

DRAWING LIST

DRAWING LIST

- A0.0 COVER PAGE
- A0.1 SURVEY PLAN
- C1.0 CIVIL
- C2.0 CIVIL GRADING AND LANDSCAPING
- C3.0 CIVIL

BUILDING NO. 1 - NEW WATER TREATMENT PLANT

- A0.0 COVER PAGE
- A0.3 SITE PLAN
- A2.0 FLOOR PLAN
- A2.1 ROOF PLAN AND ROOF DETAIL
- A3.0 ELEVATIONS
- A3.1 ELEVATIONS
- A4.0 SECTION DETAIL a-a
- A4.1 SECTION DETAIL b-b
- A7.0 DETAILS
- A7.1 DETAILS
- A8.0 DOOR DETAIL & SCHEDULE
- A8.1 WALL & FINISH SCHEDULE

- S1.1 PROJECT NOTES
- S1.2 TYPE PROJECT DETAILS
- S2.1 RCMP - FOUNDATION/MAIN FLOOR PLAN
- S2.2 RCMP - FRAMING PLAN
- S5.1 RCMP - SECTIONS

- M1.0 FLOOR PLAN PLUMBING
- M1.1 DETAILS
- M1.2 DETAILS
- M2.0 FLOOR PLAN HVAC
- M2.1 DETAILS

BUILDING NO. 2 - OLD PUMP HOUSE

- A0.0 COVER PAGE
- A1.0 DEMOLITION PLAN
- A1.1 DEMOLITION ELEVATION
- A2.0 FLOOR PLAN
- A2.1 ROOF PLAN
- A3.0 ELEVATIONS
- A3.1 ELEVATIONS
- A4.0 SECTION DETAIL a-a
- A4.1 SECTION DETAIL b-b
- A7.0 DETAILS
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- S1.1 PROJECT NOTES
- S1.2 TYPE PROJECT DETAILS
- S2.1 RCMP - FOUNDATION/MAIN FLOOR PLAN
- S2.2 RCMP - FRAMING PLAN
- S5.1 RCMP - SECTIONS

- M2.0 FLOOR PLAN HVAC
- M2.1 DETAILS

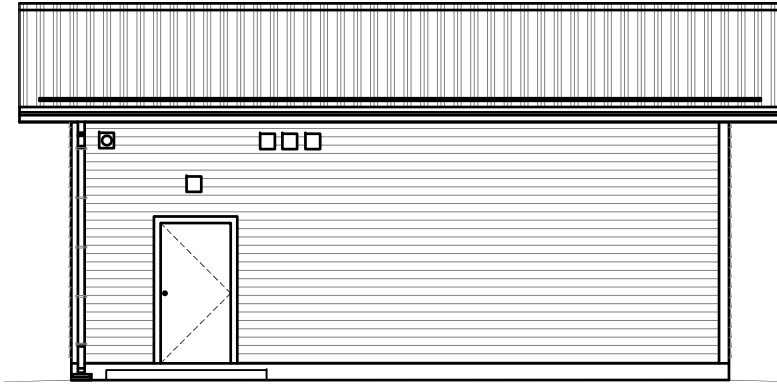
ELECTRICAL BUILDING NO.1 AND NO. 2

- E1.0 WATER TREATMENT PLANT LIGHTING
- E2.0 WATER TREATMENT PLANT POWER
- E3.0 PUMP HOUSE PLAN AND SCHEDULES
- E4.0 SCHEDULES AND DIAGRAM
- E5.0 SCHEDULES AND DIAGRAM

WATER TREATMENT DRAWINGS

- D0.1 PROCESS LEGEND SHEET 1
- D0.2 PROCESS LEGEND SHEET 2
- D1.0 PROCESS P&ID SHEET 1
- D1.1 PROCESS P&ID SHEET 2
- D1.2 PROCESS P&ID SHEET 3
- D1.3 PROCESS P&ID SHEET 4
- D2.0 PROCESS MAIN FLOOR PLAN
- D3.0 PROCESS EXISTING WTP/PUMPHOUSE EQUIPMENT DEMOLITION PLAN
- D4.0 PROCESS
- D5.1 PROCESS - DETAILS
- D5.2 PROCESS - DETAILS
- D6.0 PROCESS EQUIPMENT SCHEDULE
- D6.1 PROCESS VALVE SCHEDULE
- D7.0 MAIN FLOOR PLAN 3D VIEW
- D7.1 PROCESS MAIN FLOOR PLAN 3D VIEW

ROYAL CANADIAN MOUNTED POLICE NORWAY HOUSE WATER TREATMENT PLANT TENDER - 18 01 26



CONSULTANT LIST

PRIME CONSULTANT:



WATER TREATMENT CONSULTANT:



STRUCTURAL CONSULTANT:



MECHANICAL CONSULTANT:



ELECTRICAL CONSULTANT:



Engineering Consultants
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DRAWING SYMBOLS

- NUMBERED NOTE
- WINDOW NUMBER
- WALL / ROOF IDENTIFIER
- DOOR NUMBER
- DETAIL SECTION
- ELEVATION IDENTIFIER
- DETAIL MARKER (SEE SPECIFICATION BOOK)

- GRID LINES

- DETAIL MARKER

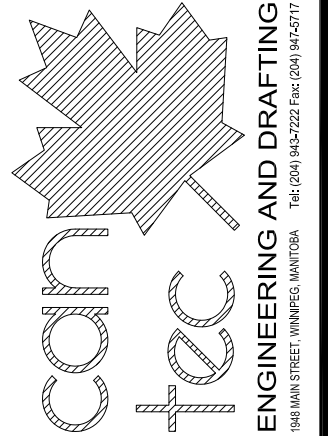
- ELEVATION MARKER

- ROOM NUMBER MARKER
- DETAIL IDENTIFICATION
- DETAIL NUMBER
- CURRENT SHEET
- PAGE ORIENTATION

ABBREVIATION LIST

ACOUSTIC	ACST	DRYWALL	DW	LAVATORY	LAV	ROOM	RM
ADHESIVE	ADH	EACH	EA	LAY-IN ACOUSTIC TILE	LAT	ROUGH OPENING	RO
ADJUSTABLE	ADJ	EACH WAY	EW	LEFT HAND	LH	RUBBER	RB
AGGREGATE	AGGR	EAST	E	LEFT HAND REVERSE	LHR	RVT	RESILIENT SHEET FLOORING
AIR VAPOUR BARRIER	AVB	ELECTRICAL	ELEC	LENGTH	LG	SCHEDULE	SCHED
ALTERNATE	ALT	ELEVATION	EL	LIGHT	LT	SCREW	SCR
ALUMINUM	ALUM	ELEVATOR	ELEV	LOUVRE	LVR	SECTION	SECT
APARTMENT	APT	EPOXY	EP	MANUFACTURE	MFG	SELF ADHESIVE	SA
APPROXIMATE	APPROX	EQUAL	EQ	MARK	MK	SHEATHING	SHTG
ARCHITECTURE	ARCH	EQUALLY SPACED	EQ SP	MASONRY OPENING	MO	SHEET	SHT
BEAM	BM	EQUIPMENT	EQUIP	MATERIAL	MAT	SHEET VINYL	SV
BENCH MARK	BM	EXISTING	EXIST	MECHANICAL	MECH	SIMILAR	SIM
BETWEEN	BTWN	EXPANSION	EXP	MINIMUM	MIN	SOLID CORE	SC
BLOCK	BLK	EXTERIOR	EXT	MISCELLANEOUS	MISC	SOUTH	S
BOARD	BD	EXTRUDE	EXTR	NEAR FACE	NF	SPECIFICATION	SPEC
BOTH SIDES	BS	FACE TO FACE	F/F	NEAR SIDE	NS	SPRUCE	SPR
BOTH WAYS	BW	FAR SIDE	FS	NORTH	N	SPRUCE, PINE OR FIR	S/P/F
BOTTOM	BOT	FIBREBOARD	FBRBD	NOT APPLICABLE	N/A	STAIN	ST
BUILDING	BLDG	FINISH	FIN	NOT IN CONTRACT	NIC	STAINLESS STEEL	SS
CARPET	CPT	FLOOR	FL	NOT TO SCALE	NTS	STANDARD	STD
CAST IRON	CI	FLOOR DRAIN	FD	NUMBER	NO	STEEL	STL
CEILING	CLG	FLOORING	FLG	ON CENTRE	O/C	STRUCTURAL	STRUCT
CEMENT BOARD	CBD	FLUORESCENT	FLR	OUT TO OUT	O/O	SQUARE FEET	SF
CENTRE	CTR	FOOTING	FTG	OUTSIDE DIAMETER	OD	TEMPORARY	TEMP
CENTRE TO CENTRE	C/C	FOUNDATION	FDN	OUTSIDE FACE	OF	THROUGH	THRU
CERAMIC TILE	CT	FULL SIZE	FS	OVERHEAD	OH	TO MATCH EXISTING	TME
CIRCLE	CIRC	GALVANIZED	GALV	PAINT	PT	TONGUE AND GROOVE	T&G
CLEAR	CLR	GALVANIZED IRON	GI	PAINTED	PTD	TOP AND BOTTOM	T&B
COLUMN	COL	GAUGE	GA	PARTITION	PTN	TOP OF	T/O
COMPLETE WITH	CW	GLASS	GL	PLYWOOD	PLYWD	TYPICAL	TYP
CONCRETE	CONC	HARDWARE	HDW	PRECAST	PC	UNDER SIDE	UIS
CONCRETE BLOCK	CBLK	HEIGHT	HGT	PRECAST CONCRETE	PC CONC	UNDERCUT	UCUT
CONSTRUCTION	CONST	HEXAGON	HEX	PREFABRICATION	PREFAB	URINAL	UR
CONTINUOUS	CONT	HOLLOW CORE	HC	PREFINISHED	PREFIN	VAPOUR BARRIER	VB
CONTROL JOINT	CJ	HOLLOW METAL	HM	PRESSED STEEL	PS	VERTICAL	VERT
COUNTERSINK	CSK	HORIZONTAL	HORIZ	QUANTITY	QTY	VINYL ASBESTOS TILE	VAT
COVED SHEET VINYL	CSV	INCLUSIVE	INCL	QUARRY TILE	QT	VINYL COVE BASE	VCB
DETAIL	DTL	INSIDE DIAMETER	ID	RADIUS	R	VINYL TILE	VT
DEMOLISH	DEMO	INSIDE FACE	IF	RAINWATER LEADER	RWL	VINYL WALL COVERING	VWC
DIAGONAL	DIAG	INSULATE	INSUL	REFERENCE	REF	WATER CLOSET	WC

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<http://www.cantecservices.ca/>



PROJECT TITLE
RCMP - WATER TREATMENT PLANT

SHEET TITLE
COVER PAGE

CHECKED BY
RS

DRAWN BY
XW

SCALE
AS NOTED

DATE
17-09-06

LOCATION
NORWAY HOUSE, MB

REVISION NO. **03**
ISSUED FOR TENDER
January 26 2018

A0.0

JOB NO.
17-045-01-21

P:\20174990-00-RCMP-Norway-House\Working_Dwgs\100-Civil\4990-00-C-101.dwg
DATE: 2018-01-25; Tyler Dyckho

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE
IF NOT 50 mm ADJUST SCALES 30 mm



DAYLIGHT BACKWASH PIPE AT NORTH EDGE OF PUMPHOUSE AND RUN PIPE ABOVE GROUND TO LAKE

500 HDPE RAW WATER AND BACKWASH PIPES IN COMMON SHALLOW TRENCH C/W HEAT TRACE AND INSULATION.

NEW WATER TREATMENT PLANT

WASTEWATER HOLDING TANK

380 HDPE FORCE MAIN IN SHALLOW TRENCH C/W HEAT TRACE AND INSULATION

500 HDPE POTABLE WATER MAIN IN SHALLOW TRENCH C/W HEAT TRACE AND INSULATION

TIE-IN POINT FOR NEW POTABLE WATER MAIN LOCATED IN BASEMENT OF EXISTING RESIDENCE

EXISTING WATER TREATMENT PLANT/ PUMPHOUSE

INSTRUMENTATION AND CONTROL CABLES IN COMMON TRENCH WITH WATER MAINS

T/O SLAB EL. 221.800

TBM ELEV 220.65

TIE-IN FORCE MAIN TO EXISTING MANHOLE

LEGEND

	EXISTING	PROPOSED
VALVE		
WATER LEVEL		
COUPLING		
OVERHEAD POWER		
UNDERGROUND POWER		
FORCE MAIN		
SEWER		
RAW WATER		
POTABLE WATER		
SPOT ELEVATION		
SLOPE		
BUILDING		
GRAVEL ROAD		

NOTE:
ALL PIPE DIAMETERS IN MILLIMETRES.

1 PLAN 1:250
WTP SITE



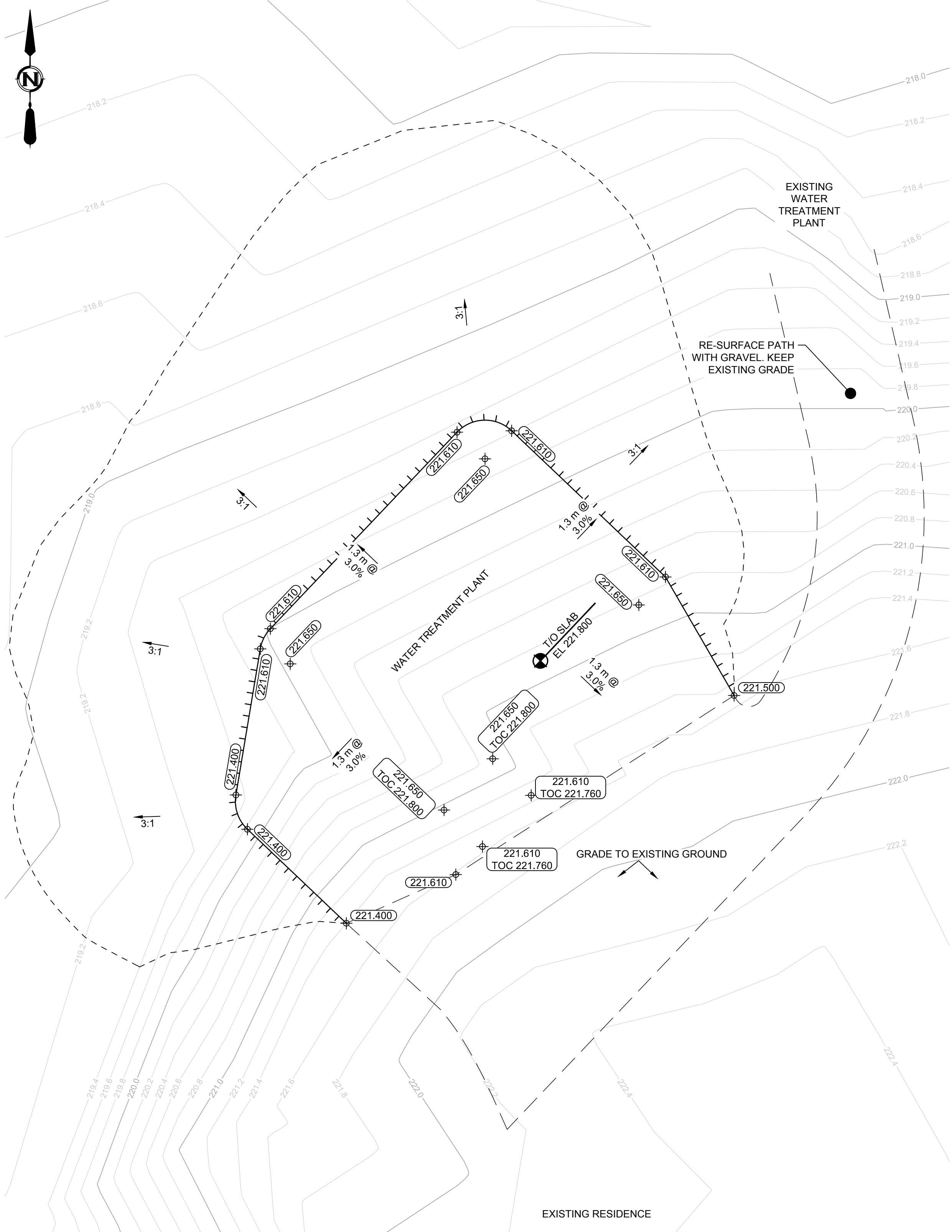
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R.C.M.P.
NORWAY HOUSE DETACHMENT
WATER TREATMENT PLANT
20174990-00
SCALE: AS SHOWN
CIVIL

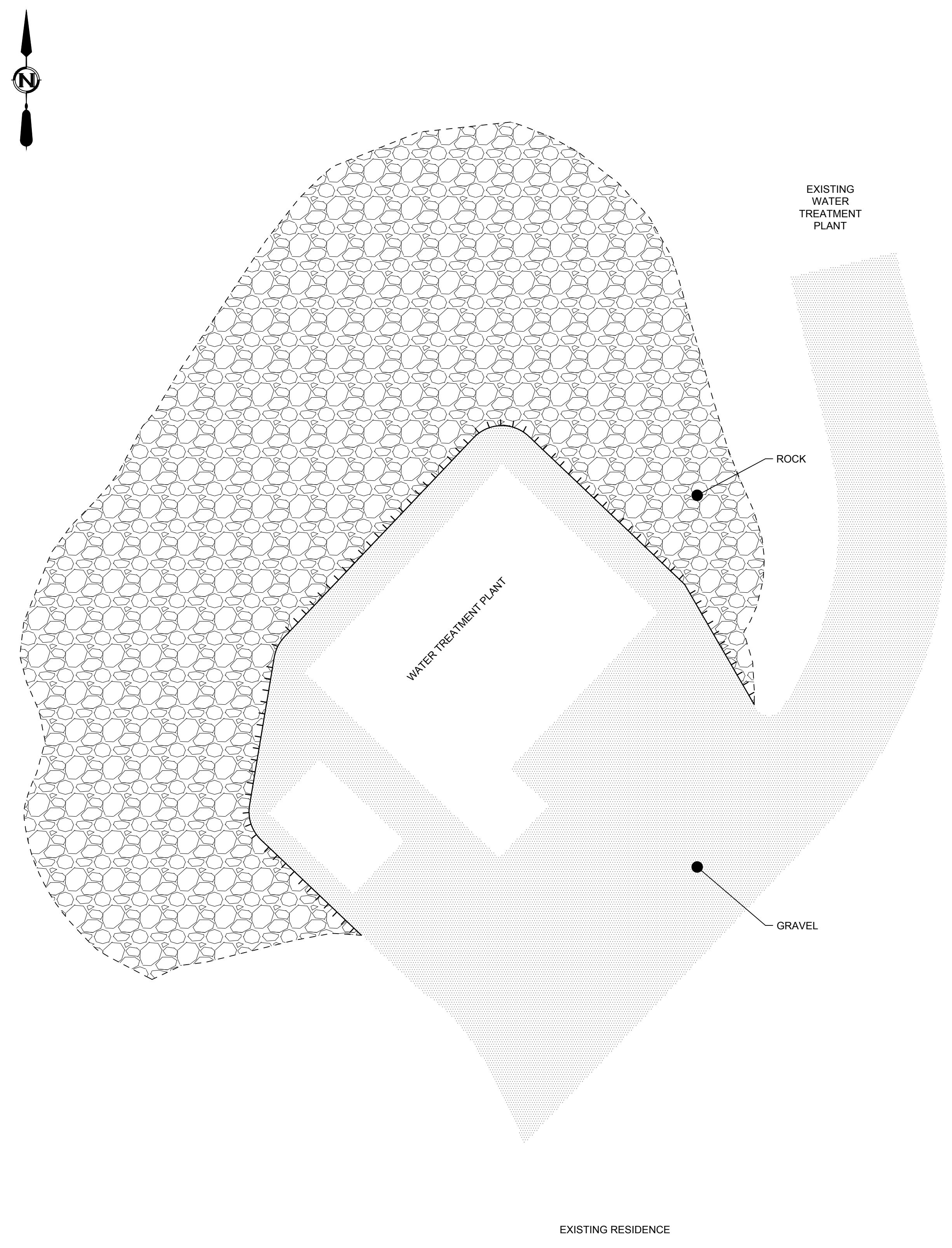
DRAWING	REVISION	SHEET
4990-00-C-101	0	C1.0

P:\20174990\00_RCMP_Norway_House\Working_Dwgs\100_Civil\4990-00-C-102.dwg
 DATE: 2018-01-25; Tyler Dyckho

IF NOT 50 mm ADJUST SCALES
 30 mm
 SCALES SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11x17) SIZE DRAWINGS ARE 1/2 OF SCALES SHOWN UNLESS NOTED OTHERWISE



1 PLAN 1:100
 GRADING



2 PLAN 1:100
 LANDSCAPING

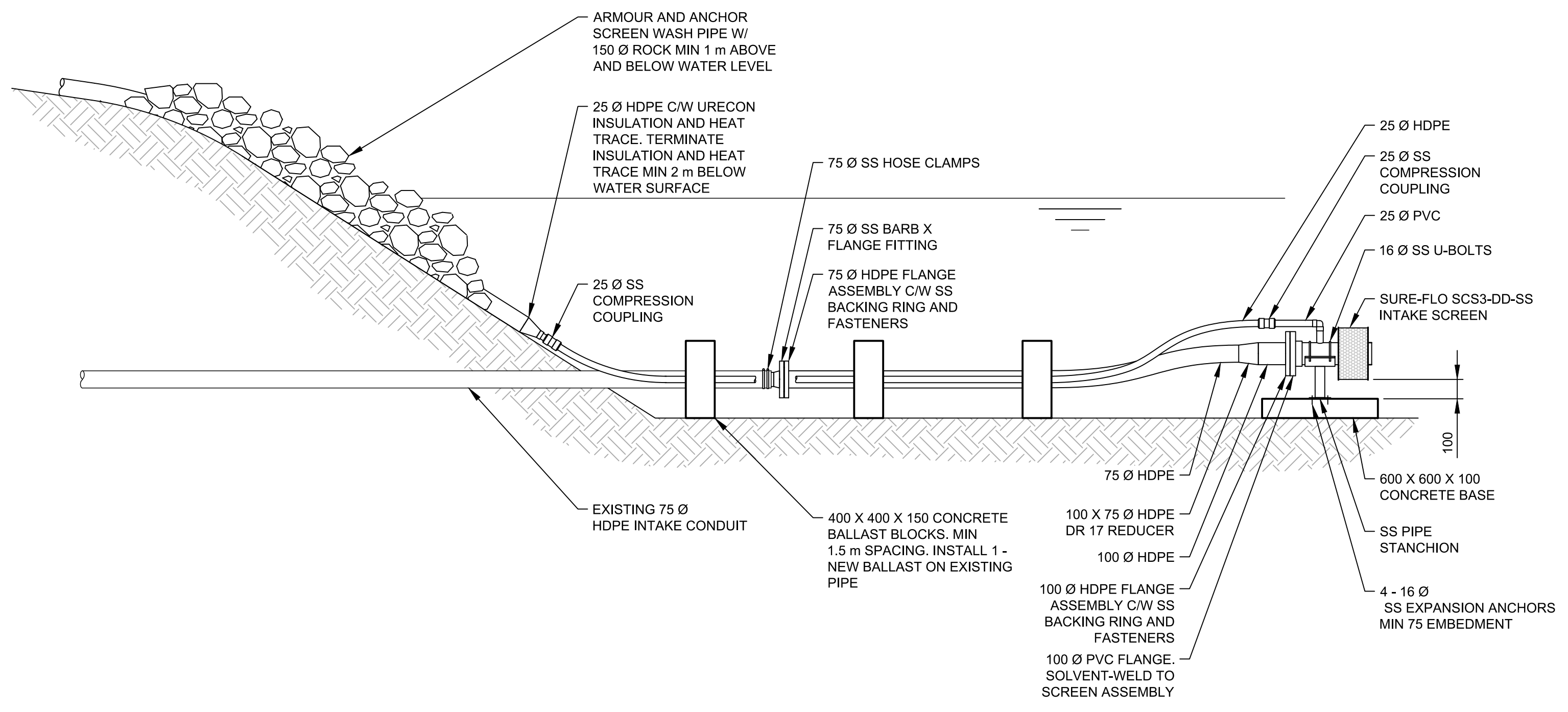


REV	DATE	DESIGN	DRAWN	DESCRIPTION
A	2018JAN24	K. ANDERSON	C. REESE	ISSUED FOR REVIEW

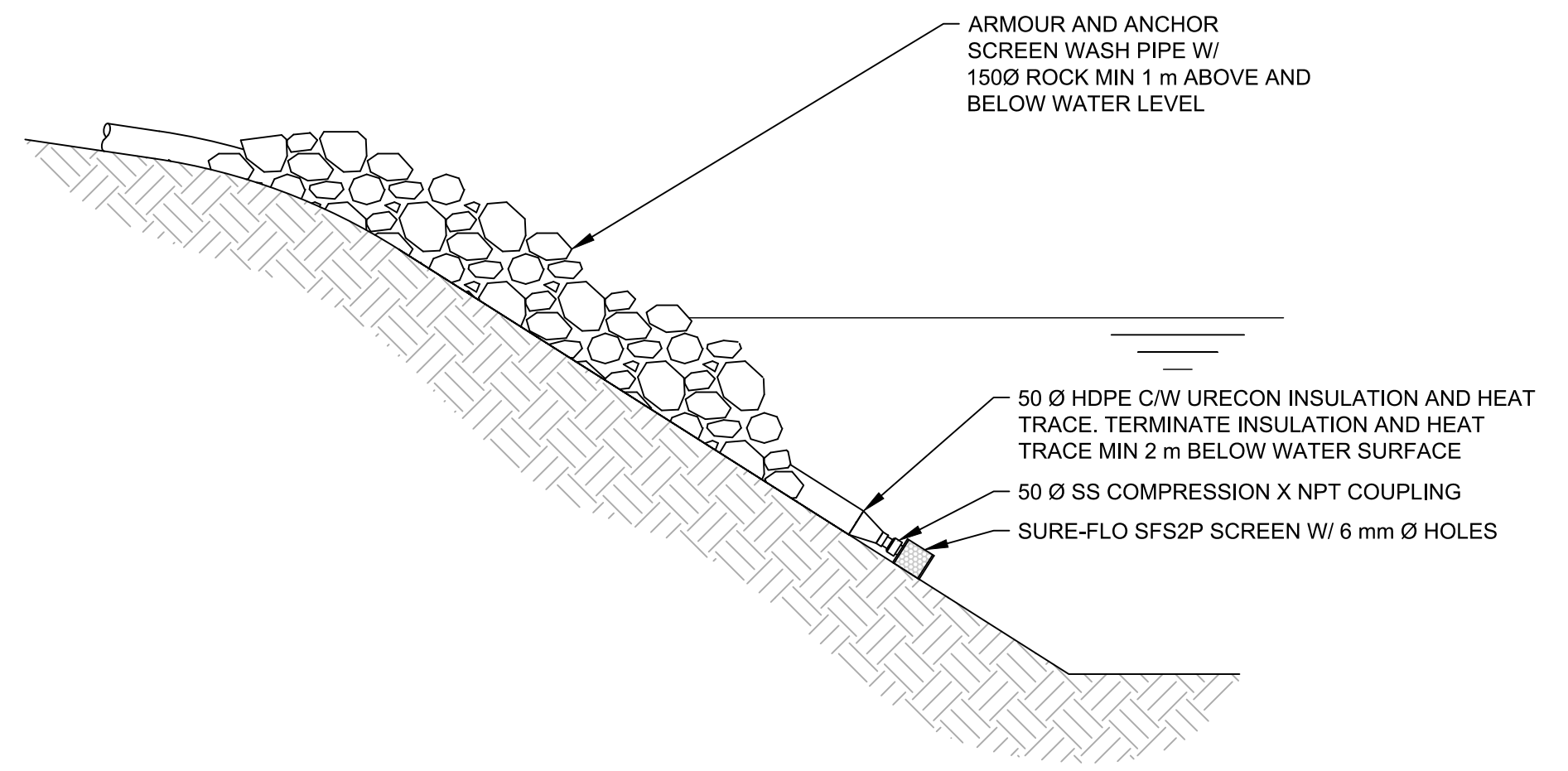
R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 CIVIL
 GRADING AND LANDSCAPING

DRAWING	REVISION	SHEET
4990-00-C-102	A	C2.0

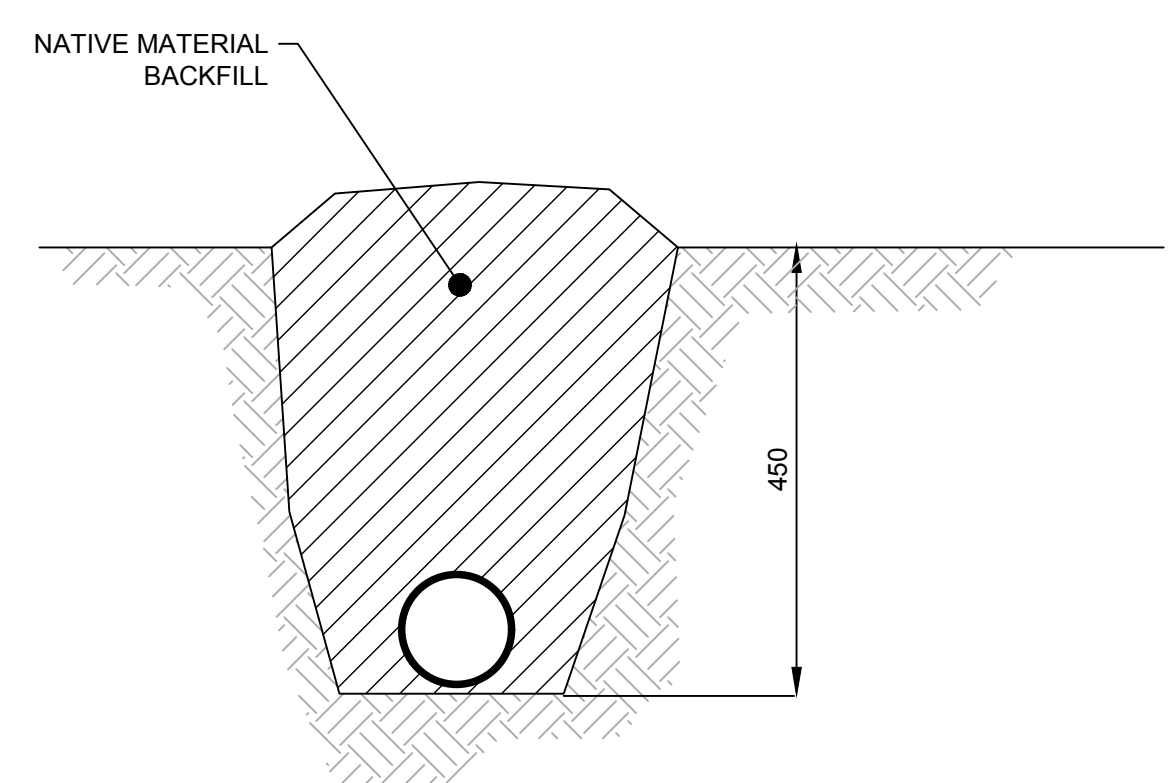
IF NOT 50 mm ADJUST SCALES
 30 mm
 SCALES SHOWN ARE INTENDED FOR ANSI D (22/94) SIZE DRAWINGS. TABLE D (11X17) SIZE DRAWINGS ARE 1/2 OF SCALES SHOWN UNLESS NOTED OTHERWISE



1 ELEVATION NTS
 C-101 RAW WATER INTAKE



2 ELEVATION NTS
 C-101 BACKWASH DISCHARGE PIPE



3 DETAIL NTS
 SHALLOW BURY WATER LINE



4 PHOTO NTS
 C-101 POTABLE WATER MAIN TIE-IN

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 CIVIL

DRAWING	REVISION	SHEET
4990-00-C-501	0	C3.0

ROYAL CANADIAN MOUNTED POLICE

NORWAY HOUSE

NEW WATER TREATMENT PLANT - BUILDING NO. 1 ISSUED FOR TENDER - 18 01 26

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PROJECT TITLE: **RCMP - NEW WATER TREATMENT PLANT**
SHEET TITLE: **COVER PAGE**
DATE: **17-09-06**
SCALE: **AS NOTED**
DRAWN BY: **XW**
CHECKED BY: **RS**
LOCATION: **NORWAY HOUSE, MB**

REVISION NO. **01**
ISSUED FOR TENDER
18 01 26

A0.0

JOB NO.
17-045-01-21

DRAWING LIST

- DRAWING LIST**
- A0.0 COVER PAGE
 - A0.3 SITE PLAN
 - A2.0 FLOOR PLAN
 - A2.1 ROOF PLAN AND ROOF DETAIL
 - A3.0 ELEVATIONS
 - A3.1 ELEVATIONS
 - A4.0 SECTION DETAIL a-a
 - A4.1 SECTION DETAIL b-b
 - A7.0 DETAILS
 - A7.1 DETAILS
 - A8.0 DOOR DETAIL & SCHEDULE
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 - S1.1 PROJECT NOTES
 - S1.2 TYPE PROJECT DETAILS
 - S2.1 RCMP - FOUNDATION/MAIN FLOOR PLAN
 - S2.2 RCMP - FRAMING PLAN
 - S5.1 RCMP - SECTIONS
 - M1.0 FLOOR PLAN PLUMBING
 - M1.1 DETAILS
 - M1.2 DETAILS
 - M2.0 FLOOR PLAN HVAC
 - M2.1 DETAILS

CONSULTANT LIST

PRIME CONSULTANT:
 can tec
ENGINEERING AND DRAFTING

WATER TREATMENT CONSULTANT:
 Associated Engineering

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Professional Engineering Services
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Telephone: (204) 251 7211 Fax: (204) 251 7238

MECHANICAL CONSULTANT:
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ELECTRICAL CONSULTANT:
 JOREY ELECTRIC
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Winnipeg, Manitoba Facsimile: (204) 255-7679
Canada, R2J 3T3 E-mail: info@joreyelectric.com

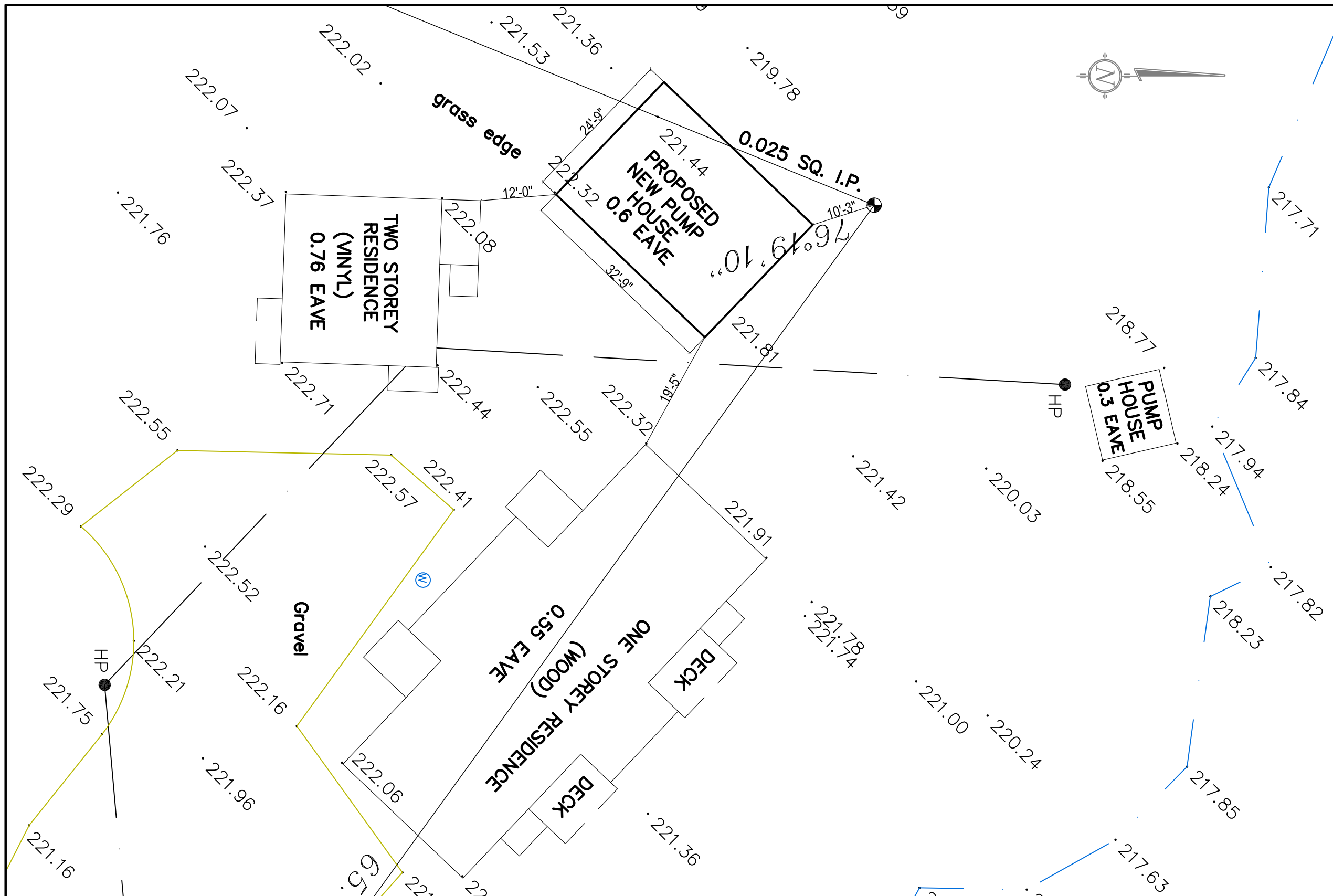
DRAWING SYMBOLS

NUMBERED NOTE
 WINDOW NUMBER
 WALL / ROOF IDENTIFIER
 DOOR NUMBER
 DETAIL SECTION
 DETAIL SECTION LOCATED
 ELEVATION IDENTIFIER
 DETAIL NUMBER
 SHEET ELEVATION LOCATED
 DETAIL MARKER (SEE SPECIFICATION BOOK)
 GRID LINES
 DETAIL MARKER
 ELEVATION MARKER
 ROOM NUMBER MARKER
 DETAIL IDENTIFICATION
 DETAIL NUMBER
 CURRENT SHEET
 PAGE ORIENTATION

ABBREVIATION LIST

ACOUSTIC	ACST	DRYWALL	DW	LAVATORY	LAV	ROOM	RM
ADHESIVE	ADH	EACH	EA	LAY-IN ACOUSTIC TILE	LAT	ROUGH OPENING	RO
ADJUSTABLE	ADJ	EACH WAY	EW	LEFT HAND	LH	RUBBER	RB
AGGREGATE	AGGR	EAST	E	LEFT HAND REVERSE	LHR	RVT	RESILIENT SHEET FLOORING
AIR VAPOUR BARRIER	AVB	ELECTRICAL	ELEC	LENGTH	LG	SCHEDULE	SCHED
ALTERNATE	ALT	ELEVATION	EL	LIGHT	LT	SCREW	SCR
ALUMINUM	ALUM	ELEVATOR	ELEV	LOUVRE	LVR	SECTION	SECT
APARTMENT	APT	EPOXY	EP	MANUFACTURE	MFG	SELF ADHESIVE	SA
APPROXIMATE	APPROX	EQUAL	EQ	MARK	MK	SHEATHING	SHTG
ARCHITECTURE	ARCH	EQUALLY SPACED	EQ SP	MASONRY OPENING	MO	SHEET	SHT
BEAM	BM	EQUIPMENT	EQUIP	MATERIAL	MAT	SHEET VINYL	SV
BENCH MARK	BM	EXISTING	EXIST	MECHANICAL	MECH	SIMILAR	SIM
BETWEEN	BTWN	EXPANSION	EXP	MINIMUM	MIN	SOLID CORE	SC
BLOCK	BLK	EXTERIOR	EXT	MISCELLANEOUS	MISC	SOUTH	S
BOARD	BD	EXTRUDE	EXTR	NEAR FACE	NF	SPECIFICATION	SPEC
BOTH SIDES	BS	FACE TO FACE	F/F	NEAR SIDE	NS	SPRUCE	SPR
BOTH WAYS	BW	FAR SIDE	FS	NORTH	N	SPRUCE, PINE OR FIR	S/P/F
BOTTOM	BOT	FIBREBOARD	FBRBD	NOT APPLICABLE	N/A	STAIN	ST
BUILDING	BLDG	FINISH	FIN	NOT IN CONTRACT	NIC	STAINLESS STEEL	SS
CARPET	CPT	FLOOR	FL	NOT TO SCALE	NTS	STANDARD	STD
CAST IRON	CI	FLOOR DRAIN	FD	NUMBER	NO	STEEL	STL
CEILING	CLG	FLOORING	FLG	ON CENTRE	O/C	STRUCTURAL	STRUCT
CEMENT BOARD	CBD	FLUORESCENT	FLR	OUT TO OUT	O/O	SQUARE FEET	SF
CENTRE	CTR	FOOTING	FTG	OUTSIDE DIAMETER	OD	TEMPORARY	TEMP
CENTRE TO CENTRE	C/C	FOUNDATION	FDN	OUTSIDE FACE	OF	THROUGH	THRU
CERAMIC TILE	CT	FULL SIZE	FS	OVERHEAD	OH	TO MATCH EXISTING	TME
CIRCLE	CIRC	GALVANIZED	GALV	PAINT	PT	TONGUE AND GROOVE	T&G
CLEAR	CLR	GALVANIZED IRON	GI	PAINTED	PTD	TOP AND BOTTOM	T&B
COLUMN	COL	GAUGE	GA	PARTITION	PTN	TOP OF	T/O
COMPLETE WITH	C/W	GLASS	GL	PLYWOOD	PLYWD	TYPICAL	TYP
CONCRETE	CONC	HARDWARE	HDW	PRECAST	PC	UNDER SIDE	U/S
CONCRETE BLOCK	CBLK	HEIGHT	HGT	PRECAST CONCRETE	PC CONC	UNDERCUT	UCUT
CONSTRUCTION	CONST	HEXAGON	HEX	PREFABRICATION	PREFAB	URINAL	UR
CONTINUOUS	CONT	HOLLOW CORE	HC	PREFINISHED	PREFIN	VAPOUR BARRIER	VB
CONTROL JOINT	CJ	HOLLOW METAL	HM	PRESSED STEEL	PS	VERTICAL	VERT
COUNTERSINK	CSK	HORIZONTAL	HORIZ	QUANTITY	QTY	VINYL ASBESTOS TILE	VAT
COVERED SHEET VINYL	CSV	INCLUSIVE	INCL	QUARRY TILE	QT	VINYL COVE BASE	VCB
DETAIL	DTL	INSIDE DIAMETER	ID	RADIUS	R	VINYL TILE	VT
DEMOLISH	DEMO	INSIDE FACE	IF	RAINWATER LEADER	RWL	VINYL WALL COVERING	VWC
DIAGONAL	DIAG	INSULATE	INSUL	REFERENCE	REF	WATER CLOSET	WC

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ENGINEERING AND DRAFTING
 1948 MAIN STREET, WINNIPEG, MANITOBA Tel: (204) 943-7222 Fax: (204) 947-5717
<http://www.canteccservices.ca/>

PROJECT TITLE RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE SITE PLAN

DATE 17-09-06 SCALE AS NOTED CHECKED BY RS DRAWN BY XW

LOCATION NORWAY HOUSE, MB

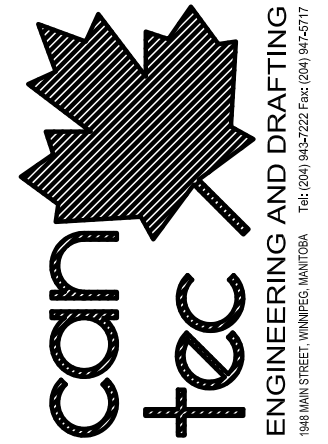
REVISION NO. 03
 ISSUED FOR TENDER
 18 01 26

A0.1

JOB NO. 17-045-01-21

1 SITE PLAN
 A0.1 SCALE: 1/16"=1'-0"

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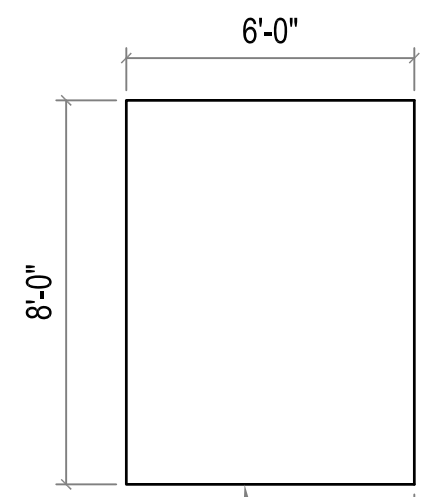
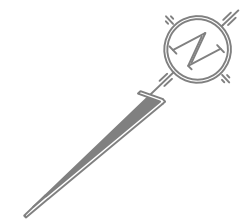


PROJECT TITLE: RCMP - NEW WATER TREATMENT PLANT
 SHEET TITLE: FLOOR PLAN
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW

REVISION NO. 03
 ISSUED FOR TENDER
 18 01 26

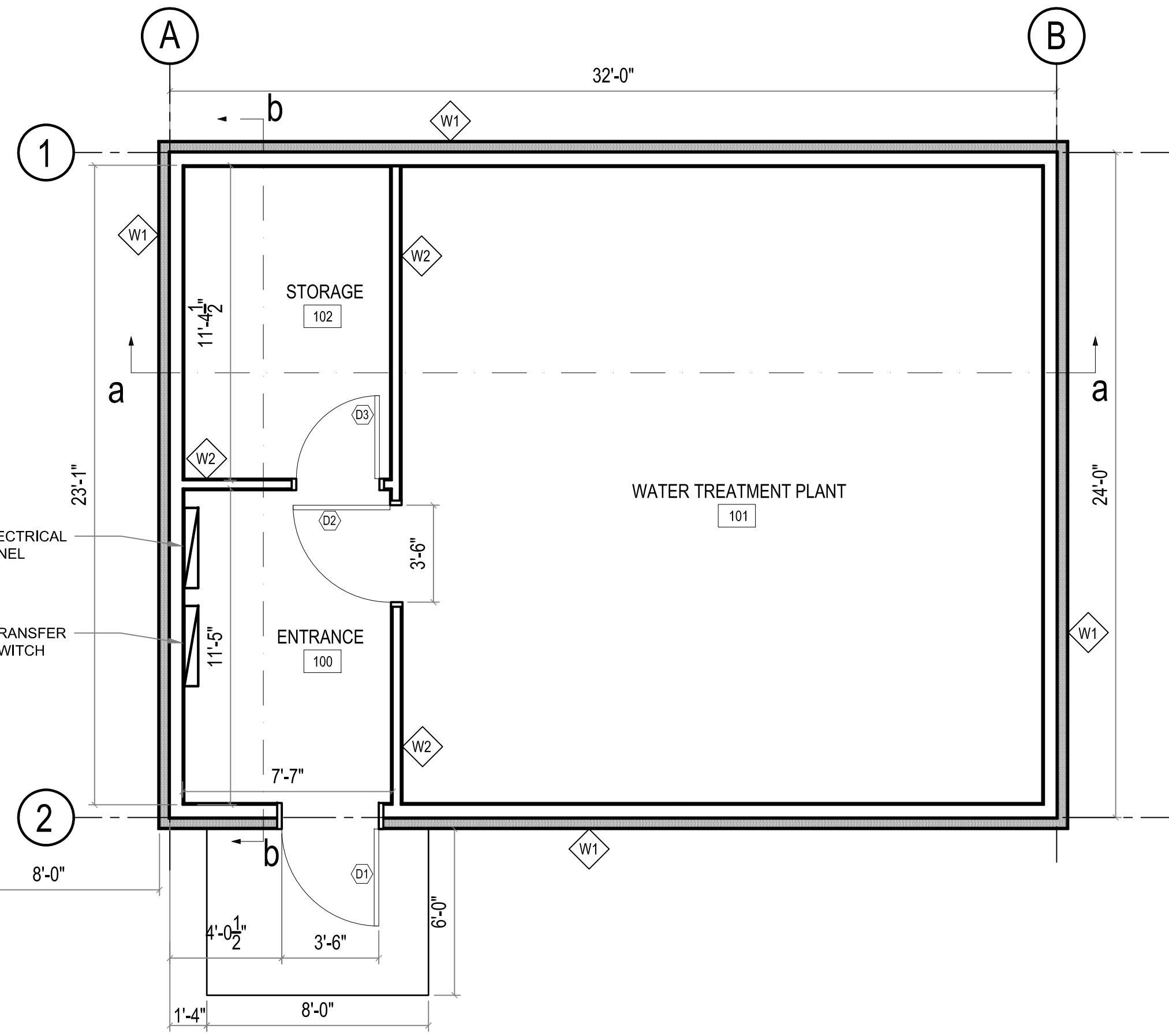
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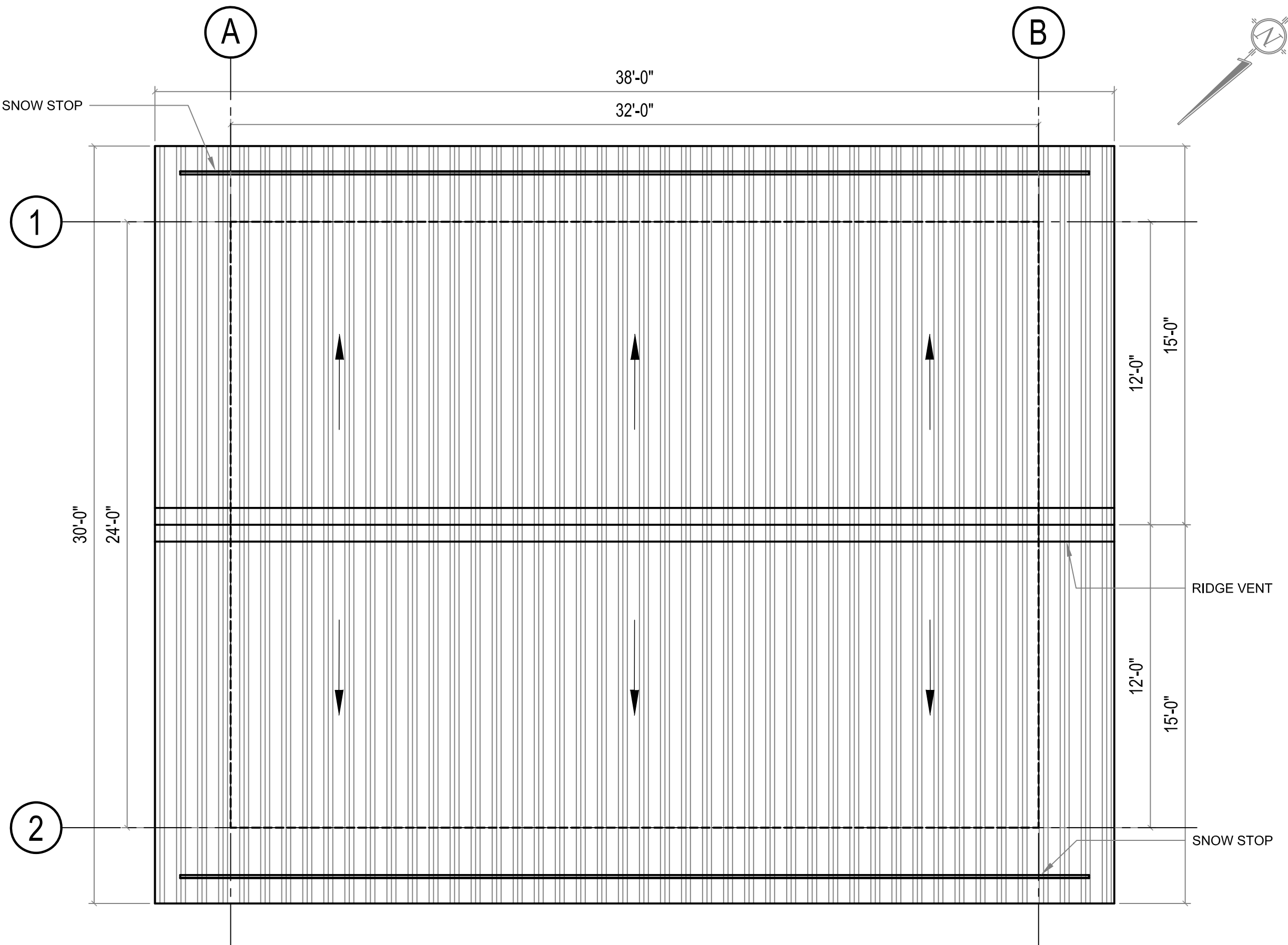
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 17-045-01-21



