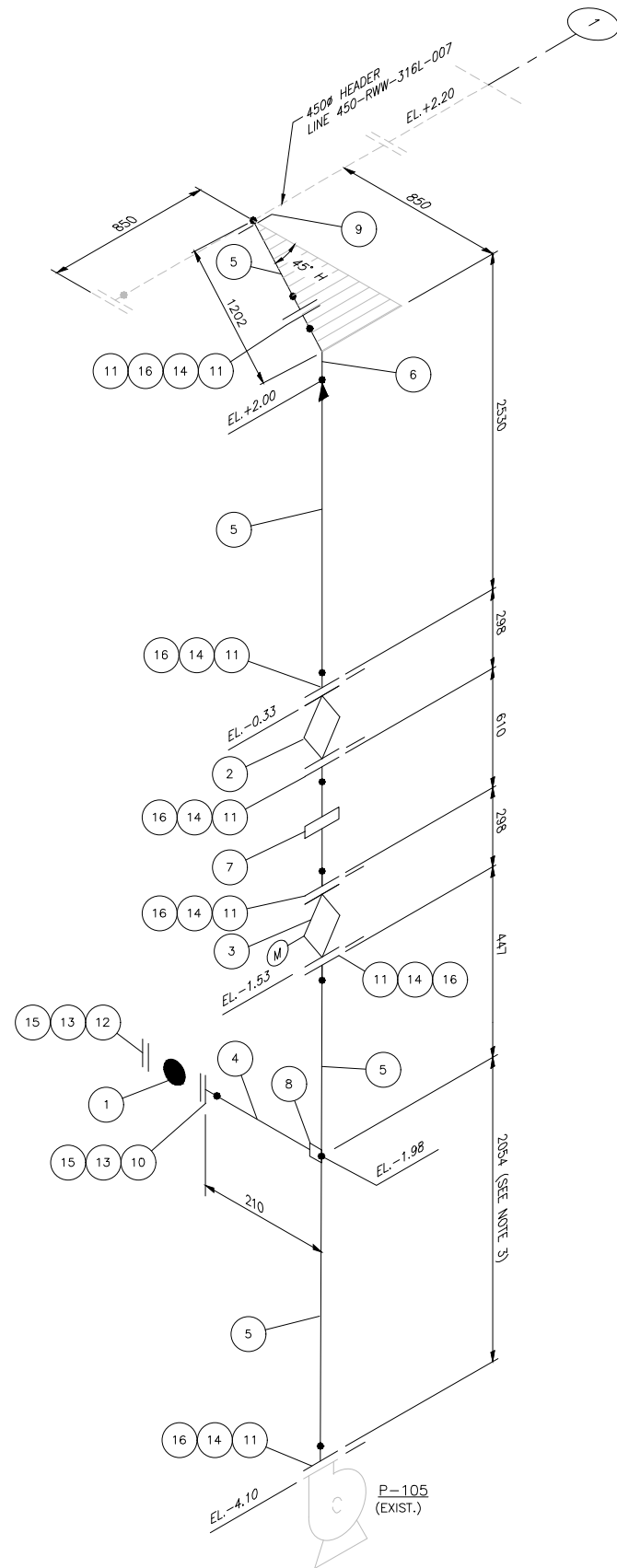
NOTES:

- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- CONFIRM LENGTH BASED ON FINAL ELEVATION OF MOUNTING PLATE - SEE DWG CRPS-M-216.

PROJECT NAME				CHASE RIVER PUMP STATION UPGRADES			
DRAWN		DESIGNED		CHECKED		APPROVED	
CT		CW		JG		JG	
CHASE RIVER PUMP STATION MECHANICAL				JACOBS			
PUMP #4 DISCHARGE ISOMETRIC				PROJECT NO.		SCALE	
				707564		NTS	
DRAWING NUMBER				SHEET		DATE	
CRPS-M-224				0		APR 2021	
				REV		0	

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS	0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG
REVISIONS							





BILL OF MATERIAL			
ITEM NUMBER	SIZE (NPS)	QTY.	DESCRIPTION
1	50mm	1	BALL VALVE, FLANGED FLAT FACE, CLASS 150, FULL PORT, 316 STAINLESS STEEL, LOCKABLE HANDLE
2	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, HAND WHEEL OPERATED
3	200mm	1	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, ELECTRIC ACTUATED
4	50mm	0.1m	PIPE SCH 80, ASTM A312-TP316L STAINLESS STEEL
5	200mm	5.9m	PIPE SCH STD, ASTM A774-TP316 L STAINLESS STEEL
6	200mm	1	ELBOW 90 DEG SHORT RADIUS, SCH STD, ASTM A774-TP316 L STAINLESS STEEL
7	200mm	1	COUPLING, VICTAULIC STANDARD FLEXIBLE COUPLING STYLE 77 OR EQUIVALENT, ASTM A-536, HOT DIPPED GALVANIZED, GRADE "T" NITRILE GASKET
8	50mm	1	WELDOLET, SCH 80, ASTM A182/182M - F316 L STAINLESS STEEL
9	200mm	1	BRANCH REINFORCEMENT ASME B31.3
10	50mm	1	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
11	200mm	7	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
12	50mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
13	50mm	2	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
14	200mm	6	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
15	16mm	2	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
16	20mm	6	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4

NOTES:

- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- CONFIRM LENGTH BASED ON FINAL ELEVATION OF MOUNTING PLATE - SEE DWG CRPS-M-216.

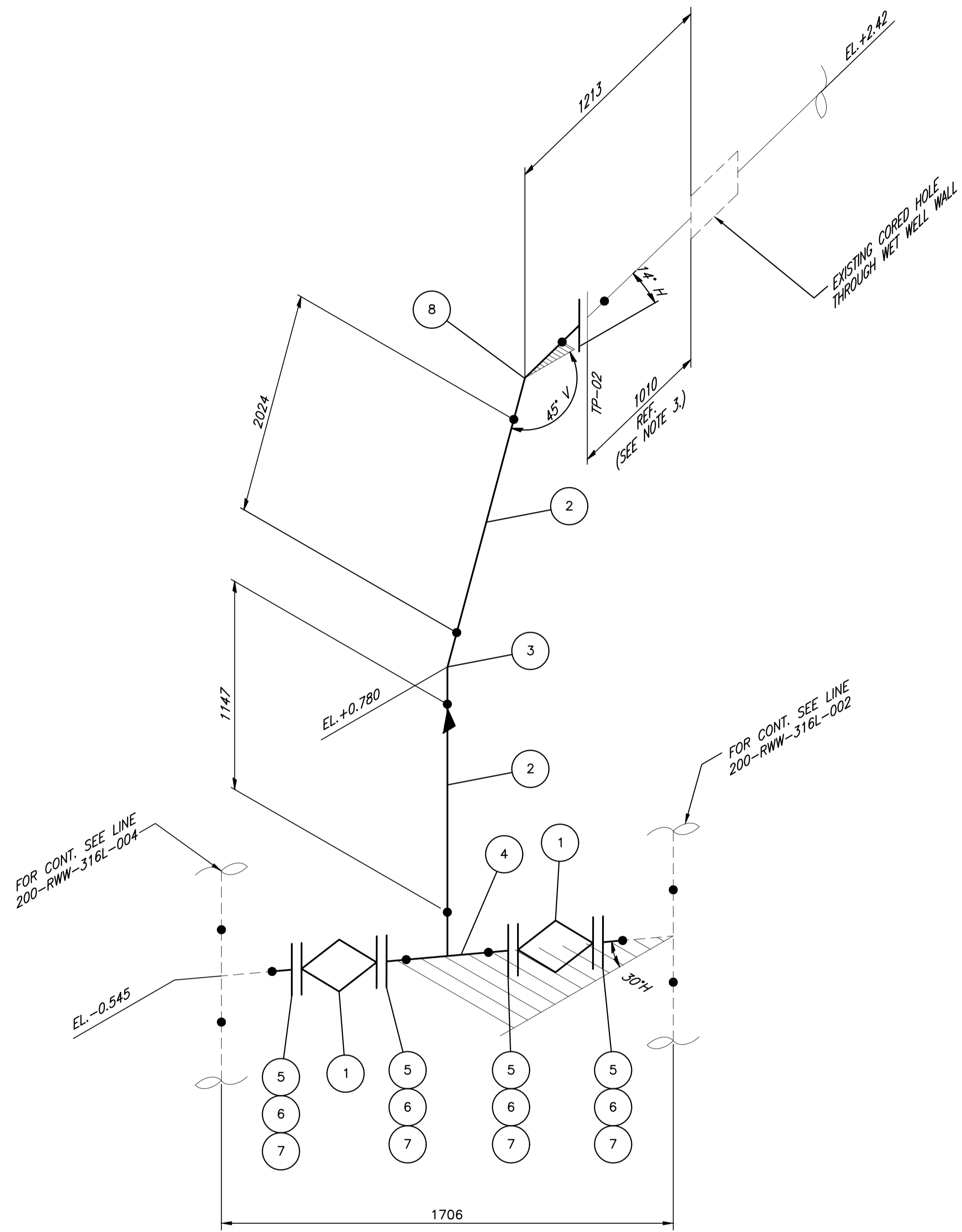
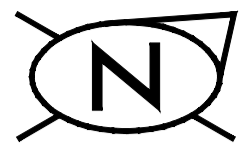
PROJECT NAME				LINE 200-RWW-316L-005			
DRAWN				CHASE RIVER PUMP STATION UPGRADES			
DESIGNED				CHASE RIVER PUMP STATION MECHANICAL			
CHECKED				PUMP #5 DISCHARGE ISOMETRIC			
APPROVED				DRAWING NUMBER		SHEET	
REV				CRPS-M-225		DATE	
TITLE				PROJECT NO.		SCALE	
REFERENCE DRAWINGS				707564		NTS	
REVISIONS				DATE		REV	
				APR 2021		0	

DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
		0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG



REGIONAL DISTRICT OF NANAIMO

JACOBS



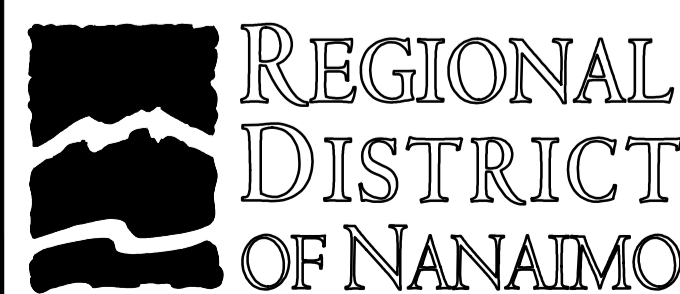
BILL OF MATERIAL			
ITEM NUMBER	SIZE (NPS)	QTY.	DESCRIPTION
1	200mm	2	ECCENTRIC PLUG VALVE, DEZURIK PEF SERIES, FLANGED, CLASS 150, ASTM A126 CLASS B CAST IRON, 100% PORT, HAND WHEEL OPERATED
2	200mm	3.2m	PIPE SCH STD, ASTM A774-TP316 L STAINLESS STEEL
3	200mm	1	ELBOW 45 DEG SHORT RADIUS, SCH STD, ASTM A774-TP316 L STAINLESS STEEL
4	200mm	1	TEE, SCH STD, ASTM A774-TP316 L STAINLESS STEEL
5	200mm	4	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
6	200mm	4	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
7	20mm	4	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
8	200mm	1	ELBOW 46.77 DEG, SPECIAL FITTING, SCH STD, ASTM A774 - TP316L STAINLESS STEEL

NOTES:

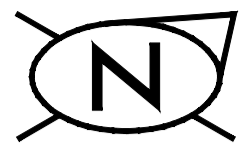
- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- REFERENCE DIMENSION IS TO FACE OF FLANGE AND TO BE CONFIRMED ON SITE PRIOR TO PIPE FABRICATION. CONFIRM FLANGE TYPE AND GASKET TYPE BEFORE FABRICATION OF MATING FLANGE. MATING FLANGE NOT INCLUDED IN BILL OF MATERIAL. RE-USE STUD-NUTS SET.

LINE 200-RWW-316L-006

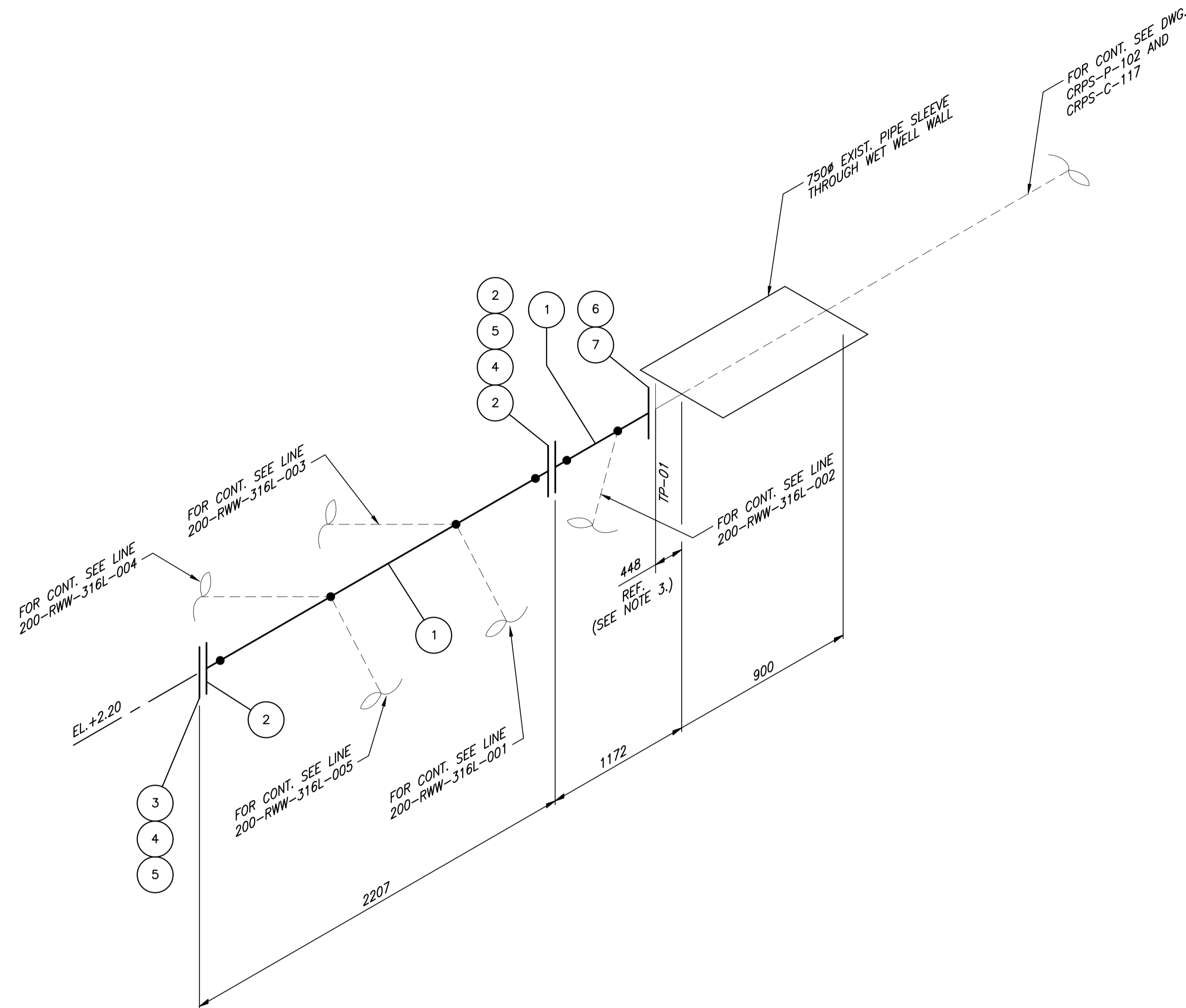
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS			REVISIONS			
		1	JAN 2022	ISSUED FOR CONSTRUCTION	JH	JG	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG



PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	CT	CHASE RIVER PUMP STATION MECHANICAL PUMP #2 AND PUMP #4 DISCHARGE BYPASS ISOMETRIC	JACOBS
DESIGNED	CW		
CHECKED	JG		
APPROVED	JG	DRAWING NUMBER	CRPS-M-226
		SHEET	
		DATE	APR 2021
		SCALE	NTS
		REV	1



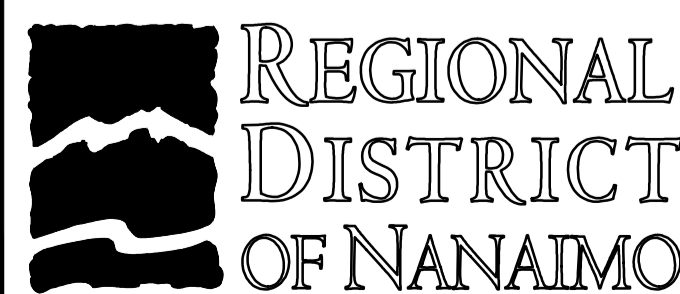
BILL OF MATERIAL			
ITEM NUMBER	SIZE (NPS)	QTY.	DESCRIPTION
1	450mm	2.81m	PIPE SCH STD, ASTM A774-TP316 L STAINLESS STEEL
2	450mm	3	FLANGE CLASS 150, WELD NECK, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL
3	450mm	1	BLIND FLANGE CLASS 150, FLAT FACE, ASTM A182/182M - F316 L STAINLESS STEEL WITH LIFTING EYE
4	450mm	2	GASKET, CLASS 150, FULL FACE, BLACK RUBBER (EPDM) ASME B16.47
5	31mm	2	STUD-NUTS SETS, STUDS ASTM A193 GRADE B8M, NUTS ASTM A194 GR.4
6	450mm	1	GASKET, CLASS 150, RAISED FACE FLANGE GASKET, BLACK RUBBER (EPDM) ASME B16.47. SEE NOTE 3.
7	450mm	1	FLANGE CLASS 150, WELD NECK, RAISED FACE, ASTM A182/182M - F316 L STAINLESS STEEL. SEE NOTE 3.



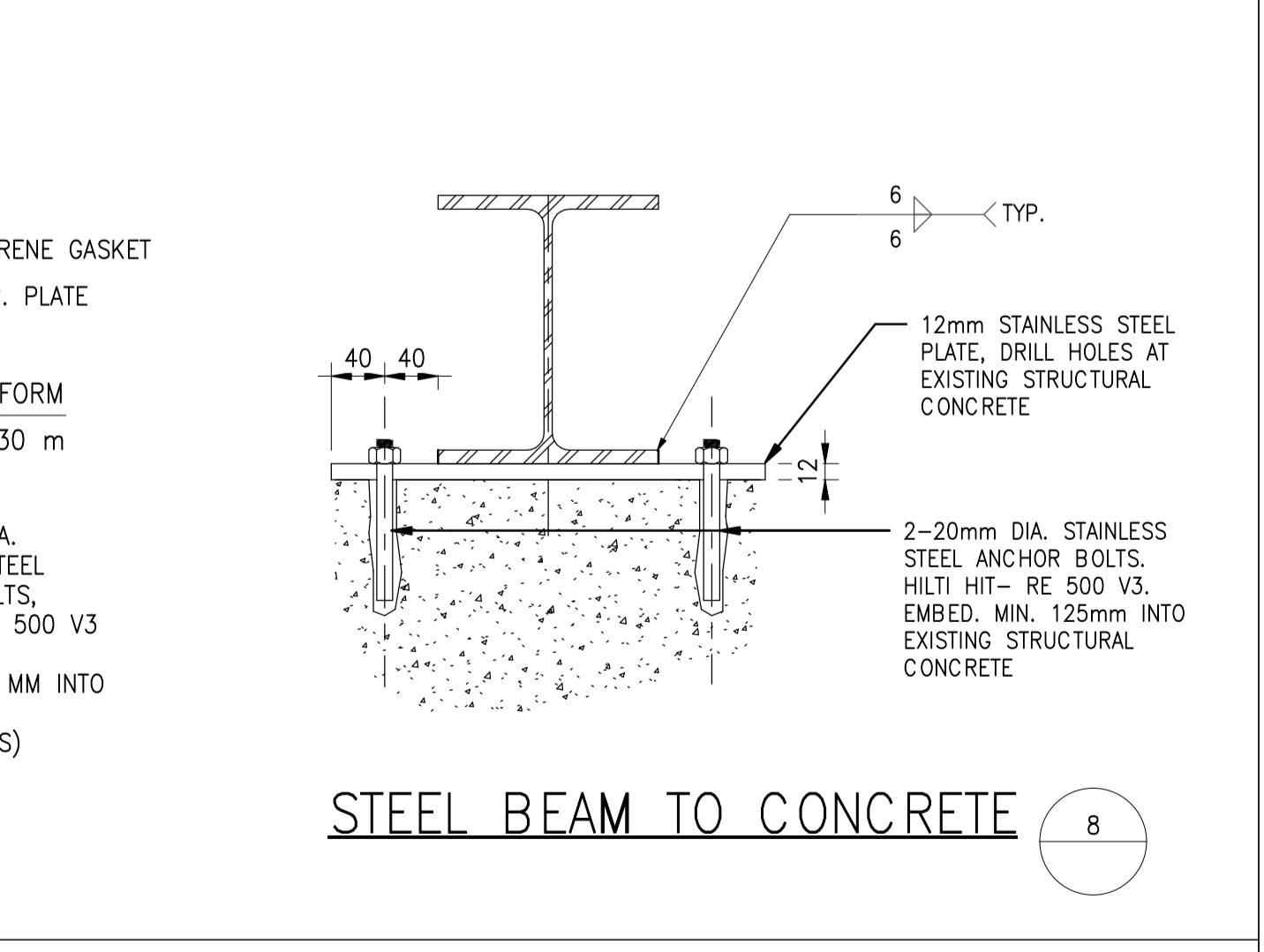
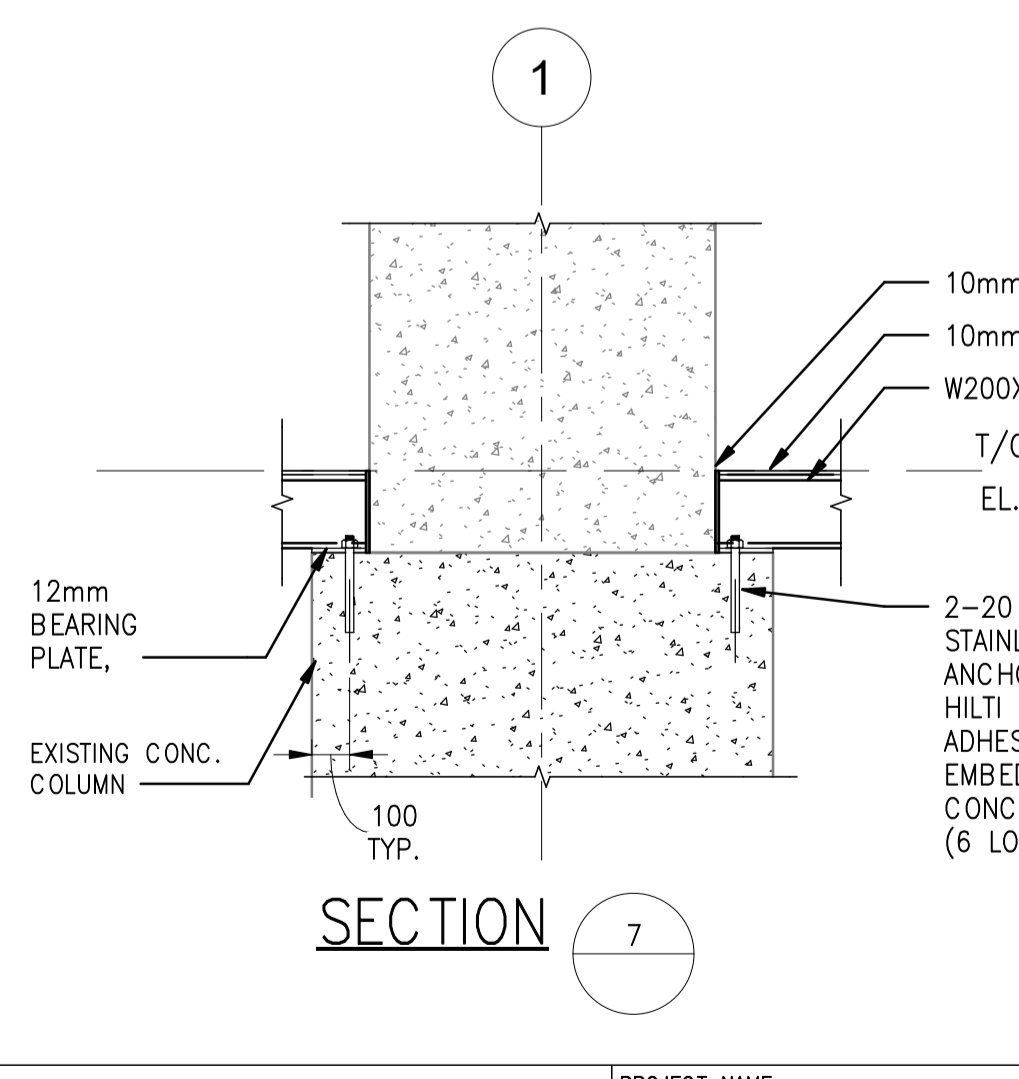
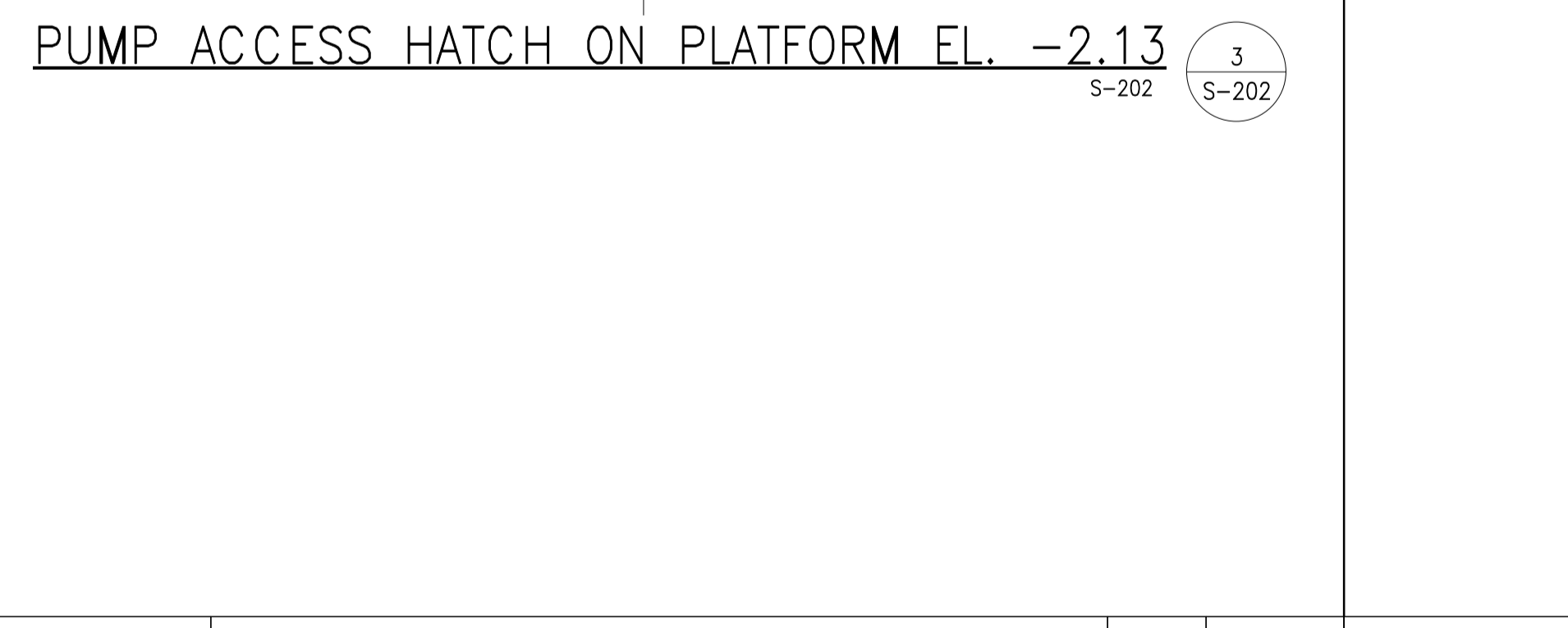
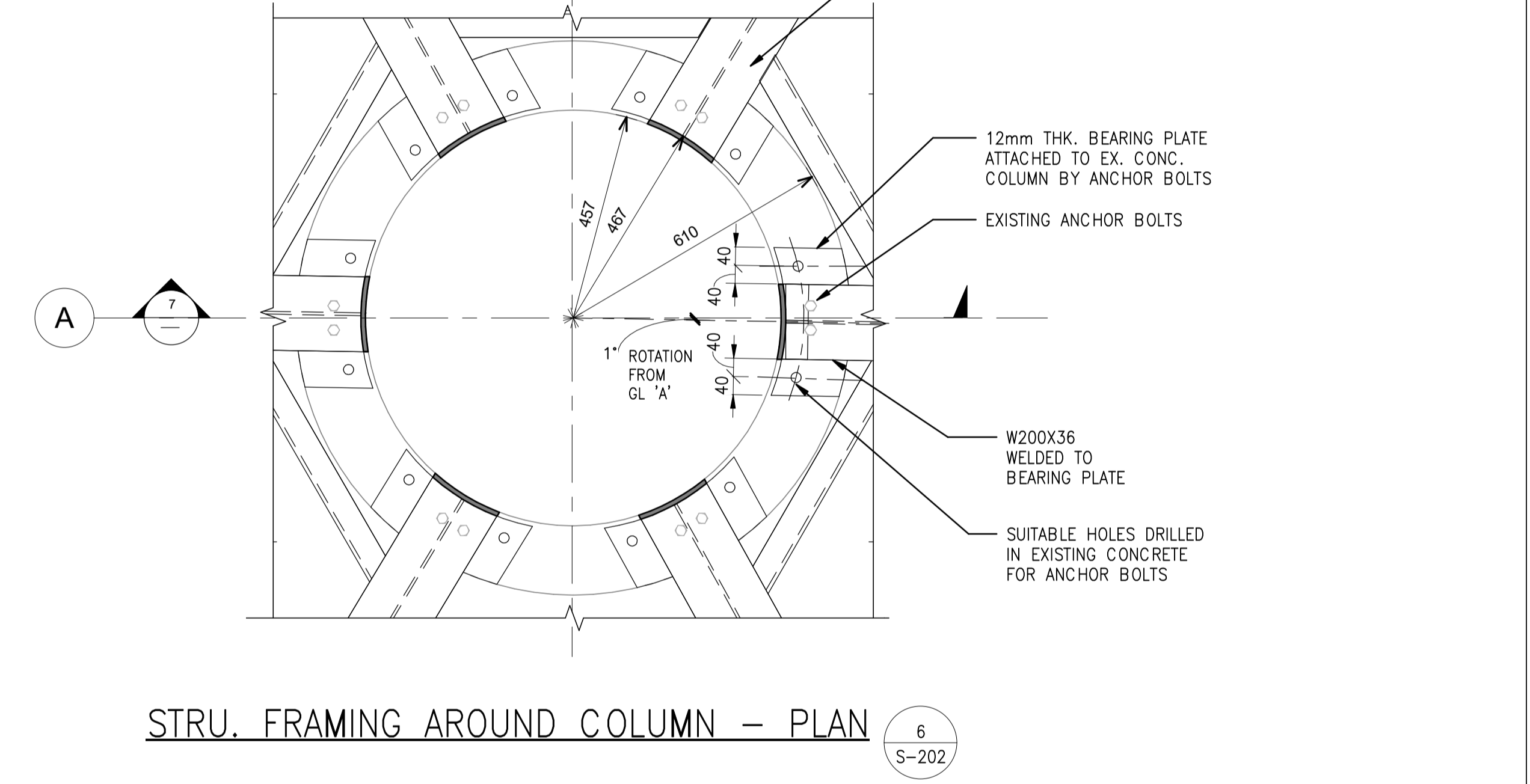
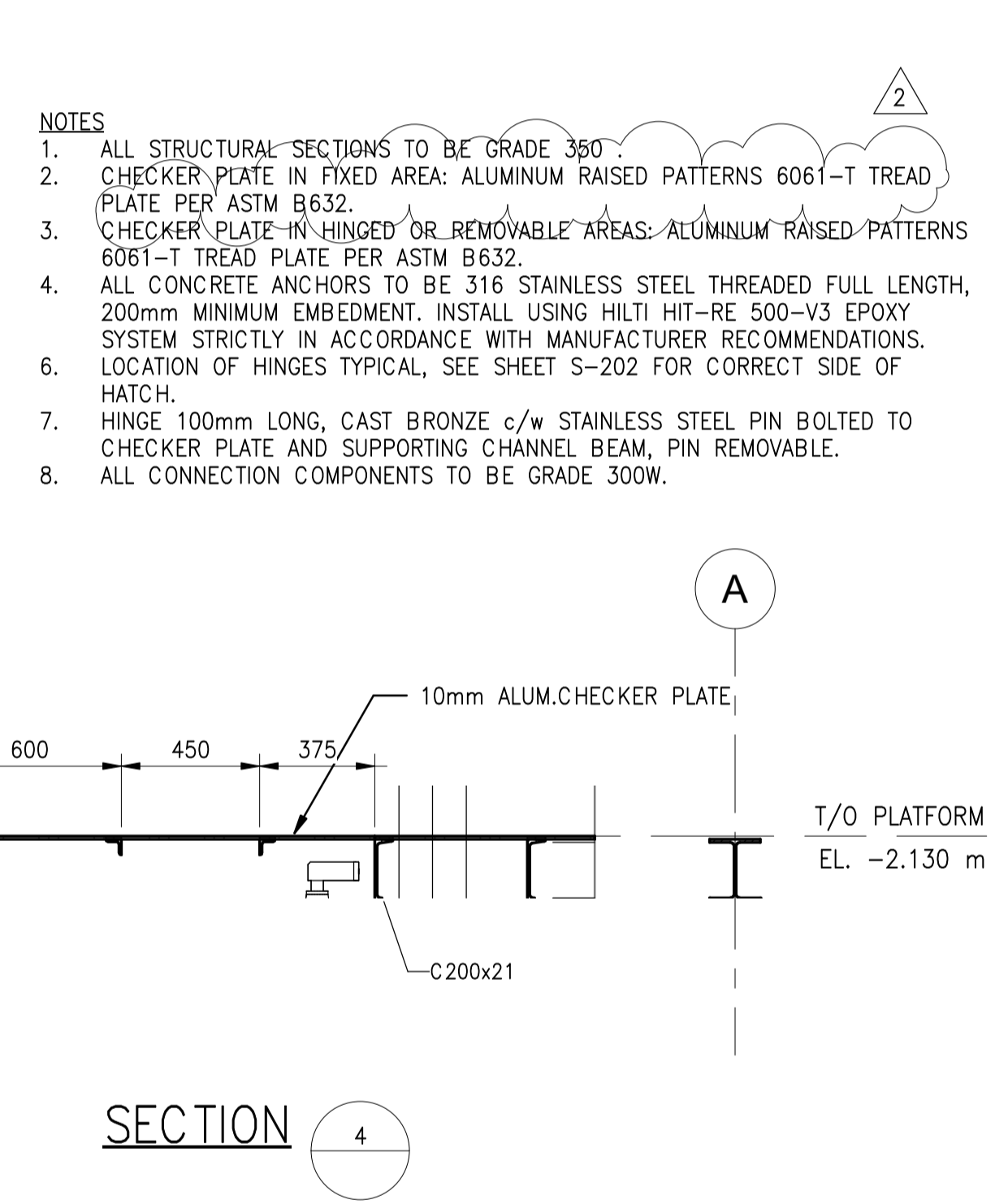