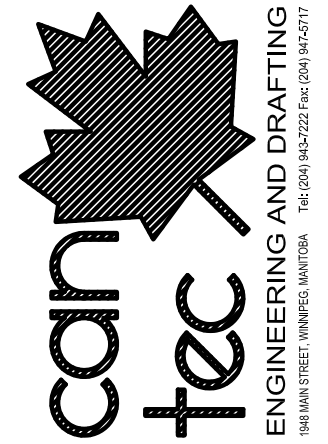
GENERATOR PAD

1 CONSTRUCTION PLAN
 A2.0 SCALE: 1/4"=1'-0"





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PROJECT TITLE: RCMP - NEW WATER TREATMENT PLANT
 SHEET TITLE: ROOF PLAN
 DATE: 17-09-06
 LOCATION: NORWAY HOUSE, MB
 SCALE: AS NOTED
 DRAWN BY: XW
 CHECKED BY: RS

REVISION NO. 03
 ISSUED FOR TENDER
 18 01 26

A2.1

JOB NO.
 17-045-01-21

1 ROOF PLAN
 A2.1 SCALE: 1/4"=1'-0"

ROOF PEAK
±17'-11 11/16"

T/O WALL (DOUBLE PLATE)
±12'-0"

FINISHED GROUND FLOOR
±0.00

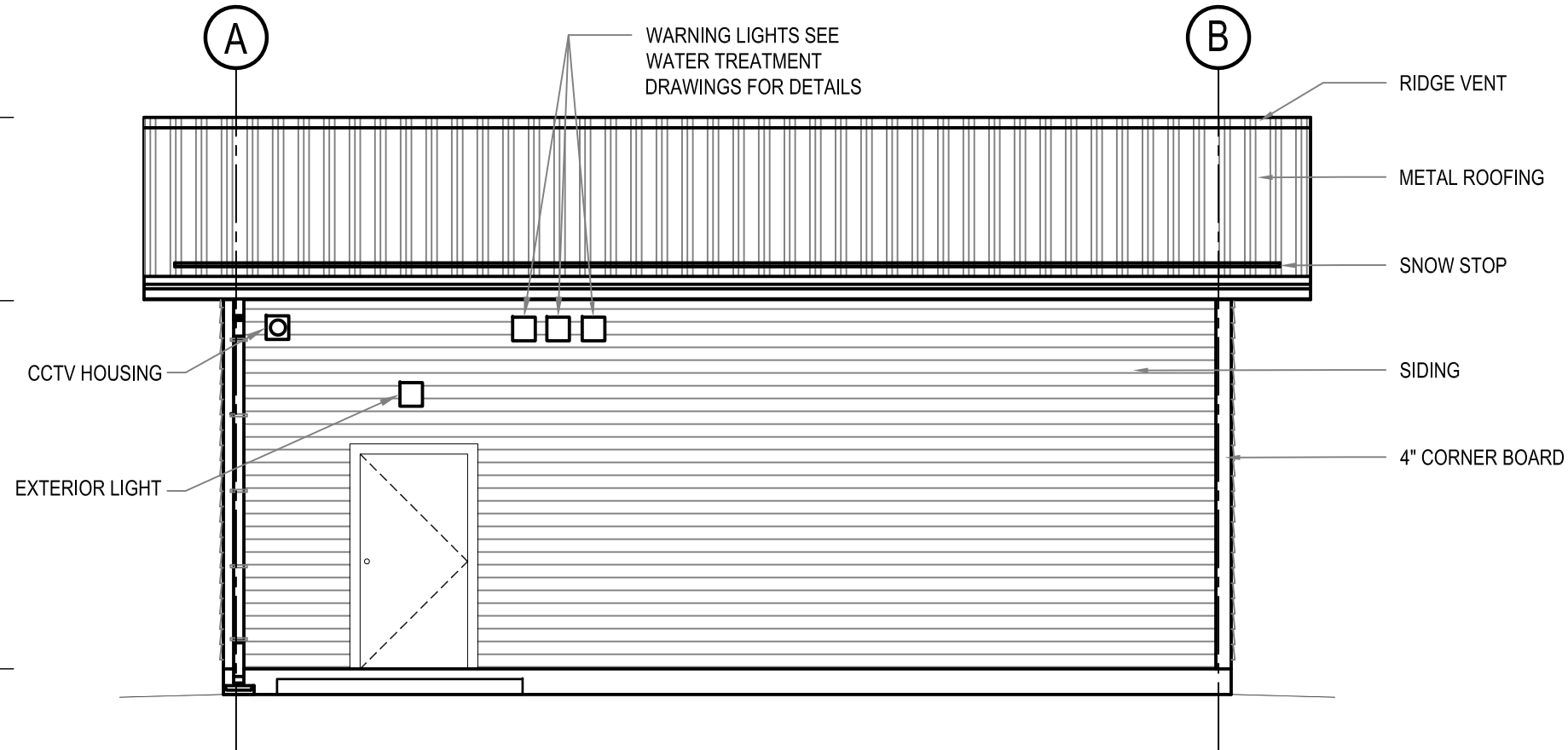
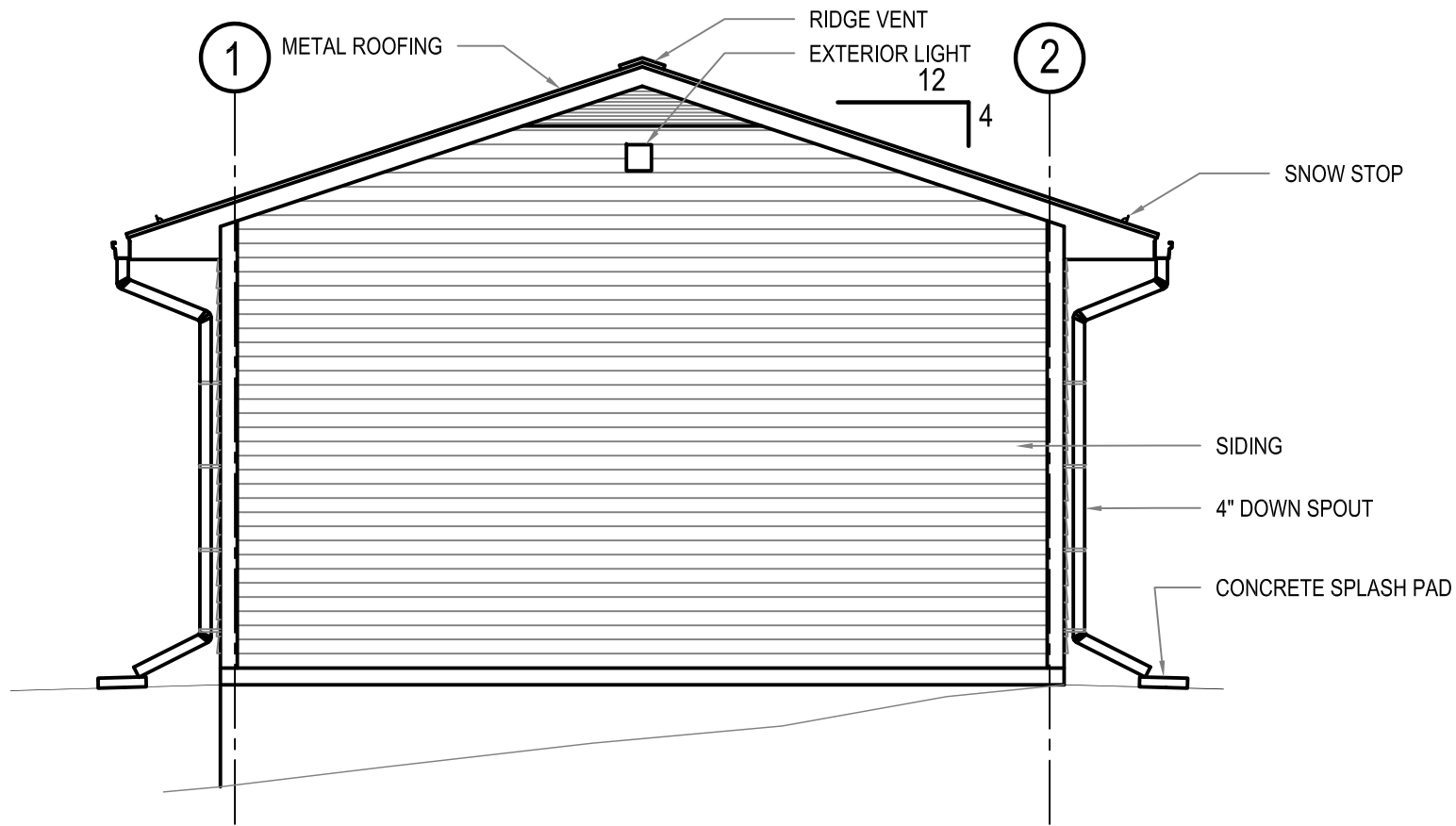
1 NORTH ELEVATION
A3.0 SCALE: 3/16"=1'-0"

ROOF PEAK
±17'-11 11/16"

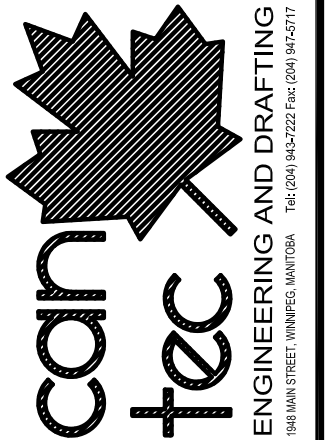
T/O WALL (DOUBLE PLATE)
±12'-0"

FINISHED GROUND FLOOR
±0.00

2 WEST ELEVATION
A3.0 SCALE: 3/16"=1'-0"



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PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE
ELEVATIONS

DATE
17-09-06

SCALE
AS NOTED

LOCATION
NORWAY HOUSE, MB

CHECKED BY
RS

DRAWN BY
XW

REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A3.0

JOB NO.
17-045-01-21

ROOF PEAK
±17'-11 11/16"

T/O WALL (DOUBLE PLATE)
±12'-0"

FINISHED GROUND FLOOR
±0.00

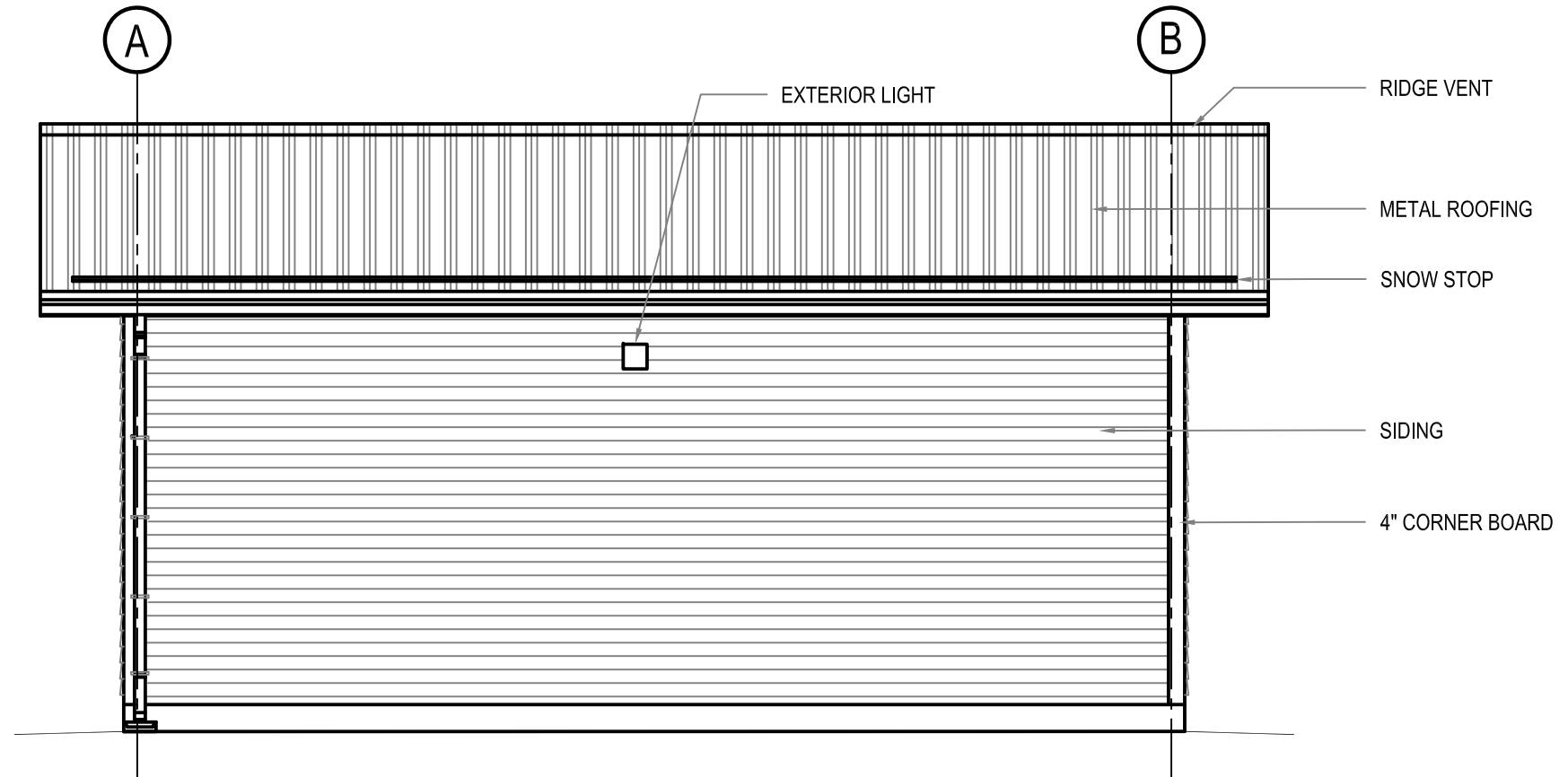
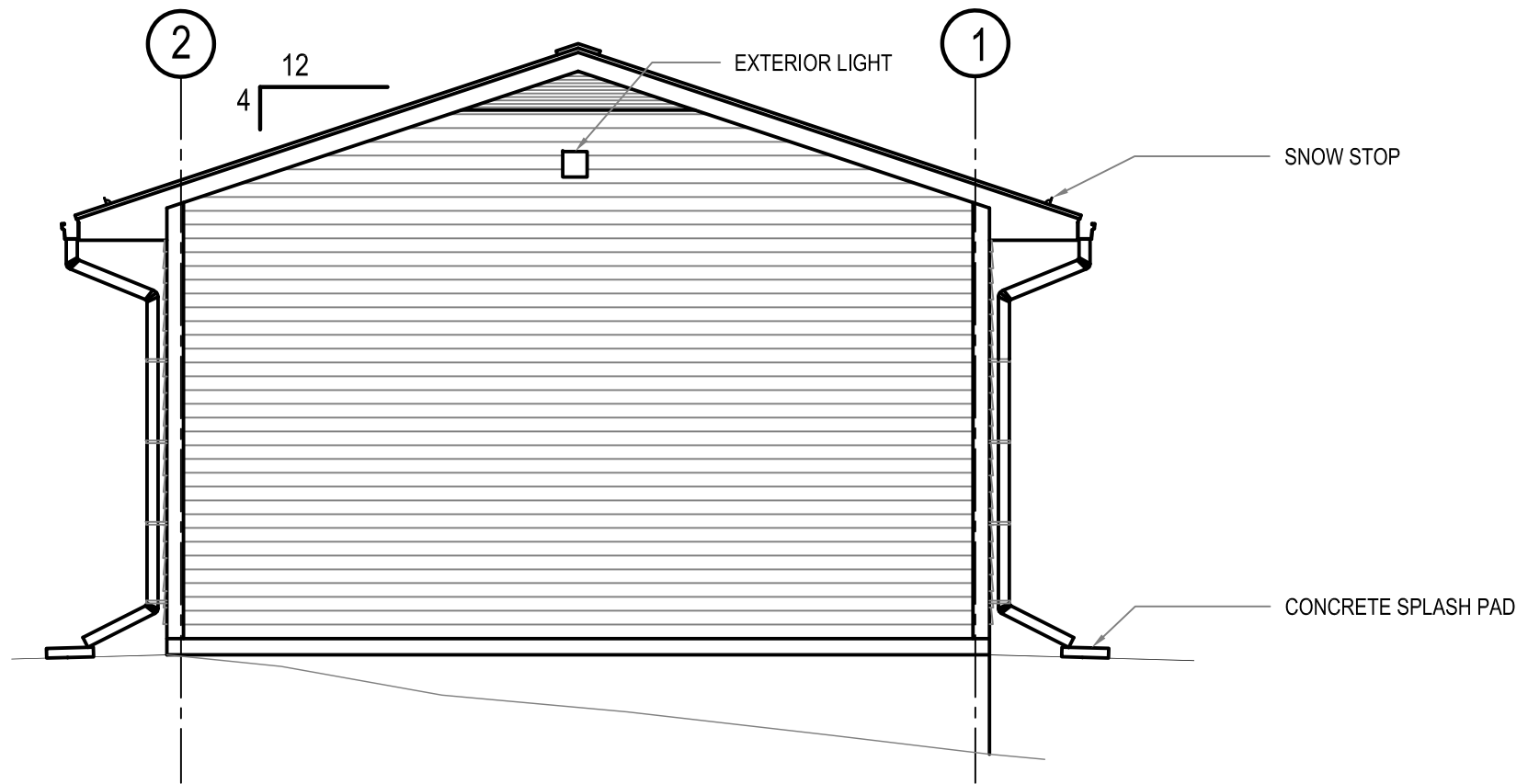
1 SOUTH ELEVATION
A3.1 SCALE: 3/16"=1'-0"

ROOF PEAK
±17'-11 11/16"

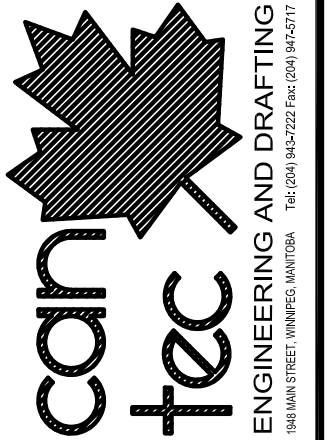
T/O WALL (DOUBLE PLATE)
±12'-0"

FINISHED GROUND FLOOR
±0.00

2 EAST ELEVATION
A3.1 SCALE: 3/16"=1'-0"



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PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE
ELEVATIONS

DATE
17-09-06

SCALE
AS NOTED

CHECKED BY
RS

DRAWN BY
XW

LOCATION
NORWAY HOUSE, MB

REVISION NO. 03
ISSUED FOR TENDER
18 01 26

A3.1

JOB NO.
17-045-01-21

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1948 MAIN STREET, WINNIPEG, MANITOBA Tel: (204) 943-7222 Fax: (204) 947-5717

PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE
SECTION a-a

DATE
 17-09-06

SCALE
 AS NOTED

LOCATION
 NORWAY HOUSE, MB

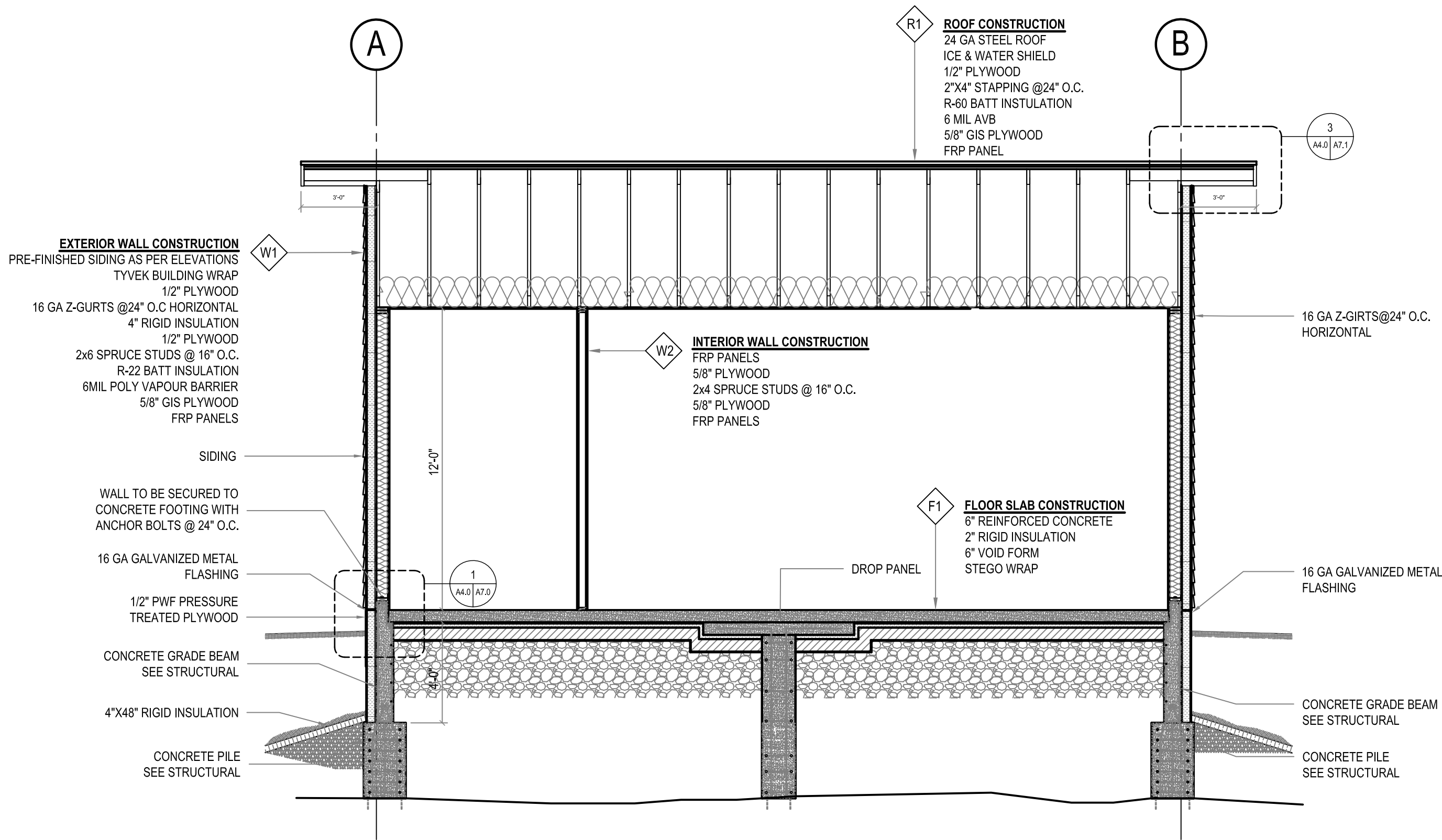
CHECKED BY
 RS

DRAWN BY
 XW

REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A4.0

JOB NO.
 17-045-01-21



1 SECTION a-a
 A4.0 SCALE: 3/8"=1'-0"

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PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE
SECTION b-b

DATE
 17-09-06

SCALE
 AS NOTED

LOCATION
 NORWAY HOUSE, MB

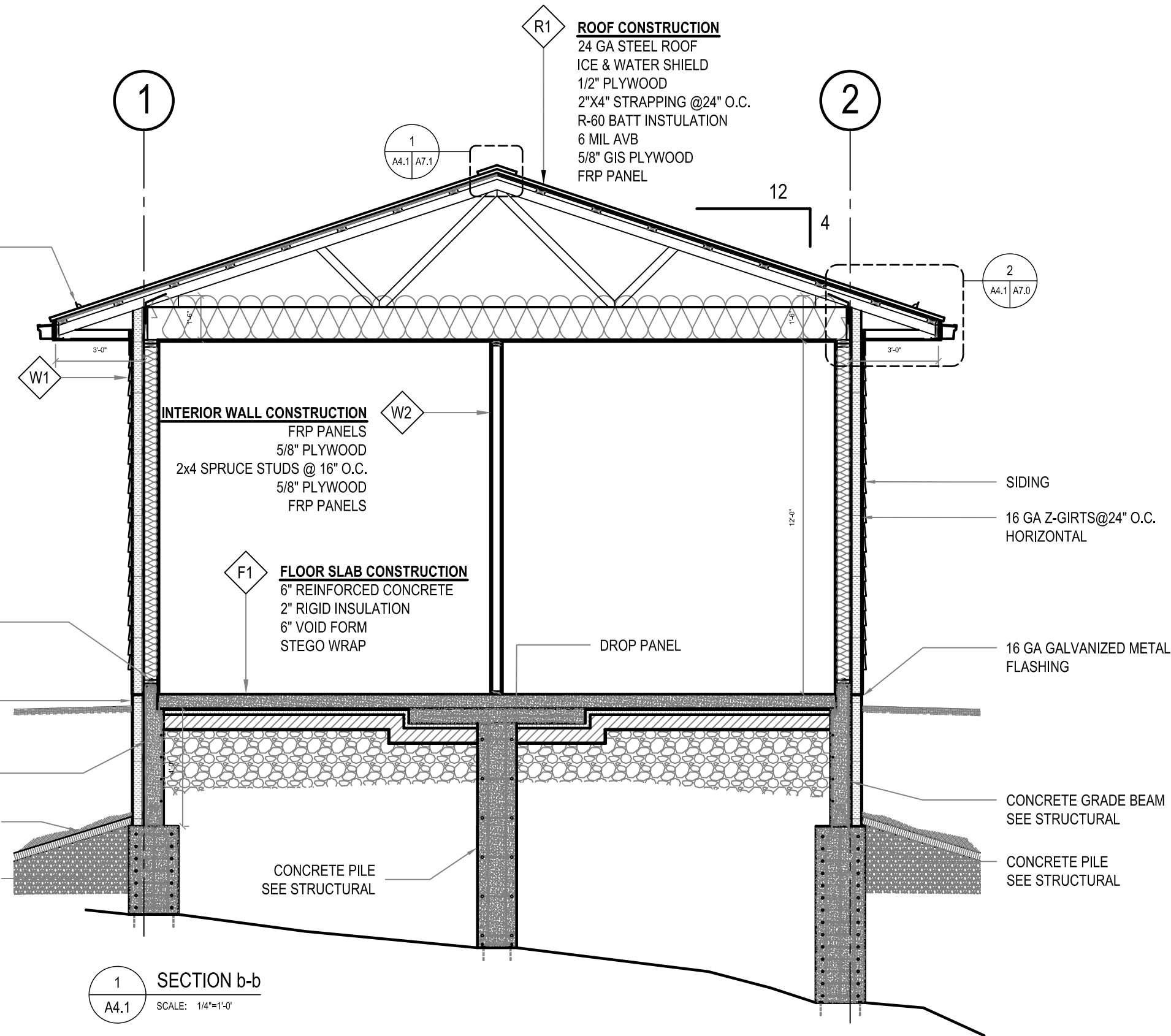
CHECKED BY
 RS

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REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A4.1

JOB NO.
 17-045-01-21



EXTERIOR WALL CONSTRUCTION
 PRE-FINISHED SIDING AS PER ELEVATIONS
 TYVEK BUILDING WRAP
 1/2" PLYWOOD
 16 GA Z-GIRTS @ 24" O.C. HORIZONTAL
 4" RIGID INSULATION
 1/2" PLYWOOD WALL SHEATHING
 2x6 SPRUCE STUDS @ 16" O.C.
 R-22 BATT INSULATION
 6MIL POLY VAPOUR BARRIER
 5/8" GIS PLYWOOD
 FRP PANELS

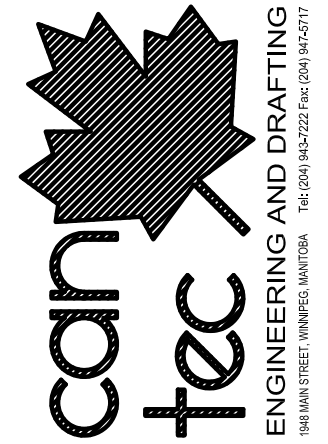
INTERIOR WALL CONSTRUCTION
 FRP PANELS
 5/8" PLYWOOD
 2x4 SPRUCE STUDS @ 16" O.C.
 5/8" PLYWOOD
 FRP PANELS

FLOOR SLAB CONSTRUCTION
 6" REINFORCED CONCRETE
 2" RIGID INSULATION
 6" VOID FORM
 STEGO WRAP

1 SECTION b-b
 A4.1 SCALE: 1/4"=1'-0"

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PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

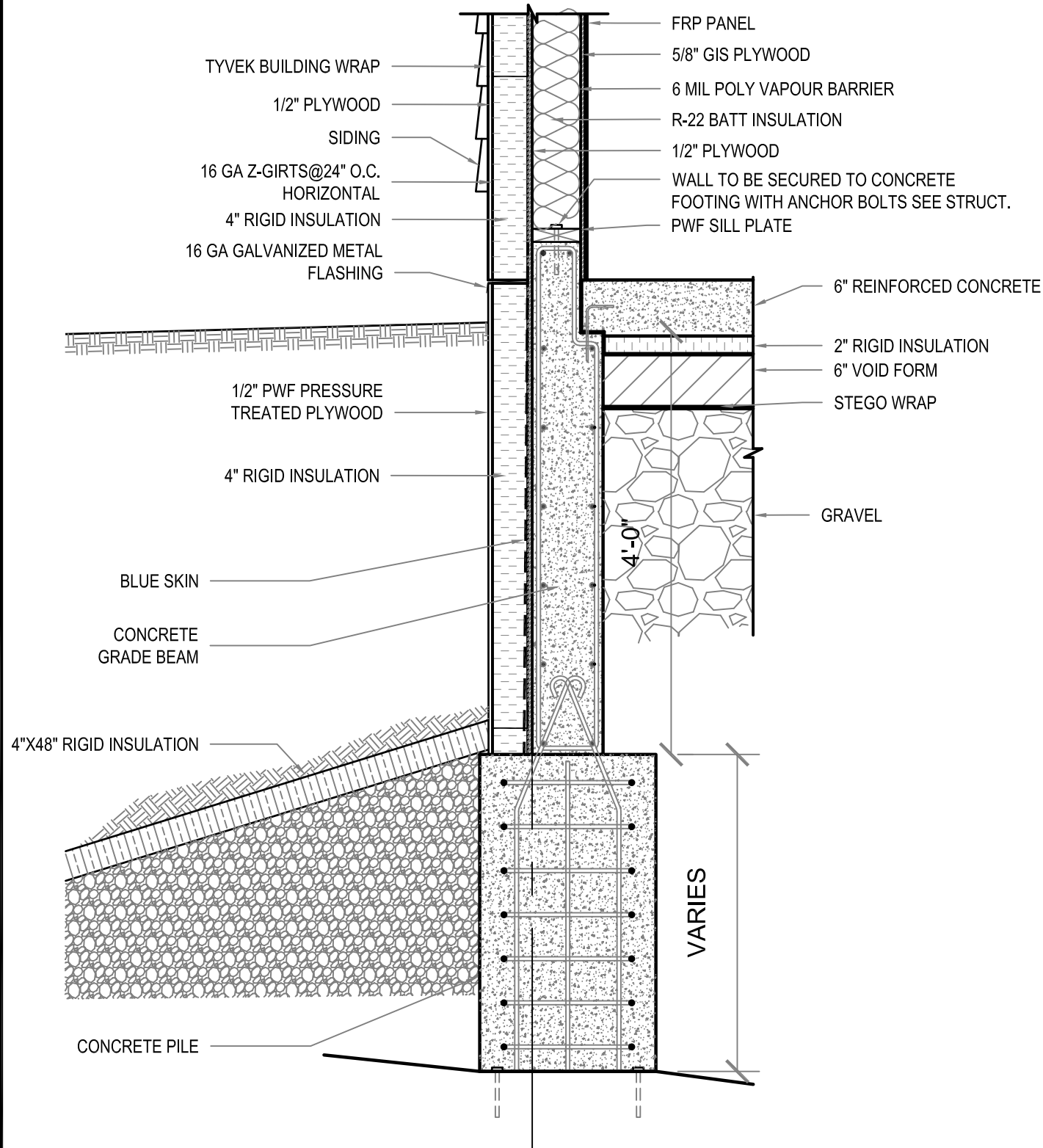
SHEET TITLE
DETAILS

DATE 17-09-06
 SCALE AS NOTED
 CHECKED BY RS
 DRAWN BY XW
 LOCATION NORWAY HOUSE, MB

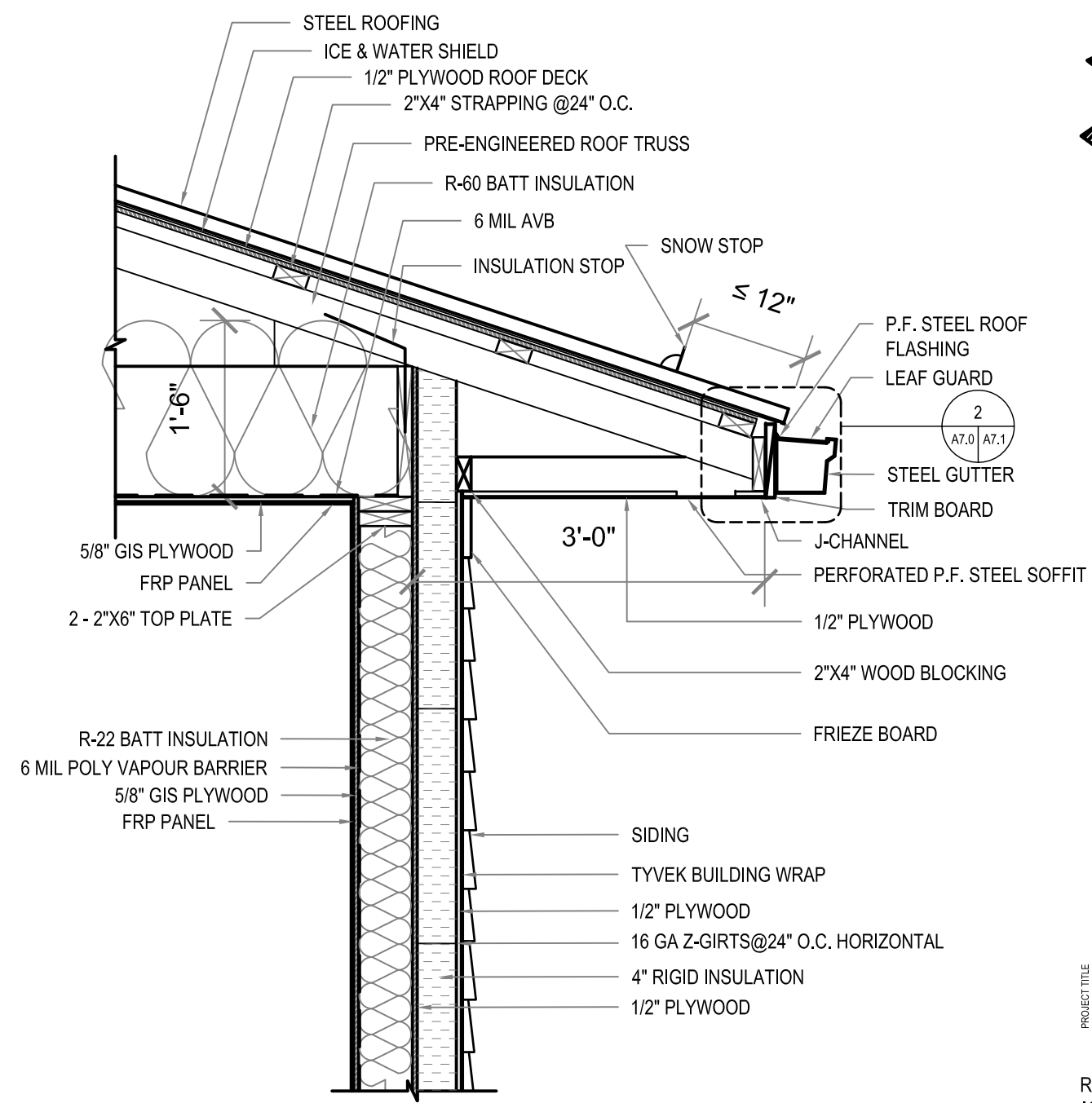
REVISION NO. 02
 ISSUED FOR TENDER
18 01 26

A7.0

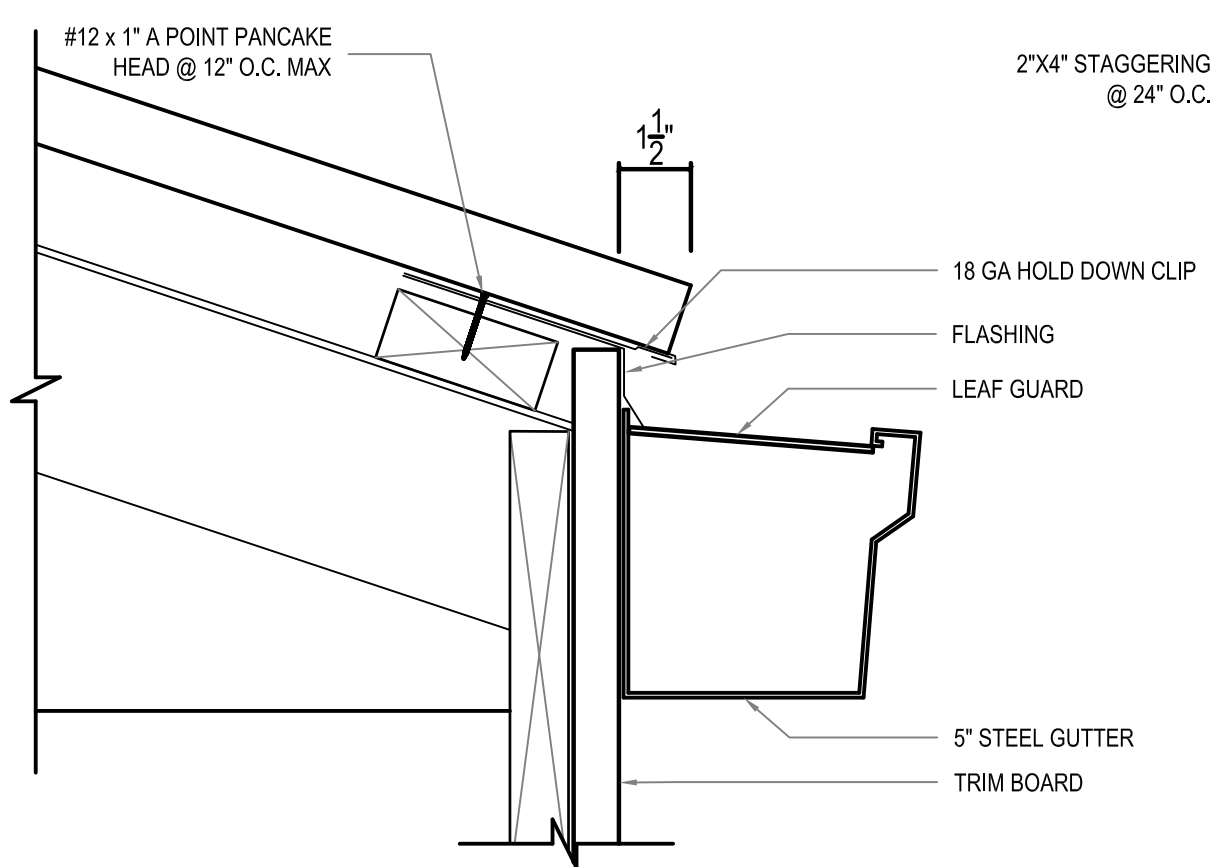
JOB NO.
17-045-01-21



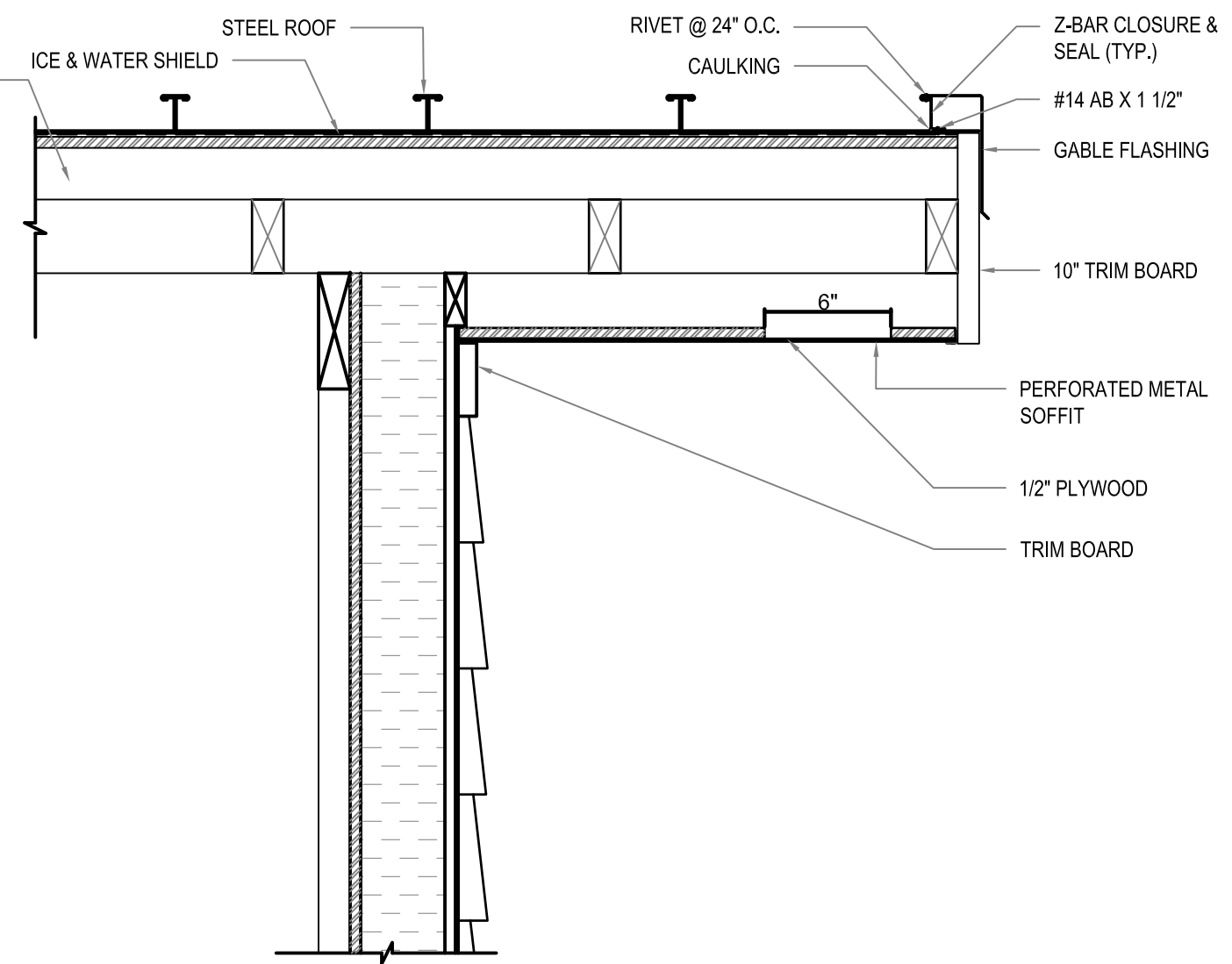
1 WALL AND FOUNDATION DETAIL
 A4.0 A7.0 SCALE: 3/4"=1'-0"



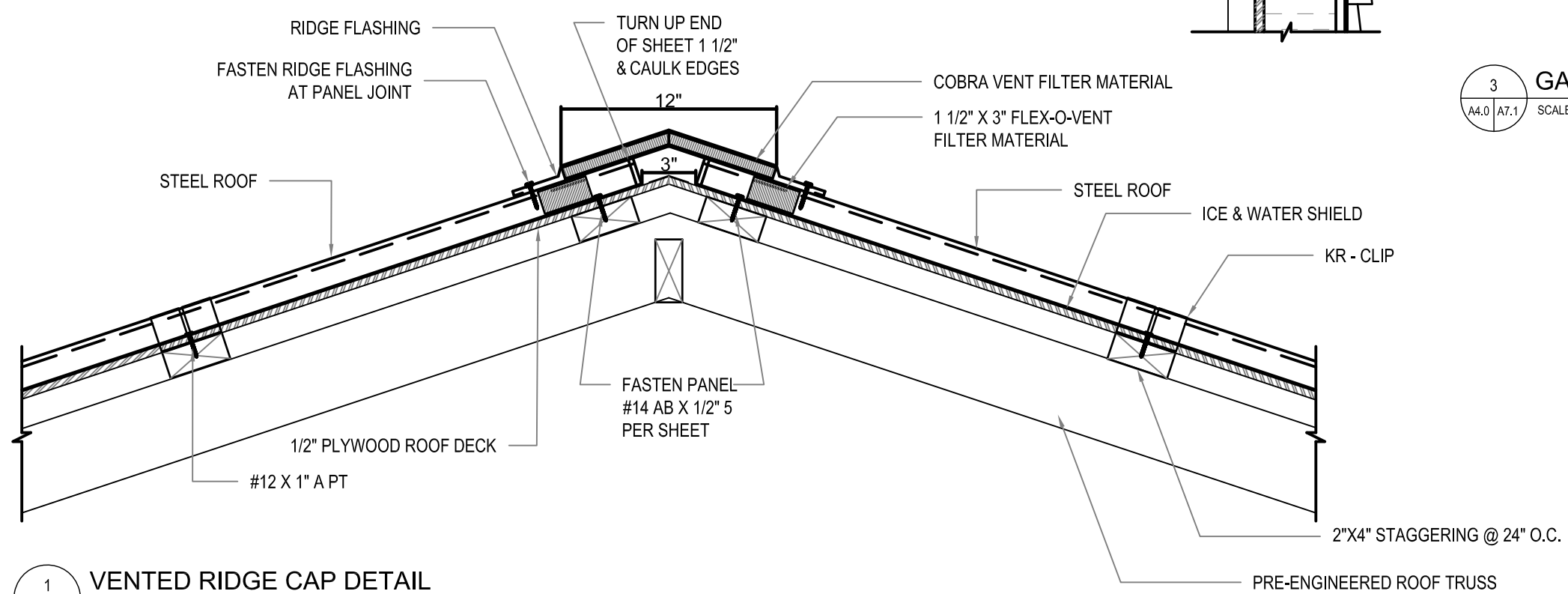
2 EAVE DETAIL
 A4.1 A7.0 SCALE: 3/4"=1'-0"



2 EAVE AND GUTTER DETAIL
 A7.0 | A7.1 SCALE: 3"=1'-0"

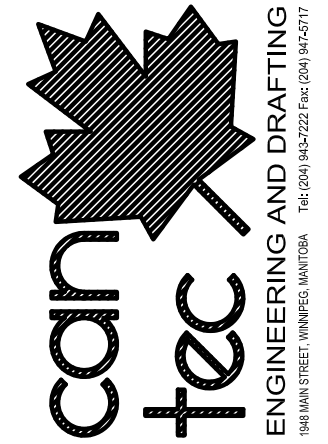


3 GABLE END FLASHING DETAIL
 A4.0 | A7.1 SCALE: 3"=1'-0"



1 VENTED RIDGE CAP DETAIL
 A4.1 | A7.1 SCALE: 1-1/2"=1'-0"

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PROJECT TITLE RCMP - NEW WATER TREATMENT PLANT
 SHEET TITLE DETAILS
 DATE 17-09-06
 SCALE AS NOTED
 LOCATION NORWAY HOUSE, MB
 CHECKED BY RS
 DRAWN BY XW

REVISION NO. 03
 ISSUED FOR TENDER
 18 01 26

A7.1
 JOB NO. 17-045-01-21

DOOR SCHEDULE

D##

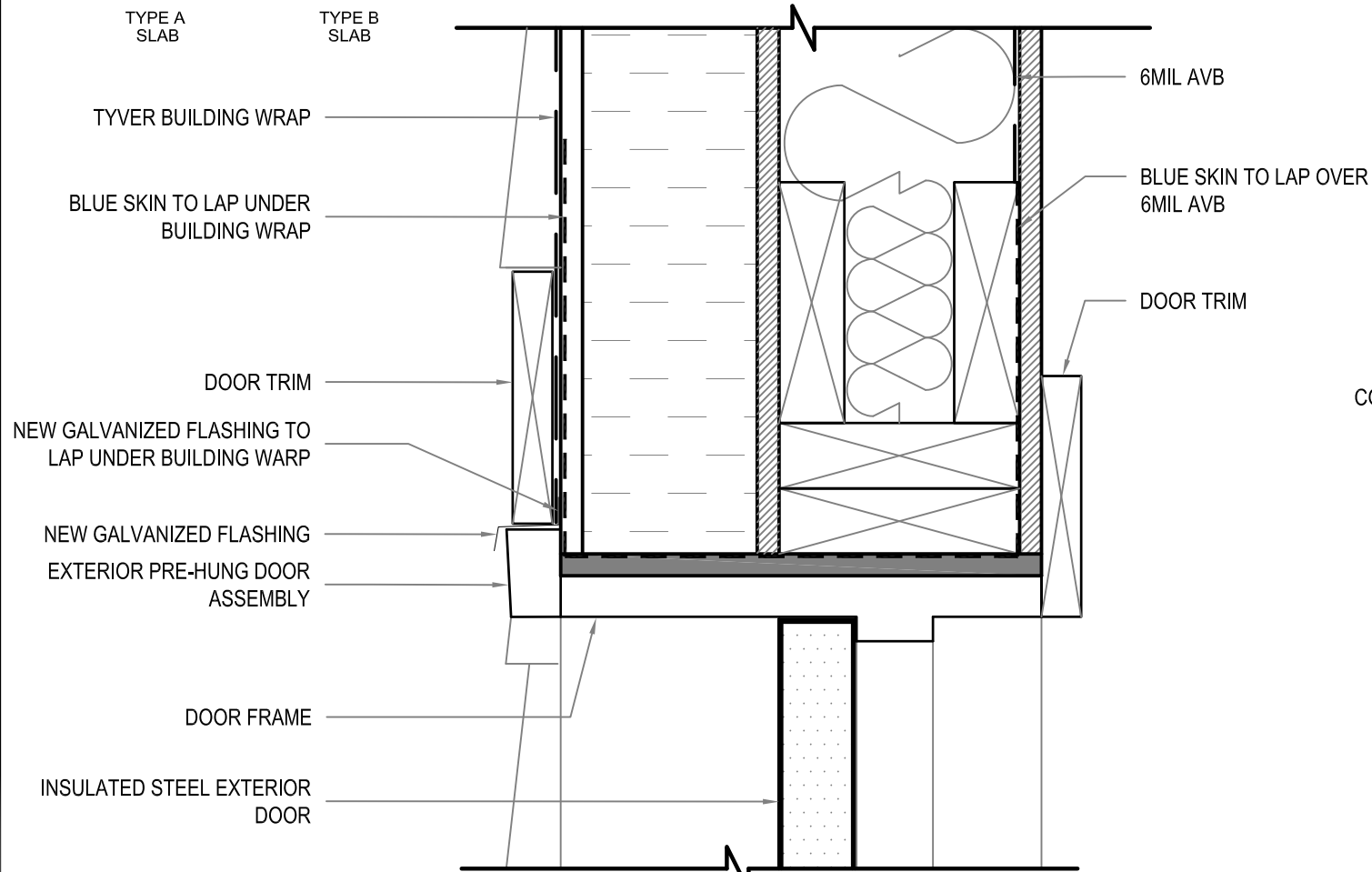
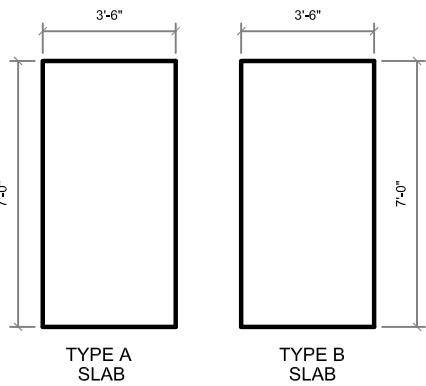
MARK	SIZE	DOOR TYPE	DOOR ELEV.	DOOR CORE	DOOR FINISH	DOOR COLOR	DOOR GAUGE	FRAME MATERIAL	FRAME TYPE	FRAME FINISH	FRAME COLOR	FRAME GAUGE	HARDWARE	RATING	REMARKS
D1	42" X 7'-0" X 1 3/4"	STEEL	A	POLY ISO	PAINTED		16GA	STEEL	WELDED	PAINTED		14 GA	1	N/A	
D2	42" X 7'-0" X 1 3/4"	STEEL	B	HOLLOW CORE	PAINTED		16GA	STEEL	WELDED	PAINTED		14GA	2	N/A	
D3	42" X 7'-0" X 1 3/4"	STEEL	B	HOLLOW CORE	PAINTED		16GA	STEEL	WELDED	PAINTED		14GA	2	N/A	