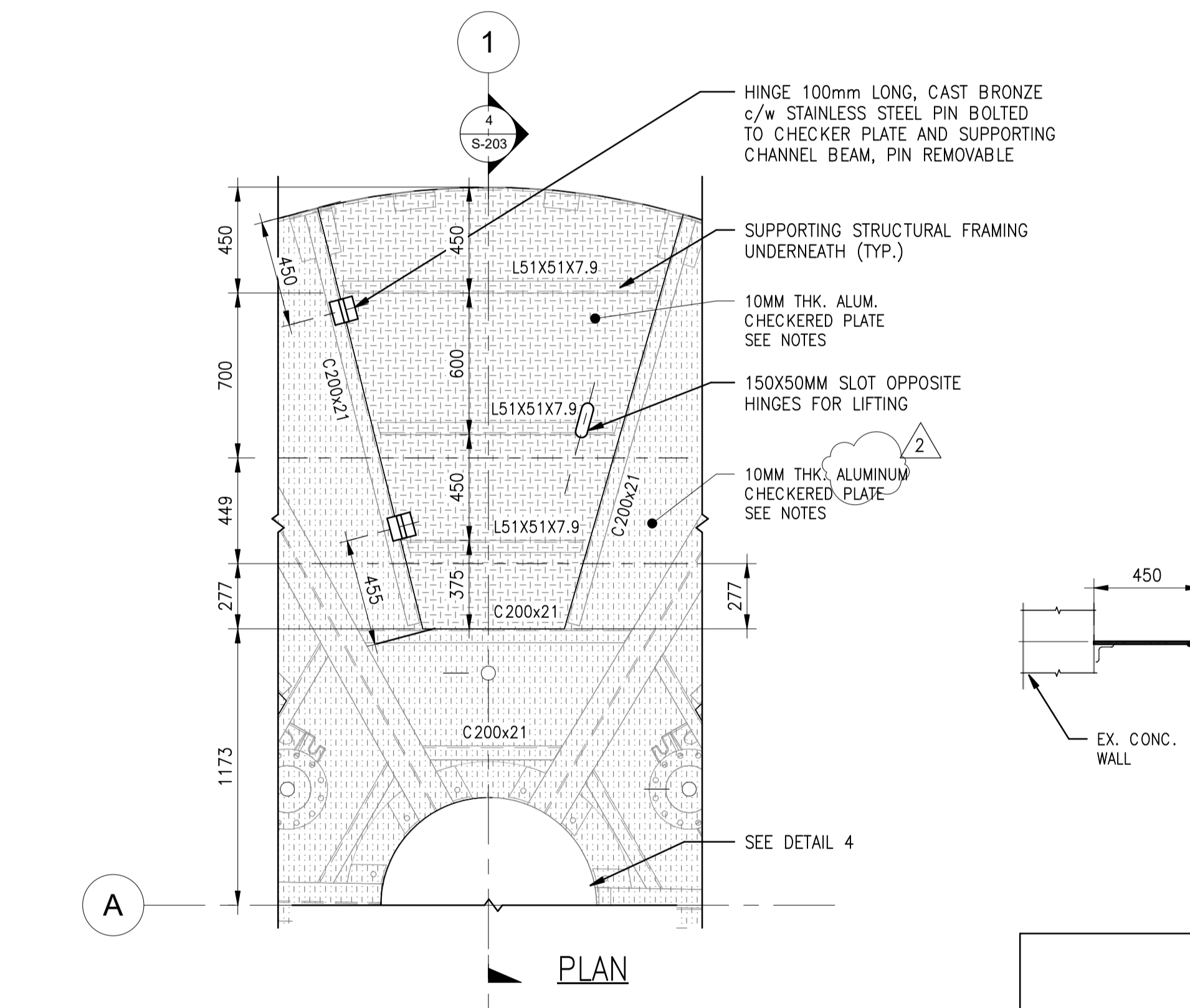
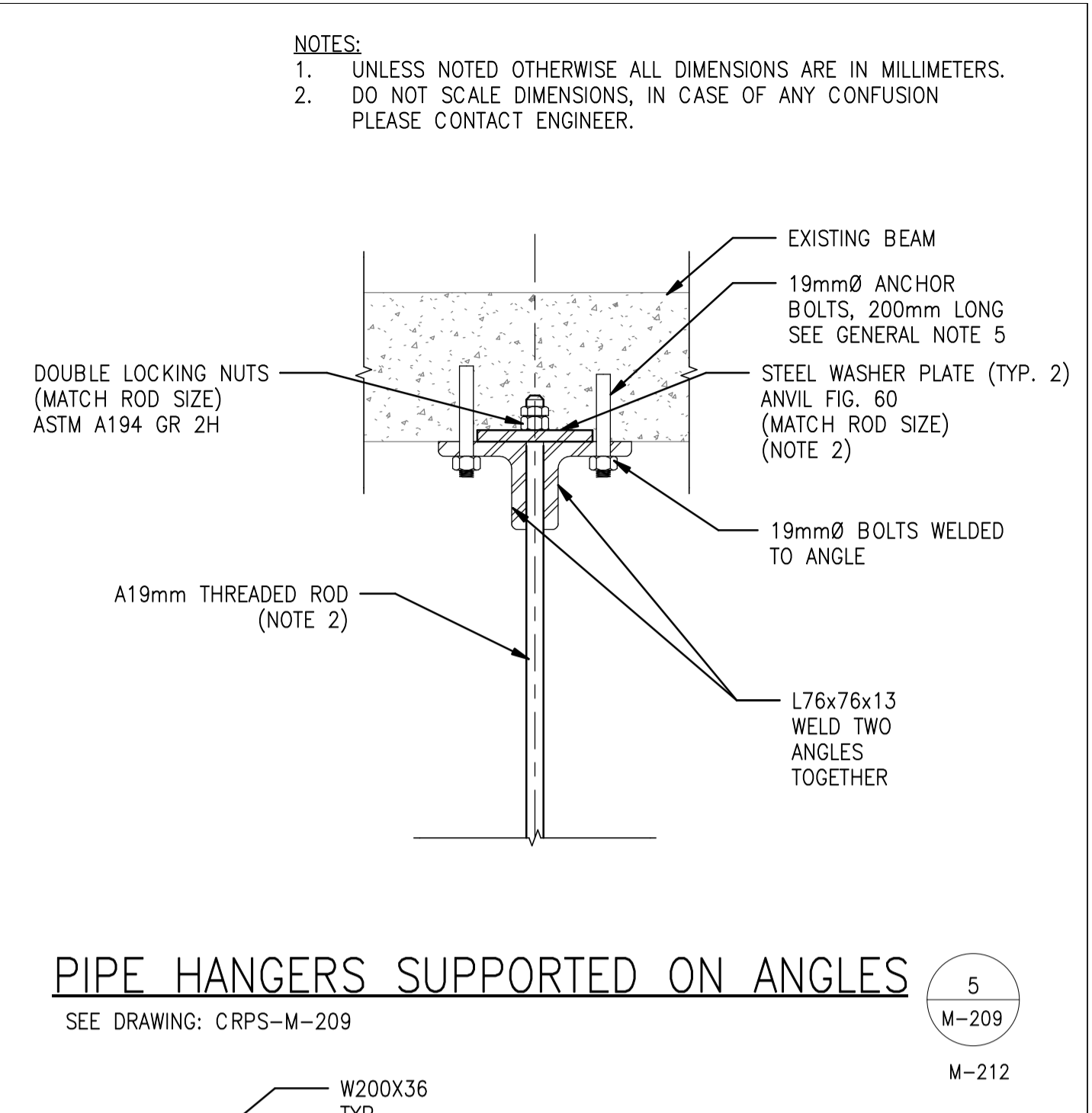
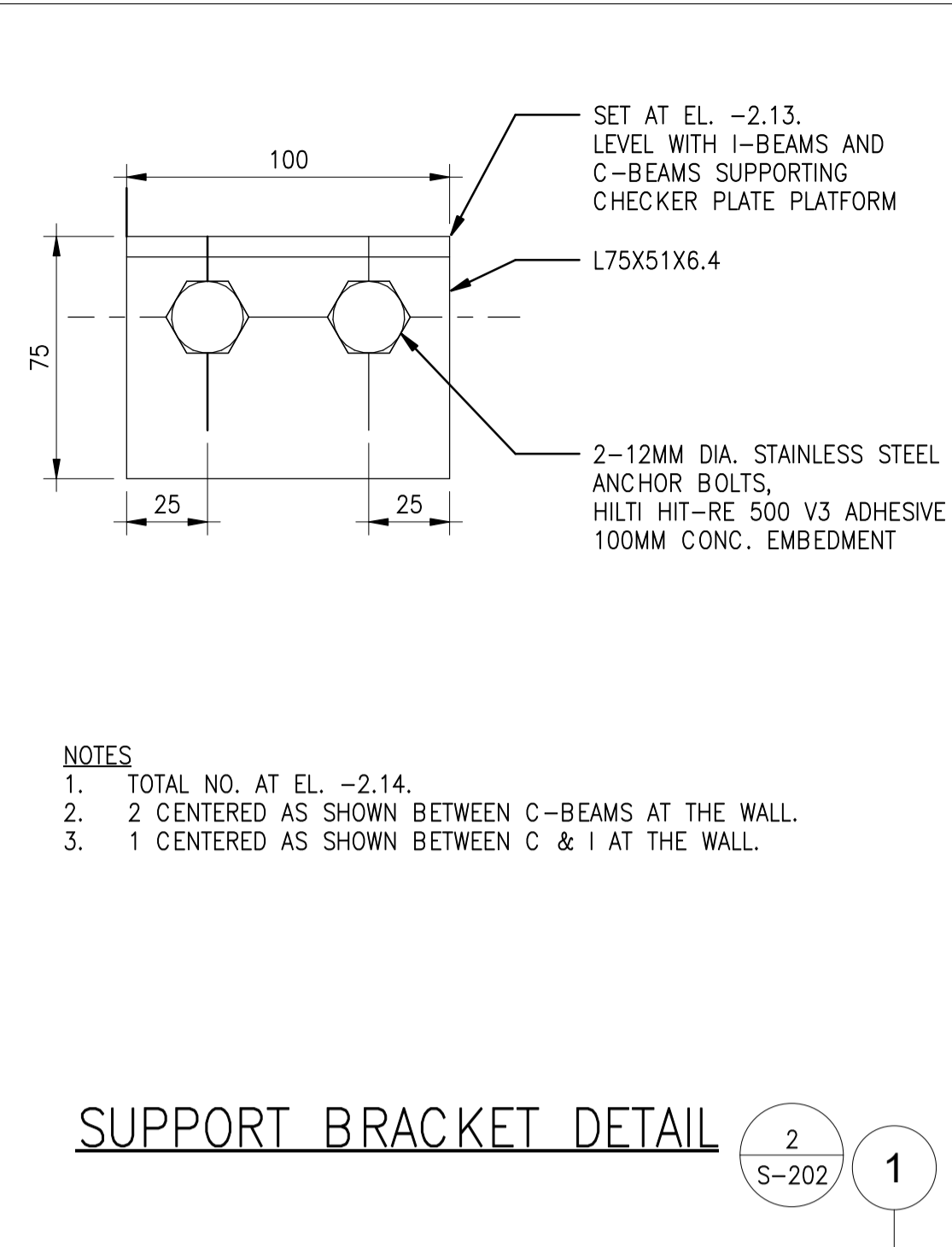
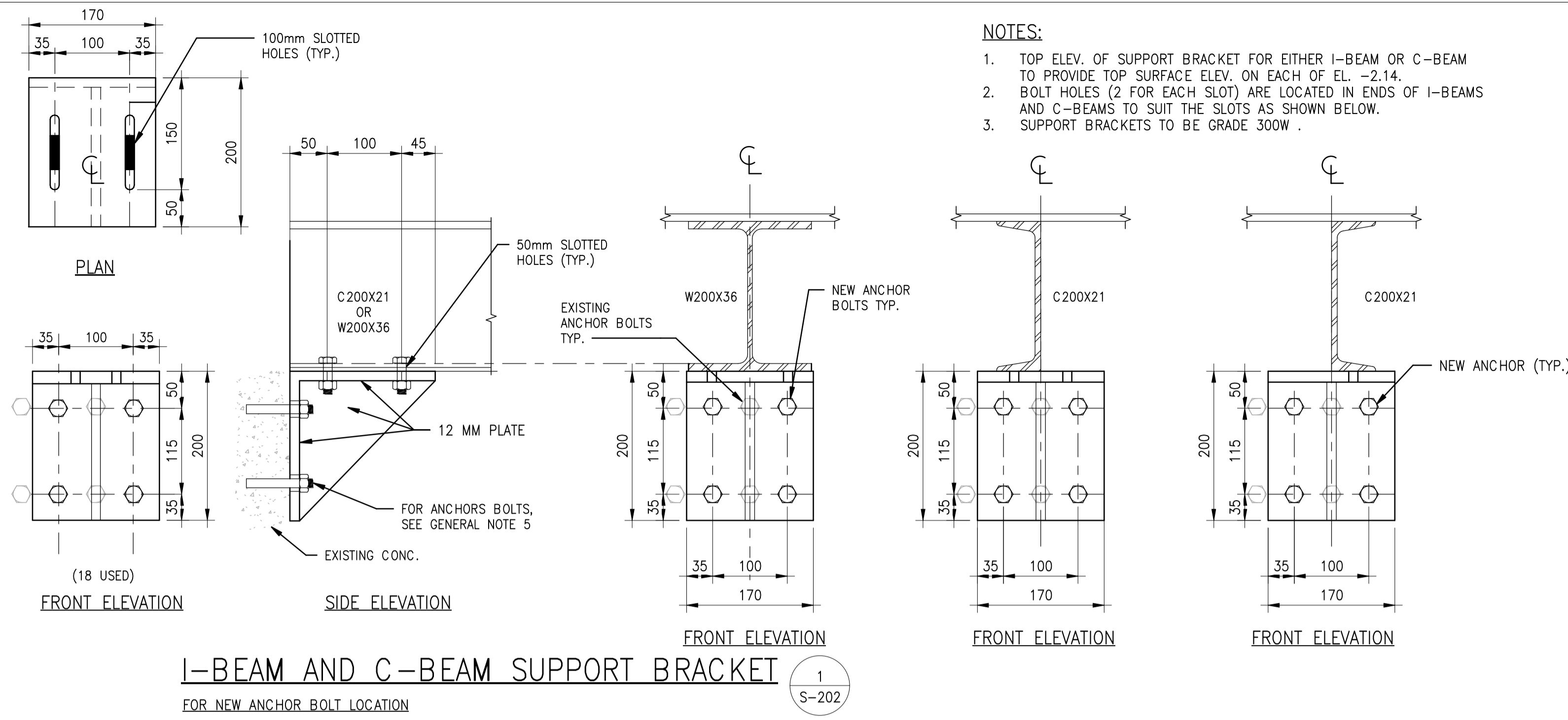
NOTES:

- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS ARE IN METRES (m).
- FOR LINE CONDITIONS SEE THE LINE DESIGNATION TABLE, CRPS-LDT-001.
- REFERENCE DIMENSION IS TO FACE OF FLANGE AND TO BE CONFIRMED ON SITE PRIOR TO PIPE FABRICATION. CONFIRM FLANGE TYPE AND GASKET TYPE BEFORE FABRICATION OF MATING FLANGE. RE-USE STUD-NUTS SET.

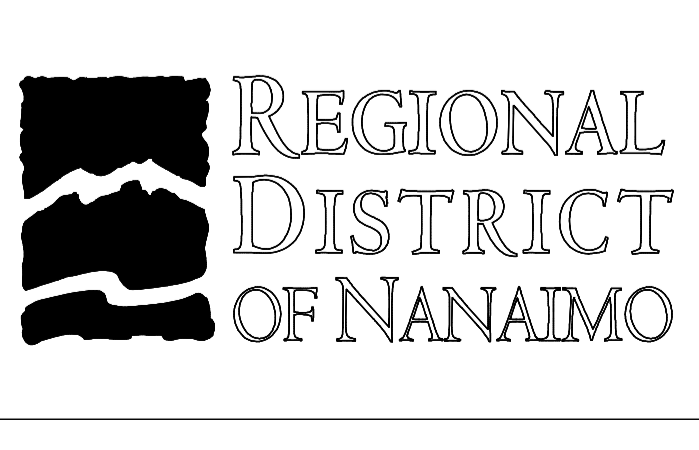
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
	REFERENCE DRAWINGS			REVISIONS			
		2	JAN 2022	ISSUED FOR CONSTRUCTION	JH	JG	JG
		1	AUG 2021	ISSUED FOR CONSTRUCTION	RY	JG	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	JH	JG	JG