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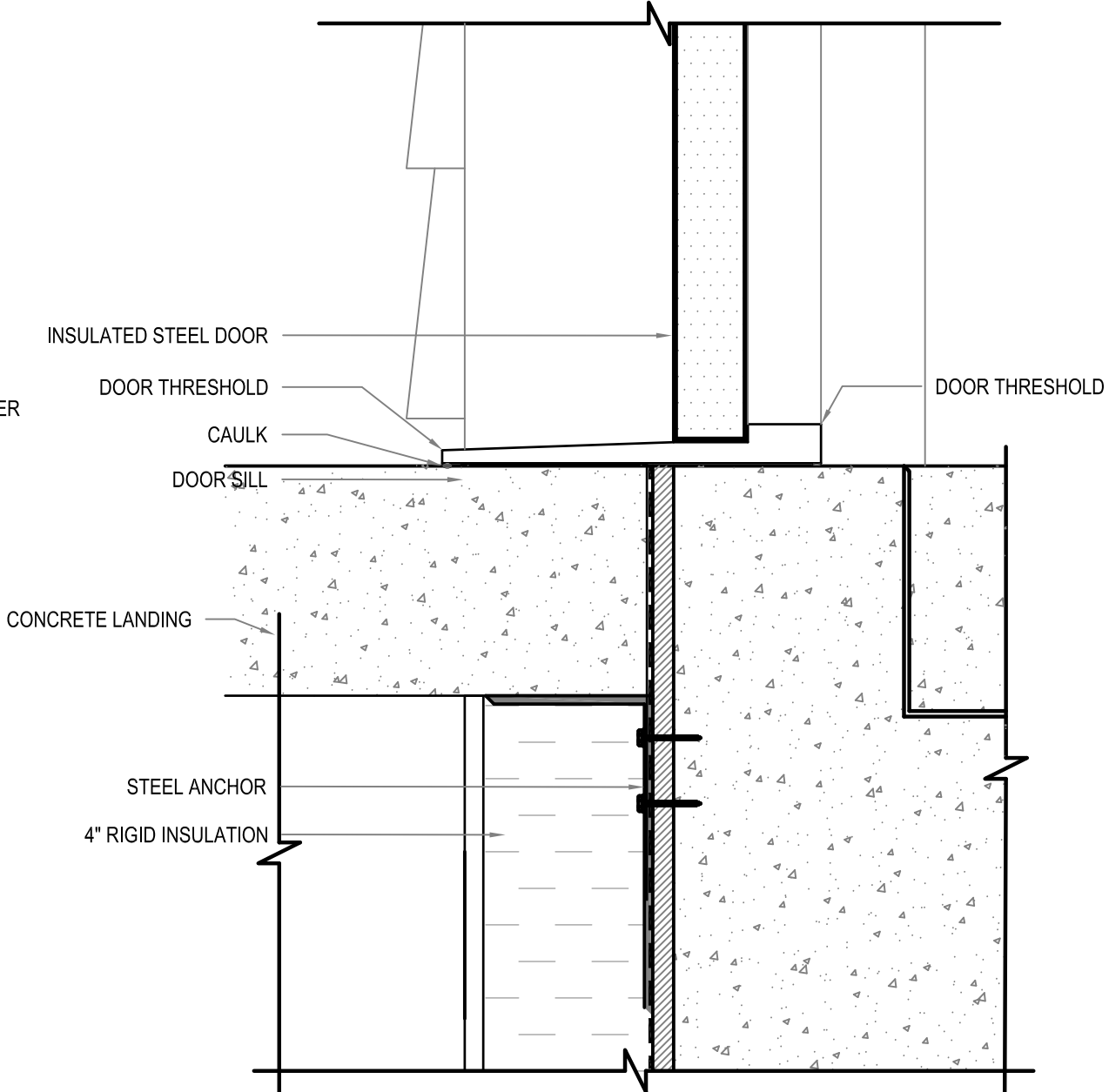


DOOR DETAILS

DOOR ELEVATIONS



1 DOOR HEAD DETAIL
 A8.0 SCALE: 3"=1'-0"



2 DOOR JAMB DETAIL
 A8.0 SCALE: 3"=1'-0"

PROJECT TITLE
RCMP - NEW WATER TREATMENT PLAN

SHEET TITLE
DOOR DETAILS & SCHEDULE

DATE: 17-09-06
 SCALE: AS NOTED
 DRAWN BY: XW
 CHECKED BY: RS
 LOCATION: NORWAY HOUSE, MB

REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A8.0

JOB NO.
17-045-01-21

WALL SCHEDULE

W1

EXTERIOR WALL CONSTRUCTION
PRE-FINISHED SIDING AS PER ELEVATIONS
TYVEK BUILDING WRAP
1/2" PLYWOOD
16 GA Z-GURTS @24" O.C HORIZONTAL
4" RIGID INSULATION
1/2" PLYWOOD
2x6 SPRUCE STUDS @ 16" O.C.
R-22 BATT INSULATION
6MIL POLY VAPOUR BARRIER
5/8" GIS PLYWOOD
FRP PANELS

W2

INTERIOR WALL CONSTRUCTION
FRP PANELS
5/8" PLYWOOD
2x4 SPRUCE STUDS @ 16" O.C.
5/8" PLYWOOD
FRP PANELS

ROOF SCHEDULE

R1

ROOF CONSTRUCTION
24 GA STEEL ROOF
ICE & WATER SHIELD
1/2" PLYWOOD
2"X4" STRAPPING @24" O.C.
R-60 BATT INSULATION
6 MIL AVB
5/8" GIS PLYWOOD

FLOOR SCHEDULE

F1

FLOOR SLAB CONSTRUCTION
6" REINFORCED CONCRETE
2" RIGID INSULATION
6" VOID FORM
STEGO WRAP

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PROJECT TITLE: **RCMP - NEW WATER TREATMENT PLANT**
SHEET TITLE: **WALL & FINISH SCHEDULE**
DATE: 17-09-06
SCALE: AS NOTED
DRAWN BY: XW
CHECKED BY: RS
LOCATION: NORWAY HOUSE, MB

REVISION NO. 03
ISSUED FOR TENDER
18 01 26

A8.1

JOB NO.
17-045-01-21

GENERAL NOTES:

- DO NOT SCALE DRAWINGS.
- THE DESIGN IS IN ACCORDANCE WITH THE 2011 MANITOBA BUILDING CODE
- CLIMATIC DATA (TABLE C-2) NBCC:
 - GROUND SNOW LOAD: Ss = 2.4 kPa (50 psf)
 - RAIN LOAD: Sr = 0.2 kPa (4.0 psf)
 - HOURLY WIND PRESSURE: q (1/50) = 0.49 kPa (10.2 psf)
 - SEISMIC DATA: NOT APPLICABLE
- IMPORTANCE CATEGORY: POST DISASTER
- COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
- SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS, SLOPES, ROUGH OPENING DIMENSIONS FOR WINDOWS, DOORS, ETC.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS IN FLOORS, ROOF, WALLS, ETC.
- DO NOT CUT OR DRILL OPENINGS IN ANY STRUCTURAL MEMBERS WITHOUT WRITTEN APPROVAL FROM BEACH ROCKE ENGINEERING LTD.
- BEACH ROCKE ENGINEERING LTD. SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF REQUIRED SITE INSPECTIONS. (TEL: 1-204-255-7251, FAX: 1-204-257-7239).
- STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE. THEY DO NOT SHOW COMPONENTS WHICH MAY BE NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE SAFETY AND TO ENSURE THAT ALL SUBTRADES CONFORM TO THE LATEST REGULATIONS OF THE PROVINCIAL "BUILDING PROTECTION ACT", TO PROVIDE ALL NECESSARY SAFETY EQUIPMENT AS REQUIRED THEREIN AND TO NOTIFY LOCAL AUTHORITIES AS REQUIRED BY LAW.
- THE CONTRACTOR SHALL CONFORM TO THE COLD WEATHER REQUIREMENTS OF THE CSA STANDARD A23.1/A23.2 AND THE NATIONAL BUILDING CODE.
- IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO LOCATE ALL SITE SERVICES PRIOR TO CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL DESIGN ALL SHORING, FORM WORK, AND BRACING TO ENSURE PROPER CONSTRUCTION AND ERECTION.
- THE CONTRACTOR SHALL VISIT THE SITE, AND NOTE ALL CHARACTERISTICS AND IRREGULARITIES AFFECTING THE WORK OF THIS SECTION.
- SHOP DRAWINGS NOT STAMPED, SIGNED, AND DATED BY THE CONTRACTOR WILL BE RETURNED AND SHALL BE CONSIDERED REJECTED. SHOP DRAWINGS FOR WORK DESIGNED BY THE CONTRACTOR SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER IN THE PROJECTS PROVINCE.
- THE CONTRACTOR SHALL SUBMIT AT LEAST 3 COPIES OF STAMPED SHOP DRAWINGS FOR ALL PRE-FABRICATED STRUCTURAL ASSEMBLIES, INCLUDING REINFORCING STEEL TO BEACH ROCKE ENGINEERING LTD. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. ALL SHOP DRAWINGS, EXCEPT REINFORCING STEEL, SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE PROJECTS PROVINCE.

CONCRETE NOTES:

- CONCRETE SHALL BE MANUFACTURED AND PLACED IN ACCORDANCE WITH CSA STANDARDS A23.1-09/A23.2-09.
- THE CONTRACTOR SHALL PROVIDE ONE SET OF STANDARD CONCRETE CYLINDER TEST RESULTS CONDUCTED BY AN INDEPENDENT TESTING FIRM FOR EACH DAYS POUR AND AN ADDITIONAL SET OF CYLINDERS FOR EVERY 50 CUBIC METERS POURED AT NO EXTRA COST TO THE OWNER. TEST RESULTS ARE TO BE FORWARDED TO BEACH ROCKE ENGINEERING LTD. IMMEDIATELY UPON RECEIPT FROM THE TESTING FIRM.
- PROVIDE A MINIMUM 150mm (6") VOID UNDER ALL BEAMS, WALLS AND STRUCTURAL SLABS. VOID TO BE SHEARMAT OR APPROVED CARDBOARD VOIDFORM.
- VIBRATE ALL CONCRETE TO ENSURE COMPLETE CONSOLIDATION.
- THE LOCATIONS OF CONSTRUCTION JOINTS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY BEACH ROCKE ENGINEERING LTD.
- WHEN THE OUTSIDE TEMPERATURE FALLS BELOW 5 DEGREES CENTIGRADE, THE CONTRACTOR SHALL CONFORM TO CSA STANDARD A23.1-09/A23.2-09 AND THE NATIONAL BUILDING CODE FOR COLD WEATHER CONCRETING PROCEDURES, AND SHALL RECIEVE WRITTEN APPROVAL FROM BEACH ROCKE ENGINEERING LTD. PRIOR TO COMMENCING CONCRETE CONSTRUCTION.
- PROVIDE 1/8" x 1" SAW CUTS AT 20' O.C. BOTH WAYS IN FLOOR SLABS UNLESS OTHERWISE NOTED ON DRAWINGS.
- CONCRETE SHALL CONFORM TO THE FOLLOWING:

NAME	CONC. TYPE	STRENGTH	MAX. AGG.	AIR	EXPOSURE CLASS
PIERS	TYPE 50	32mPa @ 28 DAYS	20mm	5-8%	S-2
INTERIOR STRUCTURAL SLAB	TYPE 10	25mPa @ 28 DAYS	20mm	NONE	N
EXTERIOR STRUCTURAL SLAB	TYPE 10	25mPa @ 28 DAYS	20mm	5-8%	C-2
CONCRETE WALLS/ GRADE BEAMS	TYPE 10	25mPa @ 28 DAYS	20mm	4-7%	F-2

REINFORCING STEEL NOTES:

- REINFORCING STEEL SHALL BE NEW BILLET DEFORMED BARS MANUFACTURED AND DETAILED IN ACCORDANCE WITH CAN/CSA-G30.18-M92, WITH MINIMUM YIELD STRENGTH AS FOLLOWS: 10M BARS-300MPA, 15M BARS & LARGER - 400MPA.
- REINFORCING STEEL SHALL BE FREE FROM LOOSE RUST, MUD, OIL OR OTHER COATINGS WHICH MAY REDUCE THE BOND OR HARM THE CONCRETE.
- REINFORCING STEEL SHALL BE HELD IN PLACE AND TIED WITH PROPER ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, TIES, ETC. SUPPLIED BY THE REINFORCING STEEL PROVIDER. APPROPRIATE SUPPORT SHALL BE PROVIDED UNDER ALL SUPPORT ACCESSORIES TO ENSURE THAT THE REINFORCING STEEL IS ACCURATELY POSITIONED.
- LAP TOP BARS AT MID-SPAN AND BOTTOM BARS OVER SUPPORTS.
- BEND ALL HORIZONTAL STEEL 18" AROUND CORNERS, OR USE EXTRA 36"x36" CORNER BARS TO MATCH HORIZONTALS.
- PROVIDE 2-15M AROUND ALL SLAB, WALL, & BEAM OPENINGS, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS.
- CONCRETE COVER TO REINFORCING STEEL SHALL BE AS FOLLOWS:

7.1.	CONCRETE CAST IN DIRECT CONTACT WITH SOIL	-	75mm(3")
7.2.	FORMED CONCRETE IN CONTACT WITH SOIL 15M OR SMALLER	-	50mm (2")
7.3.	FORMED CONCRETE IN CONTACT WITH SOIL 20M OR LARGER	-	40mm (1 1/2")
7.4.	FORMED CONCRETE NOT IN CONTACT WITH SOIL (BEAMS AND COLUMNS)	-	50mm (2")
7.5.	FORMED CONCRETE NOT IN CONTACT WITH SOIL (SLABS AND WALLS)	-	20mm (3/4") @ 1 1/2HR FRR
		-	25mm (1") @ 2HR FRR
- MISCELLANEOUS CONCRETE HOUSEKEEPING PADS AND CURBS SHALL BE REINFORCED WITH A MINIMUM 10M AT 18" O.C. EACH WAY UNLESS NOTED. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

STRUCTURAL DRAWING LIST:

S1.1	PROJECT NOTES
S1.2	TYP PROJECT DETAILS
S2.1	FOUNDATION/MAIN FLOOR PLAN
S2.2	ROOF FRAMING PLAN
S5.1	SECTIONS

WOOD NOTES:

- ALL LUMBER COMPONENTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE CAN/CSA-086-09
- ALL LUMBER SHALL CONFORM TO "NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER", AND THE GRADE SHALL BE CLEARLY IDENTIFIED ON ALL PRODUCTS.
- ALL DIMENSIONAL LUMBER SHALL BE NO.2 GRADE, OR BETTER, UNLESS NOTED OTHERWISE ON DRAWINGS.
- FRAMED WALLS AND ROOF SYSTEMS SHALL BE ADEQUATELY BRACED UNTIL CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL SUPPLY AND ERECT ALL BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE, INCLUDING DURING THE CONSTRUCTION PHASE.
- LOAD BEARING STUD WALLS SHALL HAVE SOLID BLOCKING AT 4'-0" CENTERS.
- SHEATHING AND STRUCTURAL ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. SHEATHING SHALL BE CANPLY EXTERIOR GRADE PLYWOOD UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY BEACH ROCKE ENGINEERING LTD.
- LUMBER IN CONTACT WITH SOIL SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH THE CAN/CSA-080 SERIES-08. THE CUT ENDS AND DRILLED HOLES OF TREATED LUMBER SHALL BE TREATED WITH 3 COATS OF PRESERVATIVES.
- FASTENERS USED FOR FRAMING SHALL BE: HOT-DIPPED AND GALVANIZED FOR LUMBER ABOVE GRADE, AND, STAINLESS STEEL (TYPES 304 AND 316) FOR PRESERVATIVE-TREATED LUMBER CONFIRMING TO CSA B111-1974.
- JOINTS AND HOLES BELOW GRADE SHALL BE SEALED WITH BUTLY CAULKING COMPOUND OR EQUAL CONFORMING TO CGSB 19-GP-13 OR CGSB 19-GP-14, INSTALLED TO PROVIDE A WATER-TIGHT SEAL.
- PROVIDE 3 SETS OF STAMPED AND SEALED SHOP DRAWINGS FOR ALL ROOF TRUSSES SUPPLIED BY THE TRUSS MANUFACTURER. SUBMIT SHOP DRAWINGS TO BEACH ROCKE ENGINEERING FOR APPROVAL.
- PROVIDE 3 SETS OF STAMPED AND SEALED SHOP DRAWINGS FOR ALL FLOOR JOISTS SUPPLIED BY THE JOIST MANUFACTURER. SUBMIT SHOP DRAWINGS TO BEACH ROCKE ENGINEERING FOR APPROVAL.
- ALL STRUCTURAL ENGINEERED WOOD (TIMBERSTRAND, MICROLLAM, PARALLAM, GLUE-LAMINATED, ETC) PRODUCTS SHALL BE SUPPLIED BY MANUFACTURERS APPROVED BY BEACH ROCKE ENGINEERING LTD. PRODUCTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE CAN/CSA-086-09 TO SATISFY LOADING CONDITIONS NOTED ON THE DRAWINGS AND LOCAL BUILDING CODE REQUIREMENTS. THE MANUFACTURER SHALL PROVIDE 3 SETS OF SHOP DRAWINGS TO BEACH ROCKE ENGINEERING LTD. SEALED BY AND ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA, FOR ALL COMPONENTS PRIOR TO FABRICATION.
- FASTEN EXTERIOR SHEATHING AT 3" O.C. AT EDGES, AND 12" O.C. AT INTERMEDIATE MEMBERS.
- ALL 4PLY FLUSH BEAMS AND 4PLY LVL BEAMS TO BE THRU BOLTED WITH 1/2"Ø BOLTS @ 16" O.C. STAGGERED TOP AND BOTTOM.

POST INSTALLED ANCHOR NOTES:

- EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES:
 - ANCHORAGE TO CONCRETE
 - ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD
 - MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI KWIK BOLT 3 EXPANSION ANCHORS (UNCRAKED CONCRETE ONLY)
 - HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HSL-3 EXPANSION ANCHORS
 - REBAR DOWELING INTO CONCRETE
 - ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT WITH CONTINUOUSLY DEFORMED REBAR
 - HILTI HIT-HY 500V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT WITH CONTINUOUSLY DEFORMED REBAR
 - ANCHORAGE TO SOLID GROUDED MASONRY
 - ADHESIVE ANCHORS USE:
 - HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM.
 - STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - MECHANICAL ANCHORS USE:
 - HILTI KWIK BOLT-3 EXPANSION ANCHORS
 - ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY
 - ADHESIVE ANCHORS USE:
 - HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM.
 - STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION
 - ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
 - INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
 - THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

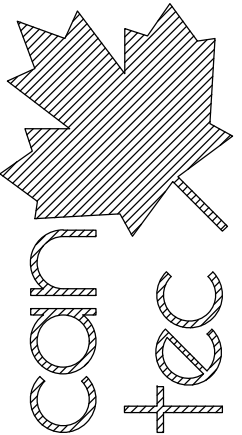
CONCRETE PIER NOTES:

- CONCRETE PIERS SHALL BEAR ON BEDROCK WITH AN ALLOWABLE BEARING CAPACITY OF 5000kPa.
- THE CONTRACTOR SHALL LOCATE ALL SITE SERVICES PRIOR TO EXCAVATION.
- BEARING SURFACE SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THE ALLOWABLE BEARING CAPACITY AND TO ENSURE ALL LOOSE AND DISTURBED MATERIAL HAS BEEN REMOVED FROM TOP OF BEDROCK.
- POUR JOINTS IN THE FOUNDATION SHALL BE APPROVED BY THE ENGINEER.

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Professional Engineering Services
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Telephone: (204) 255-7251 Fax: (204) 257-7239
Website: www.beachrocke.ca

PROJECT TITLE
RCMP - NEW WATER TREATMENT PLANT

SHEET TITLE
PROJECT NOTES

CHECKED BY
RH

DRAWN BY
MM

SCALE
AS NOTED

DATE
18-01-26

LOCATION
NORWAY HOUSE, MB

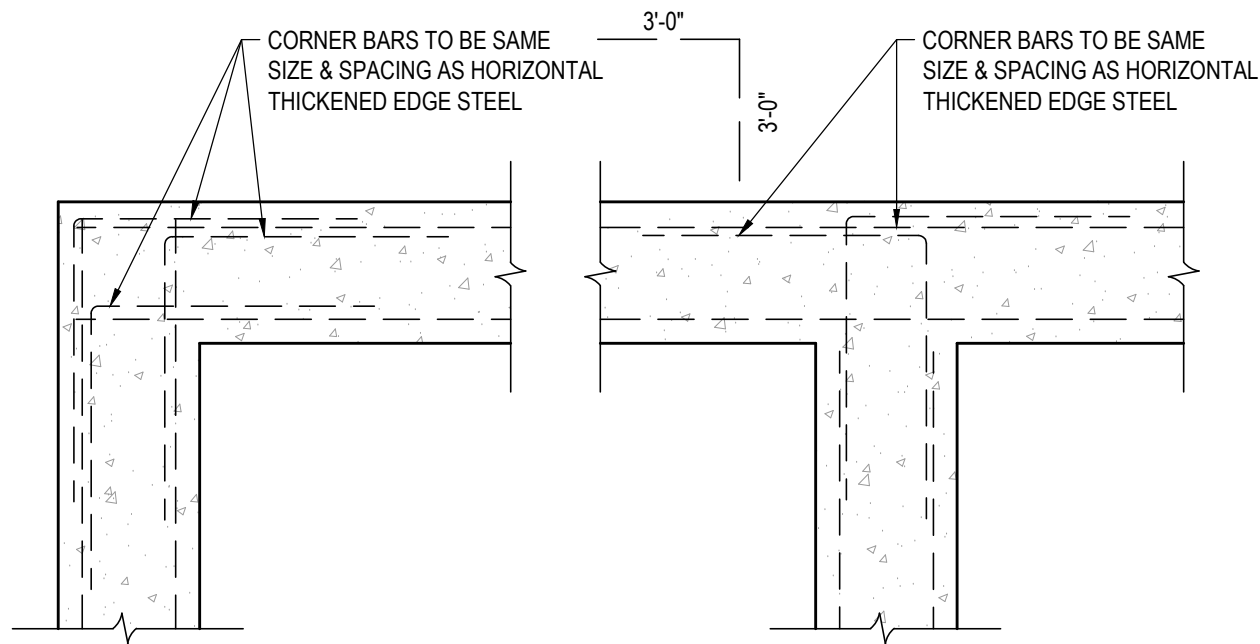
REVISION NO. 01
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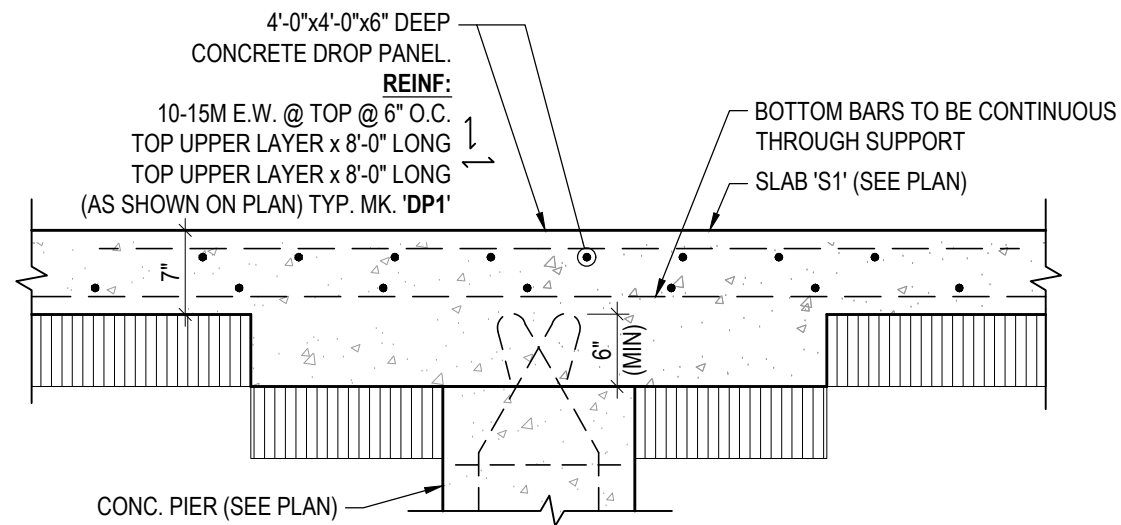
S1.1

JOB NO.

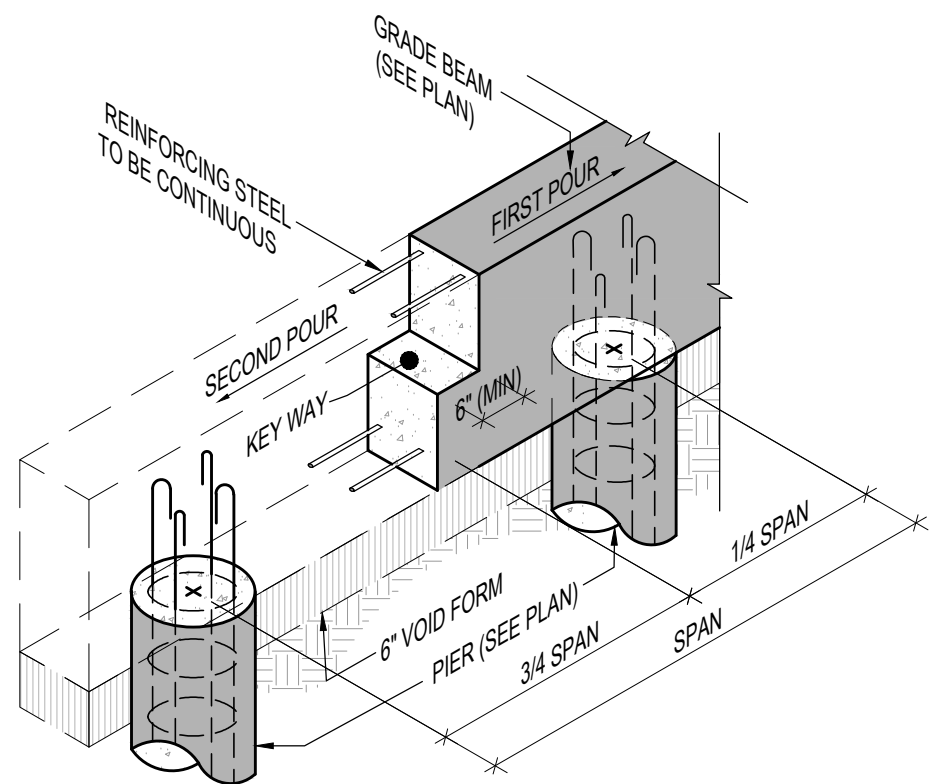
17-1824-CG-352



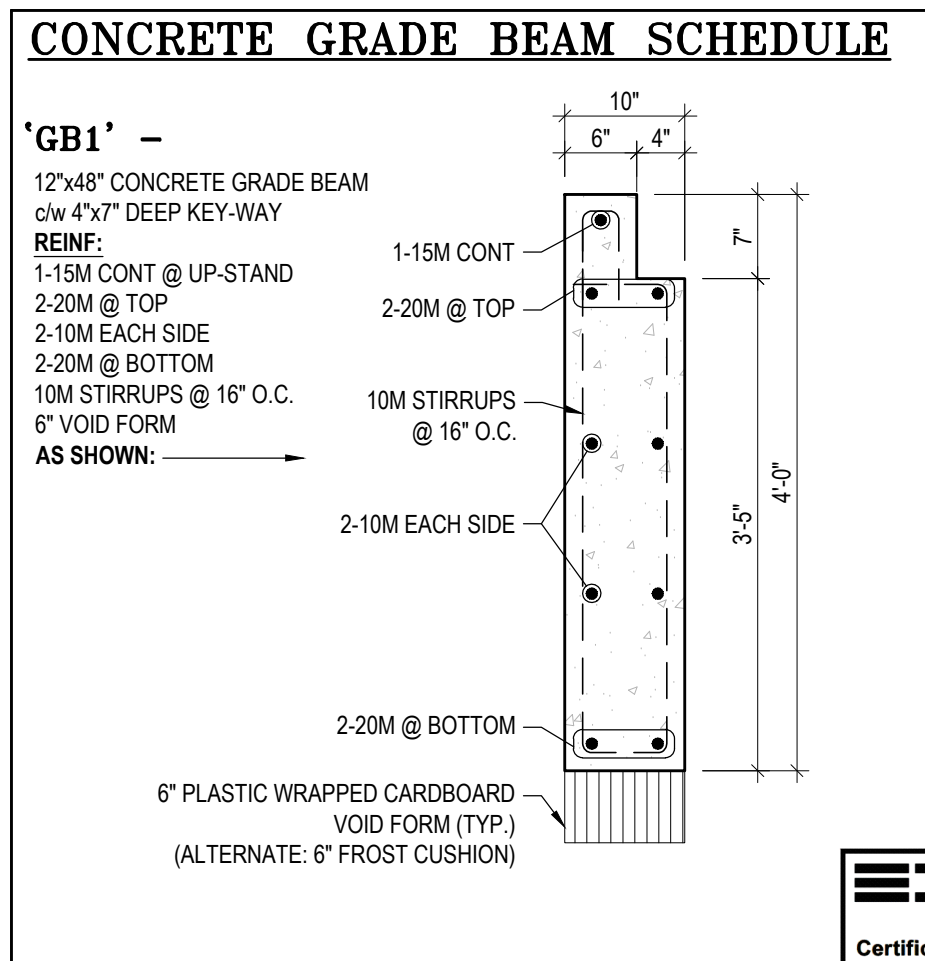
1
S1.2 TYP. CORNER BAR DETAIL
SCALE : 3/4"=1'-0"



2
S1.2 TYP. DROP PANEL 'DP1' DETAIL
SCALE : 3/4"=1'-0"



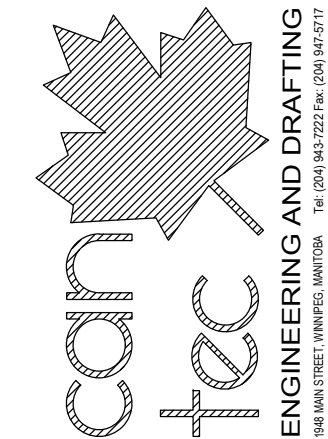
3
S1.2 TYP. GRADE BEAM WALL JOINT
SCALE : 1/2"=1'-0"



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PROJECT TITLE: **RCMP - NEW WATER TREATMENT PLANT**
SHEET TITLE: **TYP DETAILS & SCHEDULES**
DATE: 18-01-26
SCALE: AS NOTED
DRAWN BY: MM
CHECKED BY: RH
LOCATION: NORWAY HOUSE, MB

REVISION NO. 01
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S1.2

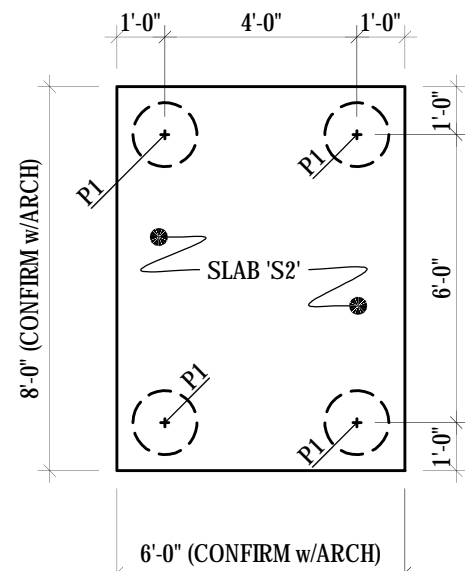
JOB NO.
17-1824-CG-352

DOWEL SCHEDULE

- 'D1' - 15M DOWELS @ 16" O.C. @ TOP OF 6" ^{48"} SLAB
- 'D2' - 8-20M DOWELSx36" LONG FROM CONC PIERS INTO BEDROCK. DRILL & EPOXY GROUT INTO BEDROCK BELOW PIERS (MIN 12" EMBEDMENT) PROVIDE 8-DOWELS @ ALL PIERS ^{36"}

SLAB SCHEDULE

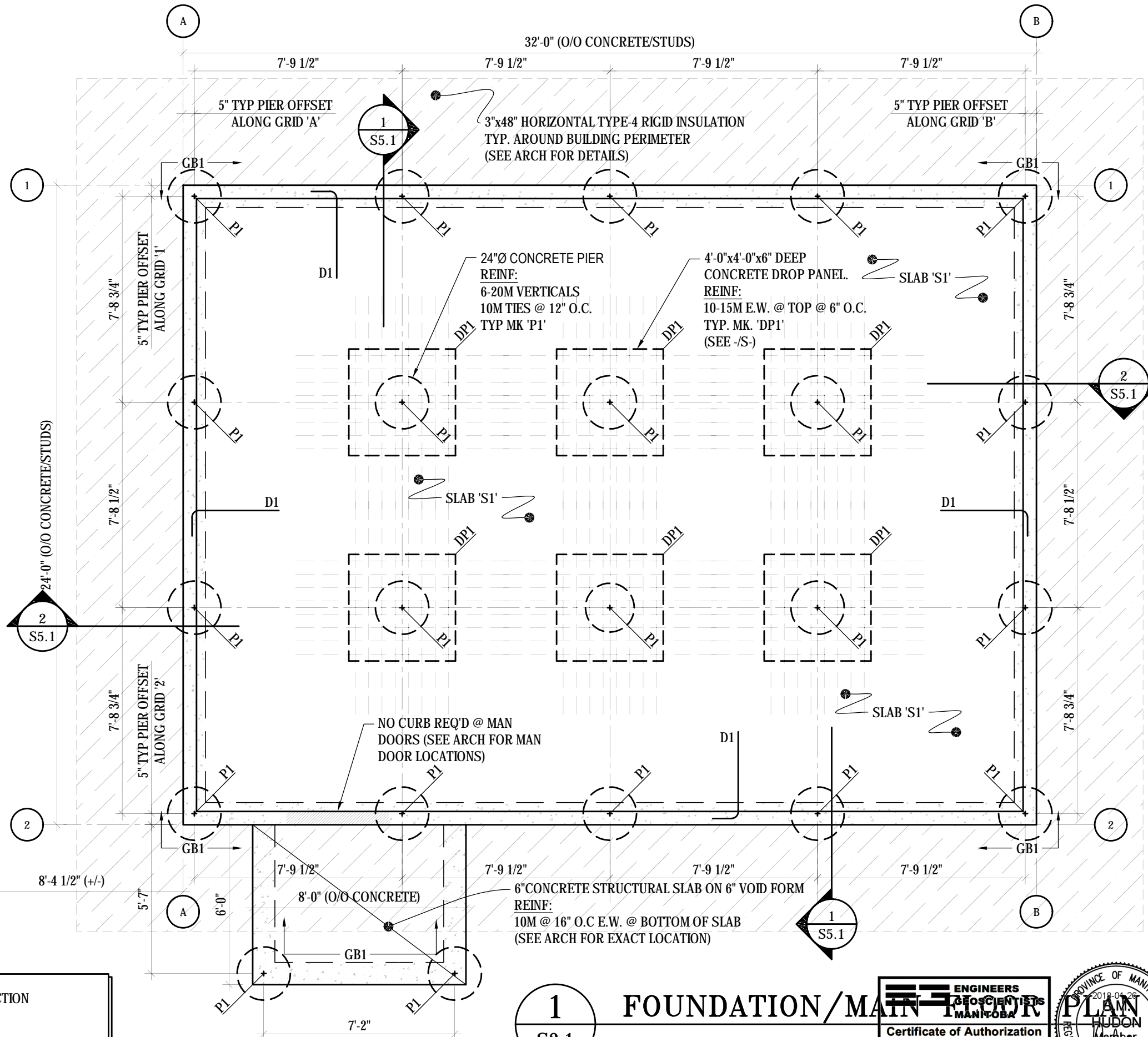
- 'S1' - 7" CONCRETE STRUCTURAL SLAB ON STEGGO WRAP (AS DETAILED BY ARCH) ON 7/16" OSB 6" VOID FORM (BIO-DEGRADABLE) ON LEVELING SAND ON LOOSE FILL.
REINF: 15M @ 12" O.C. @ BOTTOM EACH WAY
- 'S2' - 8" CONCRETE STRUCTURAL SLAB ON 6MM POLY V.B. ON 7/16" OSB 6" VOID FORM (BIO-DEGRADABLE) ON LEVELING SAND ON LOOSE FILL.
REINF: 20M @ 12" O.C. EACH WAY @ TOP & BOTTOM



- DESIGN LOADS:**
- LIVE LOAD = 12 kPa (250 psf)
 - DEAD LOAD = SLAB SELF WEIGHT + (5 psf)

PLAN NOTES:

- CONFIRM ALL DIMENSIONS w/ARCH. PRIOR TO CONSTRUCTION
- GRIDS ARE O.F. OF CONCRETE
- ALL DIMENSIONS ARE TAKEN FROM GRIDS
- PROVIDE 5 1/2"x5" HIGH CONC CURB (NOT SHOWN - SEE 1/S5.1 FOR DETAILS)

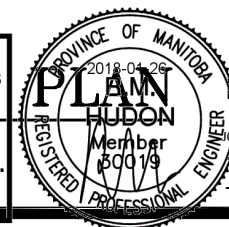


1
S2.1

FOUNDATION / MAIN FLOOR FRAMING PLAN

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

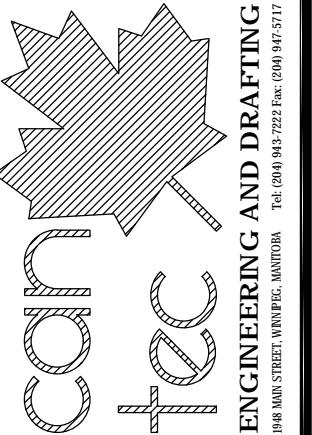
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S2.1

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PROJECT TITLE: RCMP - NEW WATER TREATMENT PLANT

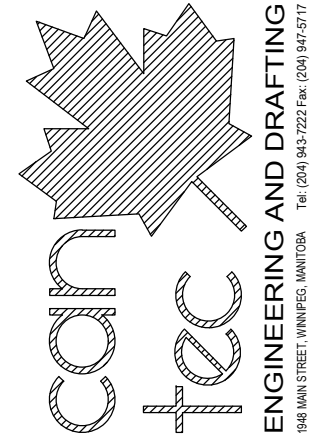
SHEET TITLE: FDTN/MAIN FLOOR FRAMING PLAN

DATE: 18-01-26
SCALE: AS NOTED
DRAWN BY: MM
CHECKED BY: RH

LOCATION: NORWAY HOUSE, MB

REVISION NO. 01
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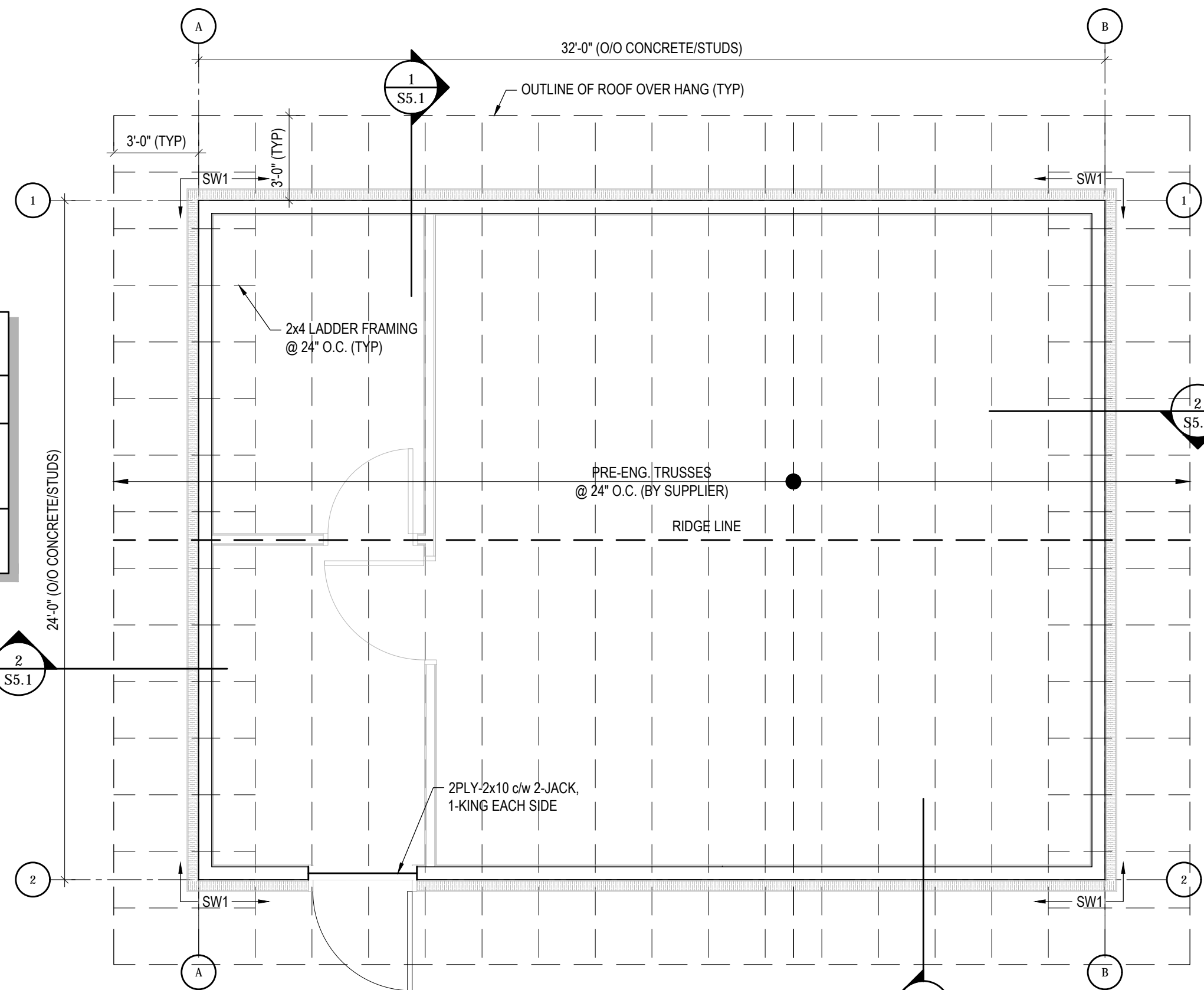
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PROJECT TITLE: **RCMP - NEW WATER TREATMENT PLANT**
 SHEET TITLE: **ROOF FRAMING PLAN**
 DATE: 18-01-26
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RH
 DRAWN BY: MM
 SCALE: AS NOTED

REVISION NO. 01
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S2.2

JOB NO. 17-1824-CG-352



WALL SCHEDULE	
MARK	DESCRIPTION
SW1	2x6 @ 12" O.C. (SPF No. 1/2) c/w 1/2" PLYWOOD, FASTENED TO STUDS w/2 1/2" NAILS @ 3" O.C. @ PANEL EDGES AND 12" O.C @ INTERMEDIATED SUPPORTS. (EXTERIOR WALLS)
NOTE: ALL STUD WALLS c/w 1/2"Øx6" LONG HILTI 'KB3' KWIK BOLTS @ 32" O.C.	

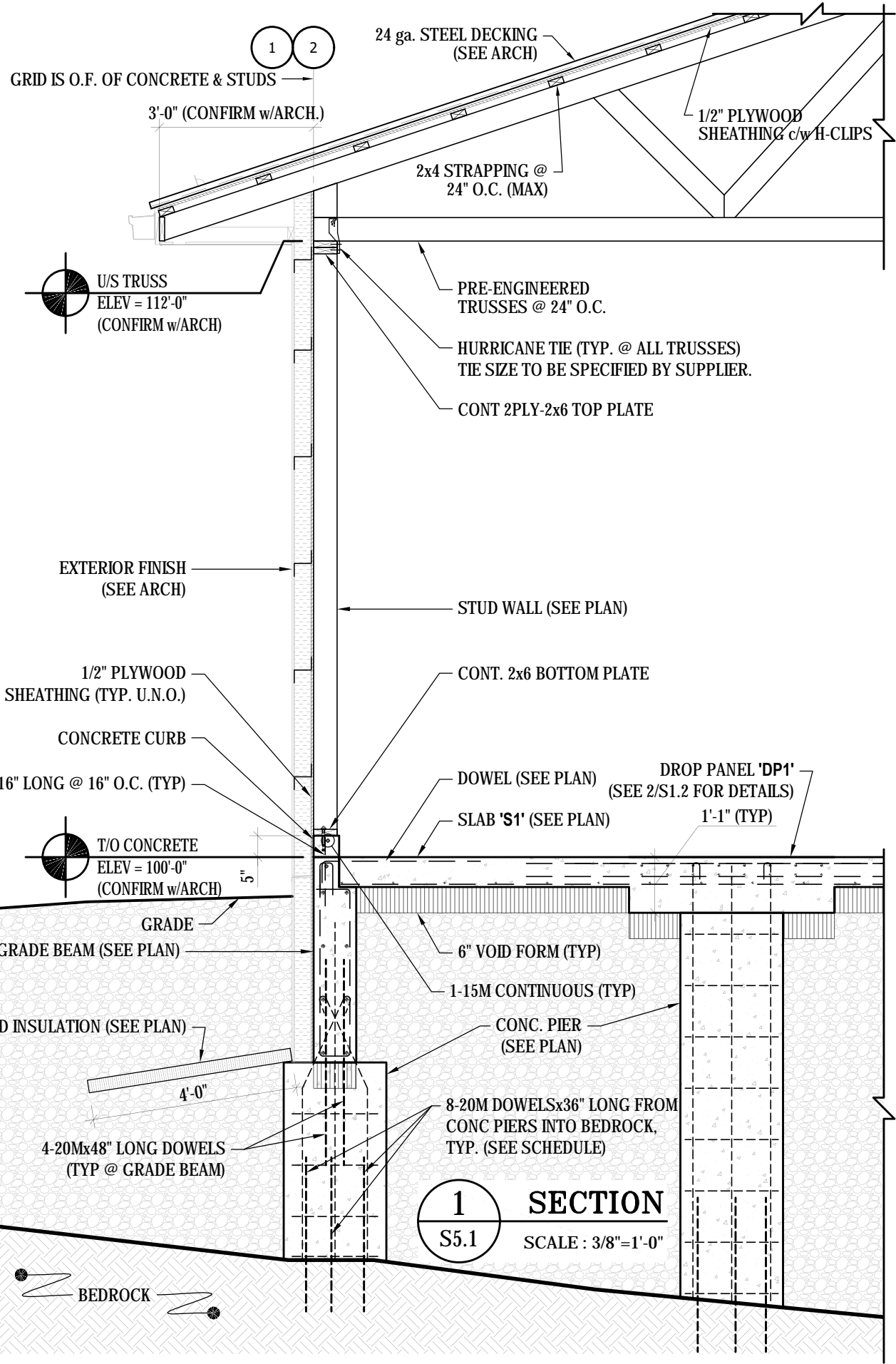
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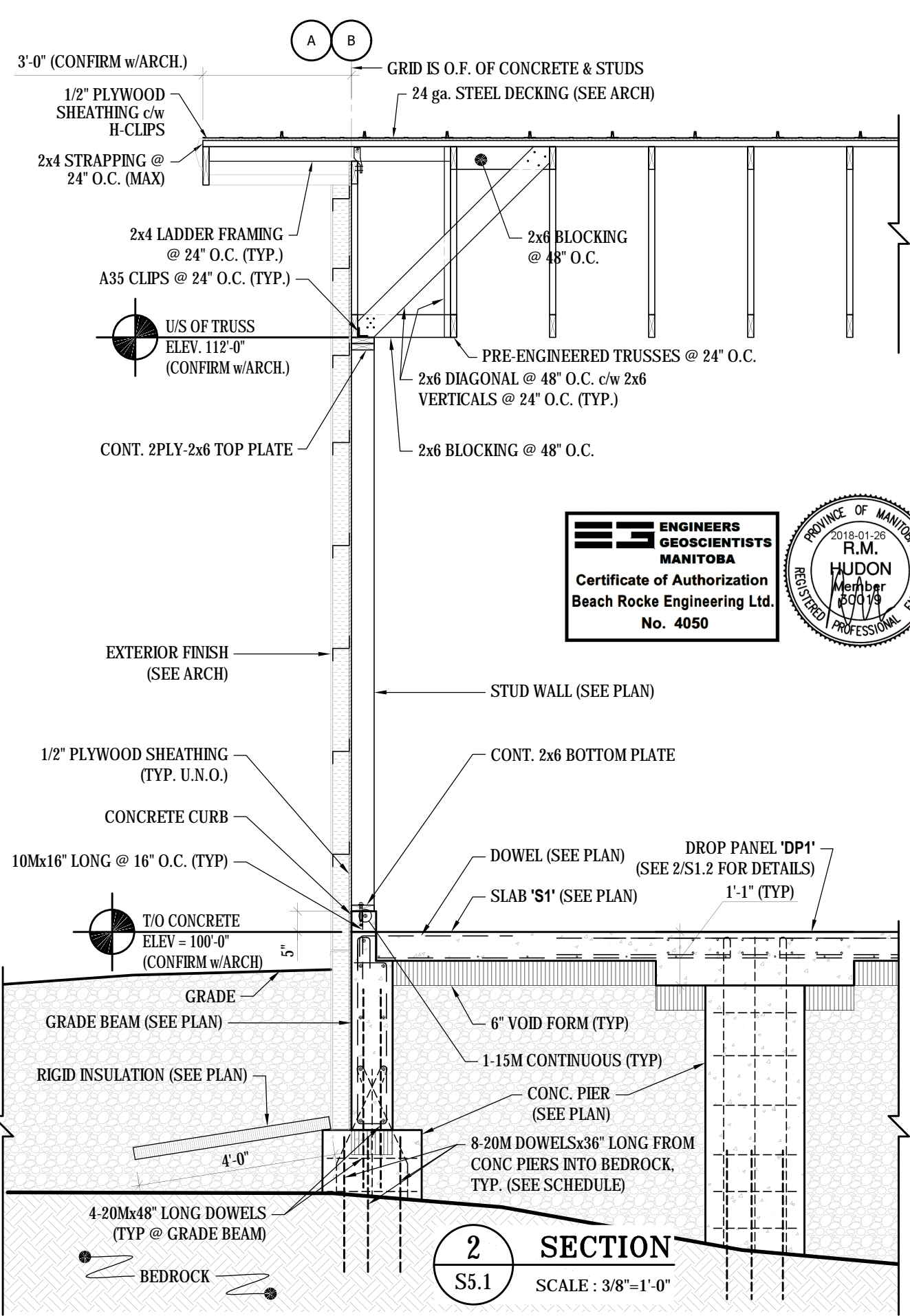
- PLAN NOTES:**
- CONFIRM ALL DIMENSIONS w/ARCH. PRIOR TO CONSTRUCTION
 - GRIDS ARE O.F. OF CONCRETE
 - ALL DIMENSIONS ARE TAKEN FROM GRIDS

1
S2.2
ROOF FRAMING PLAN
 SCALE : 1/4"=1'-0"

DESIGN LOADS:	
- SNOW LOAD	= 2.65 kPa (55 psf)
- DEAD LOAD	= 0.72 kPa (15 psf)



1 SECTION
S5.1 SCALE: 3/8"=1'-0"

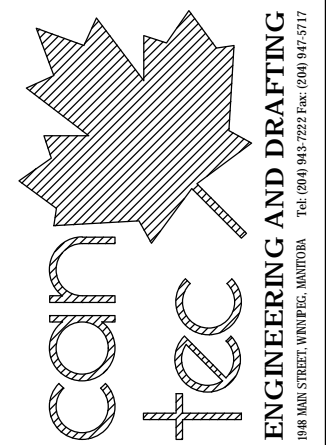


2 SECTION
S5.1 SCALE: 3/8"=1'-0"

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PROJECT TITLE: **RCMP - NEW WATER TREATMENT PLANT**

SHEET TITLE: **SECTIONS**

DATE: **18-01-26**

LOCATION: **NORWAY HOUSE, MB**

CHECKED BY: **RH**

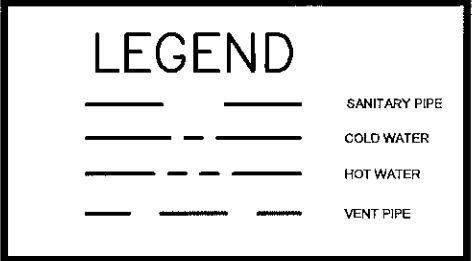
DRAWN BY: **MM**

SCALE: **AS NOTED**

REVISION NO. **01**
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S5.1

JOB NO. **17-1824-CG-352**



DRAWING NOTES: (#)