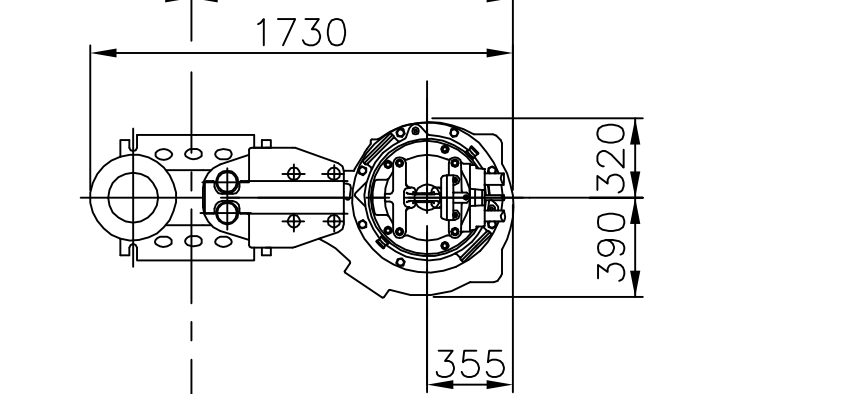
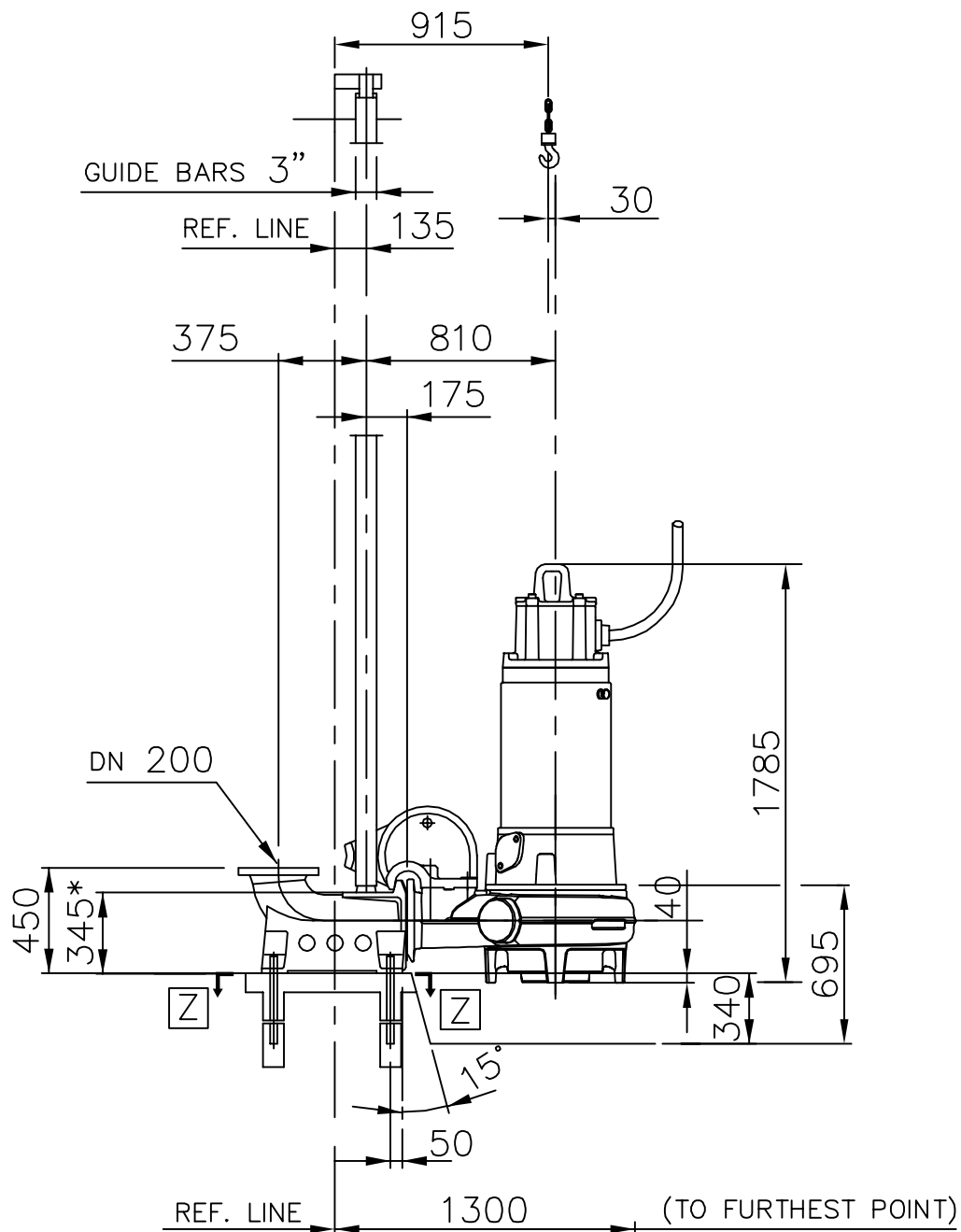
LINE 200-RWW-316L-007			
PROJECT NAME CHASE RIVER PUMP STATION UPGRADES			
DRAWN CT	CHASE RIVER PUMP STATION MECHANICAL		JACOBS
DESIGNED CW	PUMP DISCHARGE HEADER ISOMETRIC		
CHECKED JG	PROJECT NO. 707564	SCALE NTS	
APPROVED JG	DRAWING NUMBER CRPS-M-227	SHEET	DATE APR 2021
			REV 2