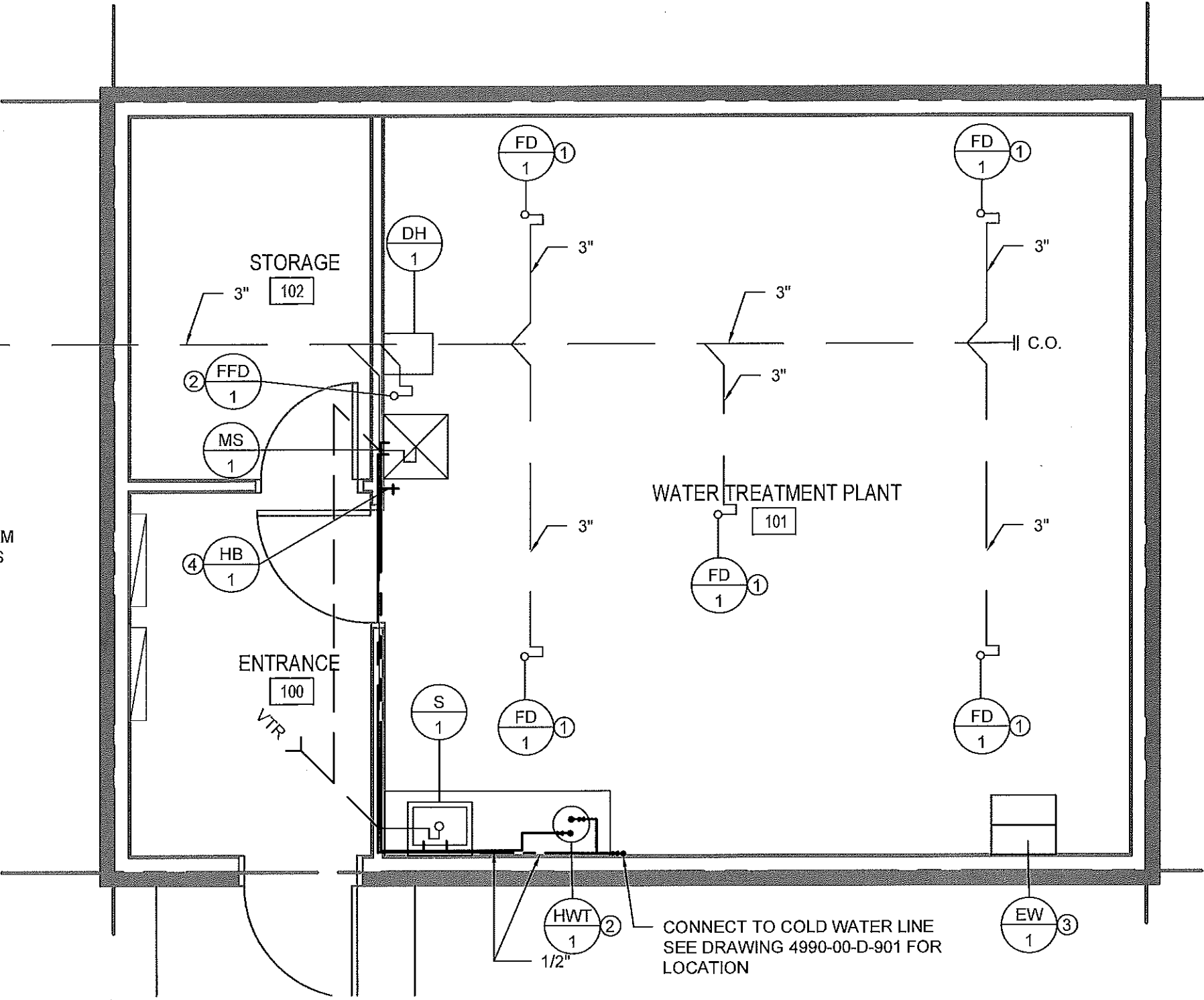
1. ALL FLOOR DRAINS TO HAVE - TRAP GUARD PRIMER
2. HWT TO BE MOUNTED IN MILLWORK AND BE COMPLETE WITH DRIP PAN.
3. EYE WASH STATION TO BE STAND ALONE SEE SPECIFICATION FOR DETAILS
4. HOSE BIB TO BE COMPLETE WITH VACUUM BREAKER



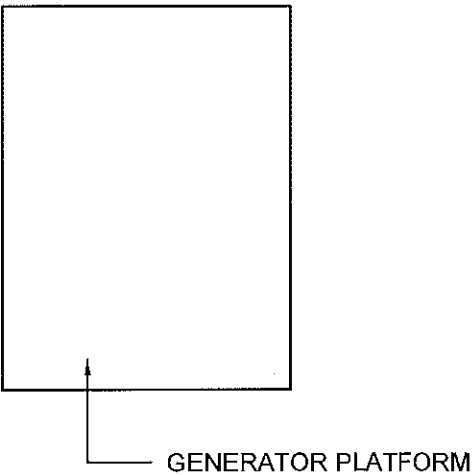
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No. 4189 Date: *Jan 26, 2018*



2" DIA TO LOW PRESSURE SEWER SYSTEM
SEE DRAWING 4990-00C-101 FOR DETAILS



1 MAIN FLOOR PLAN - PLUMBING
M1.0/M1.0 SCALE: 1/4"=1'-0"



PROJECT TITLE:
NORWAY HOUSE WATER TREATMENT PLANT - BUILDING NO.1

SHEET TITLE:
FLOOR PLAN - PLUMBING

PROJECT NUMBER:
17-045-01-21

00	ISSUED FOR TENDER	18 01 26	JLS
REV. #	REVISION	DATE (YY MM DD)	REV. BY

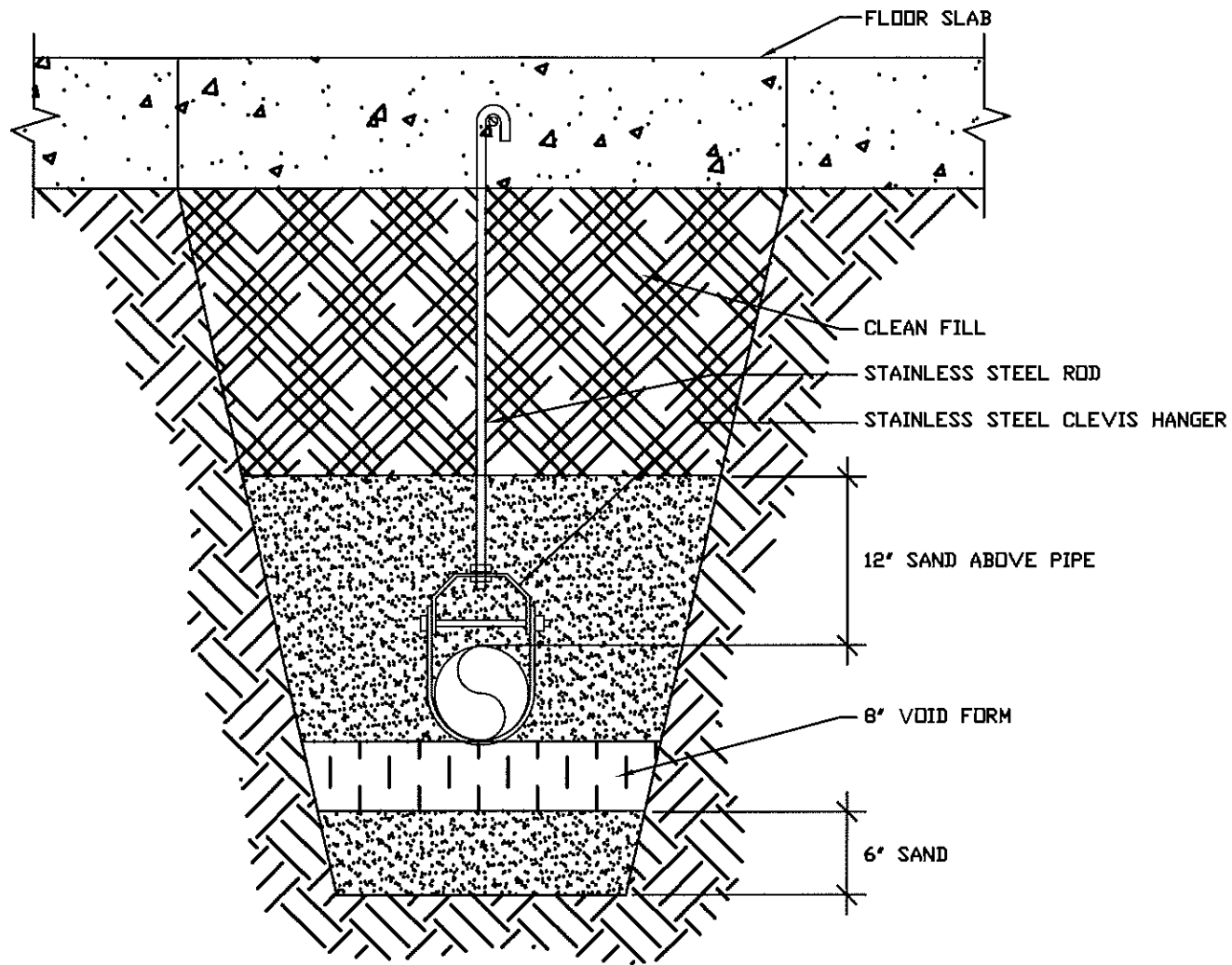
REV. #	REVISION	DATE (YY MM DD)	REV. BY

SCALE:
AS NOTED

DATE (YY MM DD):
17 11 20

DRAWING NUMBER:
M1.0

REVISION NUMBER:
01

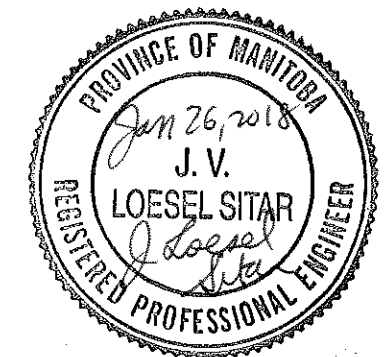
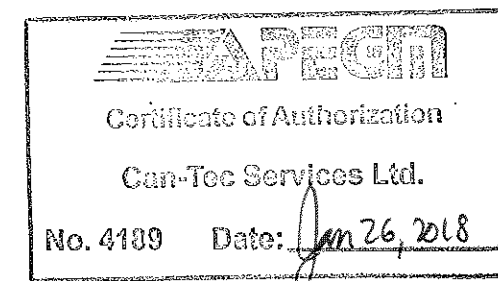


PIPE SUPPORT UNDER SLAB DETAIL

N.T.S.

NOTE:
ALL DIMENSIONS ARE MINIMUM REQUIREMENTS

PLUMBING FIXTURE CONNECTION SIZES								
SYMBOL	NAME	WATER HOT	WATER COLD	WASTE	VENT			NOTES
MS-1	MOP SINK	1/2"Ø	1/2"Ø	2"Ø	1 1/2"Ø			
HWT-1	HOT WATER TANK	1/2" Ø	1/2"Ø					
FD-1	FLOOR DRAIN			3"Ø				ALL FLOOR DRAINS TO HAVE TRAP GUARD PRIMER
FFD-1	FUNNEL FLOOR DRAIN			3"Ø				ALL FLOOR DRAINS TO HAVE TRAP GUARD PRIMER
S-1	SINK	1/2"Ø	1/2"Ø	1 1/2"Ø	1 1/2"Ø			
HB-1	HOSE BIB		1/2"Ø					C/W VACUUM BREAKER
EW-1	EYE WASH - STAND ALONE							STAND ALONE UNIT
DH-1	DEHUMIDIFIER							STAND ALONE UNIT



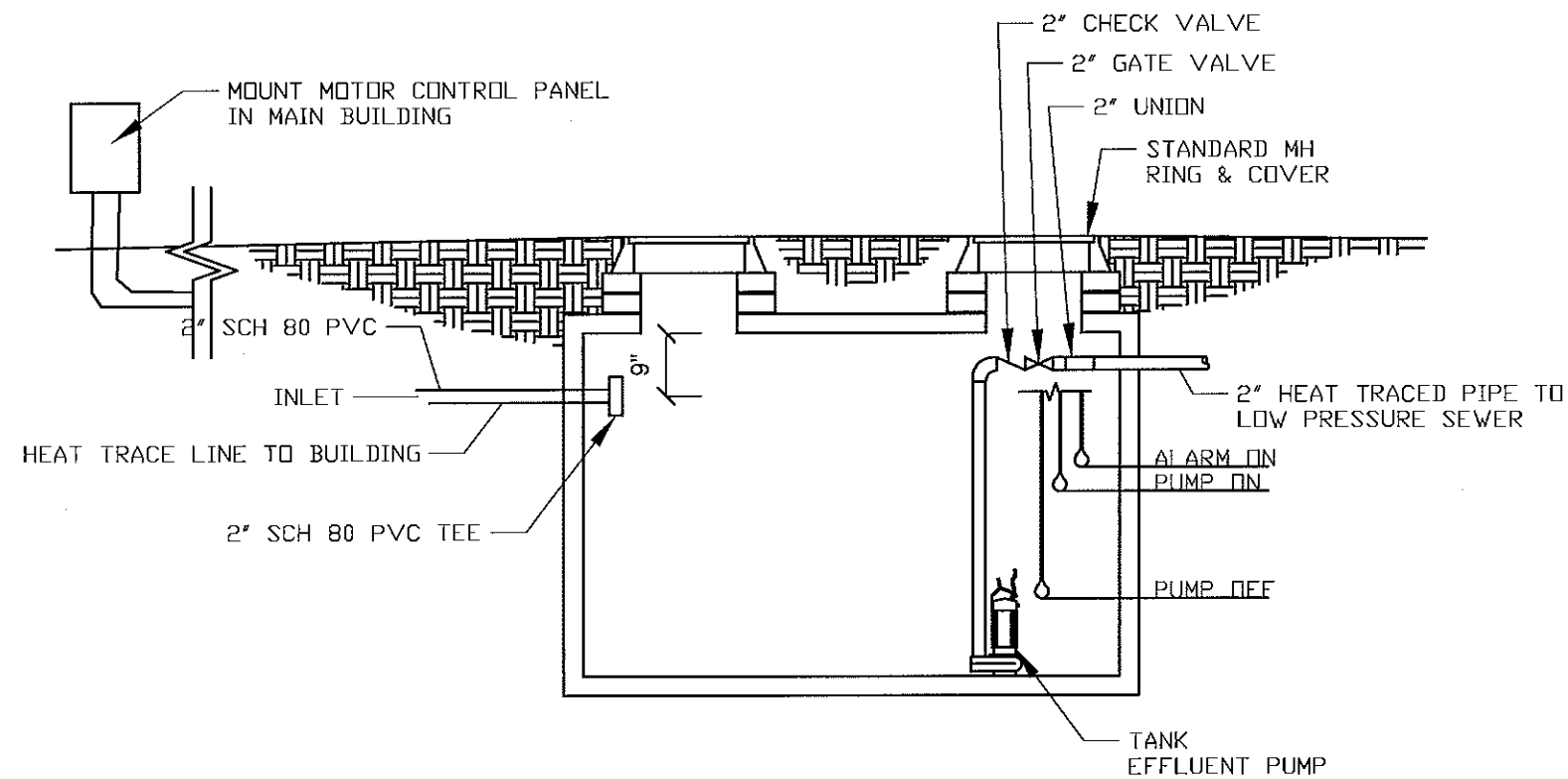
PROJECT TITLE:
NORWAY HOUSE WATER TREATMENT PLANT - BUILDING NO. 1
SHEET TITLE:
DETAILS
PROJECT NUMBER:
17-045-01-21

01 ISSUED FOR TENDER 18 01 26 JLS
REV. # REVISION DATE (YY MM DD) REV. BY

REV. # REVISION DATE (YY MM DD) REV. BY

SCALE:
AS NOTED
DATE (YYMMDD):
17 11 20

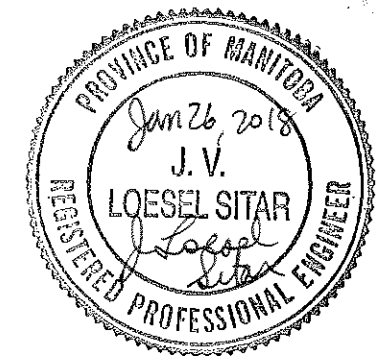
DRAWING NUMBER:
M1.1
REVISION NUMBER:
01



2 1000 GALLON TANK DETAIL
M1.2/M1.2 SCALE: NTS

NOTE:
ALARM TO BE LOCATED IN ELECTRICAL ROOM NEAR ENTERANCE
FINAL LOCATION TO BE SITE DETERMINED

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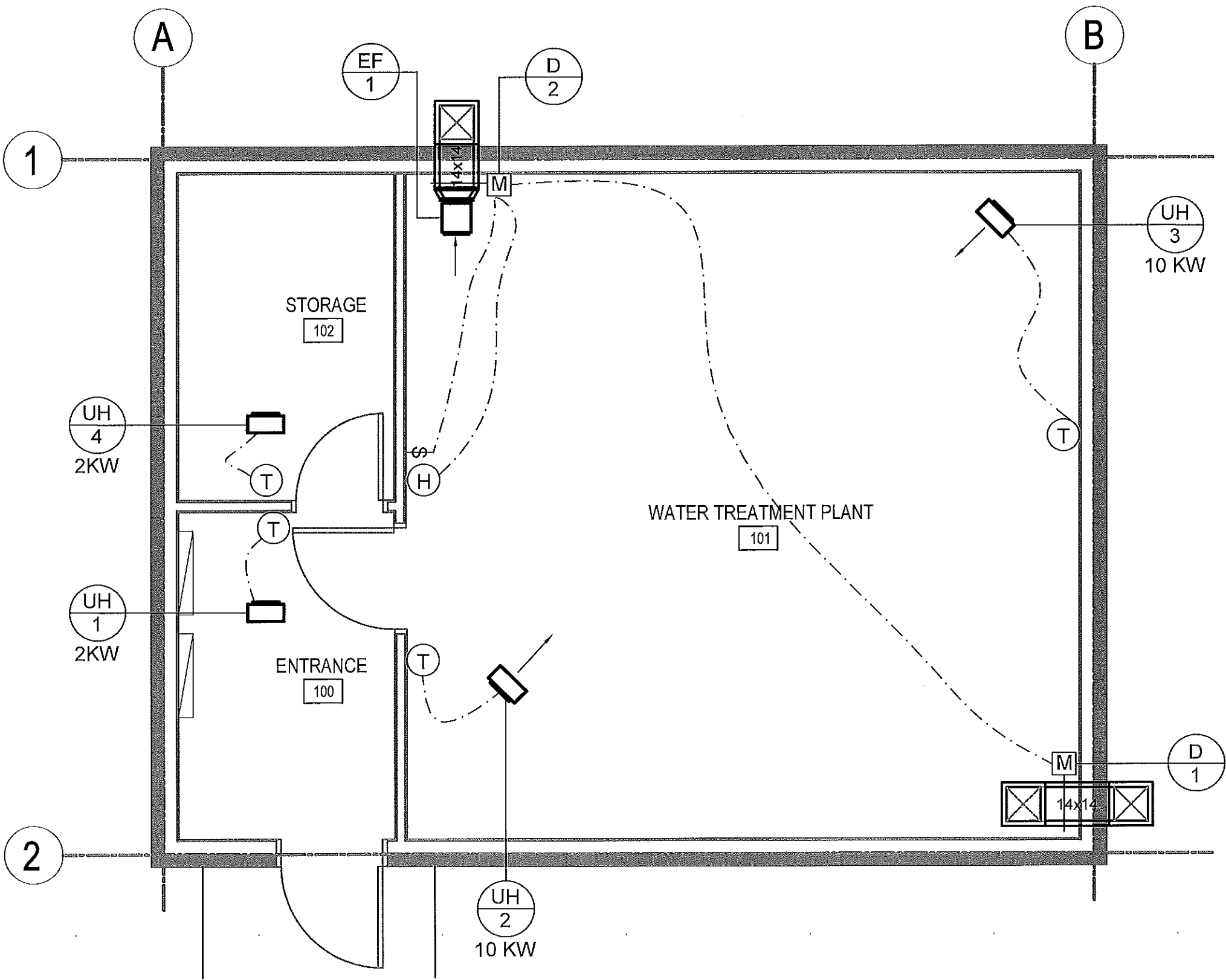
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NORWAY HOUSE WATER TREATMENT PLANT - BUILDING NO. 1
SHEET TITLE:
DETAILS
PROJECT NUMBER:
17-045-01-21

REV. #	REVISION	DATE (YY MM DD)	REV. BY
01	ISSUED FOR TENDER	18 01 26	JLS

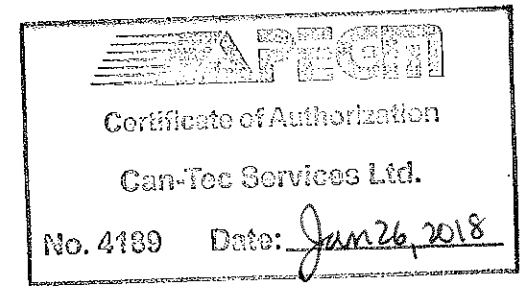
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SCALE:
AS NOTED
DATE (YY MM DD):
17 11 20

DRAWING NUMBER:
M1.2
REVISION NUMBER:
01



HEATING AND COOLING LEGEND	
Ⓣ	THERMOSTAT
Ⓢ	ROOM SENSOR
Ⓣ/Ⓢ/Ⓜ	EQUIPMENT TAG (SEE SCHEDULE)
VENTILATION LEGEND	
↔	TRANSFER SLEEVE
Ⓜ	VOLUME BALANCING DAMPER
Ⓢ	FIRE DAMPER
Ⓢ	FIRE FLAP
Ⓢ	BACKDRAFT DAMPER
Ⓜ	MOTORIZED DAMPER



1 FLOOR PLAN - HVAC
M2.0 SCALE: 1/4"=1'-0"



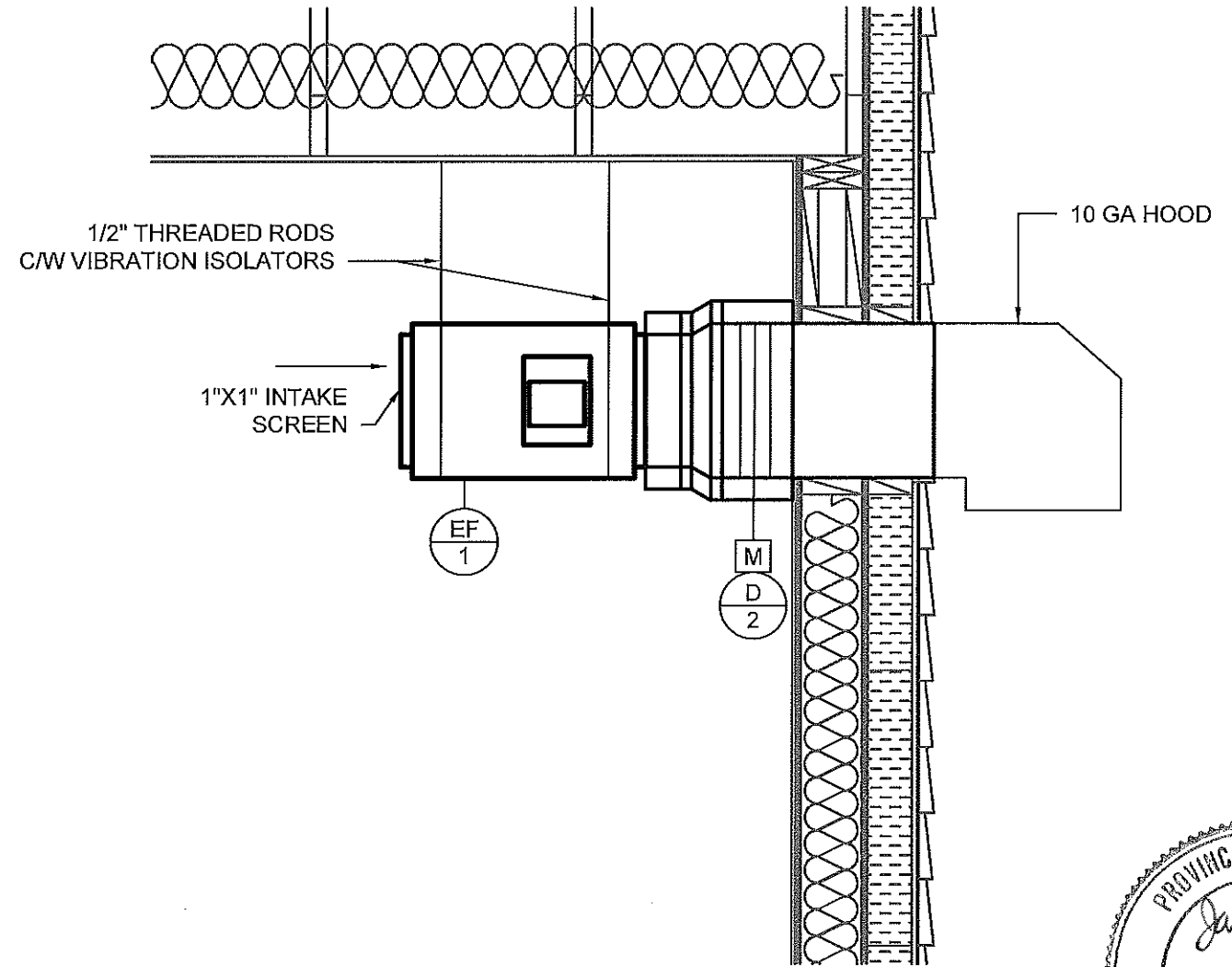
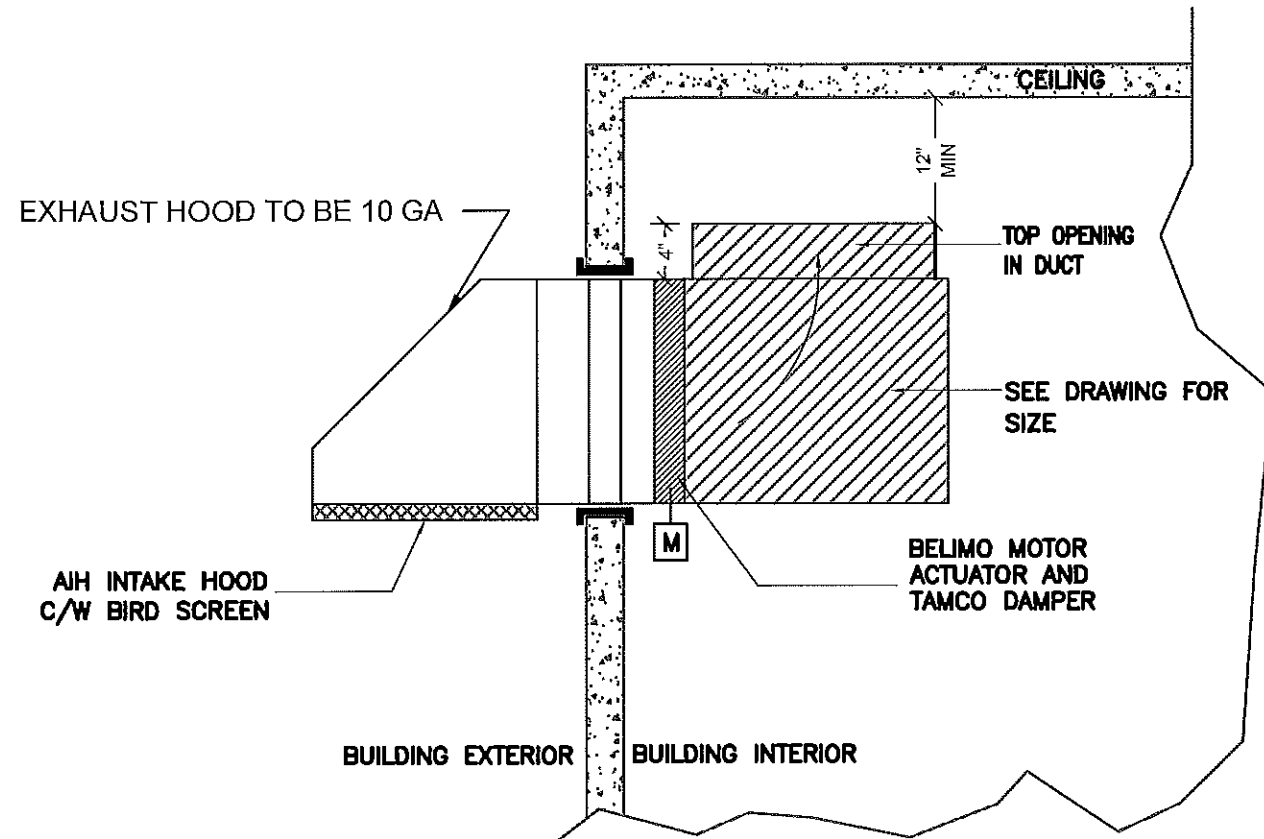
PROJECT TITLE:
NORWAY HOUSE WATER TREATMENT PLANT - BUILDING #1
SHEET TITLE:
FLOOR PLAN - HVAC
PROJECT NUMBER:
17-045-01-21

01	ISSUED FOR TENDER	18 01 26	JLS
REV. #	REVISION	DATE (YY MM DD)	REV. BY

REV. #	REVISION	DATE (YY MM DD)	REV. BY
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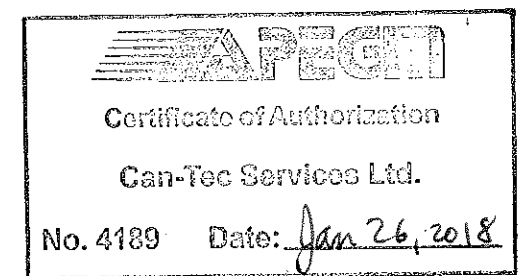
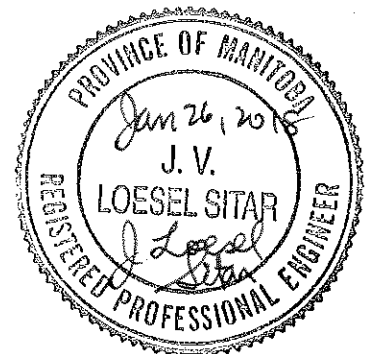
SCALE:
AS NOTED
DATE (YY/MM/DD):
17 11 20

DRAWING NUMBER:
M2.0
REVISION NUMBER:
01



1 AIR INTAKE DETAIL
M2.1 SCALE: NTS

2 EXHAUST FAN DETAIL
M2.1 SCALE: 3/4"=1'-0"



PROJECT TITLE:
NORWAY HOUSE WATER TREATMENT PLANT - BUILDING NO.1
SHEET TITLE:
DETAILS
PROJECT NUMBER:
17-045-01-21

01	ISSUED FOR TENDER	18 01 26	JLS
REV. #	REVISION	DATE (YY MM DD)	REV. BY

REV. #	REVISION	DATE (YY MM DD)	REV. BY
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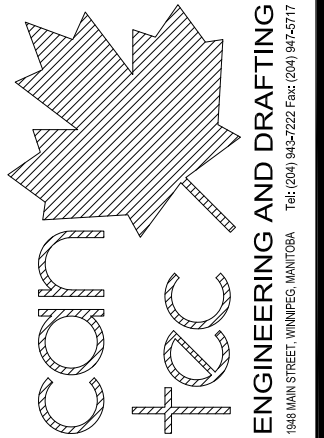
SCALE:
AS NOTED
DATE (YY MM DD):
17 11 20

DRAWING NUMBER:
M2.1
REVISION NUMBER:
01

ROYAL CANADIAN MOUNTED POLICE

NORWAY HOUSE PUMP HOUSE - BUILDING NO.2

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http://www.canteccservices.ca/ 1948 MAIN STREET, WINNIPEG, MANITOBA Tel: (204) 943-7222 Fax: (204) 947-5717

DRAWING LIST

DRAWING LIST

- A0.0 TITLE PAGE
- A1.0 DEMOLITION PLAN
- A1.1 DEMOLITION ELEVATION
- A2.0 FLOOR PLAN
- A2.1 ROOF PLAN
- A3.0 ELEVATIONS
- A3.1 ELEVATIONS
- A4.0 SECTION a-a
- A4.1 SECTION b-b
- A7.0 DETAILS
- A7.1 DETAILS
- A8.0 DOOR DETAIL & SCHEDULE
- A8.1 WALL & FINISH SCHEDULE
- S1.1 PROJECT NOTES
- S2.1 RCMP - EXISTING FOUNDATION & ROOF FRAMING PLAN
- S5.1 RCMP - SECTIONS
- M2.0 MAIN FLOOR PLAN - HVAC
- M2.1 DETAILS

CONSULTANT LIST

PRIME CONSULTANT:



WATER TREATMENT CONSULTANT:



STRUCTURAL CONSULTANT:



MECHANICAL CONSULTANT:

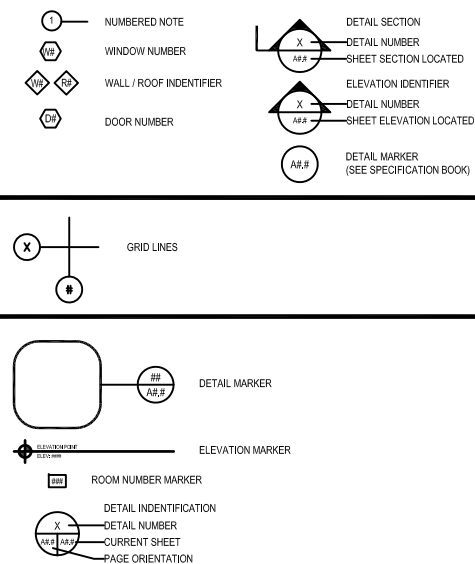


ELECTRICAL CONSULTANT:



Engineering Consultants
6-1375 Nlakwa Road E Telephone: (204) 255-4842
Winnipeg, Manitoba Facsimile: (204) 255-7679
Canada, R2J 3T3 E-mail: info@joreyelectric.com

DRAWING SYMBOLS



ABBREVIATION LIST

ACOUSTIC	ACST	DRYWALL	DW	LAVATORY	LAV	ROOM	RM
ADHESIVE	ADH	EACH	EA	LAY-IN ACOUSTIC TILE	LAT	ROUGH OPENING	RO
ADJUSTABLE	ADJ	EACH WAY	EW	LEFT HAND	LH	RUBBER	RB
AGGREGATE	AGGR	EAST	E	LEFT HAND REVERSE	LHR	RVT	RESILIENT SHEET FLOORING
AIR VAPOUR BARRIER	AVB	ELECTRICAL	ELEC	LENGTH	LG	SCHEDULE	SCHED
ALTERNATE	ALT	ELEVATION	EL	LIGHT	LT	SCREW	SCR
ALUMINUM	ALUM	ELEVATOR	ELEV	LOUVRE	LVR	SECTION	SECT
APARTMENT	APT	EPOXY	EP	MANUFACTURE	MFG	SELF ADHESIVE	SA
APPROXIMATE	APPROX	EQUAL	EQ	MARK	MK	SHEATHING	SHTG
ARCHITECTURE	ARCH	EQUALLY SPACED	EQ SP	MASONRY OPENING	MO	SHEET	SHT
BEAM	BM	EQUIPMENT	EQUIP	MATERIAL	MAT	SHEET VINYL	SV
BENCH MARK	BM	EXISTING	EXIST	MECHANICAL	MECH	SIMILAR	SIM
BETWEEN	BTWN	EXPANSION	EXP	MINIMUM	MIN	SOLID CORE	SC
BLOCK	BLK	EXTERIOR	EXT	MISCELLANEOUS	MISC	SOUTH	S
BOARD	BD	EXTRUDE	EXTR	NEAR FACE	NF	SPECIFICATION	SPEC
BOTH SIDES	BS	FACE TO FACE	F/F	NEAR SIDE	NS	SPRUCE	SPR
BOTH WAYS	BW	FAR SIDE	FS	NORTH	N	SPRUCE, PINE OR FIR	S/P/F
BOTTOM	BOT	FIBREBOARD	FBRBD	NOT APPLICABLE	N/A	STAIN	ST
BUILDING	BLDG	FINISH	FIN	NOT IN CONTRACT	NIC	STAINLESS STEEL	SS
CARPET	CPT	FLOOR	FL	NOT TO SCALE	NTS	STANDARD	STD
CAST IRON	CI	FLOOR DRAIN	FD	NUMBER	NO	STEEL	STL
CEILING	CLG	FLOORING	FLG	ON CENTRE	O/C	STRUCTURAL	STRUCT
CEMENT BOARD	CBD	FLUORESCENT	FLR	OUT TO OUT	O/O	SQUARE FEET	SF
CENTRE	CTR	FOOTING	FTG	OUTSIDE DIAMETER	OD	TEMPORARY	TEMP
CENTRE TO CENTRE	C/C	FOUNDATION	FDN	OUTSIDE FACE	OF	THROUGH	THRU
CERAMIC TILE	CT	FULL SIZE	FS	OVERHEAD	OH	TO MATCH EXISTING	TME
CIRCLE	CIRC	GALVANIZED	GALV	PAINT	PT	TONGUE AND GROOVE	T&G
CLEAR	CLR	GALVANIZED IRON	GI	PAINTED	PTD	TOP AND BOTTOM	T&B
COLUMN	COL	GAUGE	GA	PARTITION	PTN	TOP OF	T/O
COMPLETE WITH	CW	GLASS	GL	PLYWOOD	PLYWD	TYPICAL	TYP
CONCRETE	CONC	HARDWARE	HDW	PRECAST	PC	UNDER SIDE	U/S
CONCRETE BLOCK	CBLK	HEIGHT	HGT	PRECAST CONCRETE	PC CONC	UNDERCUT	UCUT
CONSTRUCTION	CONST	HEXAGON	HEX	PREFABRICATION	PREFAB	URINAL	UR
CONTINUOUS	CONT	HOLLOW CORE	HC	PREFINISHED	PREFIN	VAPOUR BARRIER	VB
CONTROL JOINT	CJ	HOLLOW METAL	HM	PRESSED STEEL	PS	VERTICAL	VERT
COUNTERSINK	CSK	HORIZONTAL	HORIZ	QUANTITY	QTY	VINYL ASBESTOS TILE	VAT
COVER SHEET VINYL	CSV	INCLUSIVE	INCL	QUARRY TILE	QT	VINYL COVE BASE	VCB
DETAIL	DTL	INSIDE DIAMETER	ID	RADIUS	R	VINYL TILE	VT
DEMOLISH	DEMO	INSIDE FACE	IF	RAINWATER LEADER	RWL	VINYL WALL COVERING	VWC
DIAGONAL	DIAG	INSULATE	INSUL	REFERENCE	REF	WATER CLOSET	WC

CHECKED BY
RS

DRAWN BY
XW

SCALE
AS NOTED

DATE
17-09-06

LOCATION
NORWAY HOUSE, MB

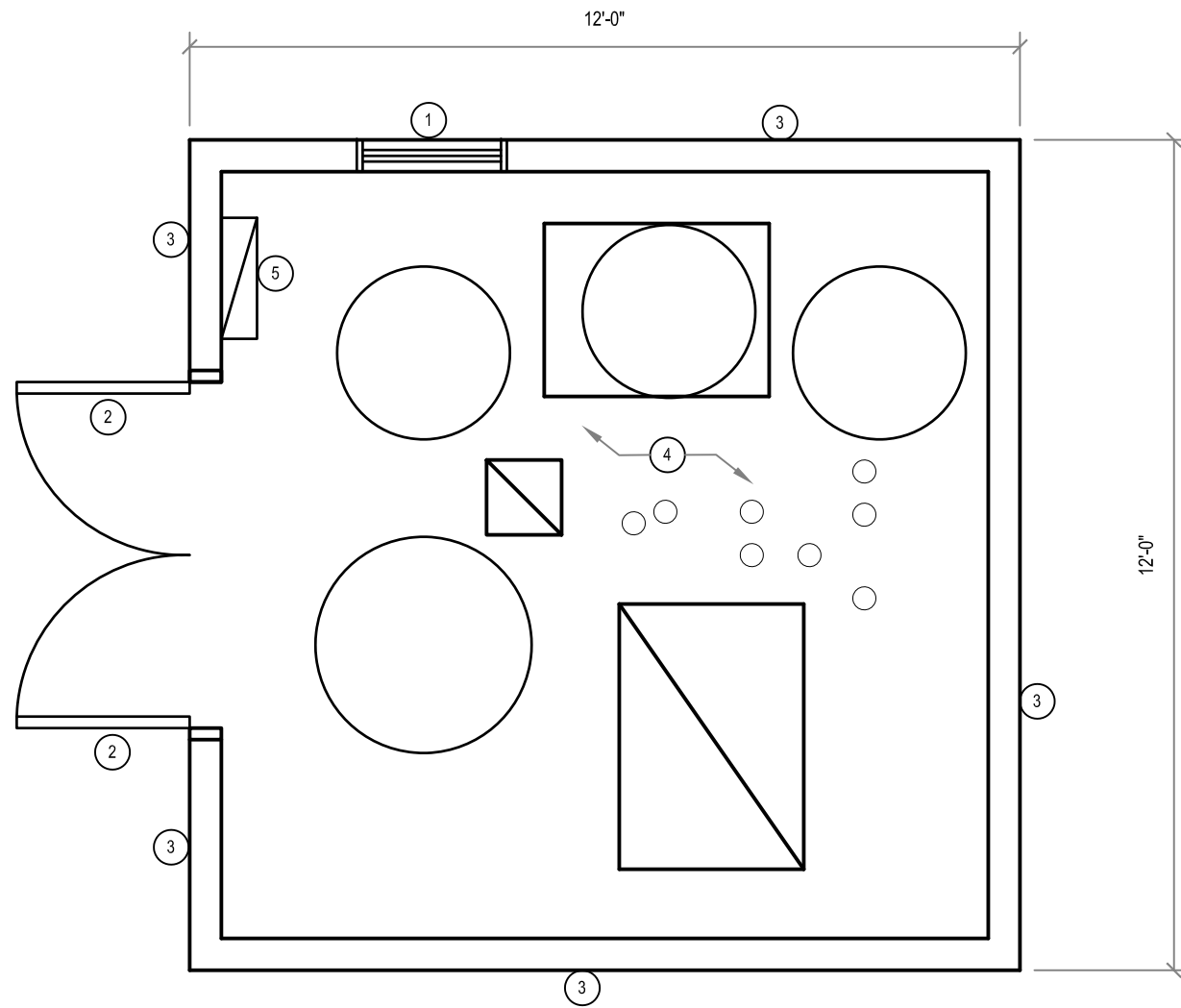
PROJECT TITLE
RCMP - PUMP HOUSE

SHEET TITLE
COVER PAGE

REVISION NO. 03
ISSUED FOR TENDER
18 01 26

A0.0

JOB NO.
17-045-01-21



DRAWING NOTES: #

1. REMOVE EXISTING WINDOW.
2. REMOVE EXISTING DOOR.
3. REMOVE ALL EXISTING WALLS.
4. REMOVE EXISTING CEILING.
5. REMOVE ELECTRICAL PANEL AND KEEP ELECTRIC CONDUITS.

GENERAL NOTES:

1. REMOVE ALL EXISTING EQUIPMENT ONCE THE NEW WATER TREATMENT PLANT IS COMPLETED, REFER TO NEW WATER TREATMENT PLANT DRAWINGS FOR DETAIL.

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1 DEMOLITION PLAN
 A1.0 SCALE: 3/8"=1'-0"

PROJECT TITLE: **RCMP - PUMP HOUSE**
 SHEET TITLE: **DEMOLITION PLAN**
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 DRAWN BY: XW
 CHECKED BY: RS

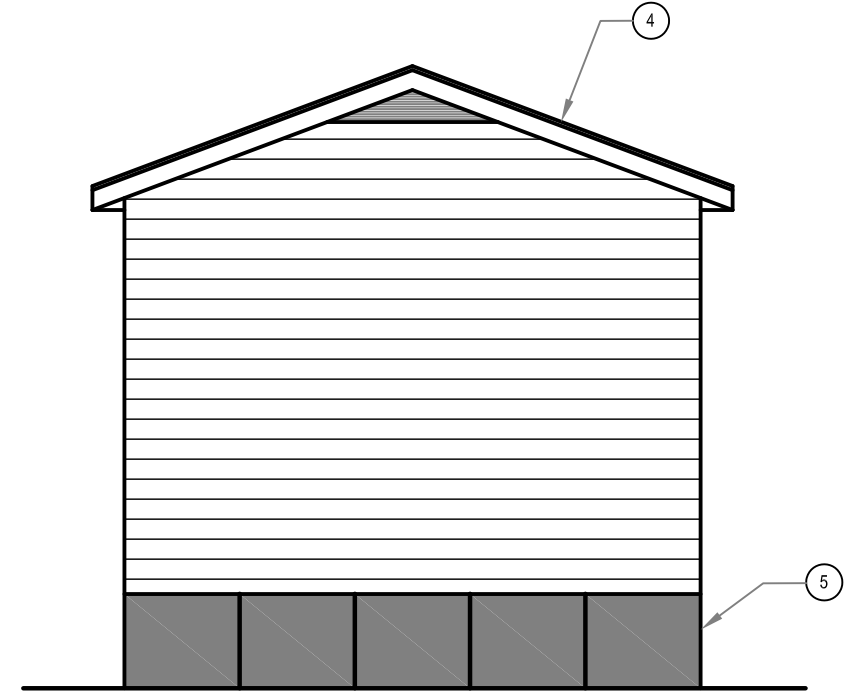
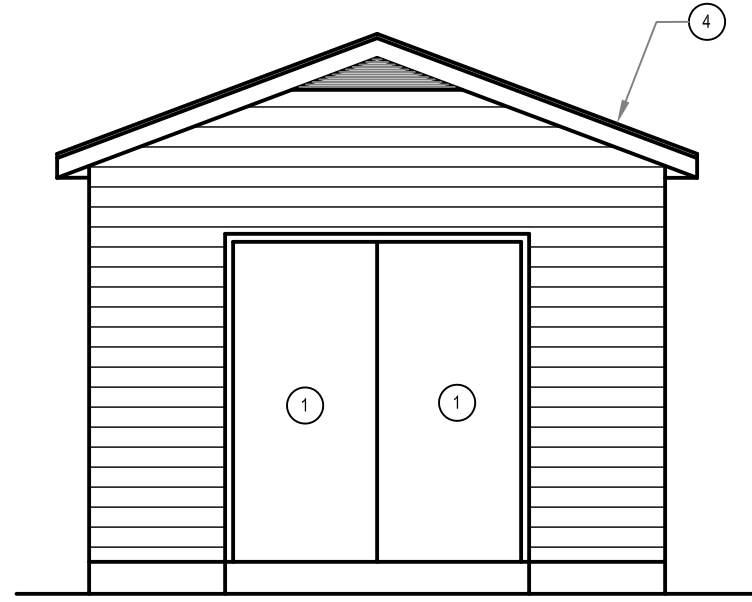
REVISION NO. 03
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18 01 26

A1.0

JOB NO.
 17-045-01-21

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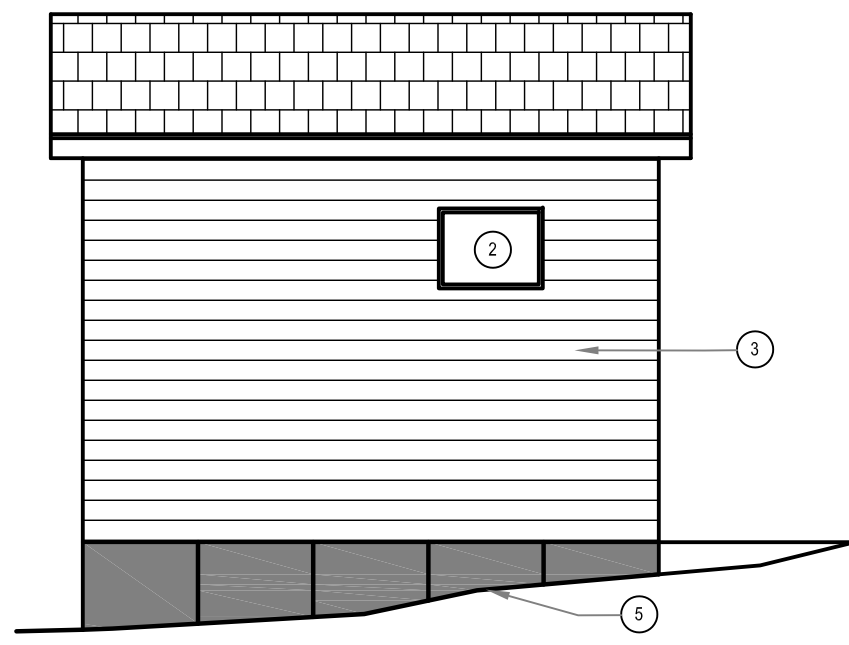
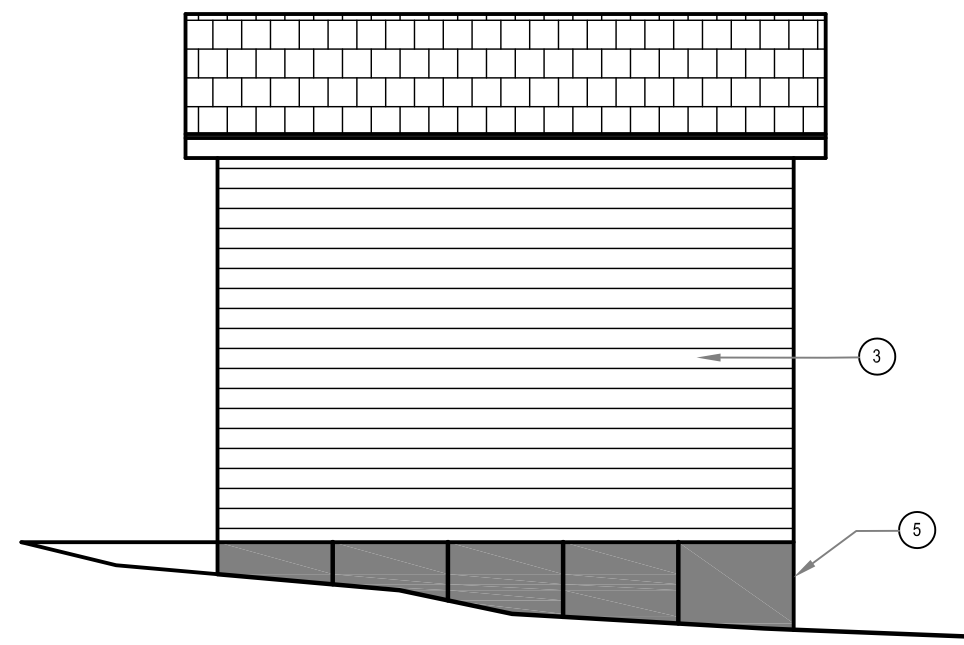
<http://www.canteeservices.ca/>



- DRAWING NOTES: #
1. REMOVE EXISTING DOOR.
 2. REMOVE EXISTING WINDOW.
 3. REMOVE EXISTING WALL AND SIDING.
 4. REMOVE EXISTING ROOF.
 5. REMOVE EXISTING FOUNDATION INSULATION.

1 FRONT ELEVATION
 A1.1 SCALE: 1/4"=1'-0"

2 REAR ELEVATION
 A1.1 SCALE: 1/4"=1'-0"



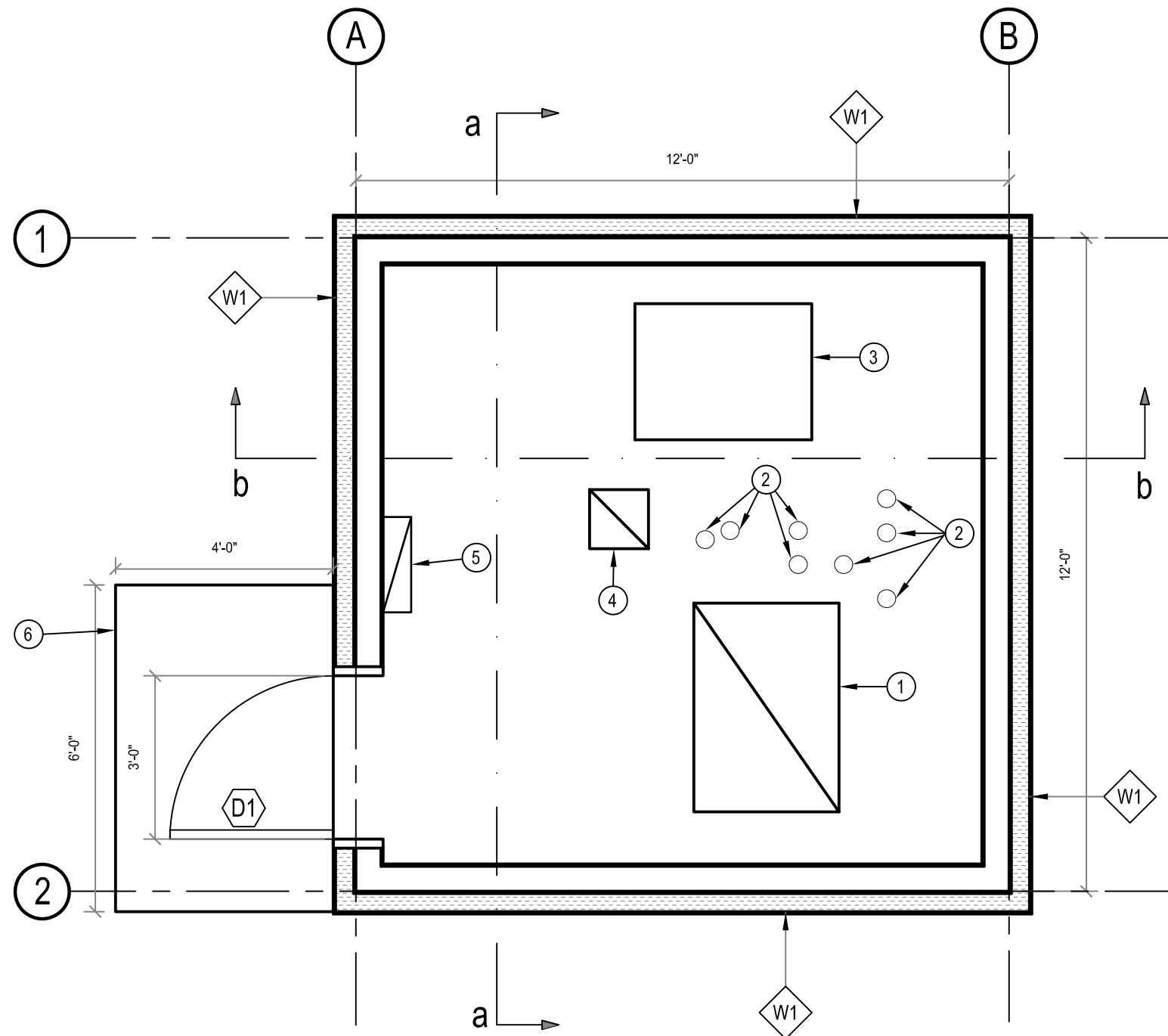
3 RIGHT SIDE ELEVATION
 A1.1 SCALE: 1/4"=1'-0"

4 RIGHT SIDE ELEVATION
 A1.1 SCALE: 1/4"=1'-0"

PROJECT TITLE: RCMP - PUMP HOUSE
 SHEET TITLE: ELEVATIONS-DEMOLITION
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 DRAWN BY: XW
 CHECKED BY: RS

REVISION NO. 02
 ISSUED FOR TENDER
 18 01 26

A1.1
 JOB NO. 17-045-01-21



DRAWING NOTES: #

1. NEW HATCH OVER PIT - SEE STRUCTURAL FOR DETAILS
2. IN-FILL HOLES IN FLOOR THAT ARE NOT BEING USED FOR NEW PUMPS
3. EXISTING PUMP STAND TO REMAIN
4. IN-FILL EXISTING HOLE IN FLOOR
5. NEW ELECTRICAL PANEL
6. EXISTING LANDING TO REMAIN
- 7.