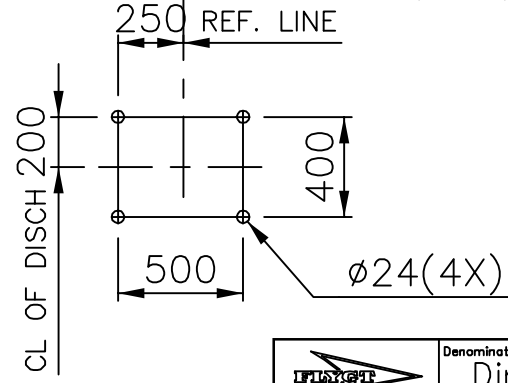
DRAWING NO.	TITLE	REV	DATE	DESCRIPTION	DRN	CHK	APP
		2	JAN 2022	ISSUED FOR CONSTRUCTION	SR	MR	JG
		1	DEC 2021	ISSUED FOR CONSTRUCTION	SR	PT	JG
		0	JUN 2021	ISSUED FOR CONSTRUCTION	SR	PT	JG
	REFERENCE DRAWINGS			REVISION			



PROJECT NAME		CHASE RIVER PUMP STATION UPGRADES	
DRAWN	SR	CHASE RIVER PUMP STATION STRUCTURAL PUMP PLATFORM PLAN AND DETAILS	
DESIGNED	ZS		
CHECKED	PT		
APPROVED	JG		
DRAWING NUMBER		CRPS-S-203	
PROJECT NO.		707564	SCALE: As indicated
DATE		APR 2021	REV: 2



VIEW [Z] - [Z]



* DIMENSION TO ENDS OF GUIDE BARS

Motor	Weight (kg)	
	Pump	Disch
35-35-XX	1380	125
35-45-XX	1410	125

	Denomination	Drawn by	Checked by	Date
	Dimensional drwg	DS		120914
	CP,NP 3231 665/675	Scale	1:30	Reg no 5399
DN 200	6218700		8	

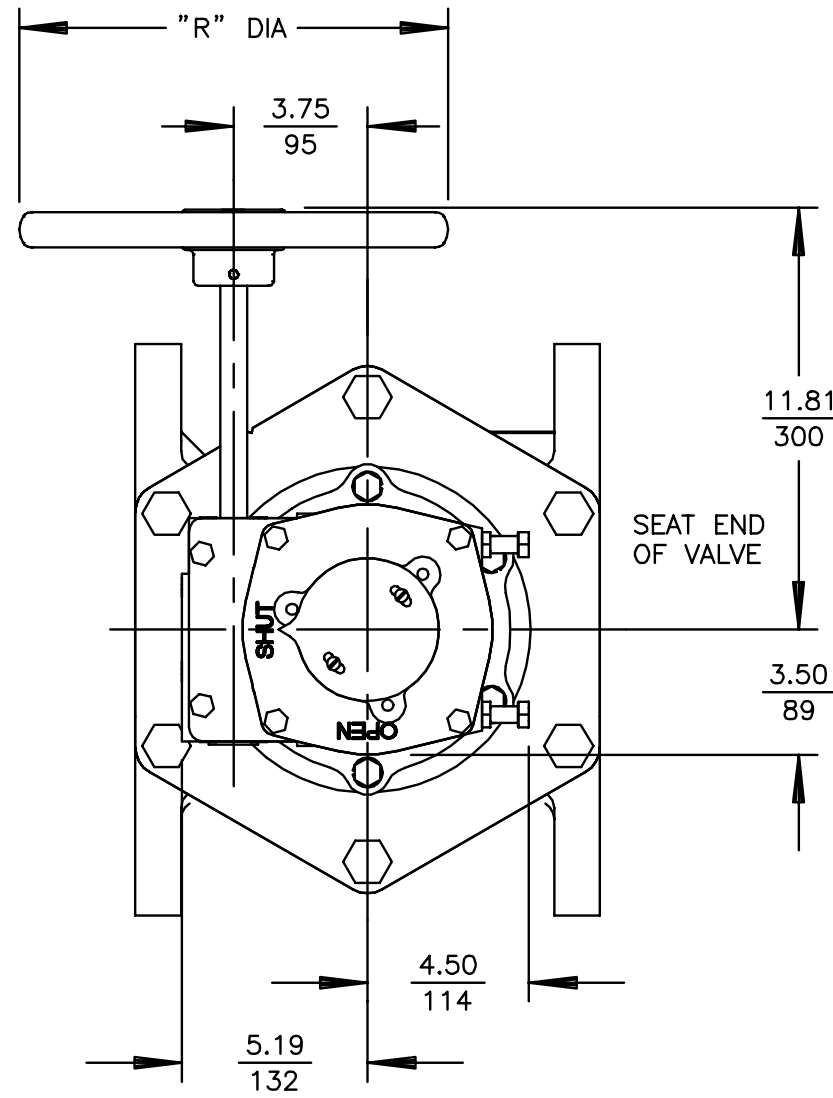
VALVE SIZE		DIMENSIONS <small>INCHES MILLIMETERS</small>										
INCH	MM	A	B	C	D	E	F	G	H	J	K	L
3	80	$\frac{.83}{21}$	$\frac{8.00}{203}$	$\frac{3.56}{90}$	$\frac{6.00}{152}$	5/8-11 UNC	4	$\frac{.81}{21}$	N/A	N/A	$\frac{8.00}{203}$	$\frac{10.19}{259}$
4	100	$\frac{1.02}{26}$	$\frac{9.00}{229}$	$\frac{4.43}{113}$	$\frac{7.50}{191}$	5/8-11 UNC	4	$\frac{.62}{16}$	$\frac{.75}{19}$	4	$\frac{8.62}{219}$	$\frac{10.81}{275}$
5	125	$\frac{1.04}{26}$	$\frac{10.50}{267}$	$\frac{5.79}{147}$	$\frac{8.50}{216}$	3/4-10 UNC	4	$\frac{.69}{18}$	3/4-10 UNC	4	$\frac{9.75}{248}$	$\frac{11.94}{303}$
6	150	$\frac{1.04}{26}$	$\frac{10.50}{267}$	$\frac{5.79}{147}$	$\frac{9.50}{241}$	3/4-10 UNC	4	$\frac{.69}{18}$	$\frac{.88}{22}$	4	$\frac{9.75}{248}$	$\frac{11.94}{303}$
8	200	$\frac{1.23}{31}$	$\frac{11.50}{292}$	$\frac{7.65}{194}$	$\frac{11.75}{298}$	3/4-10UNC	4	$\frac{.75}{19}$	$\frac{.88}{22}$	4	$\frac{12.09}{307}$	$\frac{14.28}{363}$
10	250	$\frac{1.30}{33}$	$\frac{13.00}{330}$	$\frac{9.19}{233}$	$\frac{14.25}{362}$	7/8 - 9 UNC	8	$\frac{.66}{17}$	$\frac{1.00}{25}$	4	$\frac{13.50}{343}$	$\frac{15.69}{399}$
12	300	$\frac{1.36}{35}$	$\frac{14.00}{356}$	$\frac{11.53}{293}$	$\frac{17.00}{432}$	7/8 - 9 UNC	8	$\frac{.75}{19}$	$\frac{1.00}{25}$	4	$\frac{15.56}{395}$	$\frac{17.75}{451}$

ACTUATOR NUMBER	DIM <small>IN MM</small>
	R
GS-6A-HD8	$\frac{8.00}{203}$
GS-6A-HD12	$\frac{12.00}{305}$