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PROJECT TITLE
RCMP - PUMP HOUSE

SHEET TITLE
FLOOR PLAN

DATE
 17-09-06

SCALE
 AS NOTED

CHECKED BY
 RS

DRAWN BY
 XW

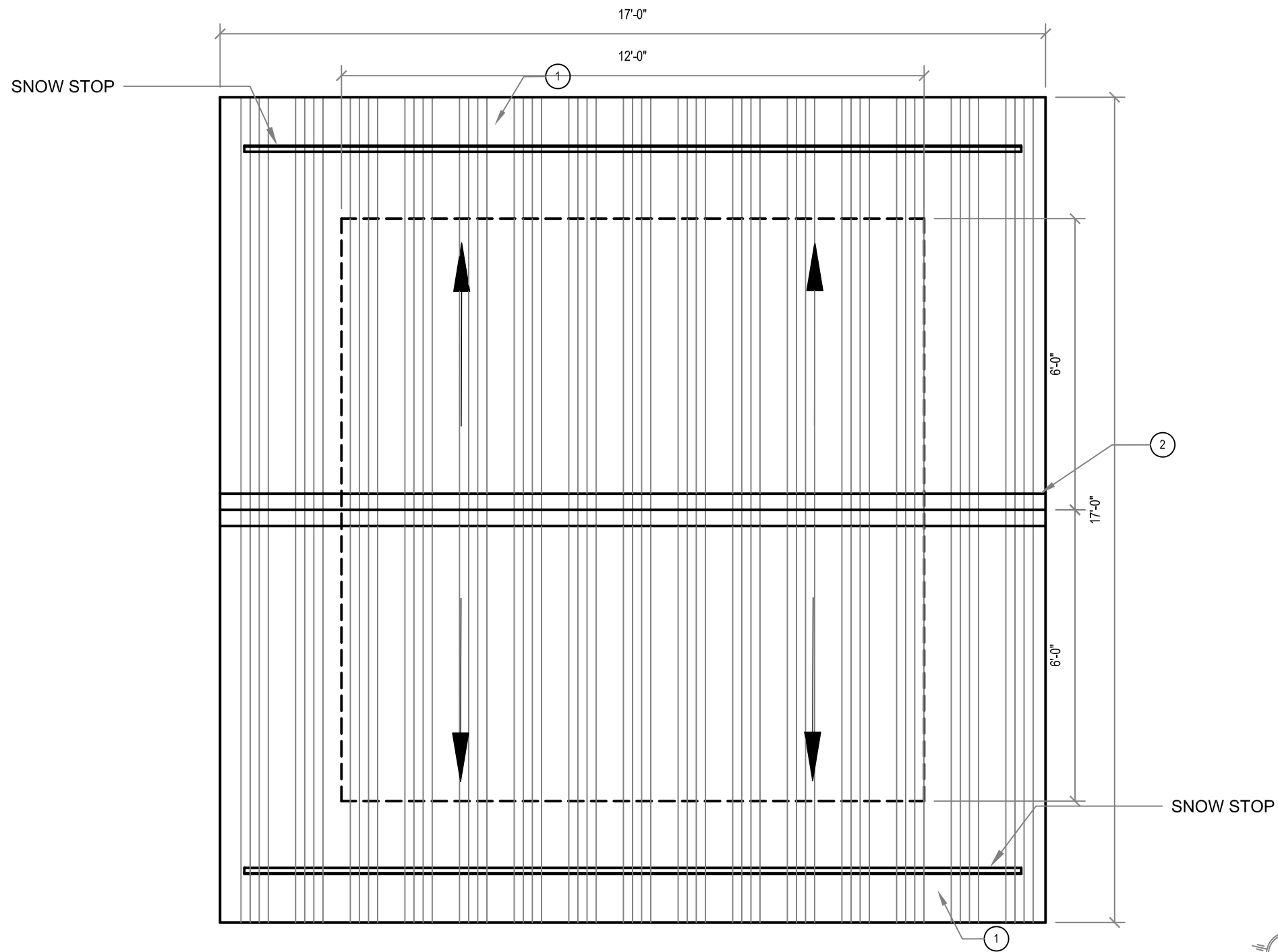
LOCATION
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REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A2.0

JOB NO.
 17-045-01-21

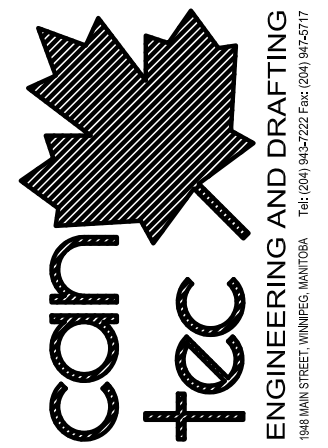
1 FLOOR PLAN
 A2.0 SCALE: 3/8"=1'-0"



DRAWING NOTES: #

1. NEW METAL ROOF.
2. NEW RIDGE VENT.

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1 ROOF PLAN
 A2.1 SCALE: 3/8"=1'-0"

PROJECT TITLE: RCMP - PUMP HOUSE
 SHEET TITLE: ROOF PLAN
 DATE: 17-09-06
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW
 SCALE: AS NOTED

REVISION NO. 03
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A2.1

JOB NO.
 17-045-01-21

ROOF PEAK
±13'-1/8"

T/O WALL (DOUBLE PLATE)
±9'-0"

FINISHED GROUND FLOOR
±0.00

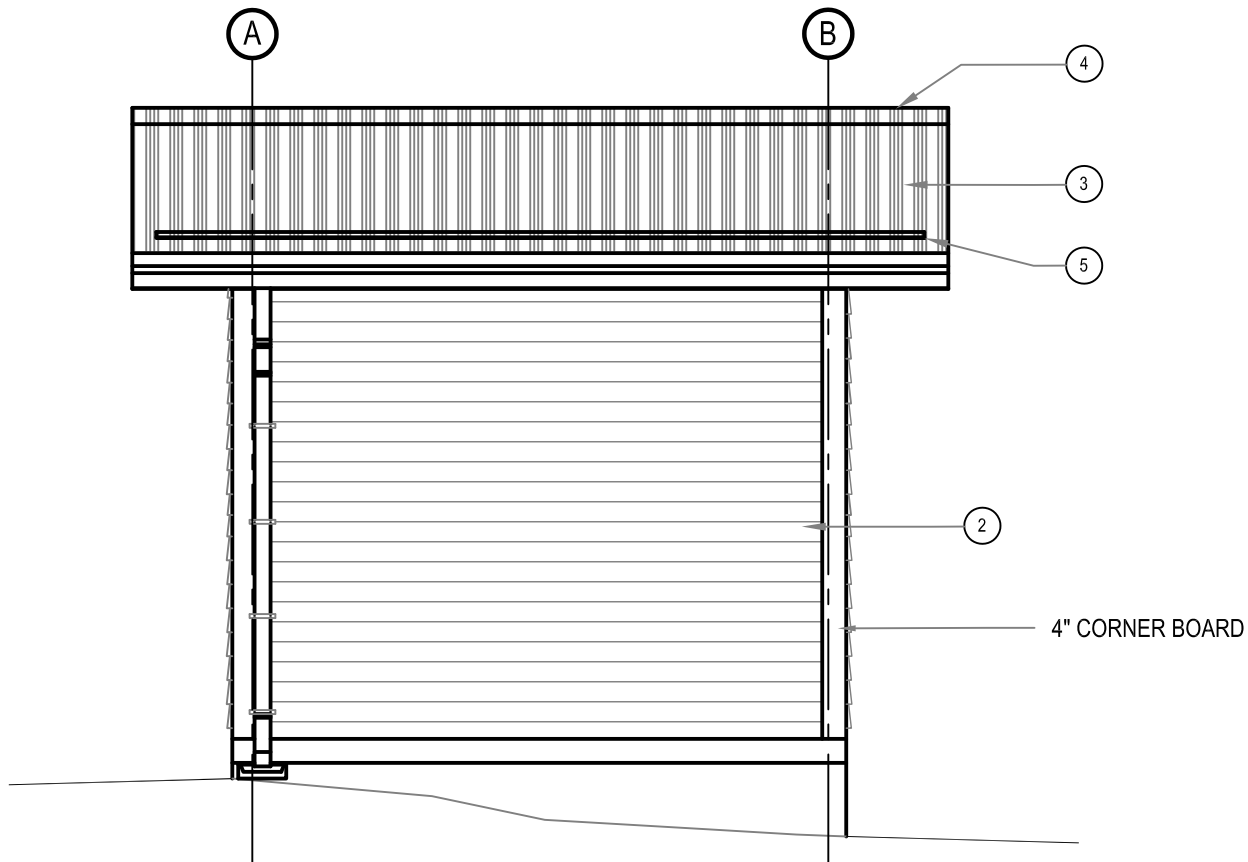
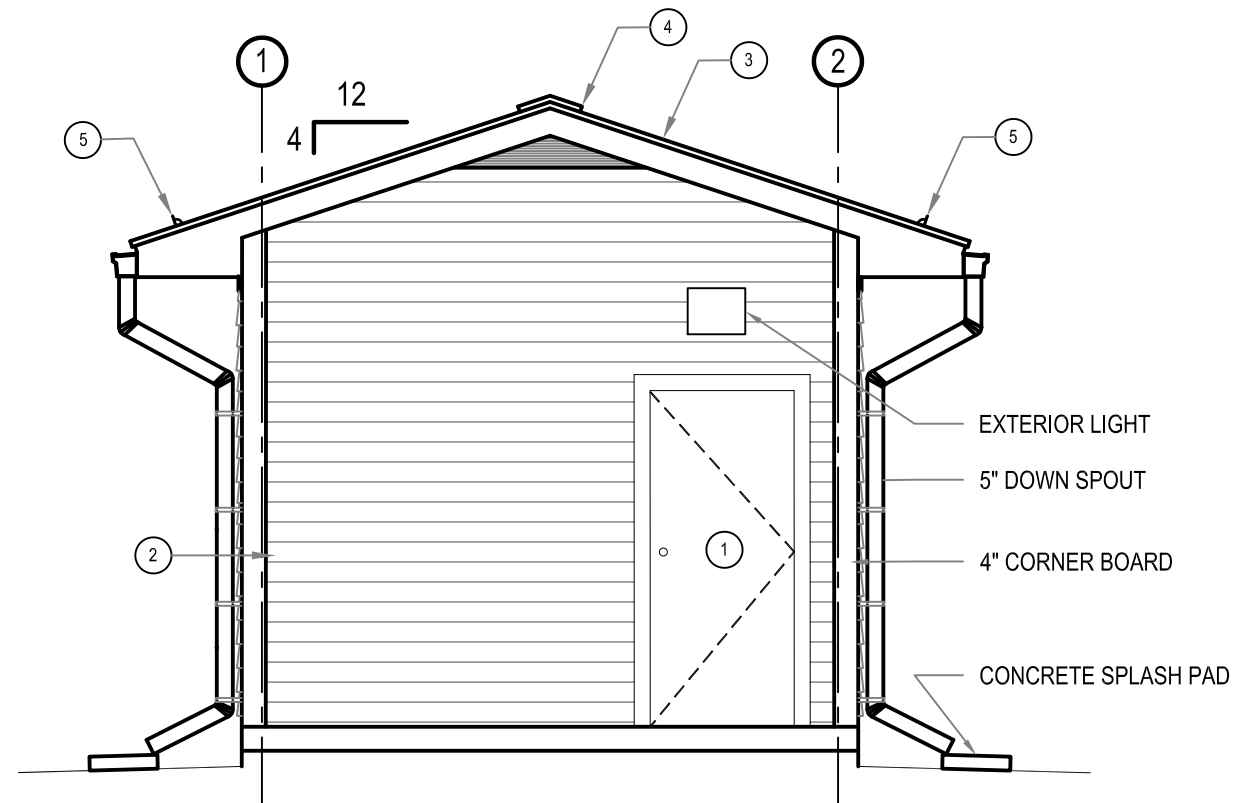
1 SOUTH ELEVATION
A3.0 SCALE: 1/4"=1'-0"

ROOF PEAK
±13'-1/8"

T/O WALL (DOUBLE PLATE)
±9'-0"

FINISHED GROUND FLOOR
±0.00

2 EAST ELEVATION
A3.0 SCALE: 1/4"=1'-0"



DRAWING NOTES: #

1. NEW EXTERIOR DOOR.
2. NEW WALL AND SIDING.
3. NEW CEILING AND ROOF.
4. RIDGE VENT.
5. SNOW STOP.
6. EXTERIOR LIGHT

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PROJECT TITLE
RCMP - PUMP HOUSE

SHEET TITLE
ELEVATIONS

DATE
17-09-06

SCALE
AS NOTED

LOCATION
NORWAY HOUSE, MB

REVISION NO. 03
ISSUED FOR TENDER
18 01 26

A3.0

JOB NO.
17-045-01-21

ROOF PEAK
±13'-1/8"

T/O WALL (DOUBLE PLATE)
±9'-0"

FINISHED GROUND FLOOR
±0.00

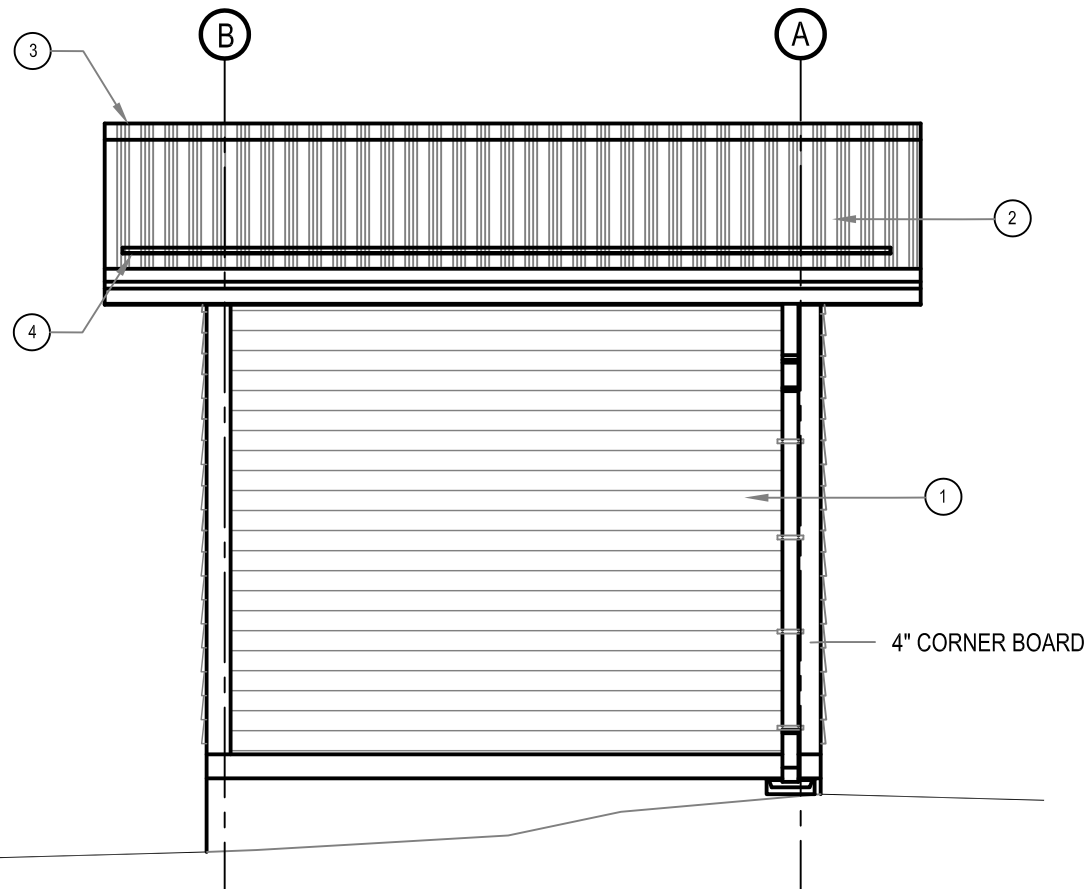
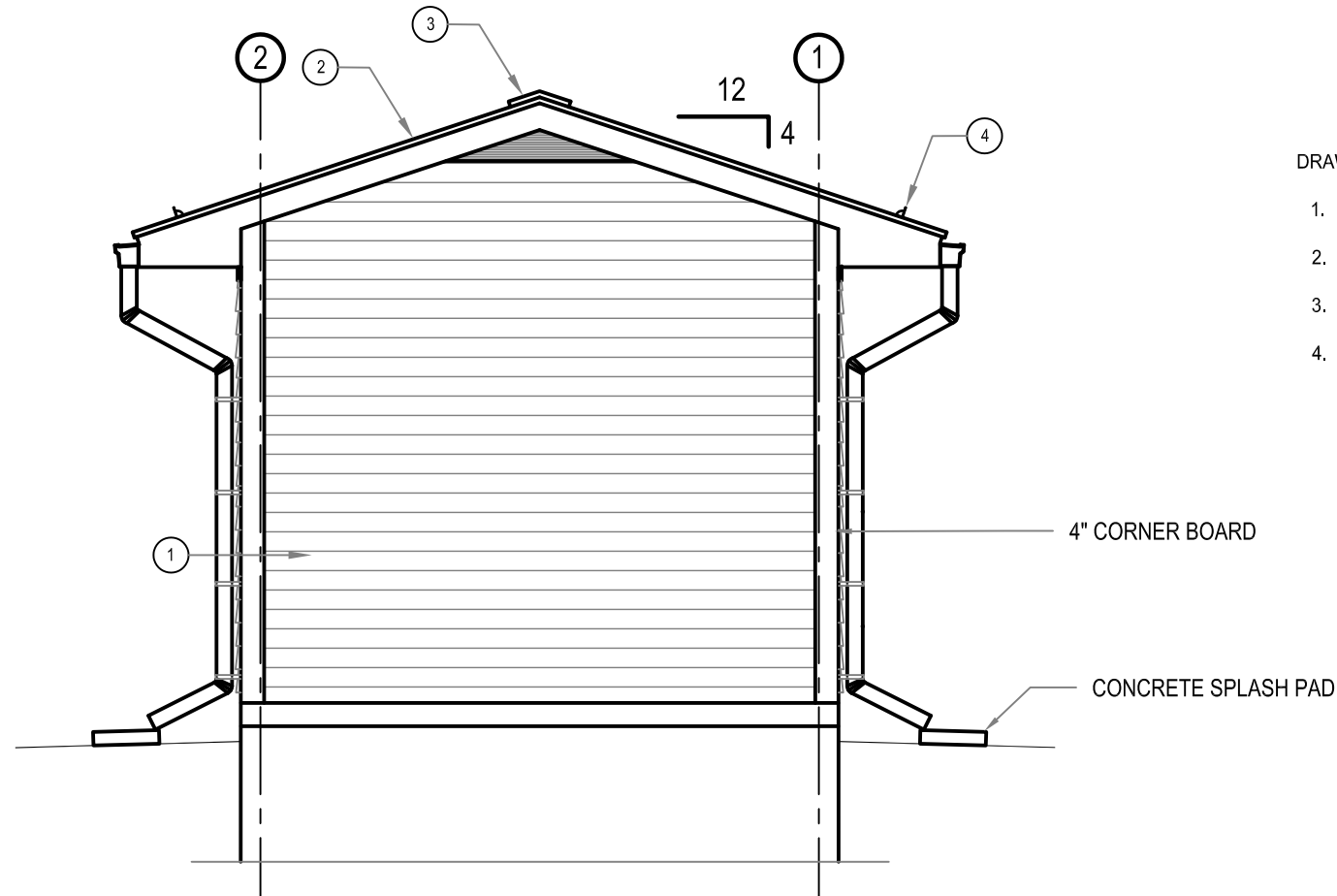
1 NORTH ELEVATION
A3.1 SCALE: 1/4"=1'-0"

ROOF PEAK
±13'-1/8"

T/O WALL (DOUBLE PLATE)
±9'-0"

FINISHED GROUND FLOOR
±0.00

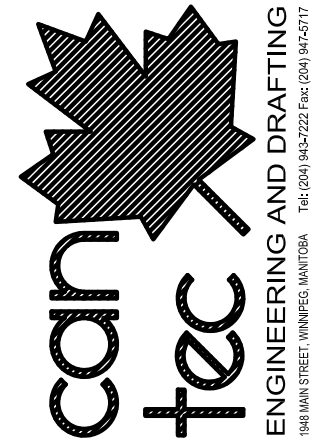
2 WEST ELEVATION
A3.1 SCALE: 1/4"=1'-0"



DRAWING NOTES: #

1. NEW WALL AND SIDING.
2. NEW CEILING AND ROOF.
3. RIDGE VENT.
4. SNOW STOP.

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PROJECT TITLE
RCMP - PUMP HOUSE

SHEET TITLE
ELEVATIONS

DATE
17-09-06

SCALE
AS NOTED

LOCATION
NORWAY HOUSE, MB

REVISION NO. 03
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18 01 26

A3.1

JOB NO.
17-045-01-21

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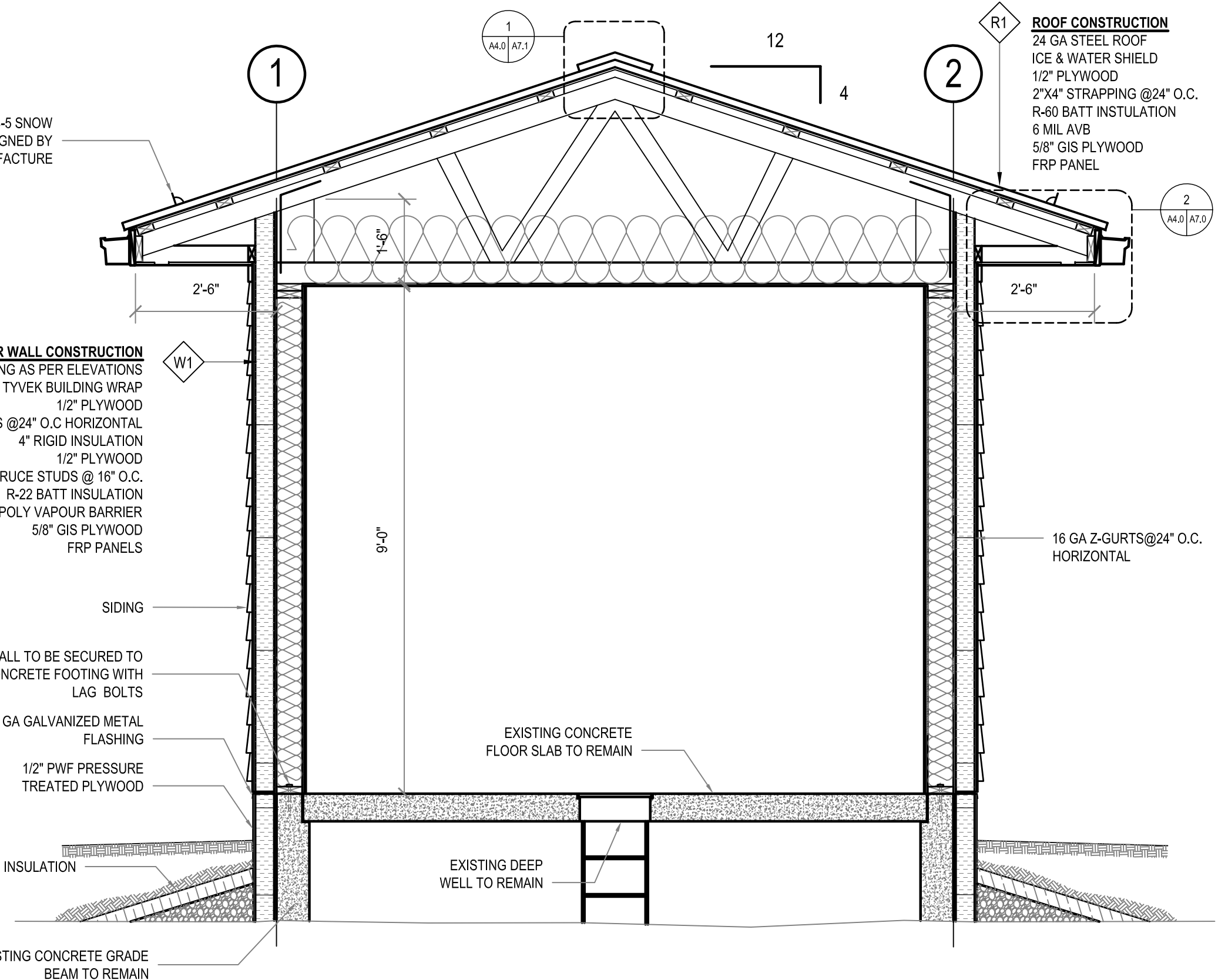


PROJECT TITLE: **RCMP - NORWAY HOUSE - RENOVATION**
 SHEET TITLE: **SECTION a-a**
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW

REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A4.0

JOB NO.
17-045-01-21



ROOF CONSTRUCTION
 24 GA STEEL ROOF
 ICE & WATER SHIELD
 1/2" PLYWOOD
 2"X4" STRAPPING @24" O.C.
 R-60 BATT INSTULATION
 6 MIL AVB
 5/8" GIS PLYWOOD
 FRP PANEL

EXTERIOR WALL CONSTRUCTION
 PRE-FINISHED SIDING AS PER ELEVATIONS
 TYVEK BUILDING WRAP
 1/2" PLYWOOD
 16 GA Z-GIRTS @24" O.C HORIZONTAL
 4" RIGID INSULATION
 1/2" PLYWOOD
 2x6 SPRUCE STUDS @ 16" O.C.
 R-22 BATT INSULATION
 6MIL POLY VAPOUR BARRIER
 5/8" GIS PLYWOOD
 FRP PANELS

SIDING
 WALL TO BE SECURED TO CONCRETE FOOTING WITH LAG BOLTS
 16 GA GALVANIZED METAL FLASHING
 1/2" PWF PRESSURE TREATED PLYWOOD

4" RIGID INSULATION
 EXISTING CONCRETE GRADE BEAM TO REMAIN

1 SECTION a-a
 A4.0 SCALE: 1/2"=1'-0"

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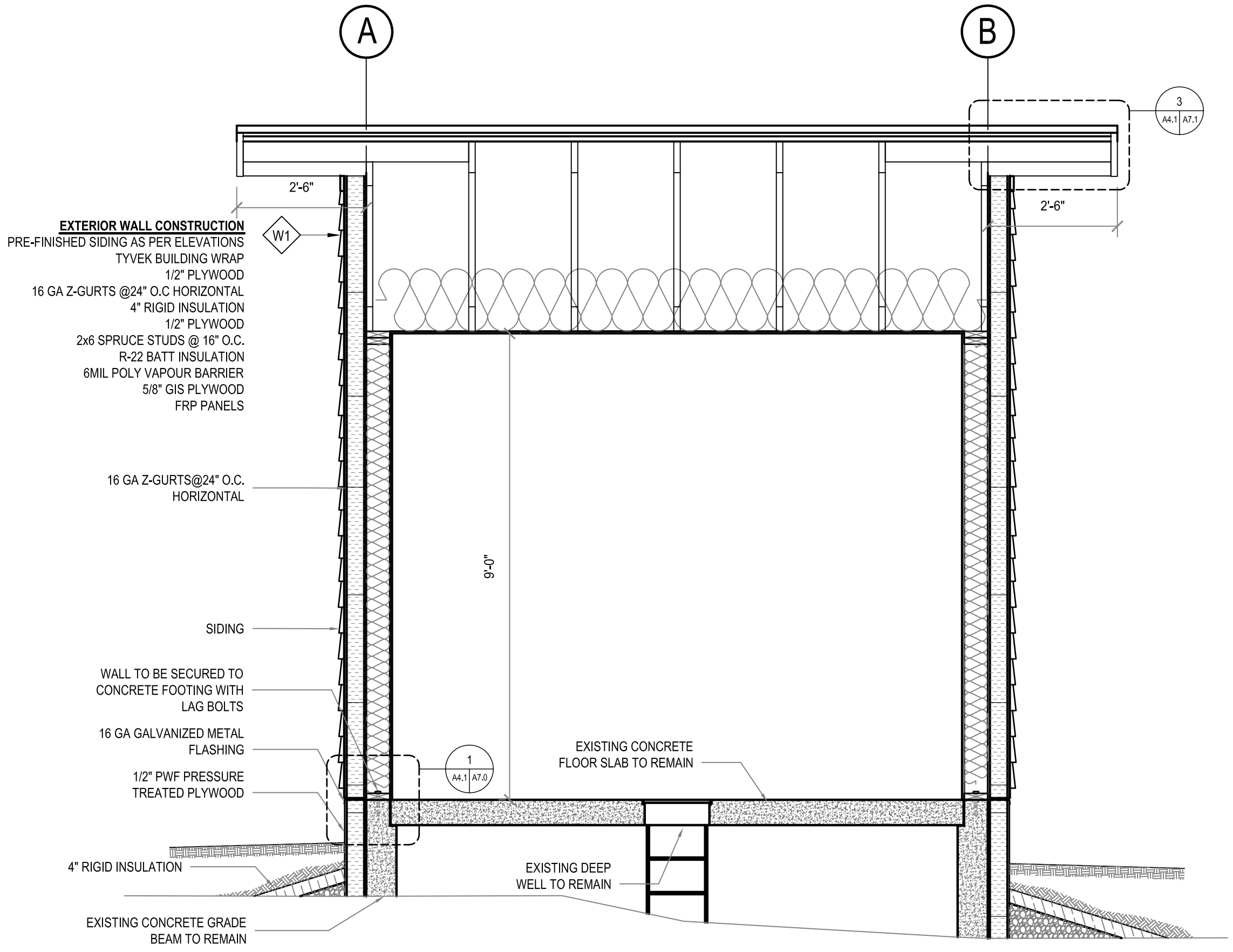


PROJECT TITLE: RCMP - NORWAY HOUSE - RENOVATION
 SHEET TITLE: SECTION b-b
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW

REVISION NO. 03
 ISSUED FOR TENDER
 18 01 26

A4.1

JOB NO.
 17-045-01-21



EXTERIOR WALL CONSTRUCTION
 PRE-FINISHED SIDING AS PER ELEVATIONS
 TYVEK BUILDING WRAP
 1/2" PLYWOOD
 16 GA Z-GURTS @ 24" O.C HORIZONTAL
 4" RIGID INSULATION
 1/2" PLYWOOD
 2x6 SPRUCE STUDS @ 16" O.C.
 R-22 BATT INSULATION
 6MIL POLY VAPOUR BARRIER
 5/8" GIS PLYWOOD
 FRP PANELS

16 GA Z-GURTS @ 24" O.C.
 HORIZONTAL

SIDING

WALL TO BE SECURED TO
 CONCRETE FOOTING WITH
 LAG BOLTS

16 GA GALVANIZED METAL
 FLASHING

1/2" PWF PRESSURE
 TREATED PLYWOOD

4" RIGID INSULATION

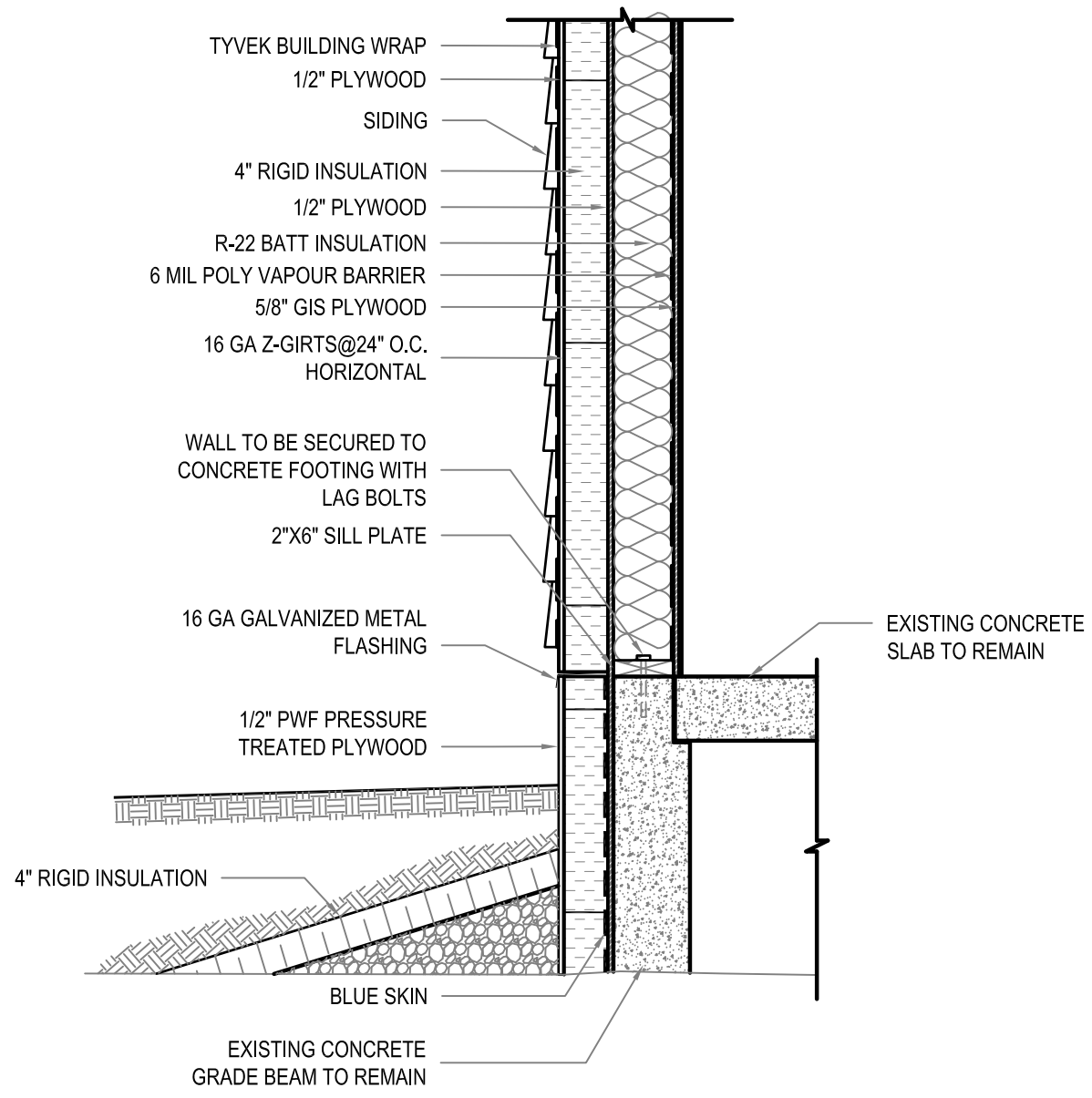
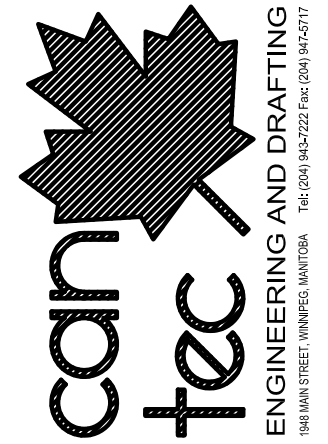
EXISTING CONCRETE GRADE
 BEAM TO REMAIN

EXISTING CONCRETE
 FLOOR SLAB TO REMAIN

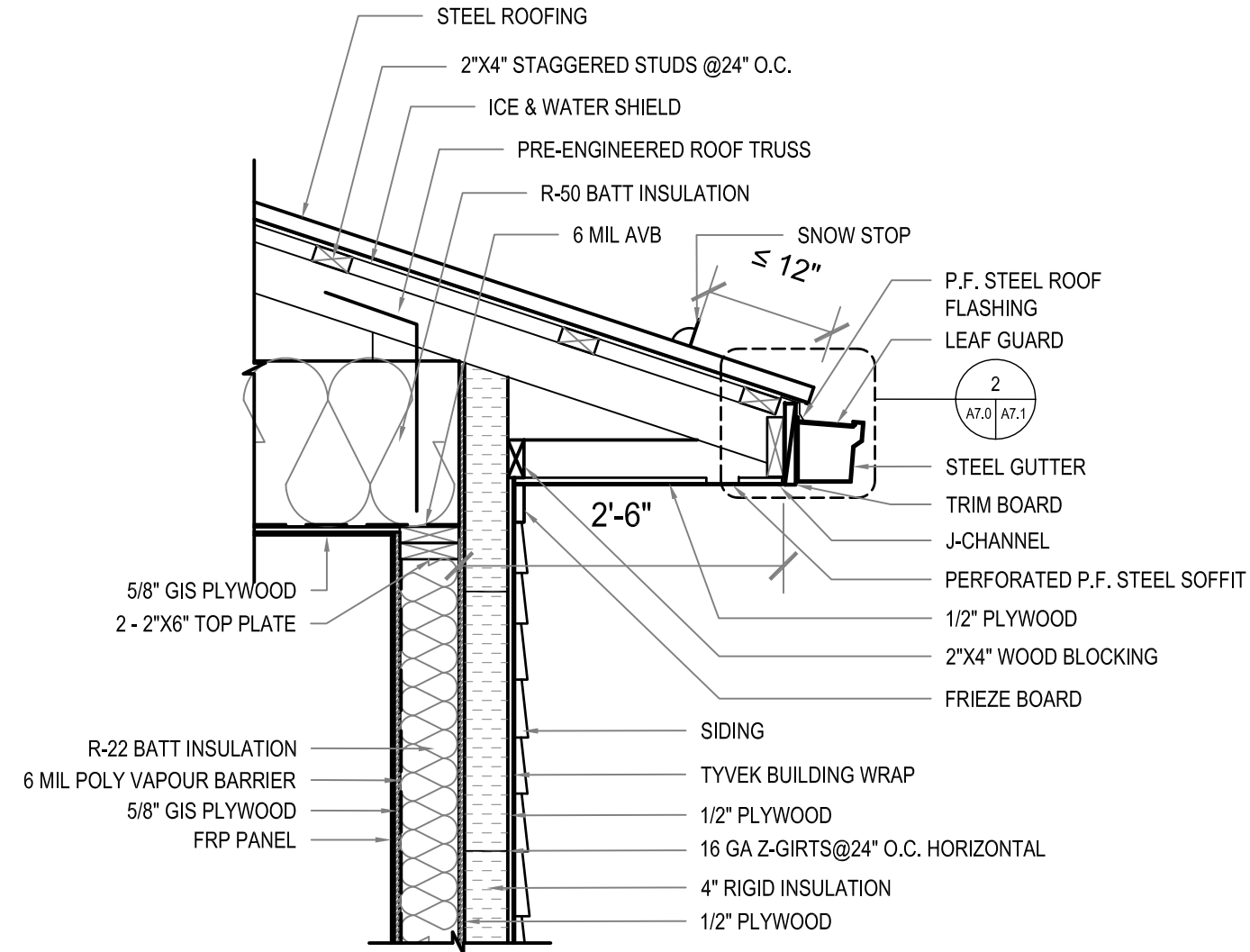
EXISTING DEEP
 WELL TO REMAIN

1 SECTION b-b
 A4.1 SCALE: 1/2"=1'-0"

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1 WALL AND FOUNDATION DETAIL
 SCALE: 3/4"=1'-0"



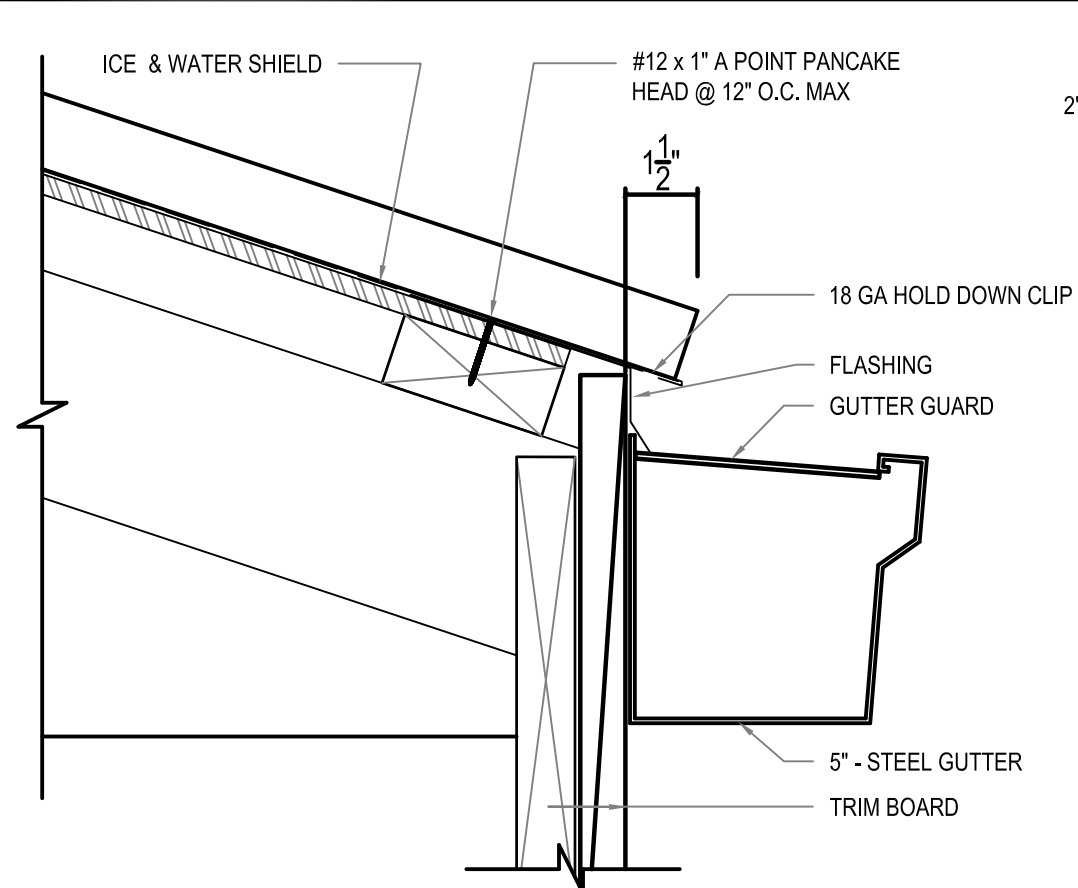
2 EAVE DETAIL
 SCALE: 3/4"=1'-0"

PROJECT TITLE: **RCMP - PUMP HOUSE**
 SHEET TITLE: **WALL DETAILS**
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW

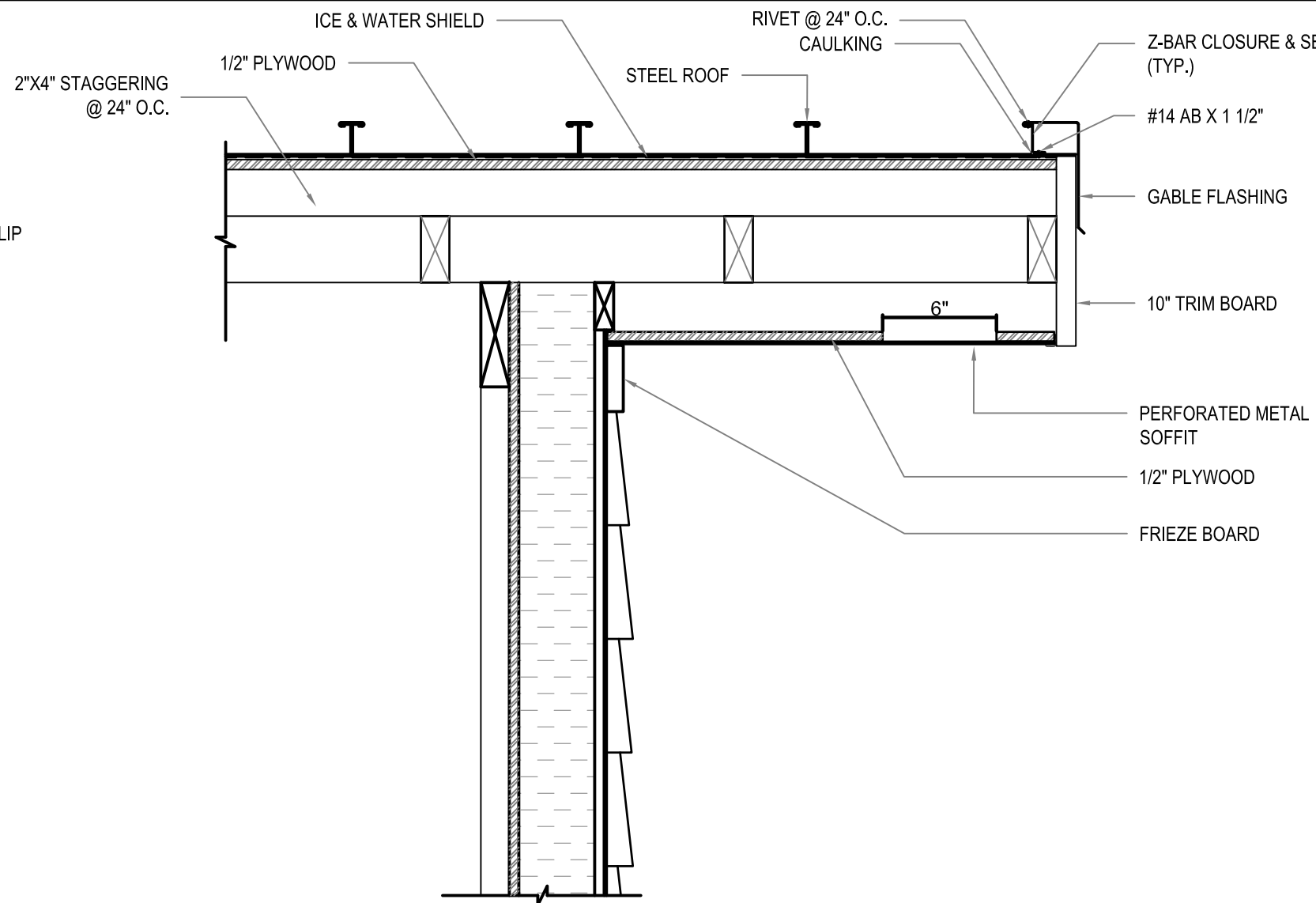
REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A7.0

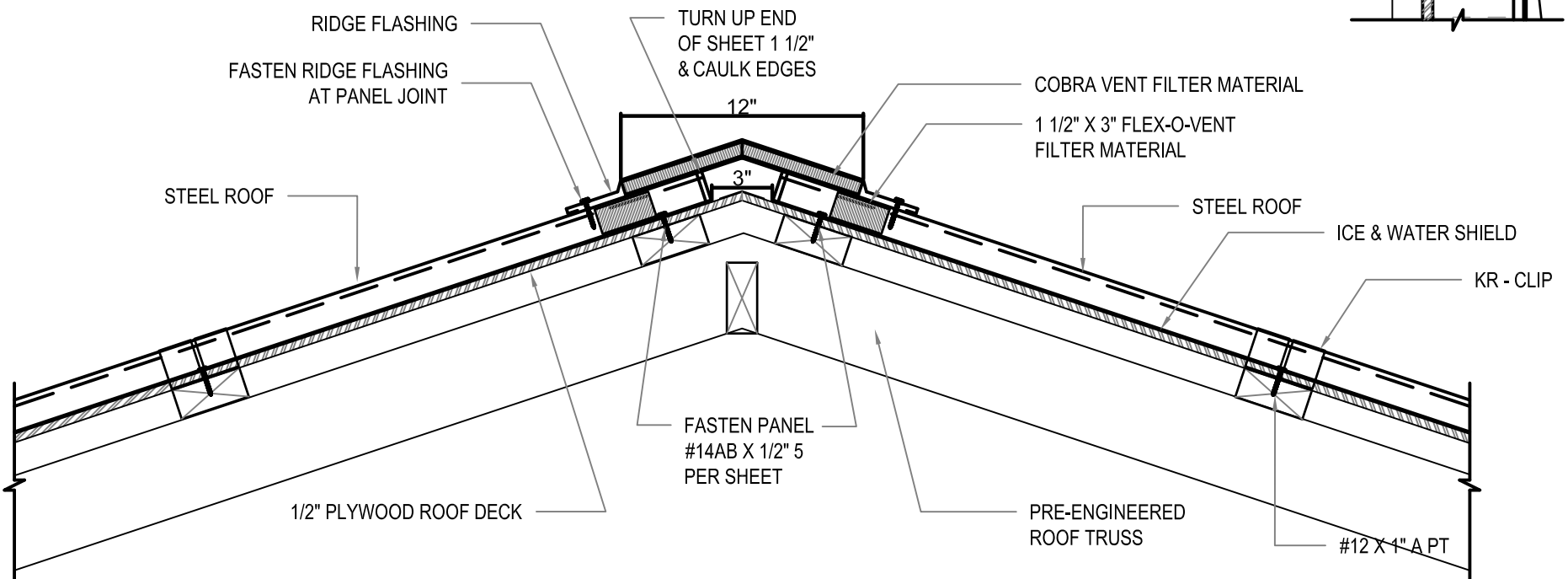
JOB NO.
17-045-01-21



2 EAVE AND GUTTER DETAIL
 SCALE: 3"=1'-0"

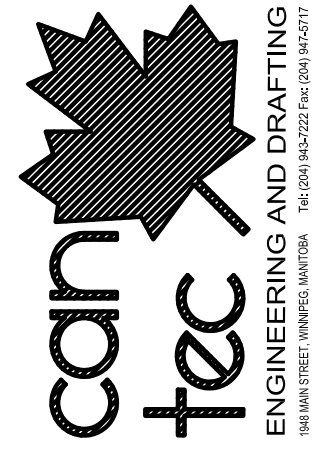


3 GABLE END DETAIL
 SCALE: 1 1/2"=1'-0"



1 VENTED RIDGE CAP DETAIL
 SCALE: 1-1/2"=1'-0"

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PROJECT TITLE: **RCMP - PUMP HOUSE**
 SHEET TITLE: **WALL DETAILS**
 DATE: 17-09-06
 SCALE: AS NOTED
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RS
 DRAWN BY: XW

REVISION NO. 03
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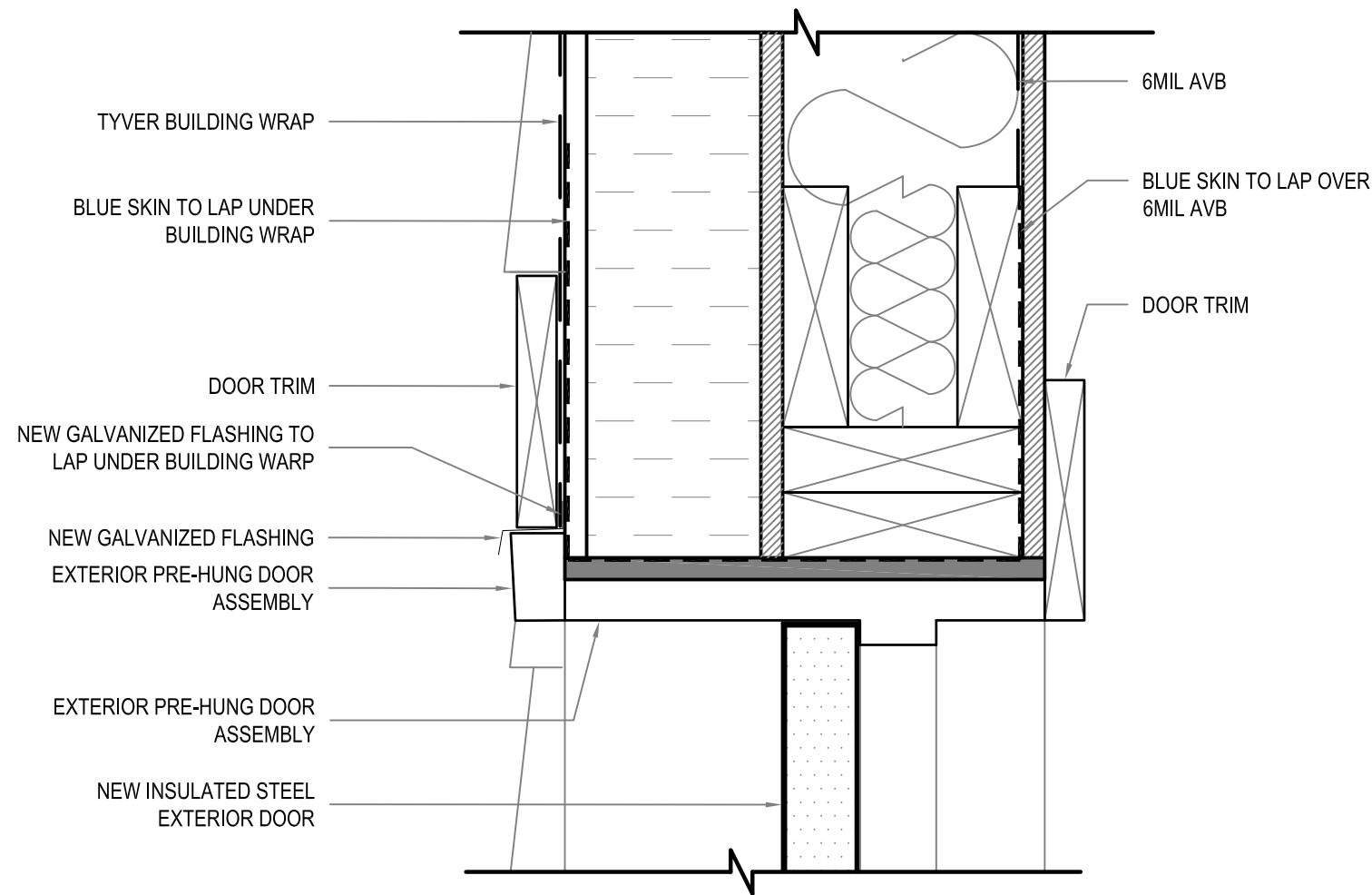
A7.1
 JOB NO.
17-045-01-21

DOOR SCHEDULE

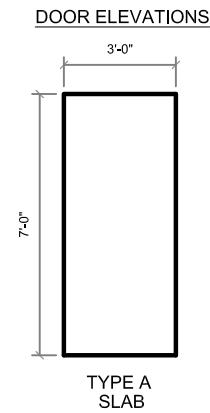
D##

MARK	SIZE	DOOR TYPE	DOOR ELEV.	DOOR CORE	DOOR FINISH	DOOR COLOR	DOOR GAUGE	FRAME MATERIAL	FRAME TYPE	FRAME FINISH	FRAME COLOR	FRAME GAUGE	HARDWARE	RATING	REMARKS
D1	42" X 7'-0" X 1 3/4"	STEEL	A	POLY ISO	PAINTED		16GA	STEEL	WELDED	PAINTED		14 GA	1	N/A	

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DOOR DETAILS



1 DOOR HEAD DETAIL
A8.0 SCALE: 3"=1'-0"

PROJECT TITLE: **RCMP - PUMP HOUSE**
 SHEET TITLE: **DOOR DETAILS & SCHEDULE**
 DATE: 17-09-06
 SCALE: AS NOTED
 DRAWN BY: XW
 CHECKED BY: RS
 LOCATION: NORWAY HOUSE, MB

REVISION NO. 03
 ISSUED FOR TENDER
18 01 26

A8.0

JOB NO.
17-045-01-21

WALL SCHEDULE

W1

EXTERIOR WALL CONSTRUCTION

PRE-FINISHED SIDING AS PER ELEVATIONS
TYVEK BUILDING WRAP
1/2" PLYWOOD
16 GA Z-GURTS @24" O.C HORIZONTAL
4" RIGID INSULATION
1/2" PLYWOOD
2x6 SPRUCE STUDS @ 16" O.C.
R-22 BATT INSULATION
6MIL POLY VAPOUR BARRIER
5/8" GIS PLYWOOD
FRP PANELS

ROOF SCHEDULE

R1

ROOF CONSTRUCTION

24 GA STEEL ROOF
ICE & WATER SHIELD
1/2" PLYWOOD
2"X4" STAPPING @24" O.C.
R-60 BATT INSULATION
6 MIL AVB
5/8" GIS PLYWOOD
FRP PANEL

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<http://www.canteccservices.ca/>



ENGINEERING AND DRAFTING
1948 MAIN STREET, WINNIPEG, MANITOBA Tel: (204) 943-7222 Fax: (204) 947-5717

PROJECT TITLE
RCMP - PUMP HOUSE

SHEET TITLE
WALL & FINISH SCHEDULE

DATE
17-09-06

SCALE
AS NOTED

DRAWN BY
XW

CHECKED BY
RS

LOCATION
NORWAY HOUSE, MB

REVISION NO. 03
ISSUED FOR TENDER
18 01 26

A8.1

JOB NO.
17-045-01-21

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS.
2. THE DESIGN IS IN ACCORDANCE WITH THE 2011 MANITOBA BUILDING CODE
3. CLIMATIC DATA (TABLE C-2) NBCC:
 - i) GROUND SNOW LOAD: $S_s = 2.4 \text{ kPa (50 psf)}$
 - ii) RAIN LOAD: $S_r = 0.2 \text{ kPa (4.0 psf)}$
 - ij) HOURLY WIND PRESSURE: $q (1/50) = 0.49 \text{ kPa (10.2 psf)}$
 - iv) SEISMIC DATA: NOT APPLICABLE
4. IMPORTANCE CATEGORY: POST DISASTER
5. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
6. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS, SLOPES, ROUGH OPENING DIMENSIONS FOR WINDOWS, DOORS, ETC.
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS IN FLOORS, ROOF, WALLS, ETC.
8. DO NOT CUT OR DRILL OPENINGS IN ANY STRUCTURAL MEMBERS WITHOUT WRITTEN APPROVAL FROM BEACH ROCKE ENGINEERING LTD.
9. BEACH ROCKE ENGINEERING LTD. SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF REQUIRED SITE INSPECTIONS. (TEL: 1-204-255-7251, FAX: 1-204-257-7239).
10. STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE. THEY DO NOT SHOW COMPONENTS WHICH MAY BE NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE SAFETY AND TO ENSURE THAT ALL SUBTRADES CONFORM TO THE LATEST REGULATIONS OF THE PROVINCIAL "BUILDING PROTECTION ACT", TO PROVIDE ALL NECESSARY SAFETY EQUIPMENT AS REQUIRED THEREIN AND TO NOTIFY LOCAL AUTHORITIES AS REQUIRED BY LAW.
11. THE CONTRACTOR SHALL CONFORM TO THE COLD WEATHER REQUIREMENTS OF THE CSA STANDARD A23.1/A23.2 AND THE NATIONAL BUILDING CODE.
12. IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO LOCATE ALL SITE SERVICES PRIOR TO CONSTRUCTION.
13. THE GENERAL CONTRACTOR SHALL DESIGN ALL SHORING, FORM WORK, AND BRACING TO ENSURE PROPER CONSTRUCTION AND ERECTION.
14. THE CONTRACTOR SHALL VISIT THE SITE, AND NOTE ALL CHARACTERISTICS AND IRREGULARITIES AFFECTING THE WORK OF THIS SECTION.
15. SHOP DRAWINGS NOT STAMPED, SIGNED, AND DATED BY THE CONTRACTOR WILL BE RETURNED AND SHALL BE CONSIDERED REJECTED. SHOP DRAWINGS FOR WORK DESIGNED BY THE CONTRACTOR SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER IN THE PROJECTS PROVINCE.
16. THE CONTRACTOR SHALL SUBMIT AT LEAST 3 COPIES OF STAMPED SHOP DRAWINGS FOR ALL PRE-FABRICATED STRUCTURAL ASSEMBLIES, INCLUDING REINFORCING STEEL TO BEACH ROCKE ENGINEERING LTD. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. ALL SHOP DRAWINGS, EXCEPT REINFORCING STEEL, SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE PROJECTS PROVINCE.

WOOD NOTES:

1. ALL LUMBER COMPONENTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE CAN/CSA-086-09
2. ALL LUMBER SHALL CONFORM TO "NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER", AND THE GRADE SHALL BE CLEARLY IDENTIFIED ON ALL PRODUCTS.
3. ALL DIMENSIONAL LUMBER SHALL BE NO.2 GRADE, OR BETTER, UNLESS NOTED OTHERWISE ON DRAWINGS.
4. FRAMED WALLS AND ROOF SYSTEMS SHALL BE ADEQUATELY BRACED UNTIL CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL SUPPLY AND ERECT ALL BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE, INCLUDING DURING THE CONSTRUCTION PHASE.
5. LOAD BEARING STUD WALLS SHALL HAVE SOLID BLOCKING AT 4'-0" CENTERS.
6. SHEATHING AND STRUCTURAL ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. SHEATHING SHALL BE CANPLY EXTERIOR GRADE PLYWOOD UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY BEACH ROCKE ENGINEERING LTD.
7. LUMBER IN CONTACT WITH SOIL SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH THE CAN/CSA-080 SERIES-08. THE CUT ENDS AND DRILLED HOLES OF TREATED LUMBER SHALL BE TREATED WITH 3 COATS OF PRESERVATIVES.
8. FASTENERS USED FOR FRAMING SHALL BE: HOT-DIPPED AND GALVANIZED FOR LUMBER ABOVE GRADE, AND, STAINLESS STEEL (TYPES 304 AND 316) FOR PRESERVATIVE-TREATED LUMBER CONFIRMING TO CSA B111-1974.
9. JOINTS AND HOLES BELOW GRADE SHALL BE SEALED WITH BUTLY CAULKING COMPOUND OR EQUAL CONFORMING TO CGSB 19-GP-13 OR CGSB 19-GP-14, INSTALLED TO PROVIDE A WATER-TIGHT SEAL.
10. PROVIDE 3 SETS OF STAMPED AND SEALED SHOP DRAWINGS FOR ALL ROOF TRUSSES SUPPLIED BY THE TRUSS MANUFACTURER. SUBMIT SHOP DRAWINGS TO BEACH ROCKE ENGINEERING FOR APPROVAL.
11. PROVIDE 3 SETS OF STAMPED AND SEALED SHOP DRAWINGS FOR ALL FLOOR JOISTS SUPPLIED BY THE JOIST MANUFACTURER. SUBMIT SHOP DRAWINGS TO BEACH ROCKE ENGINEERING FOR APPROVAL.
12. ALL STRUCTURAL ENGINEERED WOOD (TIMBERSTRAND, MICROLLAM, PARALLAM, GLUE-LAMINATED, ETC) PRODUCTS SHALL BE SUPPLIED BY MANUFACTURERS APPROVED BY BEACH ROCKE ENGINEERING LTD. PRODUCTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE CAN/CSA-086-09 TO SATISFY LOADING CONDITIONS NOTED ON THE DRAWINGS AND LOCAL BUILDING CODE REQUIREMENTS. THE MANUFACTURER SHALL PROVIDE 3 SETS OF SHOP DRAWINGS TO BEACH ROCKE ENGINEERING LTD. SEALED BY AND ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA, FOR ALL COMPONENTS PRIOR TO FABRICATION.
10. FASTEN EXTERIOR SHEATHING AT 3" O.C. AT EDGES, AND 12" O.C. AT INTERMEDIATE MEMBERS.
11. ALL 4PLY FLUSH BEAMS AND 4PLY LVL BEAMS TO BE THRU BOLTED WITH 1/2" Ø BOLTS @ 16" O.C. STAGGERED TOP AND BOTTOM.

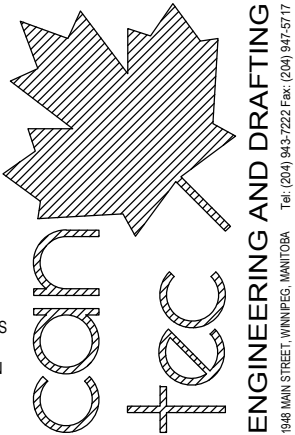
POST INSTALLED ANCHOR NOTES:

- 1) EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES:
 - a) ANCHORAGE TO CONCRETE
 - i) ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - (1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD
 - ii) MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - (1) HILTI KWIK BOLT 3 EXPANSION ANCHORS (UNCRACKED CONCRETE ONLY)
 - iii) HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - (1) HILTI HSL-3 EXPANSION ANCHORS
 - b) REBAR DOWELING INTO CONCRETE
 - i) ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - (1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT WITH CONTINUOUSLY DEFORMED REBAR
 - (2) HILTI HIT-HY 500v3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT WITH CONTINUOUSLY DEFORMED REBAR
 - c) ANCHORAGE TO SOLID GROUTED MASONRY
 - i) ADHESIVE ANCHORS USE:
 - (1) HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM.
 - (2) STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - ii) MECHANICAL ANCHORS USE:
 - (1) HILTI KWIK BOLT-3 EXPANSION ANCHORS
 - d) ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY
 - i) ADHESIVE ANCHORS USE:
 - (1) HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM.
 - (2) STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - (3) THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION
 - 2) ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
 - 3) INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
 - 4) THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

STRUCTURAL DRAWING LIST:

S1.1	PROJECT NOTES
S2.1	EXIST FOUNDATION & ROOF FRAMING PLAN
S5.1	SECTIONS

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Beach Rocke
 ENGINEERING LTD.
 Professional Engineering Services
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 Telephone: (204) 255 7251 Fax: (204) 257 7239
 Website: www.beachrocke.ca

ENGINEERING AND DRAFTING
 1948 MAIN STREET, WINNIPEG, MANITOBA
 Tel: (204) 943-7222 Fax: (204) 947-5717

PROJECT TITLE: **RCMP - PUMP HOUSE**
 SHEET TITLE: **PROJECT NOTES**
 DATE: 18-01-26
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: RH
 DRAWN BY: MM
 SCALE: AS NOTED

REVISION NO. 01
 ISSUED FOR TENDER

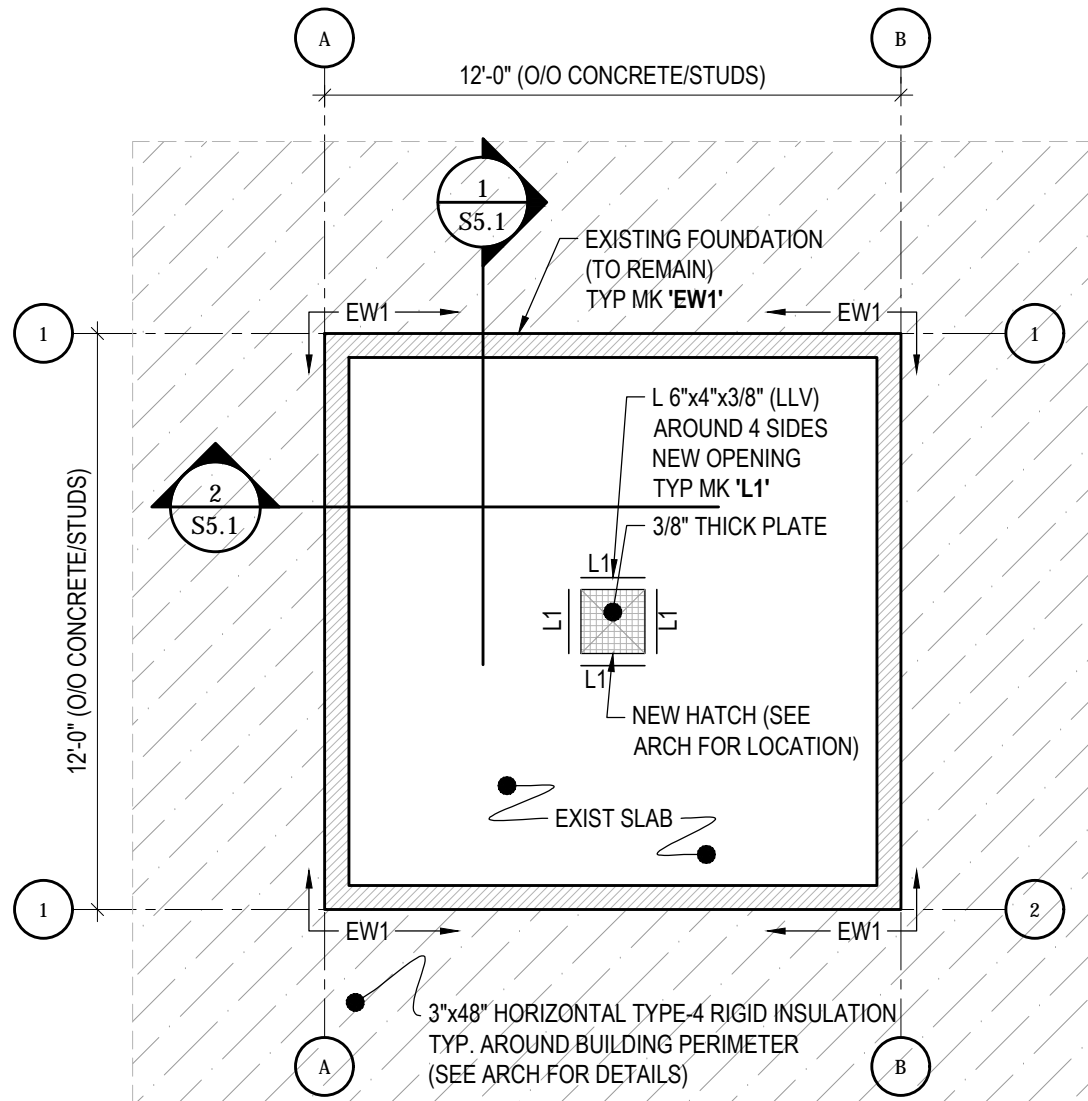


S1.1

JOB NO.
17-1824-CG-352

PLAN NOTES:

- CONFIRM ALL DIMENSIONS w/ARCH. PRIOR TO CONSTRUCTION
- GRIDS ARE O.F. OF CONCRETE
- ALL DIMENSIONS ARE TAKEN FROM GRIDS



1 EXIST FOUNDATION/MAIN FLOOR PLAN

S2.3 SCALE : 1/4"=1'-0"

- DESIGN LOADS:**
- LIVE LOAD = 12 kPa (250 psf)
 - DEAD LOAD = SLAB SELF WEIGHT + (5 psf)

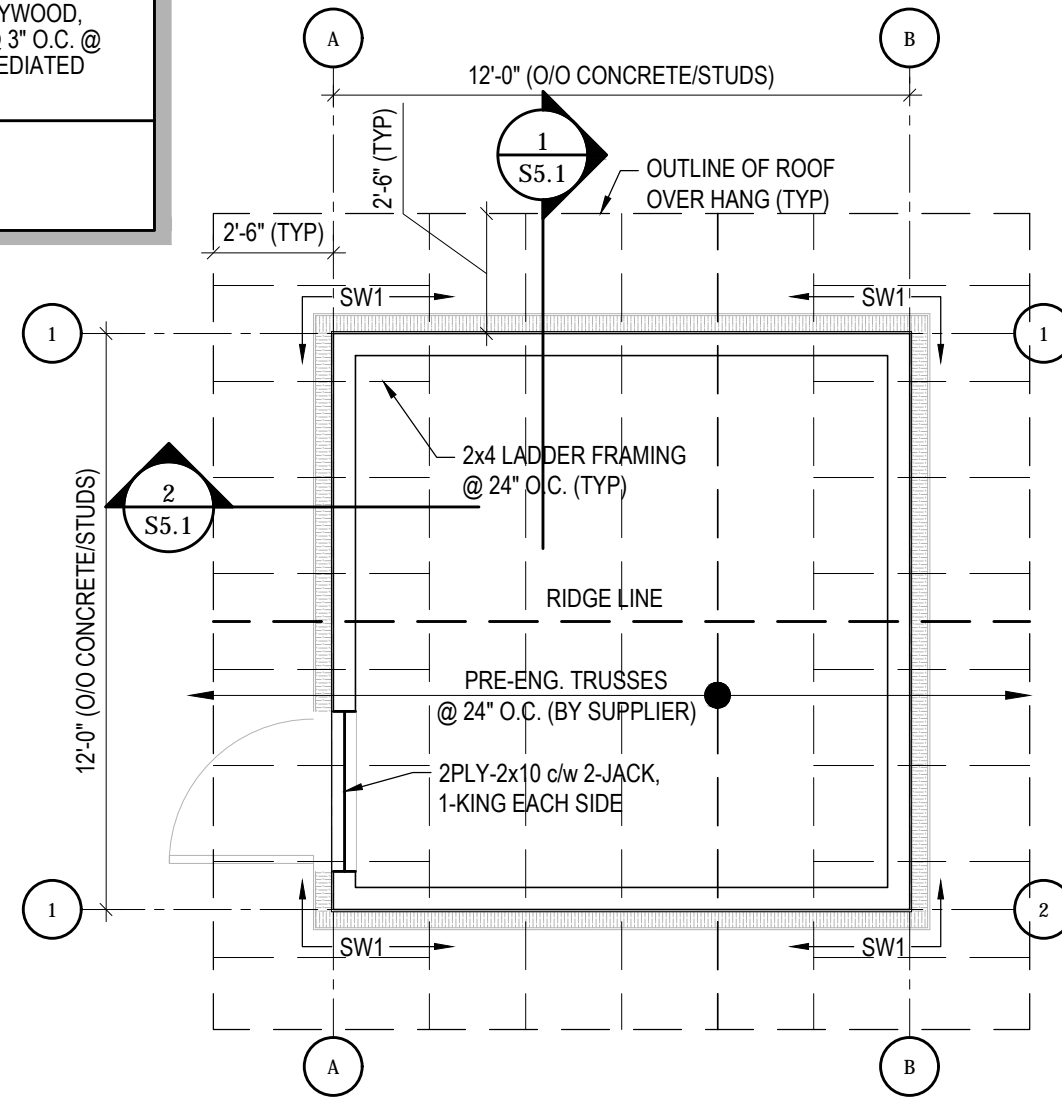
WALL SCHEDULE

MARK	DESCRIPTION
SW1	2x6 @ 12" O.C. (SPF No. 1/2) c/w 1/2" PLYWOOD, FASTENED TO STUDS w/2 1/2" NAILS @ 3" O.C. @ PANEL EDGES AND 12" O.C @ INTERMEDIATED SUPPORTS. (EXTERIOR WALLS)

NOTE:
ALL STUD WALLS c/w 1/2"Øx6" LONG HILTI 'KB3' KWIK BOLTS @ 32" O.C.

PLAN NOTES:

- CONFIRM ALL DIMENSIONS w/ARCH. PRIOR TO CONSTRUCTION
- GRIDS ARE O.F. OF CONCRETE
- ALL DIMENSIONS ARE TAKEN FROM GRIDS

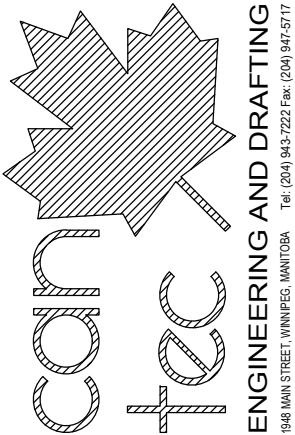


1 ROOF FRAMING PLAN

S2.3 SCALE : 1/4"=1'-0"

- DESIGN LOADS:**
- SNOW LOAD = 2.65 kPa (55 psf)
 - DEAD LOAD = 0.72 kPa (15 psf)

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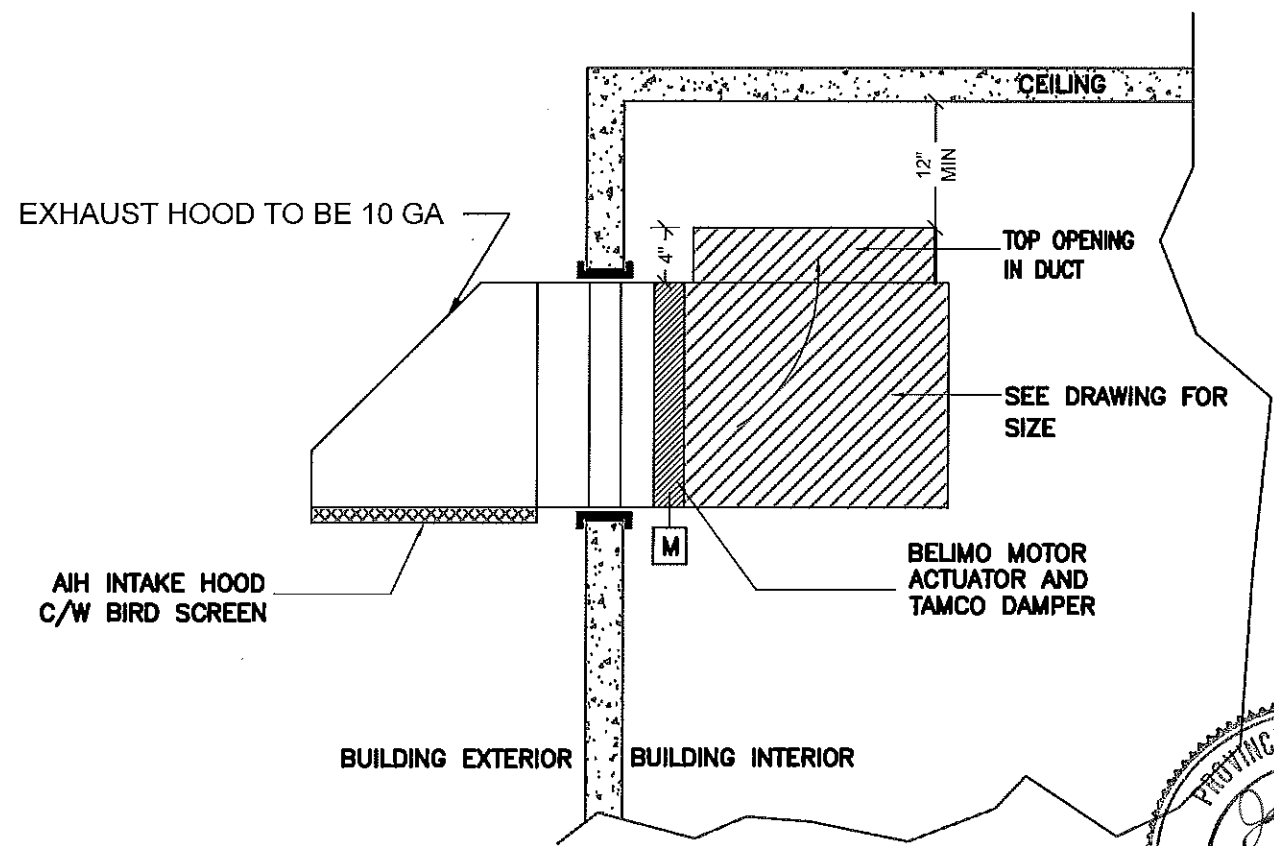
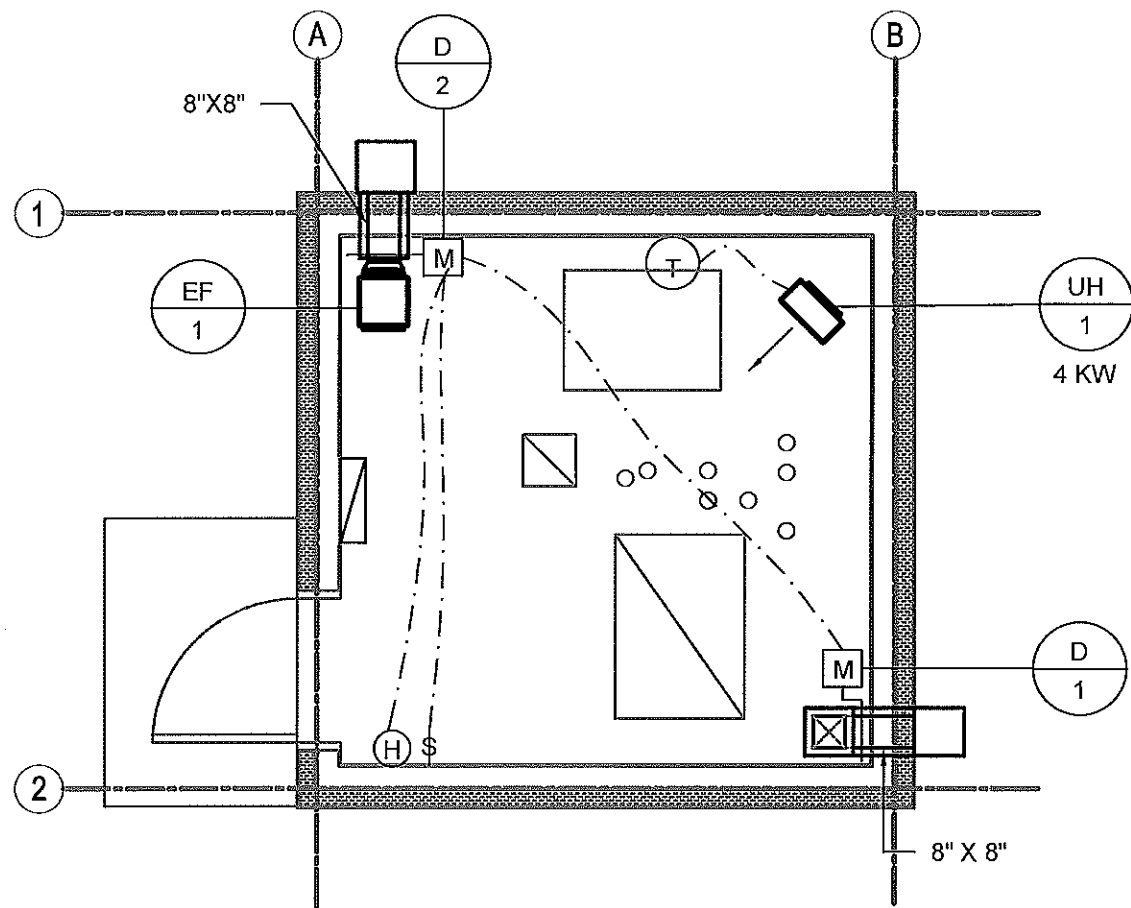
PROJECT TITLE: **RCMP - PUMP HOUSE**
SHEET TITLE: **FDTN & ROOF FRAMING PLAN**
DATE: 18-01-26
SCALE: AS NOTED
DRAWN BY: MM
CHECKED BY: RH
LOCATION: NORWAY HOUSE, MB

REVISION NO. 01
ISSUED FOR TENDER

S2.1

JOB NO. 17-1824-CG-352



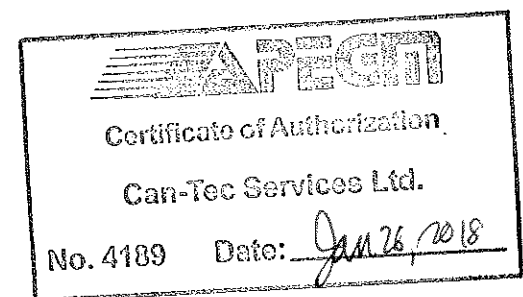


1 MAIN FLOOR PLAN - HVAC
M2.0 SCALE: 1/4"=1'-0"

2 AIR INTAKE DETAIL
M2.0 SCALE: NTS



HEATING AND COOLING LEGEND	
⊙	THERMOSTAT
⊗	ROOM SENSOR
⊠	EQUIPMENT TAG (SEE SCHEDULE)
VENTILATION LEGEND	
↔	TRANSFER SLEEVE
⊠	VOLUME BALANCING DAMPER
⊗	FIRE DAMPER
⊗	FIRE FLAP
⊗	BACKDRAFT DAMPER
⊠	MOTORIZED DAMPER



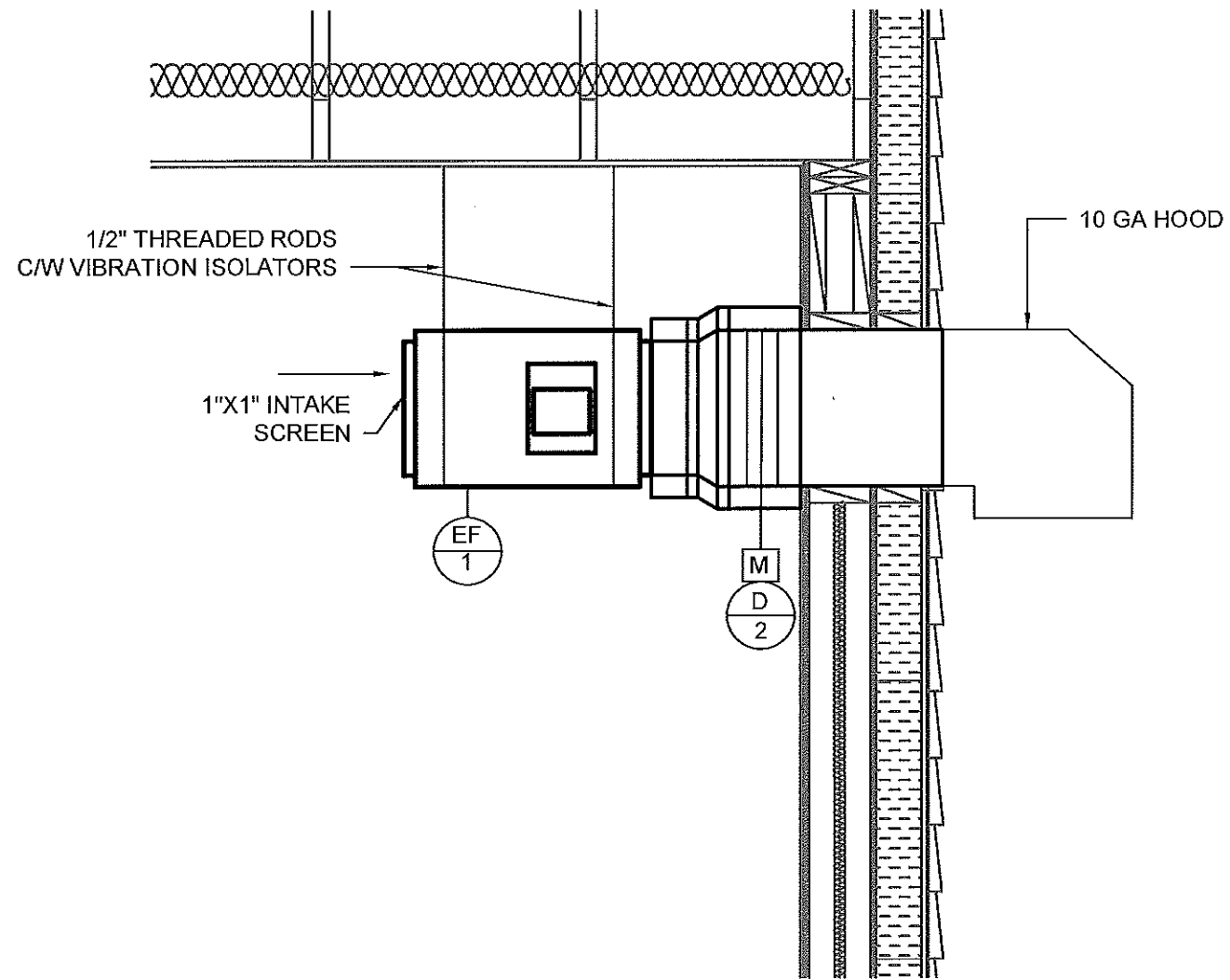
PROJECT TITLE:
NORWAY HOUSE WATER TREATMENT PLANT - BUILDING NO.2
SHEET TITLE:
FLOOR PLAN - HVAC
PROJECT NUMBER:
17-045-01-21

01	ISSUED FOR TENDER	18 01 26	JLS
REV. #	REVISION	DATE (YY MM DD)	REV. BY

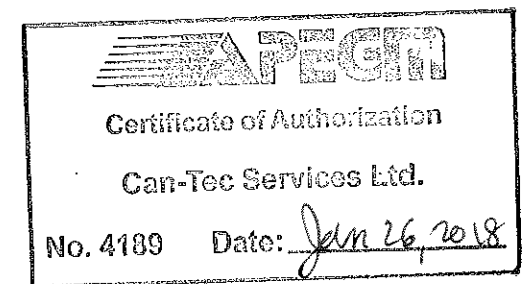
REV. #	REVISION	DATE (YY MM DD)	REV. BY
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SCALE:
AS NOTED
DATE (YY MM DD):
17 11 20

DRAWING NUMBER:
M2.0
REVISION NUMBER:
01



1 EXHAUST FAN DETAIL
M2.1 SCALE: 3/4"=1'-0"



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APEGN
 Certificate of Authorization
 Jorey Electric Ltd.
 No. 4600 Date: 29 JAN 2018

SEALED BY

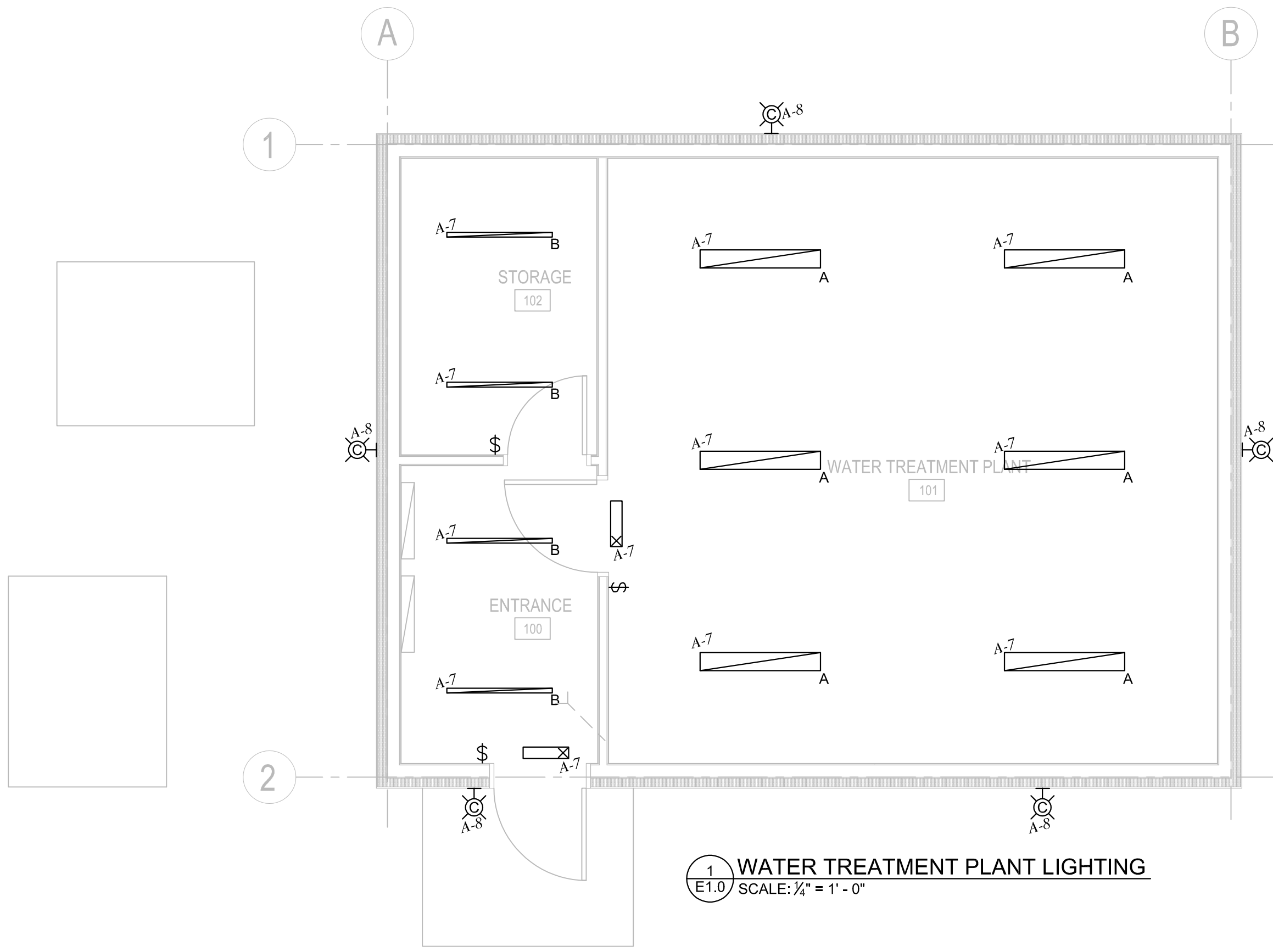


JOREY ELECTRIC!
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 Facsimile: (204) 255-7679
 E-mail: info@joreyelectric.com

PROJECT TITLE: NORWAY HOUSE WATER TREATMENT PLANT
 SHEET TITLE: WATER TREATMENT PLANT LIGHTING
 DATE: 23 JAN 2018
 SCALE: AS SHOWN
 LOCATION: NORWAY HOUSE, MB
 CHECKED BY: JJD
 DRAWN BY: LCB

CONSTRUCTION
E1.0
 REVISION NO. 0
 JOB NO. 17-053

ISSUED FOR TENDER



1 WATER TREATMENT PLANT LIGHTING
 SCALE: 1/4" = 1' - 0"

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APEGN
 Certificate of Authorization
 Jorey Electric Ltd.
 No. 4600 Date: 29 JAN 2018

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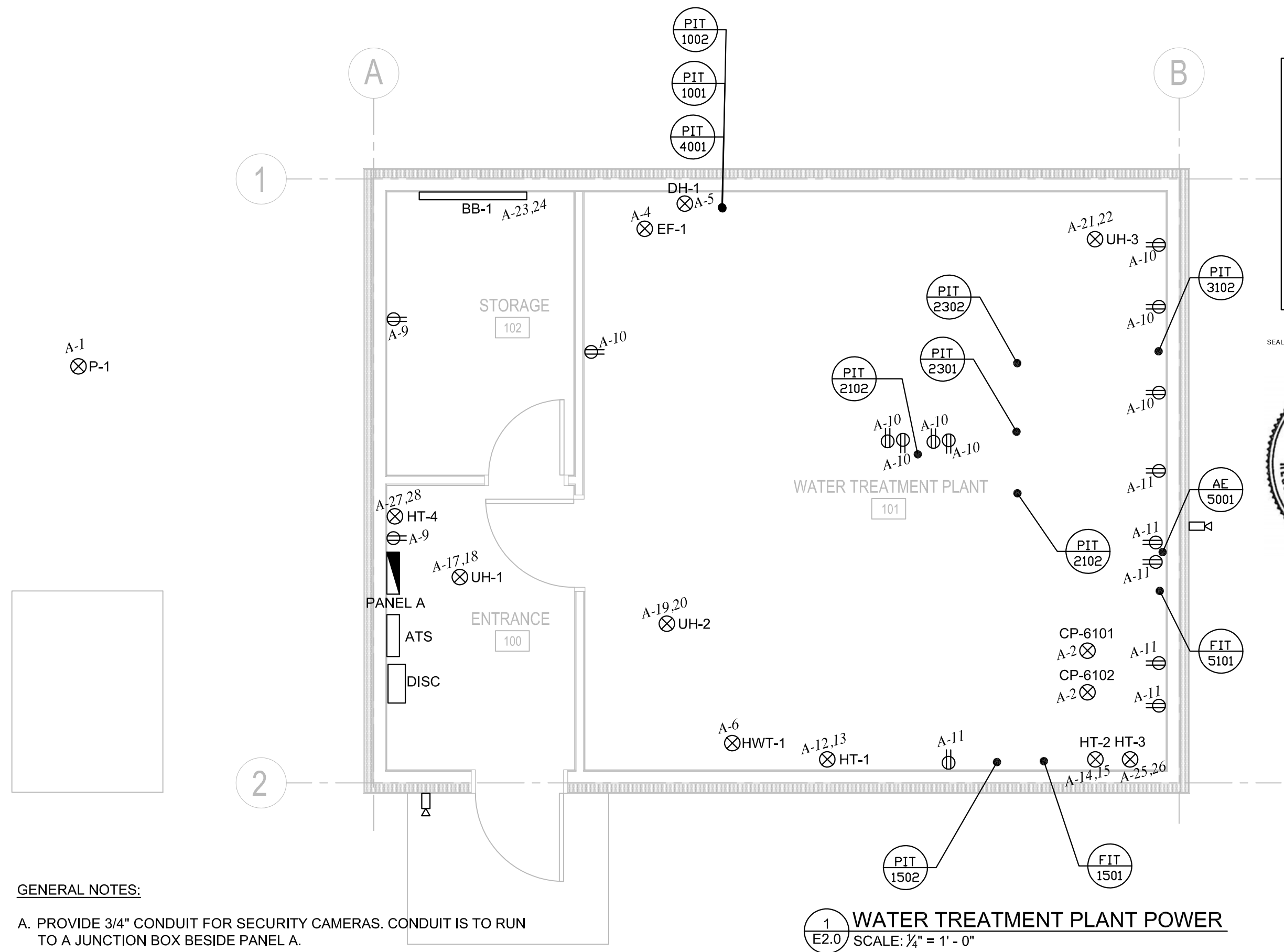


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PROJECT TITLE: NORWAY HOUSE WATER TREATMENT PLANT
 SHEET TITLE: WATER TREATMENT PLANT POWER
 DATE: 23 JAN 2018
 SCALE: AS SHOWN
 CHECKED BY: JUD
 DRAWN BY: LCB
 LOCATION: NORWAY HOUSE, MB

CONSTRUCTION
E2.0
 REVISION NO. 0
 JOB NO. 17-053

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GENERAL NOTES:

A. PROVIDE 3/4" CONDUIT FOR SECURITY CAMERAS. CONDUIT IS TO RUN TO A JUNCTION BOX BESIDE PANEL A.

1 WATER TREATMENT PLANT POWER
 E2.0 SCALE: 1/4" = 1' - 0"

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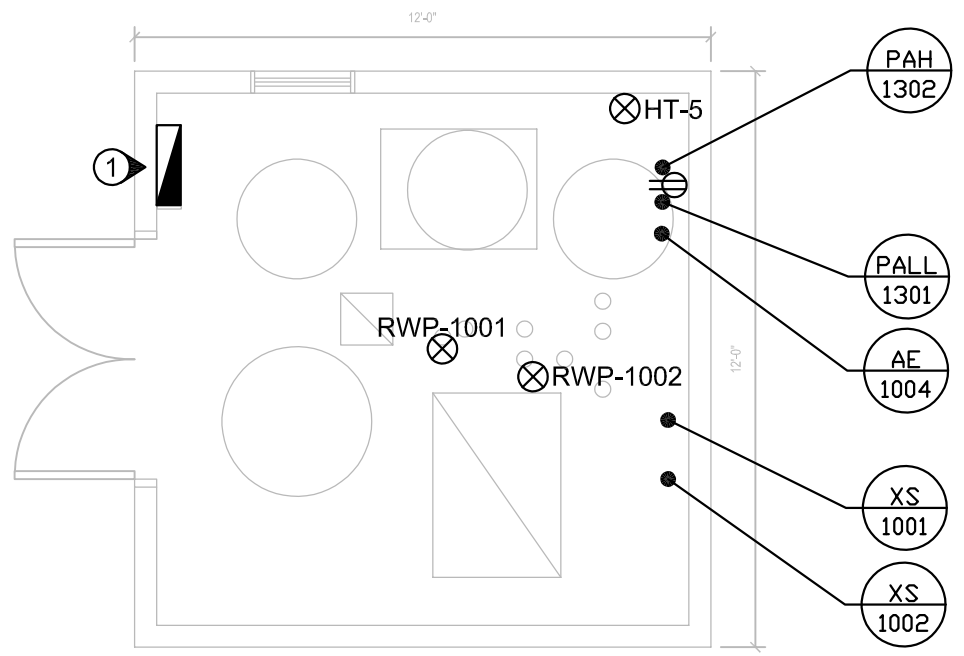
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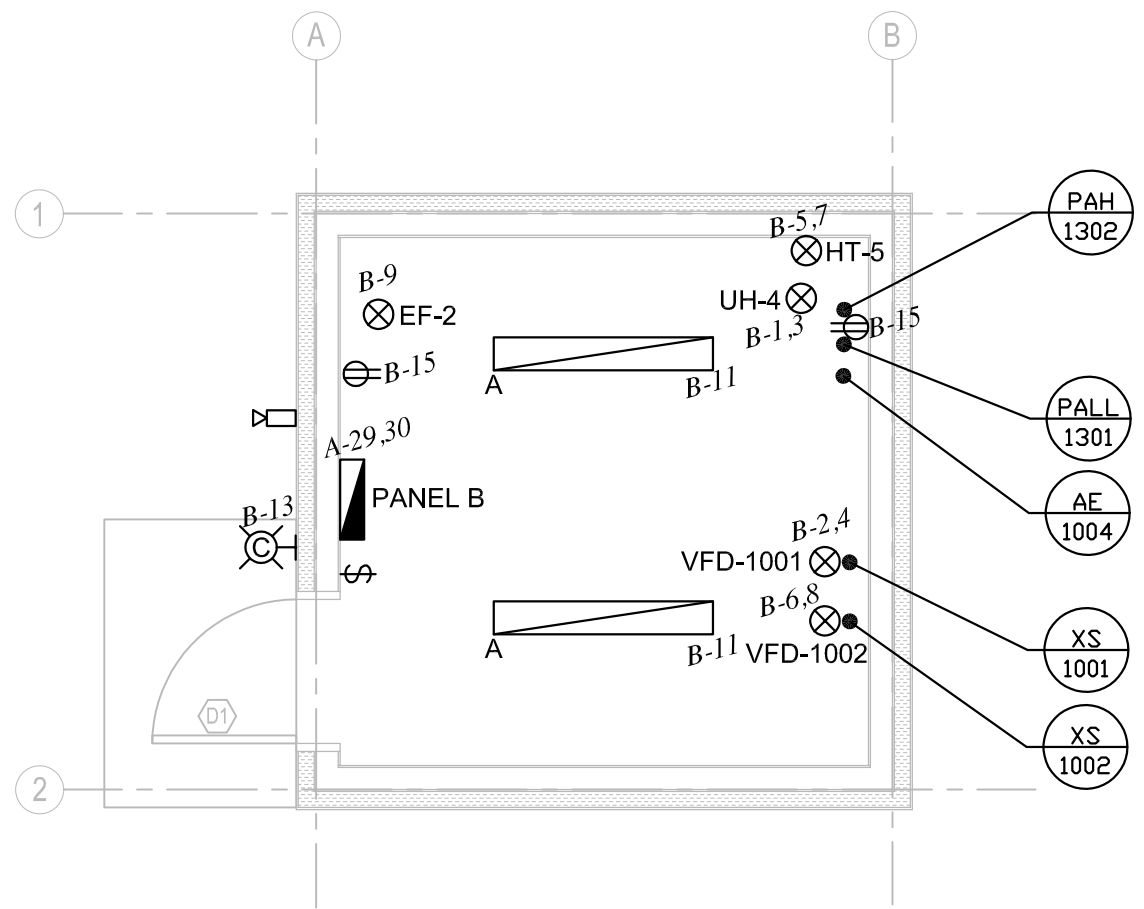
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1 PUMP HOUSE DEMOLITION PLAN
 E3.0 SCALE: 1/4" = 1' - 0"



2 PUMP HOUSE CONSTRUCTION PLAN
 E3.0 SCALE: 1/4" = 1' - 0"

DRAWING NOTES:

- 1 EXISTING PANEL TO BE REMOVED.

GENERAL NOTES:

- A. ALL EXTERIOR LIGHTS TO BE CONTROLLED BY PHOTOCELL LOCATED ON NORTH SIDE OF BUILDING.
- B. PUMPS RWP-1001 AND RWP-1002 ARE TO REMAIN OPERATIONAL UNTIL NEW PUMPS CAN BE CONNECTED. BEFORE DISCONNECTING EXISTING PANEL, PROVIDE TEMPORARY POWER FROM NEW WATER TREATMENT PLANT TO KEEP PUMPS IN OPERATION DURING CONSTRUCTION OF NEW PUMP HOUSE.