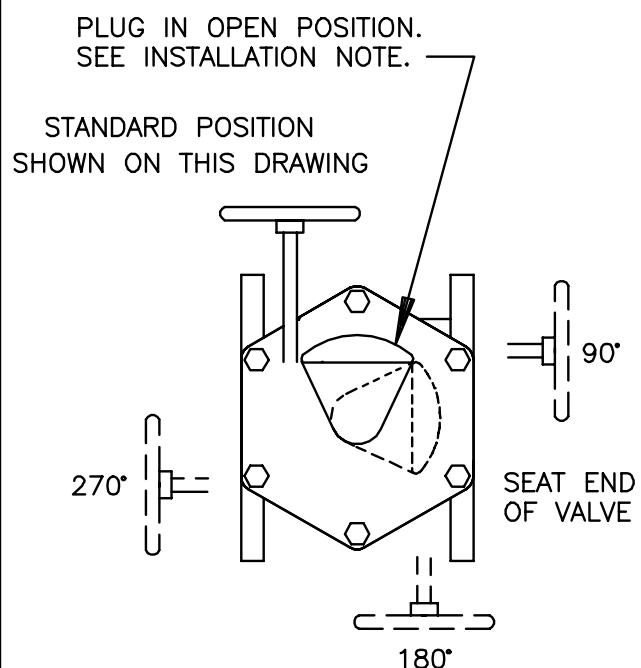
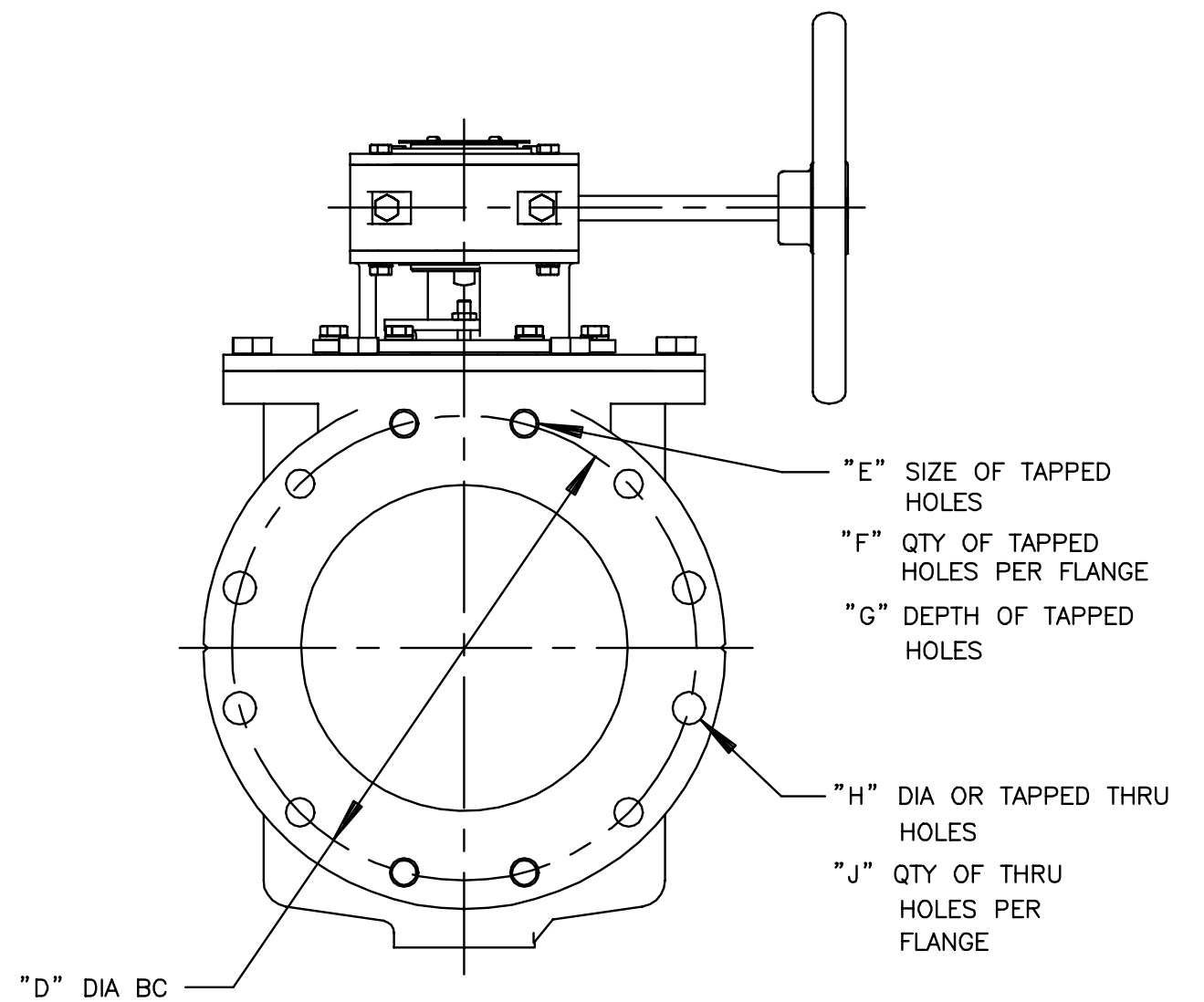
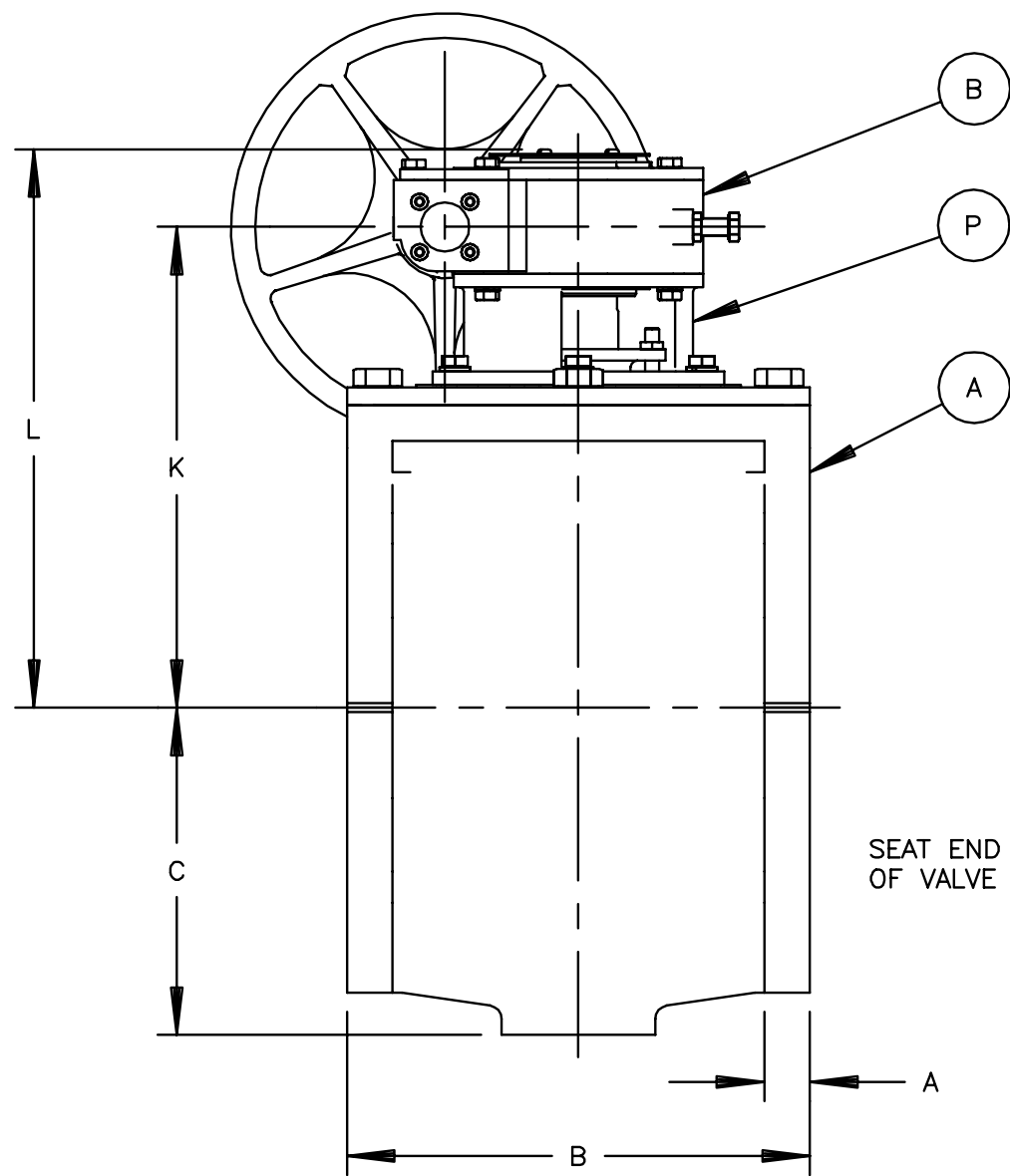
A	VALVE
B	ACTUATOR
P	CONNECTING PARTS

NOTE:

- FLANGES ARE FLAT FACED WITH THICKNESS, DIAMETER AND DRILLING TO CLASS 125 ANSI STANDARD B16.1, EXCEPT FOR TAPPED HOLES AS INDICATED. SEE A55467 FOR NON-ANSI FLANGE DATA.
- 13 TURNS OF HANDWHEEL ARE REQUIRED TO OPEN VALVE.
- INSTALLATION NOTE:
 - FOR LIQUIDS & GASES: INSTALL VALVE WITH HIGHER PRESSURE AGAINST END OPPOSITE SEAT.
 - FOR SUSPENDED SOLIDS, SLURRIES, ETC: INSTALL VALVE WITH HIGHER PRESSURE AGAINST SEAT END. IN HORIZONTAL PIPELINES, VALVE SHOULD BE INSTALLED ON IT'S SIDE SO PLUG ROTATES TO THE TOP OF THE PIPELINE WHEN OPEN. (SEE DIAGRAM BELOW).



NOTICE
THIS DRAWING DOES NOT SHOW ACTUATOR ACCESSORIES. IF ACCESSORIES ARE REQUIRED, REFER TO THE APPROPRIATE ACCESSORY INSTALLATION DRAWING FOR DIMENSIONS AND OTHER RELATED INFORMATION.



ACTUATOR MOUNTING POSITIONS AS VIEWED FROM TOP OF VALVE. DOTTED LINES SHOW OPTIONAL MOUNTING POSITIONS.

6	5	4	3	2	1	03/14/07
G	F	E	D	C	B	A

DeZURIK
Sartell, MN USA 56377
www.dezurik.com

PEF 100% PORT ECCENTRIC VALVES SIZE 3 - 12 FLANGED GS-6A-HD_ HANDWHEEL ACTUATED					
DOCT. CODE	DRAWN	SN	APPROVED	SN	A55432
C1	CHECKED	SN	DATE	10/17/05	