LIGHTING AND CONTROL SCHEDULE

TYPE	DESCRIPTION	LAMPS
A	LITHONIA-VAP-4000LM-FST-MD-MVOLT-40K-80CRI LED	42W
B	LITHONIA-Z1LN-L48-3000LM-FST-MVOLT-35K-80CRI LED STRIP LIGHT	25W
C	RC LIGHTING-WP2LED-24-RCL WALLPACK LED	24W
\$	WALL MOUNTED SWITCH LINES DENOTE NUMBER OF SWITCHES	

ELECTRIC HEATING SCHEDULE

TYPE	DESCRIPTION	KW	VOLTS/PH	LOCATION	NOTES
UH-1	UNIT HEATER OUELLET-OAS02000	2kW	240V/1PH	WATER TREATMENT PLANT	C/W BUILT-IN STAT
UH-2 AND UH-3	UNIT HEATERS OUELLET-10000	10kW	240V/1PH	WATER TREATMENT PLANT	C/W BUILT-IN STAT
BB-1	BASEBOARD HEATER OUELLET-OFM2000	2kW	240V/1PH	WATER TREATMENT PLANT	C/W BUILT-IN STAT
UH-4	UNIT HEATER OUELLET-OAS05000	5kW	240V/1PH	PUMP HOUSE	C/W BUILT-IN STAT

EMERGENCY LIGHTING SCHEDULE

TYPE	DESCRIPTION
☒	LUMACELL EXIT SIGN LS-3-W-U

PROJECT TITLE
 NORWAY HOUSE WATER TREATMENT PLANT

SHEET TITLE
 PUMP HOUSE PLAN AND SCHEDULES

CHECKED BY
 JUD
 DRAWN BY
 LCB
 SCALE
 AS SHOWN
 DATE
 23 JAN 2018
 LOCATION
 NORWAY HOUSE, MB

CONSTRUCTION
E3.0
 REVISION NO. 0
 JOB NO.
17-053

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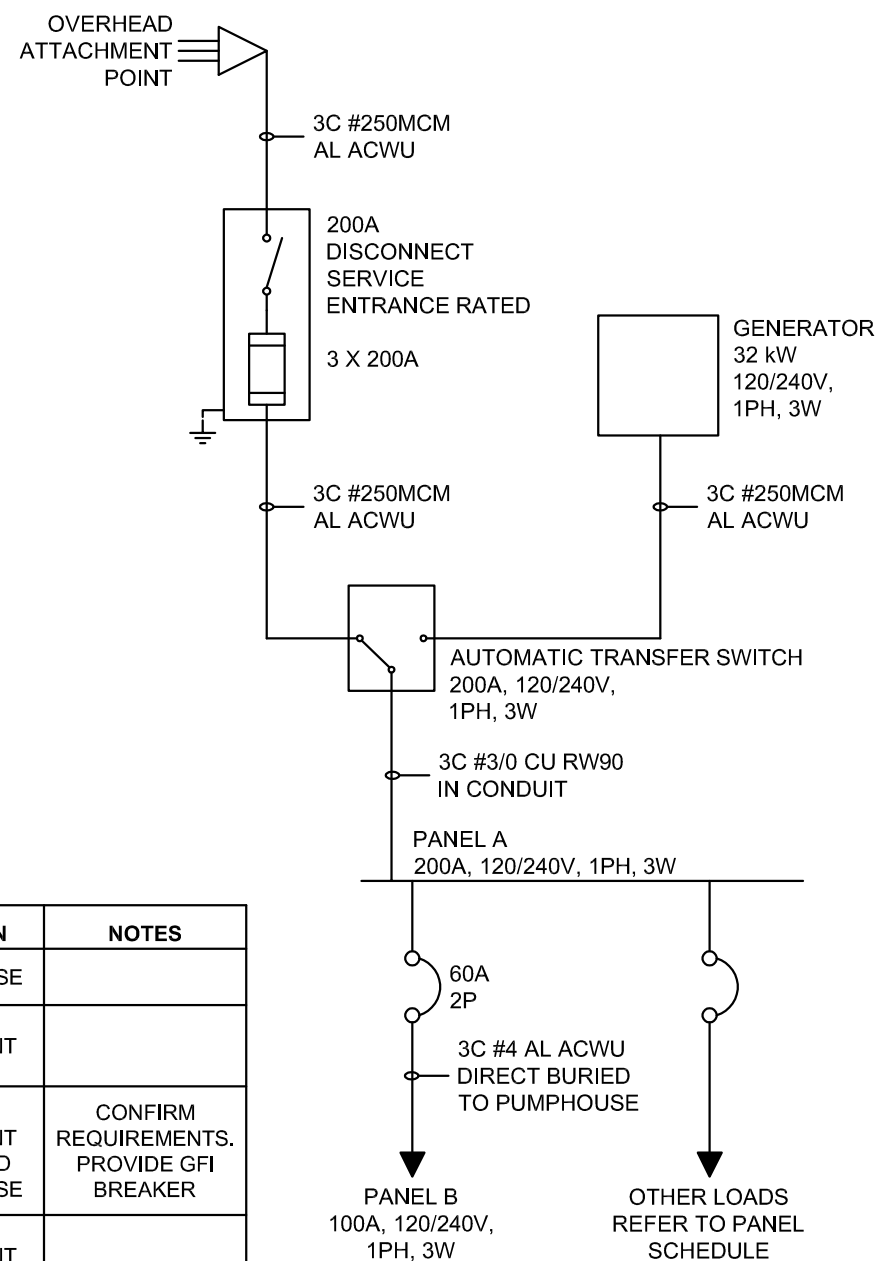


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SINGLE LINE DIAGRAM



SYMBOL SCHEDULE	
	DUPLEX RECEPTACLE "GF" DENOTES GFI RECEPTACLE "20" DENOTES 20A RECEPTACLE
	ELECTRICAL CONNECTION
	CONTROL TAG
	CAMERA
	WALL LUMINAIRE
	LINEAR LUMINAIRE

EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION	KW/HP/A	VOLTS/PH	BREAKER	CONDUCTOR	LOCATION	NOTES
VFD-1001 AND VFD-1002	RW PUMPS	7.5A	240V/1PH	15A/2P	2 #12	PUMP HOUSE	
CP-6101 AND CP-6102	CHLORINE PUMPS	FRACTIONAL	120V/1PH	15A/1P	2 #12	WATER TREATMENT PLANT	
HT-1 TO HT-5	HEAT TRACE	24A	240V/1PH	30A/2P	2 #10	WATER TREATMENT PLANT AND PUMP HOUSE	CONFIRM REQUIREMENTS. PROVIDE GFI BREAKER
EF-1	WTP EXHAUST FAN	1/10 HP	120V/1PH	15A/1P	2 #12	WATER TREATMENT PLANT	
DH-1	DEHUMIDIFIER	8A	120V/1PH	15A/1P	2 #12	WATER TREATMENT PLANT	
P-1	SANITARY PUMP	1/3 HP	120V/1PH	15A/1P	2 #12	OUTSIDE WATER TREATMENT PLANT	
HWT-1	HOT WATER TANK	1.5kW	120V/1PH	20A/1P	2 #12	WATER TREATMENT PLANT	
EF-2	PH EXHAUST FAN	1/10 HP	120V/1PH	15A/1P	2 #12	PUMP HOUSE	

NOTES:
 MATCH BREAKER AND WIRE SIZES TO ACTUAL NAMEPLATE RATINGS OF EQUIPMENT
 PROVIDE LOCAL DISCONNECTS TO CODE
 REFER TO MECHANICAL DRAWINGS AND WATER TREATMENT DRAWINGS FOR CONTROLS

PROJECT TITLE
NORWAY HOUSE WATER TREATMENT PLANT

SHEET TITLE
SCHEDULES AND SINGLE LINE DIAGRAM

DATE
23 JAN 2018

SCALE
AS SHOWN

CHECKED BY
JUD

DRAWN BY
LCB

LOCATION
NORWAY HOUSE, MB

CONSTRUCTION

E4.0

REVISION NO. 0
JOB NO.

17-053

ISSUED FOR TENDER

PANEL A
200A, 120/240V, 1PH, 3W

CCT #	DESCRIPTION	BREAKER SIZE	WIRE SIZE	CCT #	DESCRIPTION	BREAKER SIZE	WIRE SIZE
1	SANITARY PUMP P-1	15A	#12	17	UNIT HEATER UH-1	15A	#12
2	CHLORINE PUMP CP-6101	15A	#12	18			#12
3	CHLORINE PUMP CP-6102	15A	#12	19	UNIT HEATER UH-2	60A	#6
4	EXHAUST FAN EF-1	15A	#12	20			#6
5	DEHUMIDIFIER DH-1	15A	#12	21	UNIT HEATER UH-3	60A	#6
6	HOT WATER TANK	20A	#12	22			#6
7	LIGHTS, EXIT SIGNS	15A	#12	23	BASEBOARD HEATER BBH-1	15A	#12
8	EXTERIOR LIGHTS	15A	#12	24			#12
9	STORAGE AND ENTRANCE RECEPTACLES	15A	#12	25	HEAT TRACES HT-3	30A	#10
10	WTP RECEPTACLES	15A	#12	26			#10
11	WTP RECEPTACLES	15A	#12	27	HEAT TRACES HT-4	30A	#10
12	HEAT TRACES HT-1	30A	#10	28			#10
13			#10	29	PANEL B	60A	#6
14	HEAT TRACES HT-2	30A	#10	30			#6
15			#10	31			
16				32			

PANEL B
100A, 120/240V, 1PH, 3W

CCT #	DESCRIPTION	BREAKER SIZE	WIRE SIZE	CCT #	DESCRIPTION	BREAKER SIZE	WIRE SIZE
1	UNIT HEATER UH-4	30A	#10	2	VFD 1 - WELL PUMP 1	15A	#12
3			#10	4			#12
5	HEAT TRACE HT-5	30A	#10	6	VFD 1 - WELL PUMP 2	15A	#12
7			#10	8			#12
9	EXHAUST FAN EF-2	15A	#12	10			
11	INTERIOR LIGHTS	15A	#12	12			
13	EXTERIOR LIGHTS	15A	#12	14			
15	RECEPTACLES	15A	#12	16			
17				18			
19				20			

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PROJECT TITLE
NORWAY HOUSE WATER TREATMENT PLANT

SHEET TITLE
PANEL SCHEUDLES

DATE
23 JAN 2018

SCALE
AS SHOWN

LOCATION
NORWAY HOUSE, MB

CHECKED BY
JJD

DRAWN BY
LCB

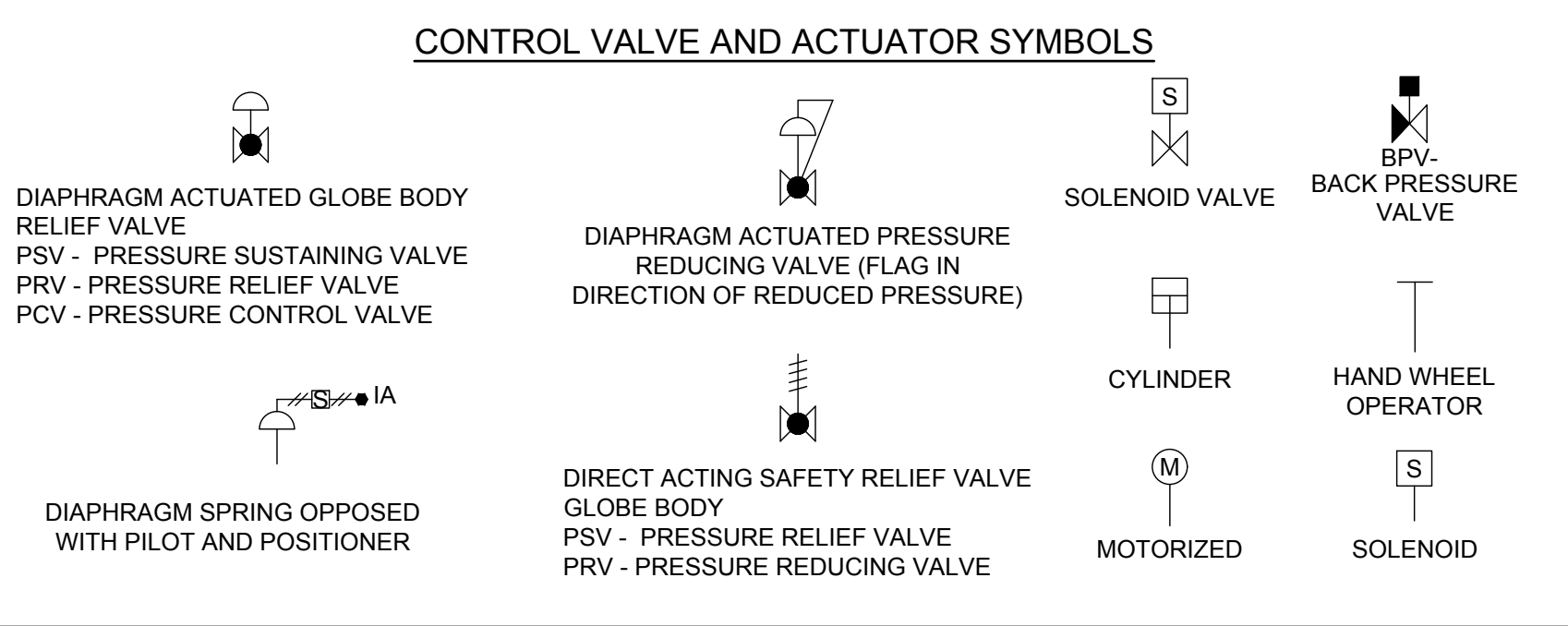
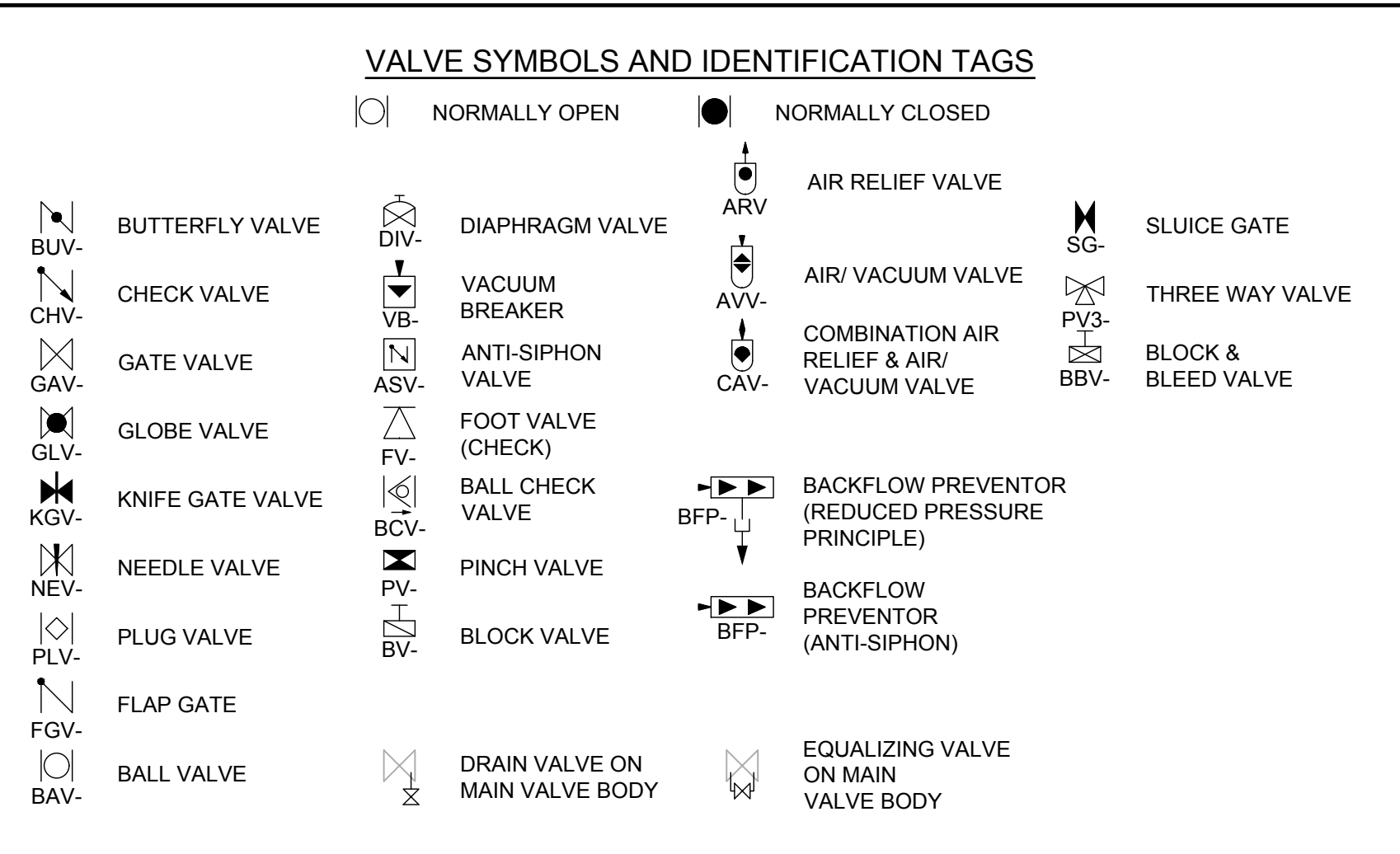
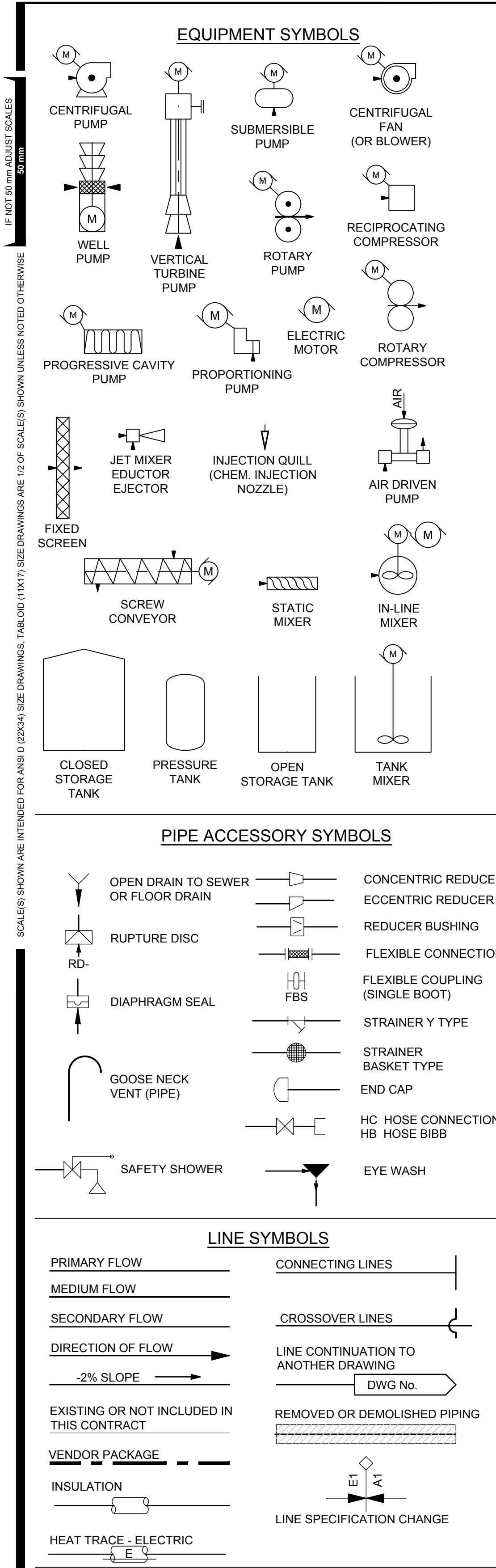
CONSTRUCTION

E5.0

REVISION NO. 0

JOB NO. 17-053

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EQUIPMENT CODES

CODE	EQUIPMENT
AC	AIR COMPRESSOR
ACF	ACTIVATED CARBON FEEDER
AER	AERATOR
ALP	AIR LIFT PUMP
ART	AIR RECEIVER TANK
ASC	AIR SCRUBBER
ASP	ALUM SOLUTION PUMP
BFP	BACK FLOW PREVENTER
BLO	BLOWER
BRT	BRINE TANK
BSP	BACKWASH SUPPLY PUMP
CB	CATCH BASIN
CCC	CHLORINE CONTACT CHAMBER
CEF	CENTRIFUGE
CGC	CHLORINE GAS CYLINDER
CGD	CHLORINE GAS DETECTOR
CL	CLARIFIER
CO	CLEAN OUT
COAP	COAGULANT AID PUMP
COMP	COMPRESSOR (INSTRUMENT AIR)
CR	CRANE
CRSP	CITRIC ACID PUMP
CSP	CAUSTIC SODA PUMP
DEC	DECHLORINATOR
DT	DAY TANK
DWH	DOMESTIC WATER HEATER
ED	EDUCTOR OR EJECTOR
ENG	ENGINE
ESH	EMERGENCY SHOWER UNIT
FAP	FLUOSILICIC ACID (FLUORIDE) PUMP
FB	FLOOR BOX (VALVE)
FD	FLOOR DRAIN
FEX	FIRE EXTINGUISHER
FHC	FIRE HOSE CONNECTION
FIL	FILTER (PROCESS WATER)
FH	FIRE HYDRANT
FS	FIXED SCREEN (BAR OR MESH)
FT	FUEL TANK
FUD	FUNNEL DRAIN
GEN	GENERATOR
H	HOIST (ELECTRIC OR MANUAL)
HB	HOSE BIBB
HC	HOSE CONNECTION
HD	HUB DRAIN
HEX	HEAT EXCHANGER
HR	HOSE REEL
HWT	HOT WATER TANK
LE	LEVEL ELEMENT
LS	LIME SILO
LSK	LIME SLAKER
M	MOTOR (ELECTRIC)
MH	MANHOLE
MV	METER VAULT
MWA	MANWAY ACCESS
MX	MIXER (MECHANICAL)
ORP	OXYGEN REDUCTION POTENTIAL PUMP (UNSPECIFIED SERVICE)
P	PUMP (UNSPECIFIED SERVICE)
PCF	POWDER CARBON FEEDER
PD	PULSATION DAMPER
PGT	PROPANE GAS TANK
PL	PIG LAUNCHER
PPP	POTASSIUM PERMANGANATE PUMP
PWP	POTABLE WATER PUMP
RES	RESERVOIR
RWP	RAW WATER PUMP
SACP	SULPHURIC ACID PUMP
SEP	SEWAGE PUMP
SEQP	SEQUESTERANT PUMP
SG	SIGHT GLASS
SHSP	SODIUM HYPOCHLORITE PUMP
SIL	SILENCER
SL	STOP LOGS
SLP	SLUDGE PUMP
SN	SPRAY NOZZLE
SOF	SODA ASH FEEDER
SOH	SODA ASH HOPPER
SOSP	SODA ASH SOLUTION PUMP
SPST	SODA ASH SOLUTION TANK
SP	SEWAGE PUMP
SUP	SUMP PUMP
T	TANK (UNSPECIFIED SERVICE)
TWS	TRAVELING WATER SCREEN
TP	TRANSFER PUMP
UV	ULTRAVIOLET
VB	VALVE BOX
VFD	VARIABLE FREQUENCY DRIVE (ELEC)
VV	VALVE VAULT

VALVE CODES

CODE	VALVE
ARV	AIR RELIEF VALVE
ASV	ANTI-SYPHON VALVE
AVV	AIR/ VACUUM VALVE
BAV	BALL VALVE
BBV	BLOCK & BLEED VALVE
BCV	BALL CHECK VALVE
BFP	BACK FLOW PREVENTER
BPV	BACK PRESSURE VALVE
BUV	BUTTERFLY VALVE
BV	BLOCK VALVE
CAV	COMBINATION AIR RELIEF & AIR/ VACUUM VALVE
CHV	CHECK VALVE
DIV	DIAPHRAGM VALVE
FC	FLEXIBLE DRESSER COUPLING
FCC	FLANGED/ FLEXIBLE DRESSER COUPLING
FCV	FLOW CONTROL VALVE
FGV	FLAP GATE VALVE
FV	FOOT VALVE
GAV	GATE VALVE
GLV	GLOBE VALVE
INQ	INJECTION QUILL
KGV	KNIFE GATE VALVE
MUV	MUD VALVE
NEV	NEEDLE VALVE
PIV	POST INDICATOR VALVE
PLV	PLUG VALVE
PRV	PRESSURE RELIEF VALVE
PV	PINCH VALVE
ROV	ROTARY VALVE
SG	SLUICE GATE VALVE
TWV	THREE (3) WAY VALVE
WG	WEIR GATE
VB	VACUUM BREAKER
VC	VICTAULIC COUPLING

PIPE MATERIAL CODES

CODE	MATERIAL AND FLANGE RATING
A1G	GALVANIZED STEEL PIPE 100mm Ø AND SMALLER 150 POUND FLANGE RATING
A5	STEEL PIPE 600mm Dia AND SMALLER 150 POUND FLANGE RATING
A7	STEEL PIPE 300mm Dia AND SMALLER A1 PIPE CODE VICTAULIC COUPLED
E1	PVC PIPE (PRESSURE PIPE)
E2	PVC PIPE - GRAVITY SERVICE
E3	POLYETHYLENE PIPE
E4	CPVC PIPE (PRESSURE PIPE)
E5	PLASTIC FLEXIBLE TUBING
E6	RUBBER HOSE
E7	PVDF PIPE (PRESSURE PIPE)
G1	COPPER PIPE - TYPE K
G2	COPPER PIPE - TYPE L
H1	STAINLESS STEEL PIPE
H2	STAINLESS STEEL TUBING
H3	STEEL TUBING
P1	PLASTIC DWV, COPPER DWV, CAST IRON DWV PLUMBING SERVICE

COMMODITY CODES

CODE	COMMODITY
AAS	AERATION AIR SUPPLY
ASC	ANTISCALENT
AL	ALUM LIQUID
AS	ALUM SOLUTION
BWS	BACK WASH SUPPLY
BWW	BACK WASH WASTE
CHW	CHEMICAL WASTE
CI	CORROSION INHIBITOR
CIP	CLEAN IN PLACE
CLL	CHLORINE LIQUID
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
DR	DRAIN
EFF	EFFLUENT
FLU	FLUOSILICIC ACID (FLUORIDE)
FIL	FILTERED WATER
FLT	FILTRATE
FLW	FLUSHING WATER
FTW	FILTER TO WASTE DRAIN
IA	INSTRUMENT AIR (FILTERED & DRIED)
OV	OVERFLOW PIPE
PERW	PERMEATE WATER
PPS	POTASSIUM PERMANGANATE SOLUTION
PRF	PRESSURE RELIEF LINE (NON-DRINKABLE WATER)
PW	POTABLE WATER (SAFE FOR HUMAN CONSUMPTION)
RTW	RINSE TO WASTE
RW	RAW WATER (NOT SAFE FOR HUMAN CONSUMPTION)
SA	SERVICE AIR
SAM	SAMPLE LINE
SBS	SODIUM BISULFITE SOLUTION
SEQ	SEQUESTERANT
SHDS	SODIUM HYDROXIDE (CAUSTIC SODA)
SHS	SODIUM HYPOCHLORITE
SLPA	SULPHURIC ACID
SOS	SODA ASH SOLUTION
VE	VENTILATION PIPE
WW	WASTE WATER (EFFLUENT)

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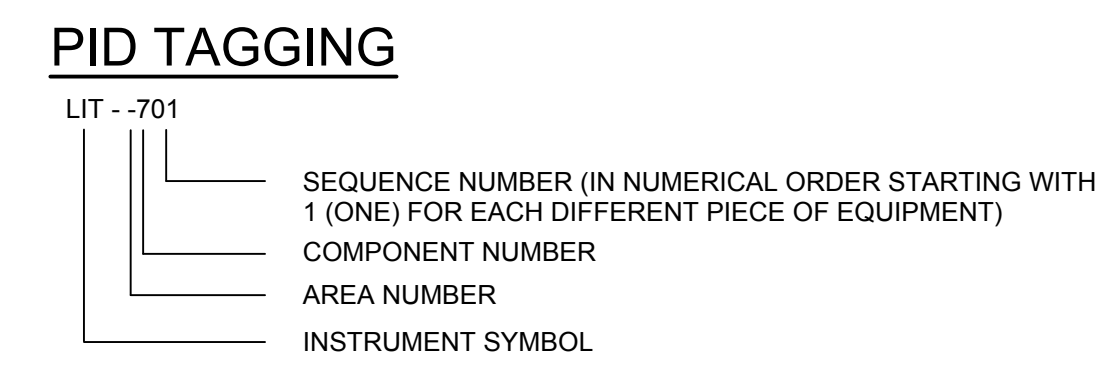
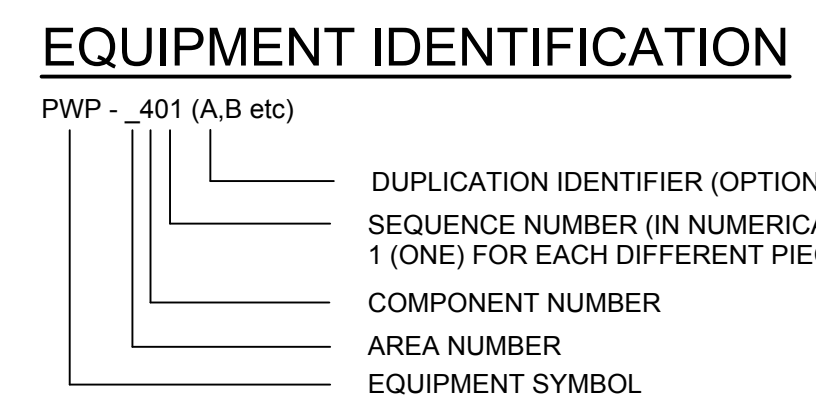
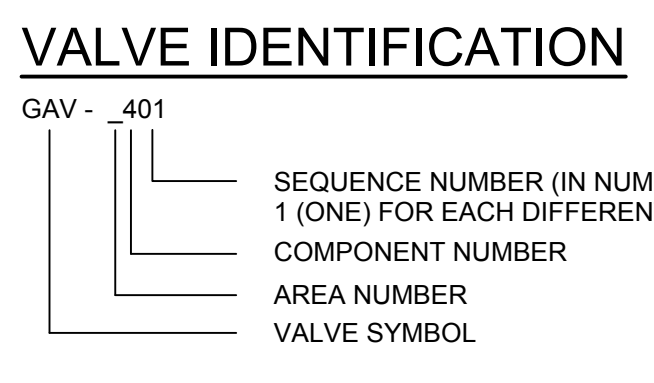
R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT

20174990-00

SCALE: AS SHOWN

PROCESS
 LEGEND
 SHEET 1

DRAWING	REVISION	SHEET
4990-00-D-001	0	D0.1 XX



MISCELLANEOUS

AE	ANALYZING ELEMENT (REFER TO LEGEND)
AT	ANALYZING TRANSMITTER
AIT	ANALYZING INDICATING TRANSMITTER
AAH	ANALYZING ALARM - HIGH SET POINT
CI	CONDUCTIVITY INDICATOR
GD	GAS DETECTOR
HC	HAND CONTROLLER (MANUAL LOADING STATION)
HIC	HAND INDICATING CONTROLLER (MANUAL LOADING STATION WITH OUTPUT GAUGE)
HJS	MANUAL SELECTOR SWITCH
HS	HAND SWITCH
JS	LOSS OF POWER SWITCH
KS	TIMER OR COUNTER
MOV	MOTORIZED OPERATING VALVE (OPEN/CLOSE)
QS	EVENT SWITCH
SC	SPEED CONTROL (SCR DRIVE)
WR	WEIGHT RECORDER
XSO	LIMIT SWITCH CLOSED
XSC	LIMIT SWITCH OPEN
YS	TORQUE SWITCH
ZS	LIMIT SWITCH
ZT	VALVE POSITION TRANSMITTER
ZC	VALVE POSITION CONTROLLER

FLOW

FAL	LOW - FLOW ALARM
FCV	FLOW CONTROL VALVE (MODULATING)
FE	FLOW ELEMENT (PRIMARY ELEMENT WITHOUT TRANSMITTER)
FG	FLOW SIGHT GLASS
FI	FLOW INDICATOR
FIT	FLOW INDICATING TRANSMITTER
FO	FLOW RESTRICTION ORIFICE
FQS	FLOW TOTALIZER SWITCH (PREDETERMINING COUNTER)
FOI	FLOW TOTALIZING INDICATOR
FS	FLOW SWITCH
FT	FLOW TRANSMITTER
FY	FLOW SOLENOID VALVE
FY	FLOW SIGNAL CONVERTER (CURRENT INPUT / PNEUMATIC OUTPUT)
FY	FLOW SIGNAL INTEGRATOR

PRESSURE

PAH	PRESSURE ALARM - HIGH
PAL	PRESSURE ALARM - LOW
PC	PRESSURE CONTROLLER
PCV	PRESSURE CONTROL VALVE (REFER TO LEGEND)
PDSH	PRESSURE DIFFERENTIAL SWITCH - HIGH
PDSL	PRESSURE DIFFERENTIAL SWITCH - LOW
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PI	PRESSURE INDICATOR
PIC	PRESSURE INDICATING CONTROLLER
PIT	PRESSURE INDICATING TRANSMITTER
PS	PRESSURE SWITCH
PSH	PRESSURE SWITCH - HIGH SET POINT
PSL	PRESSURE SWITCH - LOW SET POINT
PT	PRESSURE TRANSMITTER
PY	PRESSURE SOLENOID VALVE

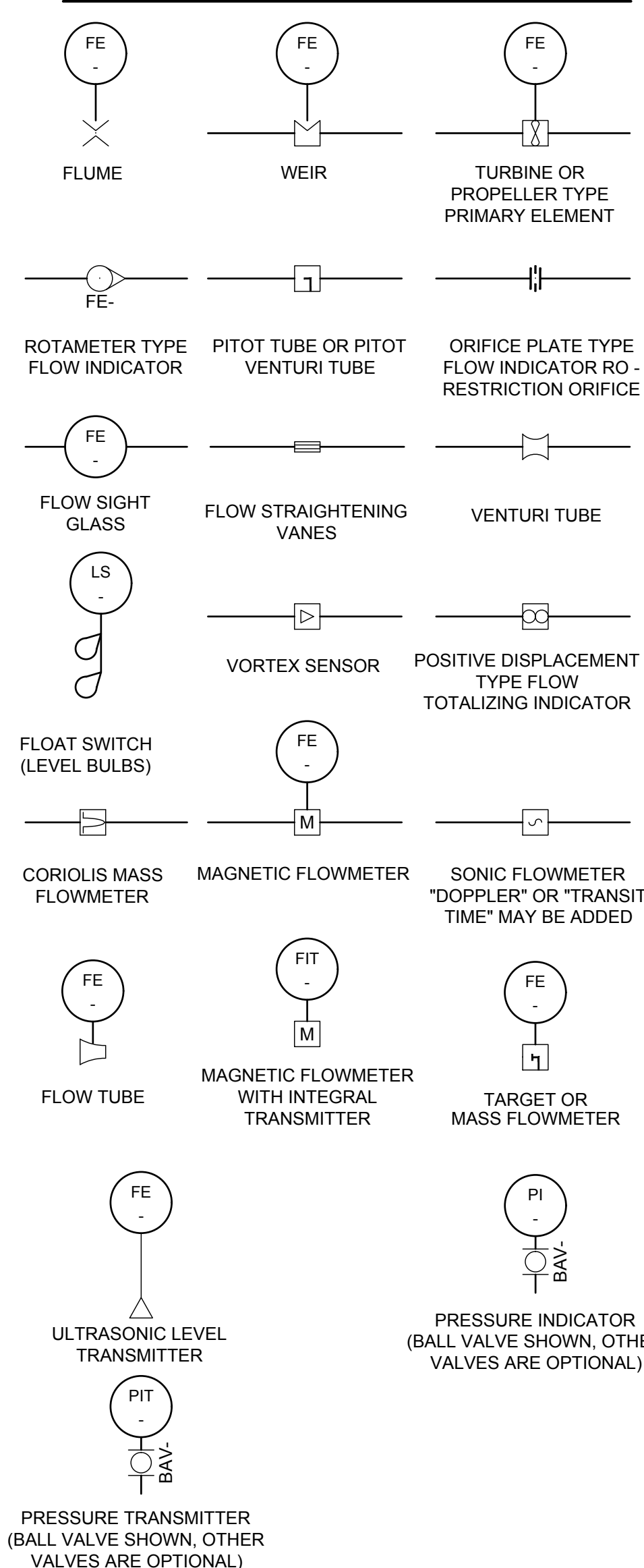
LEVEL

LAH	LEVEL ALARM - HIGH
LAHH	LEVEL ALARM - VERY HIGH
LAL	LEVEL ALARM - LOW
LALL	LEVEL ALARM - VERY LOW
LC	LEVEL CONTROLLER
LE	LEVEL ELEMENT
LI	LEVEL INDICATOR
LIT	LEVEL INDICATING TRANSMITTER
LSH	LEVEL SWITCH - HIGH SET POINT
LSL	LEVEL SWITCH - LOW SET POINT
LS	LEVEL SWITCH
LT	LEVEL TRANSMITTER

TEMPERATURE

TAH	TEMPERATURE ALARM - HIGH SET POINT
TAL	TEMPERATURE ALARM - LOW SET POINT
TI	TEMPERATURE INDICATOR
TSH	TEMPERATURE SWITCH - HIGH SET POINT
TSL	TEMPERATURE SWITCH - LOW SET POINT
TS	TEMPERATURE SWITCH
TT	TEMPERATURE TRANSMITTER

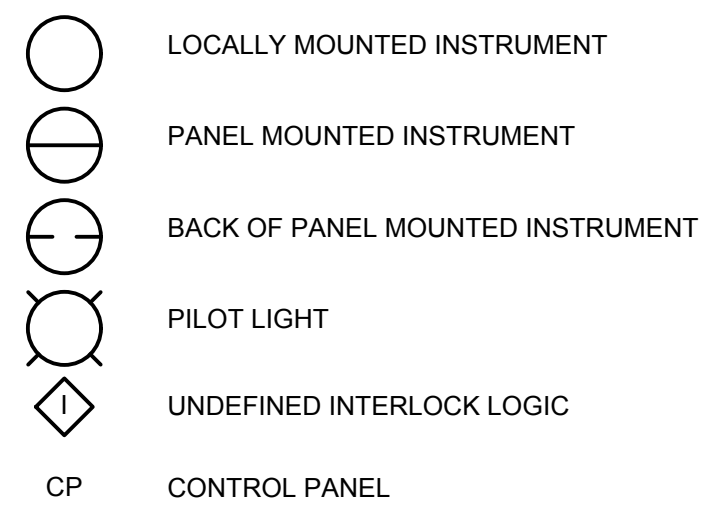
FLOW AND METERING SYMBOLS



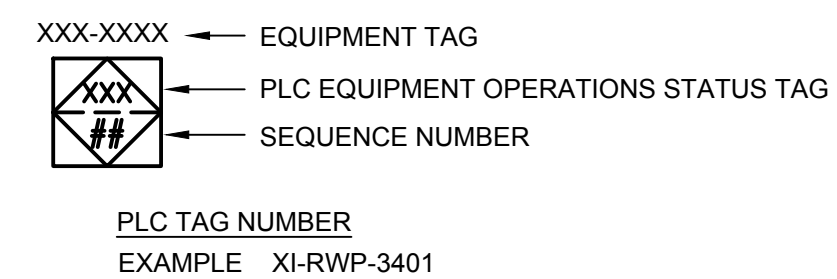
PIPE CONVERSION CHART

NOMINAL PIPE DIAMETER INCHES	NOMINAL PIPE DIAMETER MILLIMETRES	NOMINAL PIPE DIAMETER INCHES	NOMINAL PIPE DIAMETER MILLIMETRES
1/8	6	14	350
1/4	8	15	375
3/8	10	16	400
1/2	15	18	450
3/4	20	20	500
1	25	22	550
1 1/4	32	24	600
1 1/2	40		
2	50		
2 1/2	65		
3	80		
3 1/2	90		
4	100		
5	125		
6	150		
8	200		
10	250		
12	300		

NOTE: PIPE SIZE FROM 2" THROUGH TO 60" - CONVERSION BASED ON CSA STANDARD Z245.1 PIPE SIZE 2" AND SMALLER - CONVERSION BASED ON EUROPEAN ISO STANDARD OTHER PIPE SIZES ARE U.S. CONVERSIONS TO THE METRIC SYSTEM



PROGRAMMABLE LOGIC CONTROL TAG IDENTIFICATION

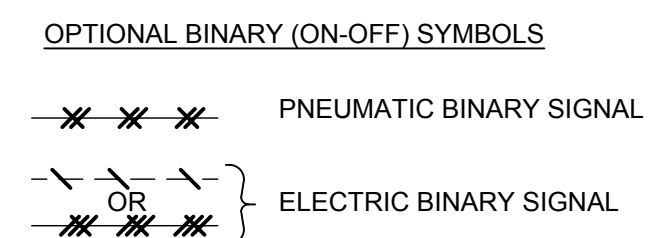
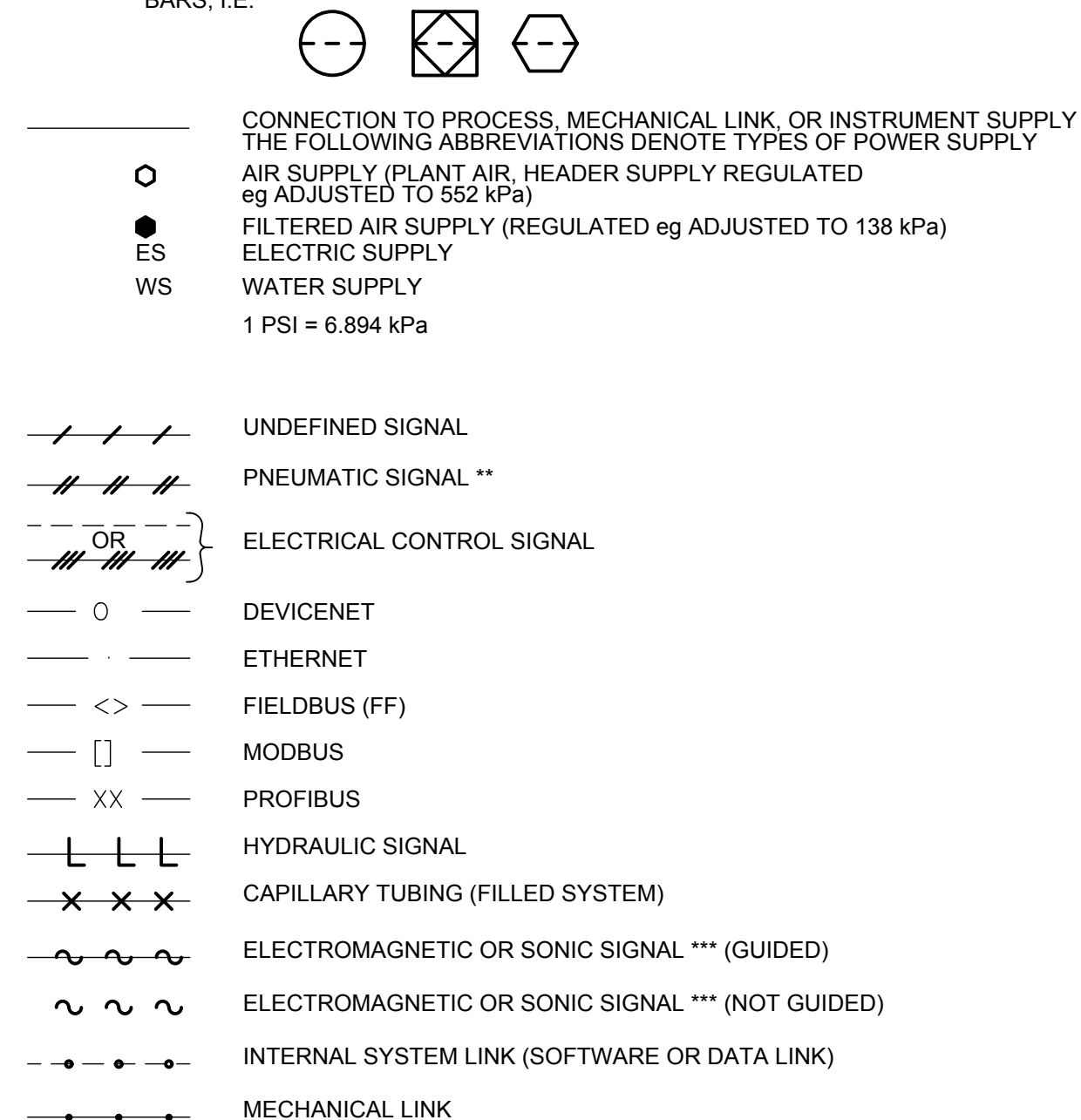


	PRIMARY LOCATION ***NORMALLY ACCESSIBLE TO OPERATOR	FIELD MOUNTED	AUXILIARY LOCATION **NORMALLY ACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS	1.	2.	3.
SHARED DISPLAY SHARED CONTROL	4.	5.	6.
COMPUTER FUNCTION	7.	8.	9.
PROGRAMMABLE LOGIC CONTROL	10.	11.	12.

* SYMBOL SIZE MAY VARY ACCORDING TO THE USER'S NEEDS AND THE TYPE OF DOCUMENT. A SUGGESTED SQUARE AND CIRCLE SIZE FOR LARGER DIAGRAMS IS SHOWN ABOVE. CONSISTENCY IS RECOMMENDED.

** ABBREVIATION OF THE USER'S CHOICE SUCH AS IPI (INSTRUMENT PANEL #1), IC2 (INSTRUMENT CONSOLE #2), CC3 (COMPUTER CONSOLE #3), ETC., MAY BE USED WHEN IT IS NECESSARY TO SPECIFY INSTRUMENT OR FUNCTION LOCATION.

*** NORMALLY INACCESSIBLE OR BEHIND-THE-PANEL DEVICES OR FUNCTIONS MAY BE DEPICTED BY USING THE SAME SYMBOLS BUT WITH DASHED HORIZONTAL BARS, I.E.



NOTE: 'OR' MEANS USER'S CHOICE. CONSISTENCY IS RECOMMENDED. THE FOLLOWING ABBREVIATIONS ARE SUGGESTED TO DENOTE THE TYPES OF POWER SUPPLY. THESE DESIGNATIONS MAY ALSO BE APPLIED TO PURGE FLUID SUPPLIES.

AS - AIR SUPPLY
IA - INSTRUMENT AIR
PA - PLANT AIR
ES - ELECTRICAL SUPPLY
GS - GAS SUPPLY

HS - HYDRAULIC SUPPLY
NS - NITROGEN SUPPLY
SS - STEAM SUPPLY
WS - WATER SUPPLY

* THE SUPPLY LEVEL MAY BE ADDED TO THE INSTRUMENT SUPPLY LINE, E.G., AS-100, A 100-PSIG AIR SUPPLY; ES-24DC, A 24 VOLT DIRECT CURRENT POWER SUPPLY.

** THE PNEUMATIC SIGNAL SYMBOL APPLIES TO A SIGNAL USING ANY GAS AS THE MEDIUM. IF A GAS OTHER THAN AIR IS USED, THE GAS MAY BE IDENTIFIED BY A NOTE ON THE SIGNAL SYMBOL OR OTHERWISE.

*** ELECTROMAGNETIC PHENOMENA INCLUDE HEAT, RADIO WAVES, NUCLEAR RADIATION, AND LIGHT.

0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
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REV	DATE	DESIGN	DRAWN	DESCRIPTION
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R.C.M.P.
NORWAY HOUSE DETACHMENT
WATER TREATMENT PLANT

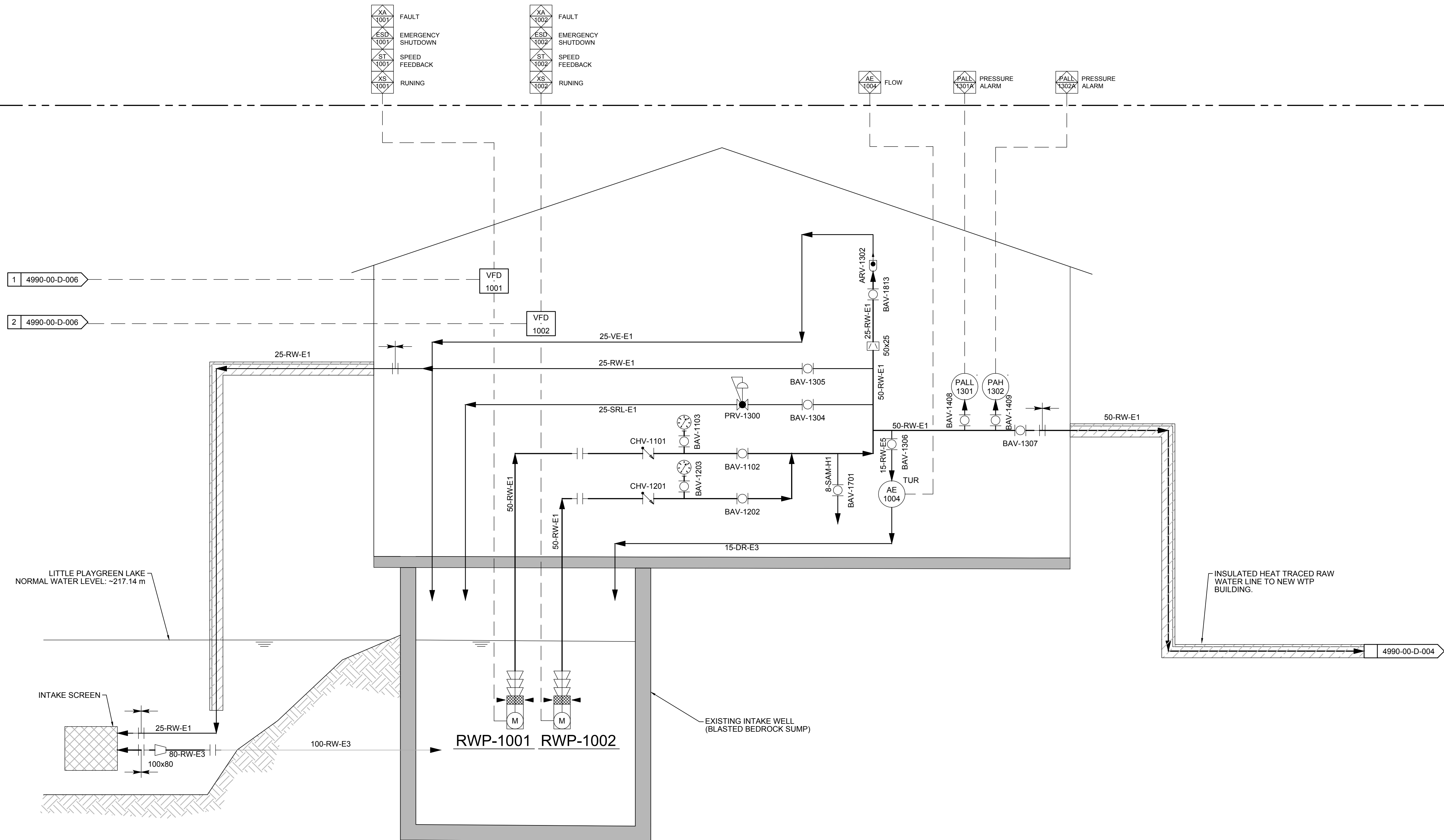
20174990-00
SCALE: AS SHOWN

PROCESS
LEGEND
SHEET 2

DRAWING	REVISION	SHEET
4990-00-D-002	0	D.02

P:\20174990\00_RCMP_Norway_House\Working_Dwgs\400_Process_Mech\4990-00-d-003.dwg
DATE: 2018-01-25; Tyler Dyckko

IF NOT 50 mm ADJUST SCALES
30 mm
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11x17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE

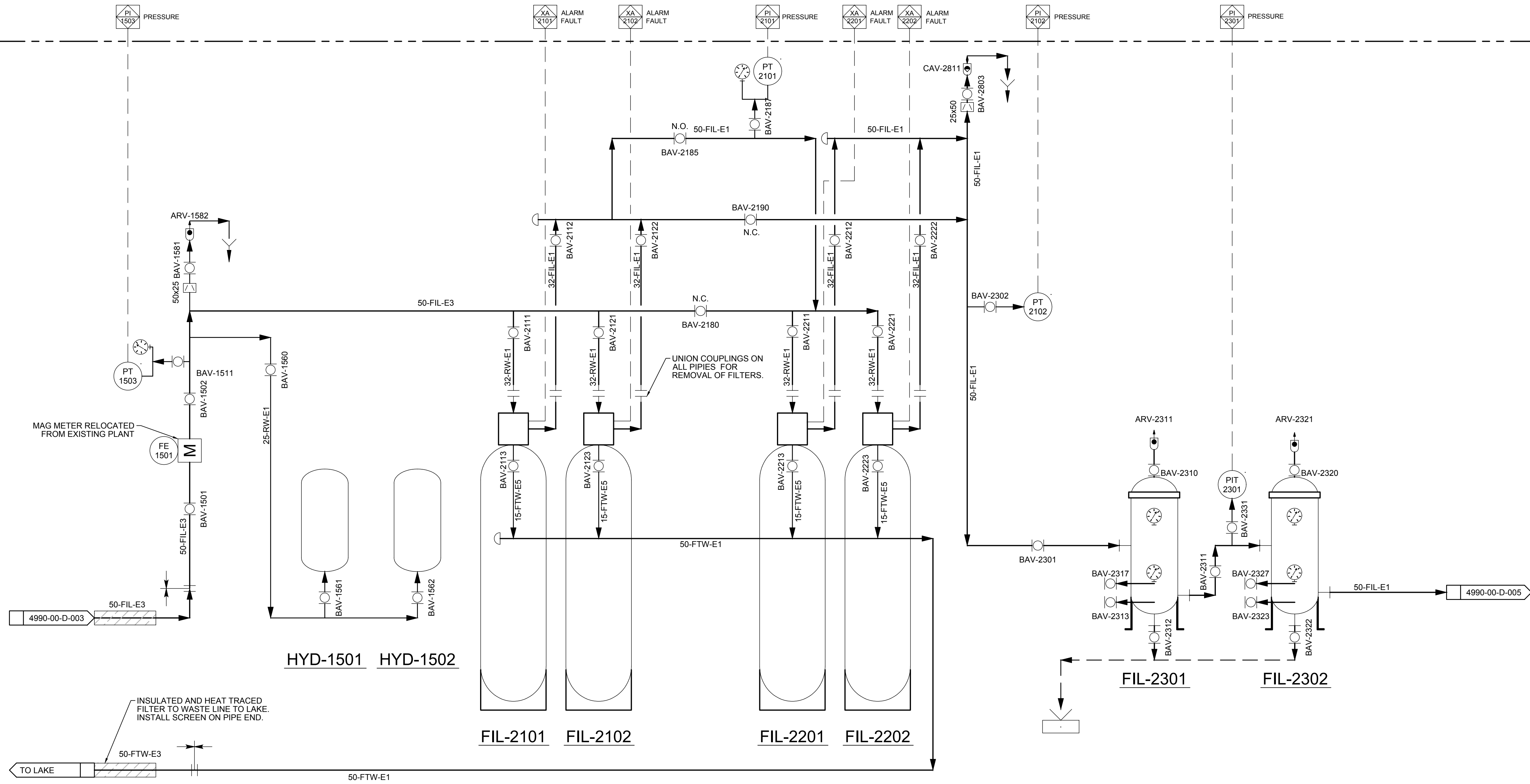


REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.
NORWAY HOUSE DETACHMENT
WATER TREATMENT PLANT
20174990-00
SCALE: AS SHOWN
PROCESS
P&ID
SHEET 1

DRAWING	REVISION	SHEET
4990-00-D-003	0	D1.0

CONTROL PANEL MCP-101



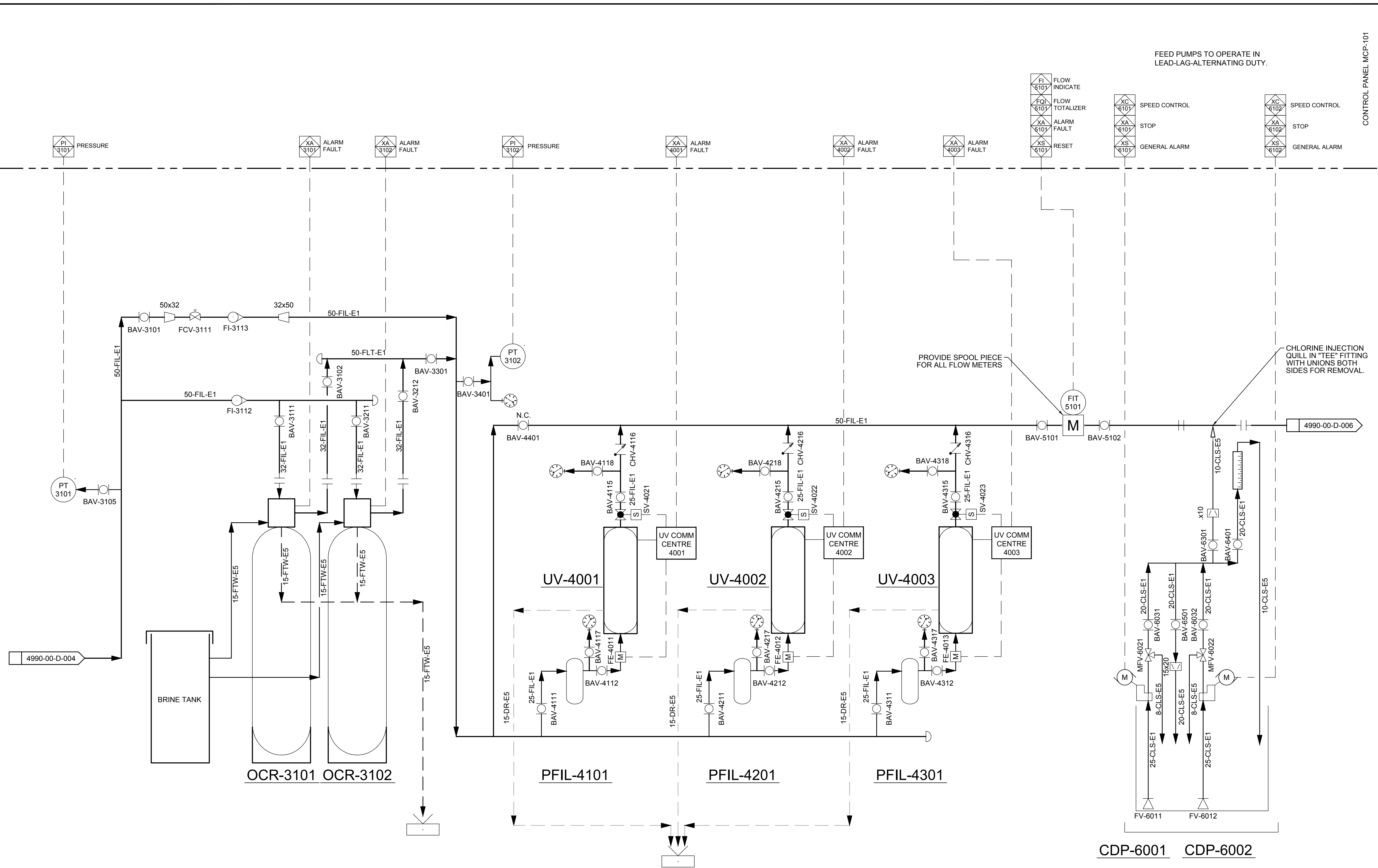
CONTROL PANEL MCP-101



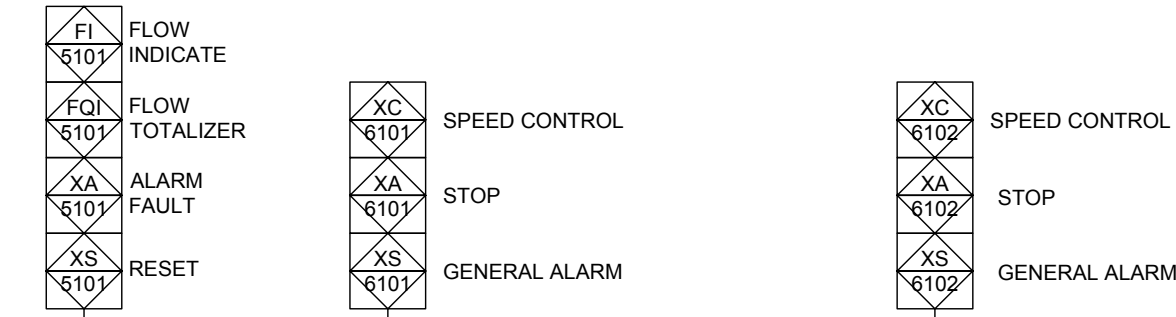
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
REV	DATE	DESIGN	DRAWN	DESCRIPTION

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 PROCESS
 P&ID
 SHEET 2

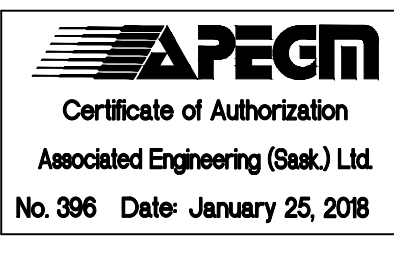
DRAWING	REVISION	SHEET
4990-00-D-004	0	D1.1



FEED PUMPS TO OPERATE IN LEAD-LAG-ALTERNATING DUTY.



CONTROL PANEL MCP-101



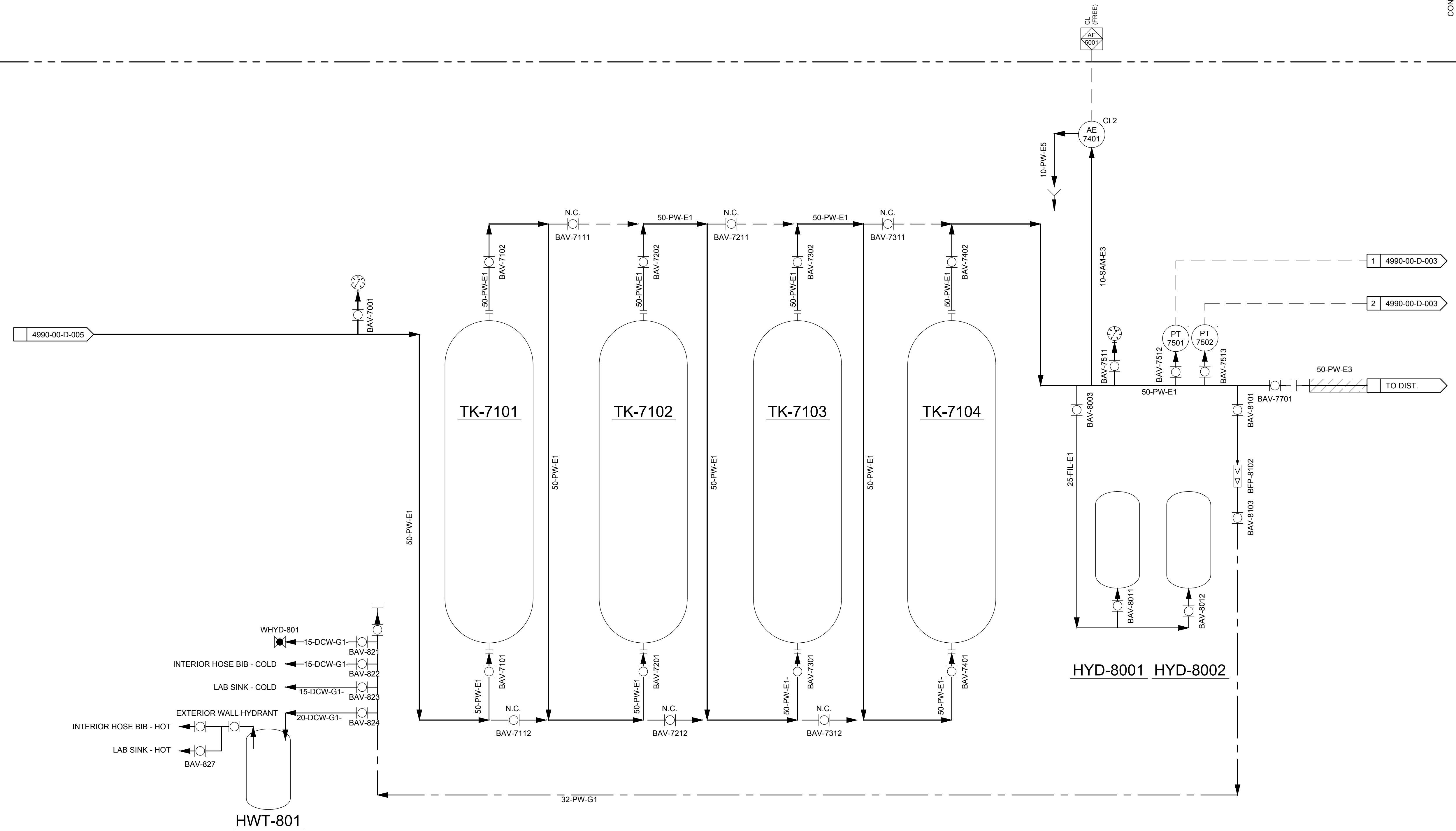
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
REV	DATE	DESIGN	DRAWN	DESCRIPTION

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 PROCESS
 P&ID
 SHEET 3

DRAWING	REVISION	SHEET
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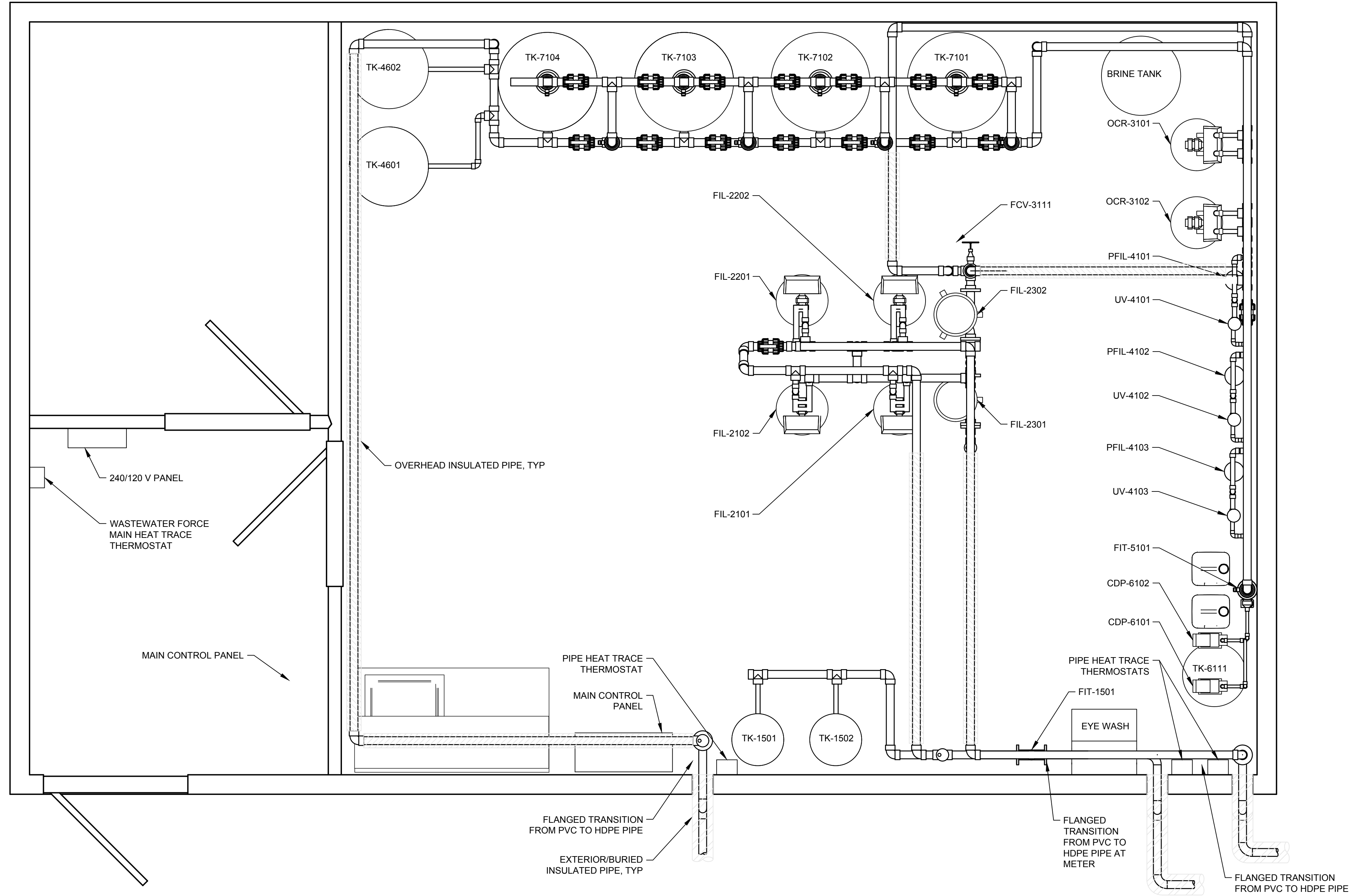


CONTROL PANEL MCP-101



REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.		
NORWAY HOUSE DETACHMENT WATER TREATMENT PLANT		
20174990-00		
SCALE: AS SHOWN		
PROCESS P&ID SHEET 4		
DRAWING	REVISION	SHEET
4990-00-D-006	0	D1.3



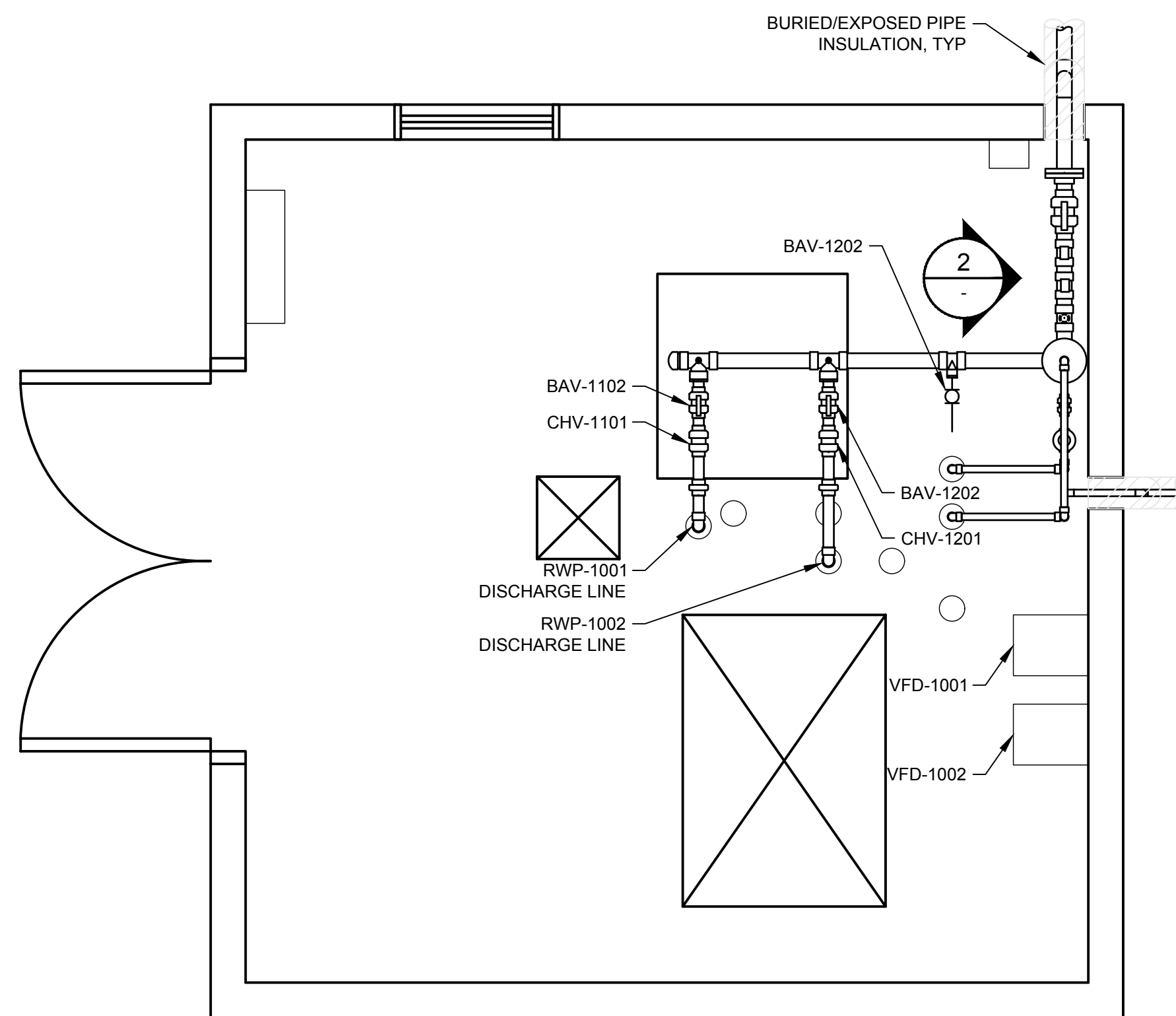
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
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REV	DATE	DESIGN	DRAWN	DESCRIPTION
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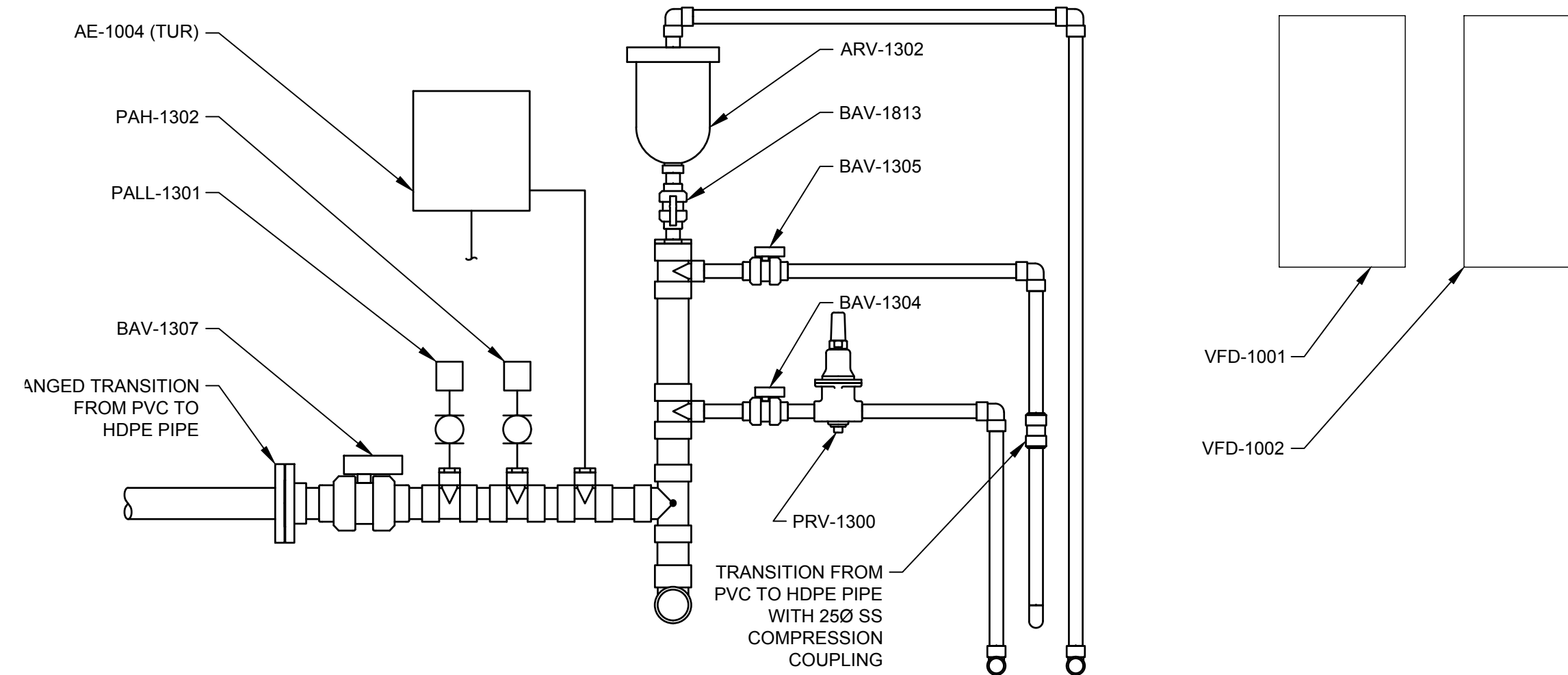
R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT

20174990-00
 SCALE: AS SHOWN
 PROCESS
 MAIN FLOOR PLAN

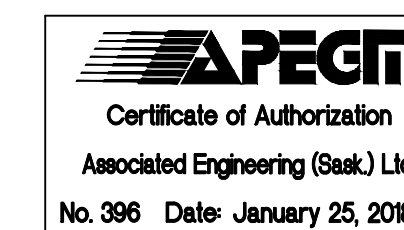
DRAWING	REVISION	SHEET
4990-00-D-101	0	D2.0



1 PLAN 1:20
 - EXISTING PUMPHOUSE MODIFICATIONS



2 ELEVATION 1:10
 -

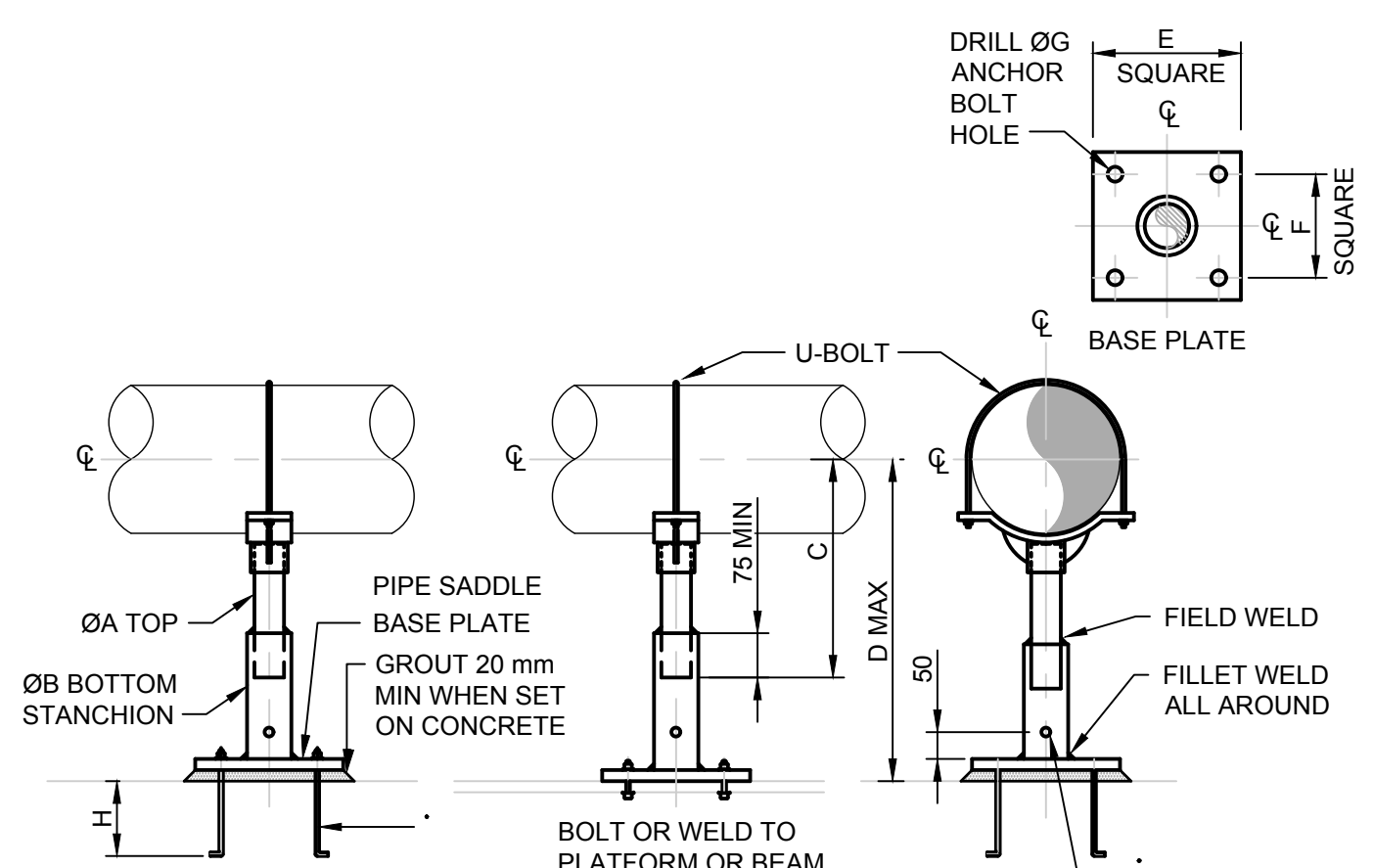


REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 PROCESS

DRAWING	REVISION	SHEET
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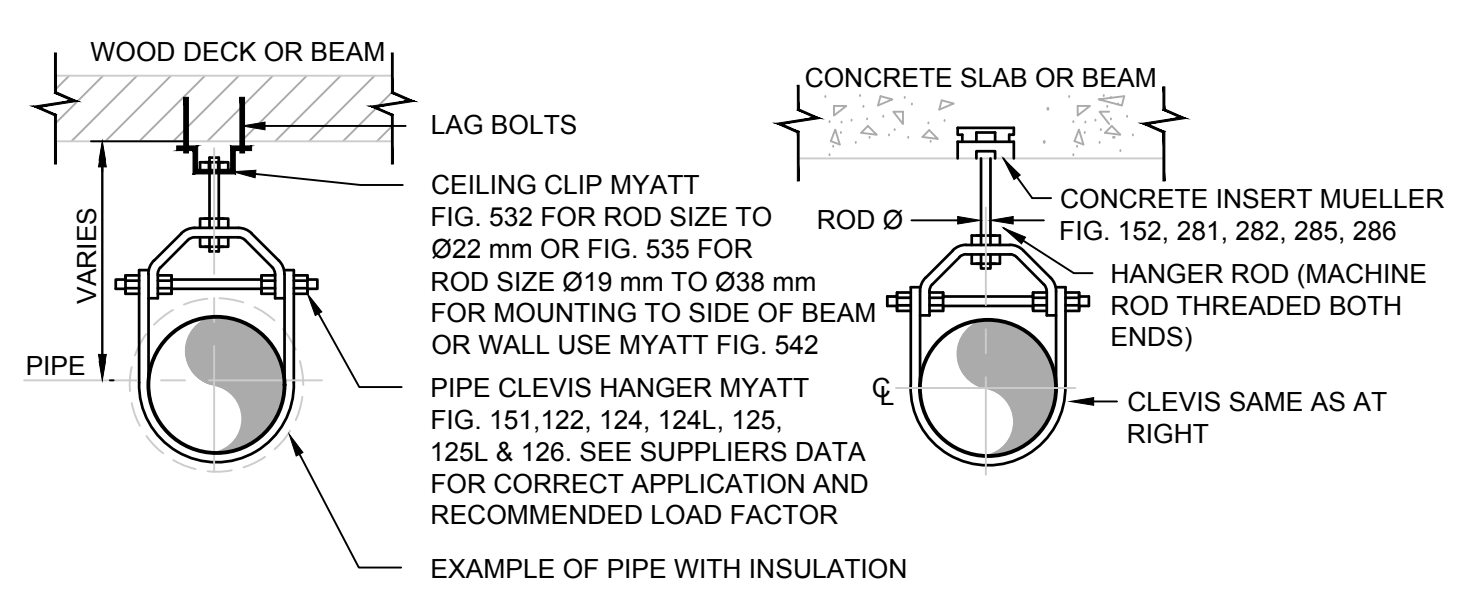
IF NOT 50 mm ADJUST SCALES
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11x17) SIZE DRAWINGS ARE 1/2 OF SCALES(S) SHOWN UNLESS NOTED OTHERWISE
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11x17) SIZE DRAWINGS ARE 1/2 OF SCALES(S) SHOWN UNLESS NOTED OTHERWISE



NOTES:
STANCHION MATERIAL SCH. 40 PIPE, OR AS PER SPECIFICATIONS.
BASE PLATE - CARBON STEEL
SHOP PRIME - 2 COATS RED OXIDE PRIMER OR GALVANIZED AS PER SPECIFICATIONS
TOUCH UP FIELD WELDS WITH PRIMER OR GALVICON
PIPE STANCHION SADDLE - MAY BE MYATT FIG. 306/306S OR MUELLER (ANVIL) FIG. 259/265

PIPE SIZE	100	125	150	200	250	300	350	400	450	500	600	750	900	-
A	80	80	80	80	80	80	80	80	90	90	100	100	100	-
B	100	100	100	100	100	100	100	100	150	150	150	150	150	-
C	MIN 240 MAX 350	255 370	270 390	310 425	350 460	370 485	380 515	425 540	485 600	510 625	590 705	670 785	745 860	-
D	1200	1200	1200	1200	1200	1200	1200	1200	1850	1850	1850	1850	1850	-
THICK x E SQUARE	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	10 mm x 250	-
F SQUARE	200	200	200	200	200	200	200	200	200	200	200	200	200	-
G DIA. x No. HOLES	20 DIAMETER x 4													
BOLT DIA. x H	M16x100 GALVANIZED OR AS APPROVED EXIST. CONCRETE USE M16 HSL HILTI													

1 DETAIL PIPE SUPPORT - PIPE STANCHION WITH SADDLE (ADJUSTABLE) NTS



OPTIONAL METHODS OF UPPER HANGER ROD ATTACHMENTS
DEPICTING DIFFERENT CEILING STRUCTURES

CEILING CLIP MYATT FIG. 532 FOR ROD SIZE TO Ø22 mm OR FIG. 535 FOR ROD SIZE Ø19 mm TO Ø38 mm FOR MOUNTING TO SIDE OF BEAM OR WALL USE MYATT FIG. 542
PIPE CLEVIS HANGER MYATT FIG. 151, 122, 124, 124L, 125, 125L & 126. SEE SUPPLIER'S DATA FOR CORRECT APPLICATION AND RECOMMENDED LOAD FACTOR
EXAMPLE OF PIPE WITH INSULATION

WOOD DECK OR BEAM
LAG BOLTS
CONCRETE SLAB OR BEAM
ROD Ø
CONCRETE INSERT MUELLER FIG. 152, 281, 282, 285, 286
HANGER ROD (MACHINE ROD THREADED BOTH ENDS)
CLEVIS SAME AS AT RIGHT

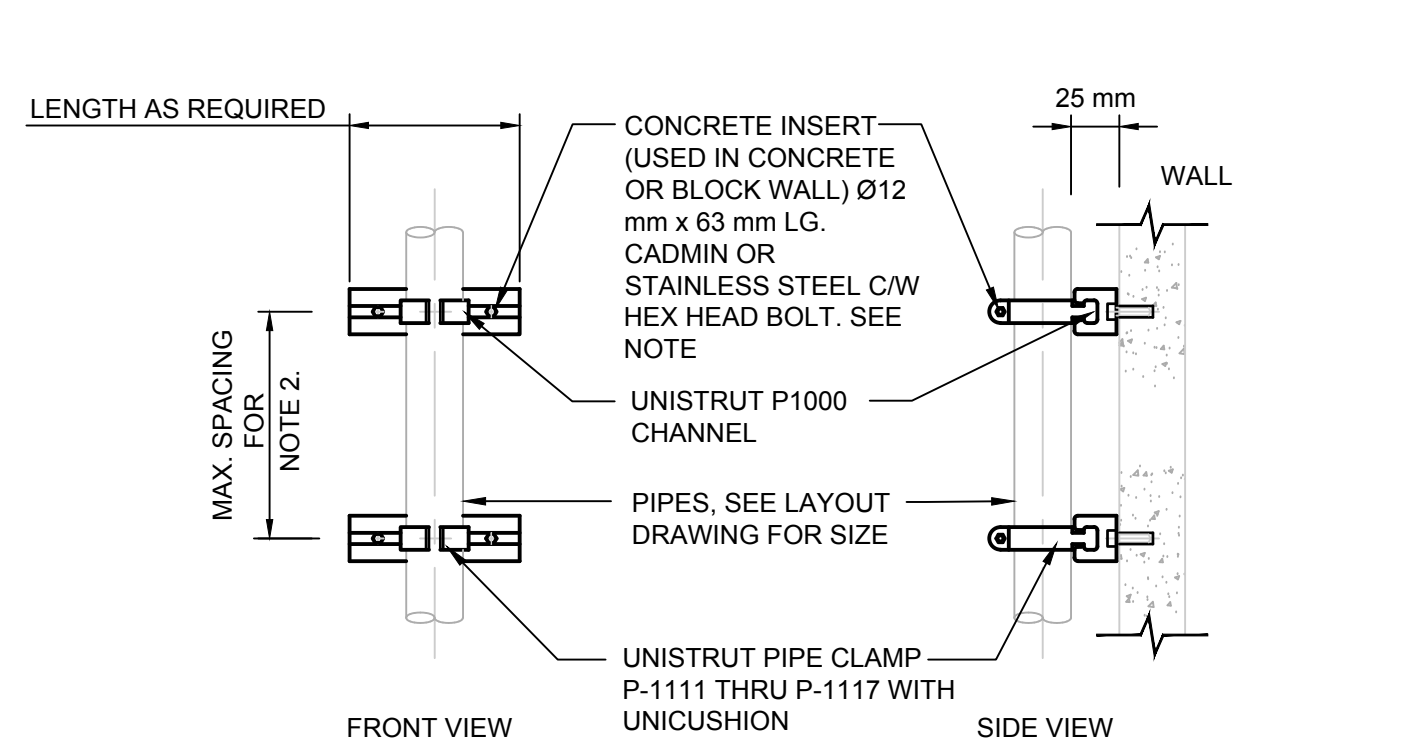
PLATE WASHER
WALL BRACKET MYATT FIG. 321 OR 322
THREADED HANGER ROD
BEAM, WALL OR COLUMN

STEEL BEAM
BEAM CLAMP MYATT FIG. 510 OR 511 FOR ROD SIZE UP TO Ø22 mm MYATT WELDED BEAM ATTACHMENT FIG. 530 OR 531 FOR ROD SIZE OVER Ø22 mm
EYE ROD

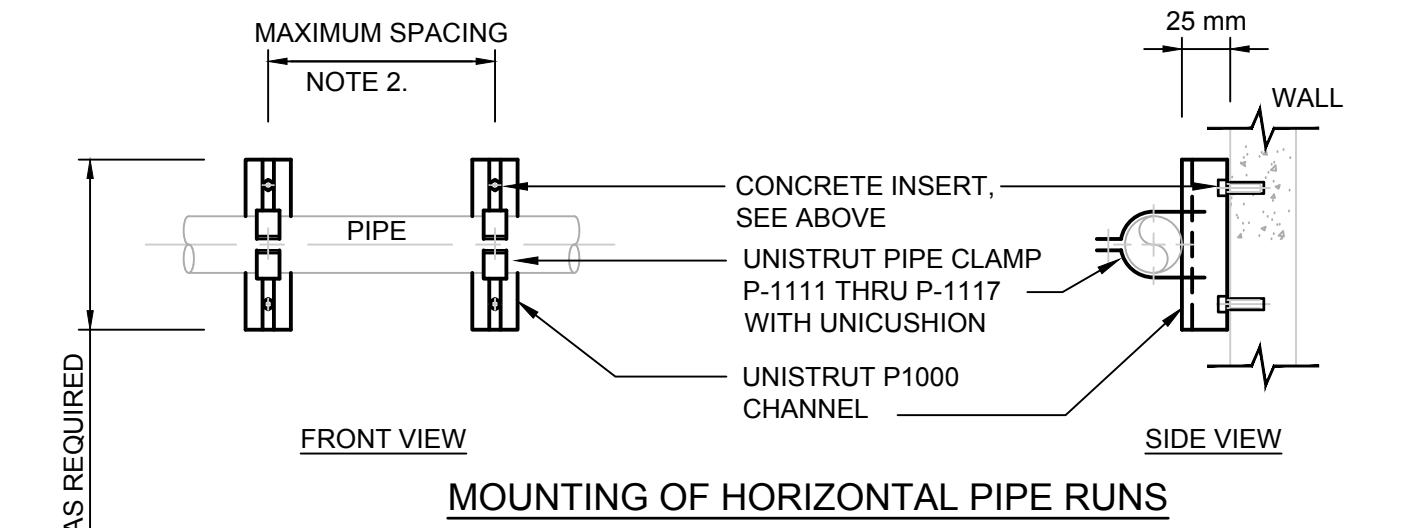
PIPE SIZE	10	15	20	25	30	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
CLEVIS No.	ROD Ø																			
MYATT 122	10	10	10	10	10	10	10	13	13	13	13	19	19	22	22	25	25	28	32	32
MYATT 124			10	10	10	10	10					19	19	22	22	25	25	28	32	32
MYATT 125												19	19	22	22	25	25	32	32	32
MYATT 126												19	19	22	22	25	25	32	32	32
MYATT 151		10	10	10	10	10	10	13	13	13	19	19	22							

NOTES:
FOR ANY OTHER TYPE OF INSTALLATION, PLEASE REFER TO MANUFACTURE'S SPECIFICATIONS ALL PARTS MUST BE FROM SAME MANUFACTURER
MANUFACTURED COMPONENTS MAY BE ORDERED FROM MYATT, MUELLER OR AS APPROVED S.L. IS THE SAFE TOTAL UNIFORMLY DISTRIBUTED LOAD IN KILOGRAMS WITH A MAXIMUM DEFLECTION OF 6 mm
FABRICATED COMPONENTS SHOP PRIME WITH 2 COATS RED OXIDE PRIMER OR GALVANIZED AS PER SPECS.

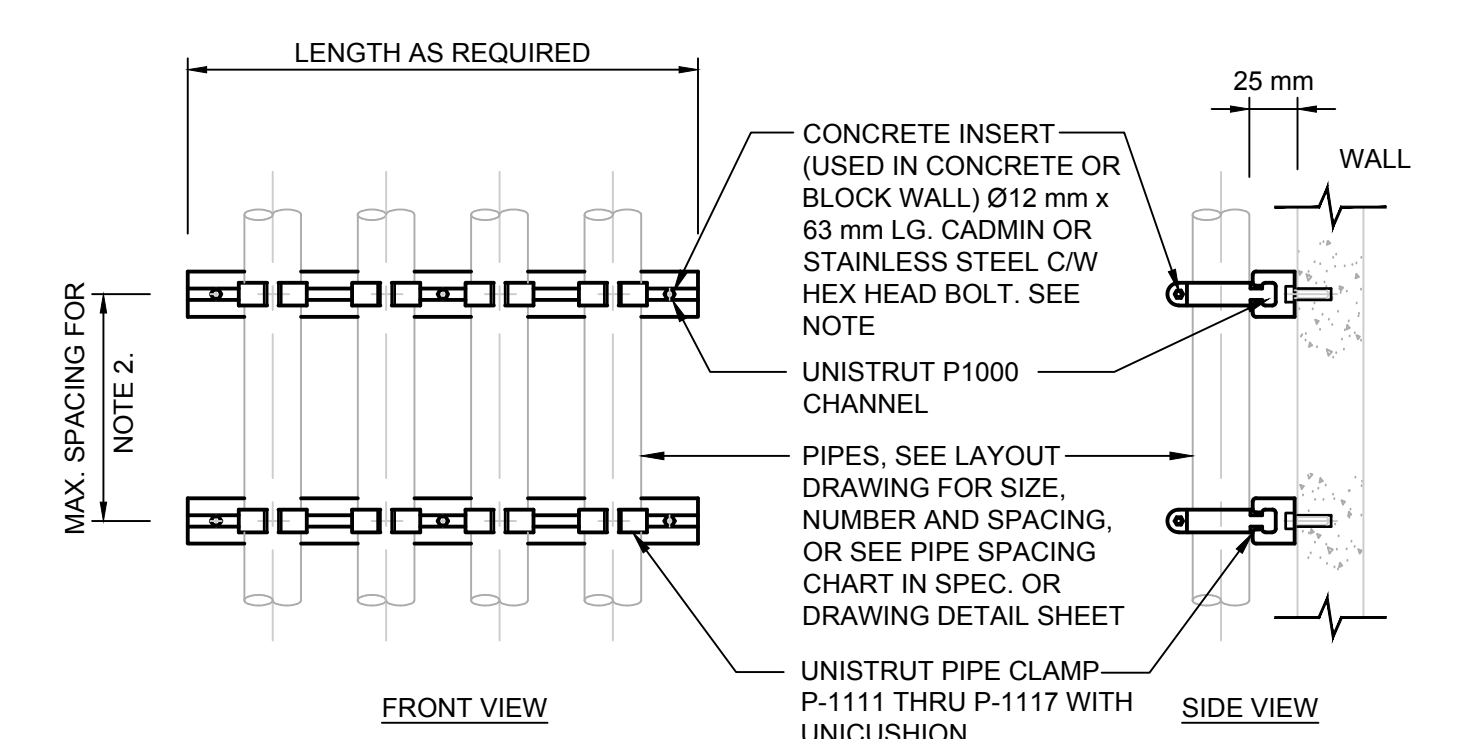
2 DETAIL PIPE HANGER - STANDARD CLEVIS HANGER NTS



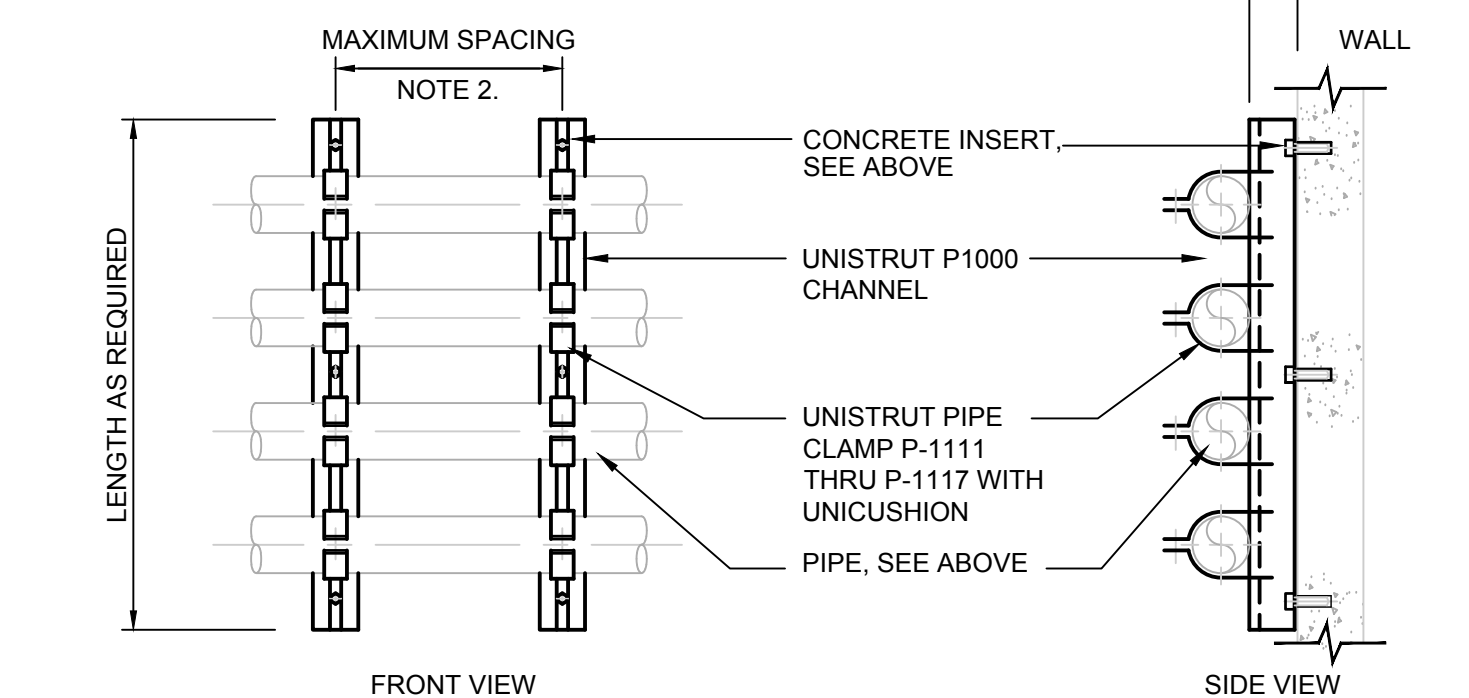
NOTES:
1.) CONCRETE INSERTS - 454kg. MAXIMUM RECOMMENDED LOAD IN GOOD CONCRETE PER INSERT ADJUST TO SUIT APPLICATION. USE BOLTS OF THE SAME RECOMMENDED LOAD WHEN FASTENING TO STEEL COLUMNS, STEEL OR WOOD WALLS.
2.) SEE TABLES "A", "B" AND "C" ON DETAIL x PAGE 4XX



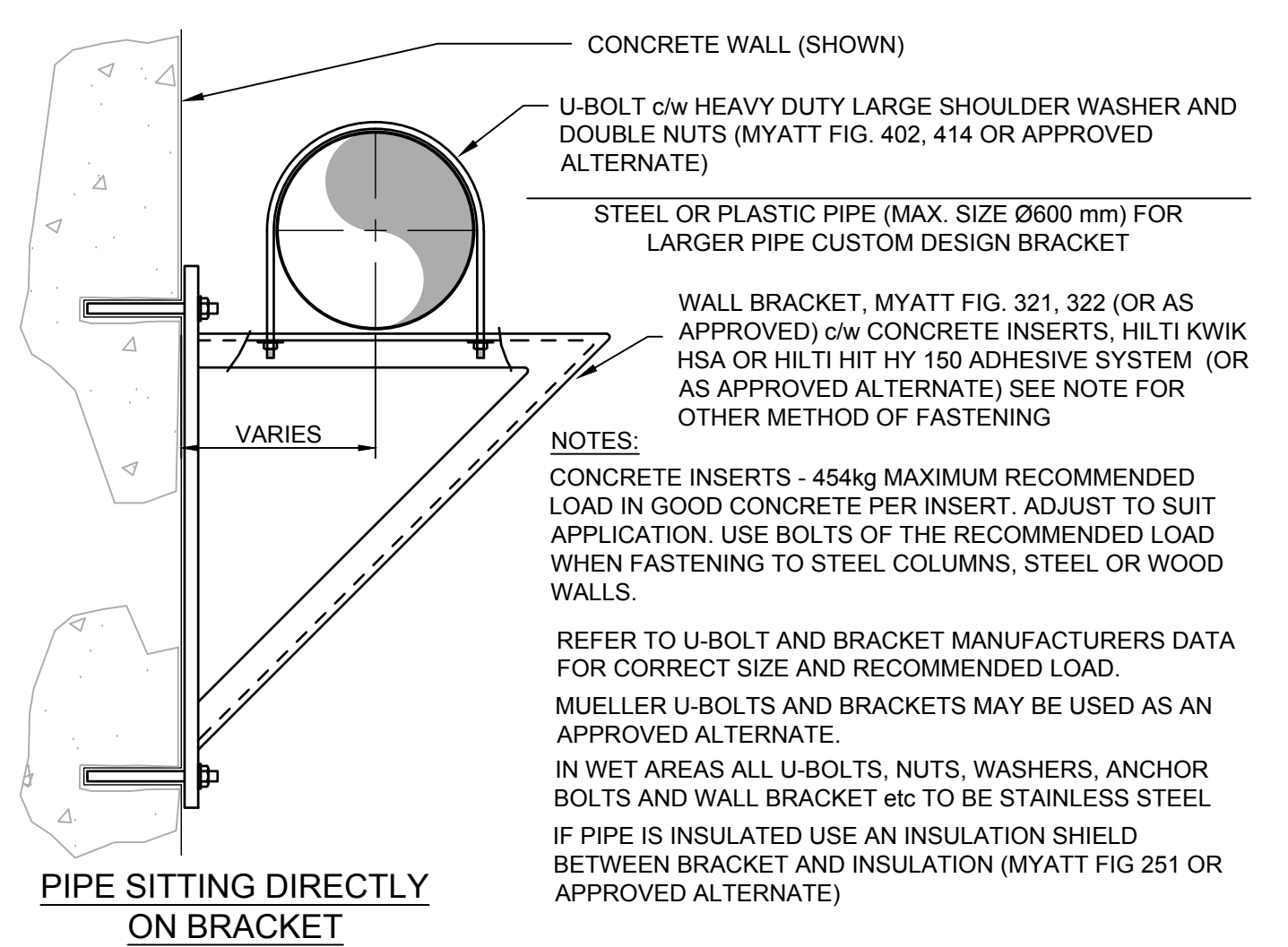
4 DETAIL PIPE SUPPORT SINGLE PIPE - UNISTRUT CHANNEL NTS



NOTES:
1.) CONCRETE INSERTS - 454kg. MAXIMUM RECOMMENDED LOAD IN GOOD CONCRETE PER INSERT ADJUST TO SUIT APPLICATION. USE BOLTS OF THE SAME RECOMMENDED LOAD WHEN FASTENING TO STEEL COLUMNS, STEEL OR WOOD WALLS.
2.) SEE TABLES "A", "B" AND "C" ON DETAIL x PAGE 4XX



5 DETAIL PIPE SUPPORT MULTI PIPE - UNISTRUT CHANNEL NTS



PIPE SITTING DIRECTLY ON BRACKET

CONCRETE WALL (SHOWN)
U-BOLT c/w HEAVY DUTY LARGE SHOULDER WASHER AND DOUBLE NUTS (MYATT FIG. 402, 414 OR APPROVED ALTERNATE)
STEEL OR PLASTIC PIPE (MAX. SIZE Ø600 mm) FOR LARGER PIPE CUSTOM DESIGN BRACKET

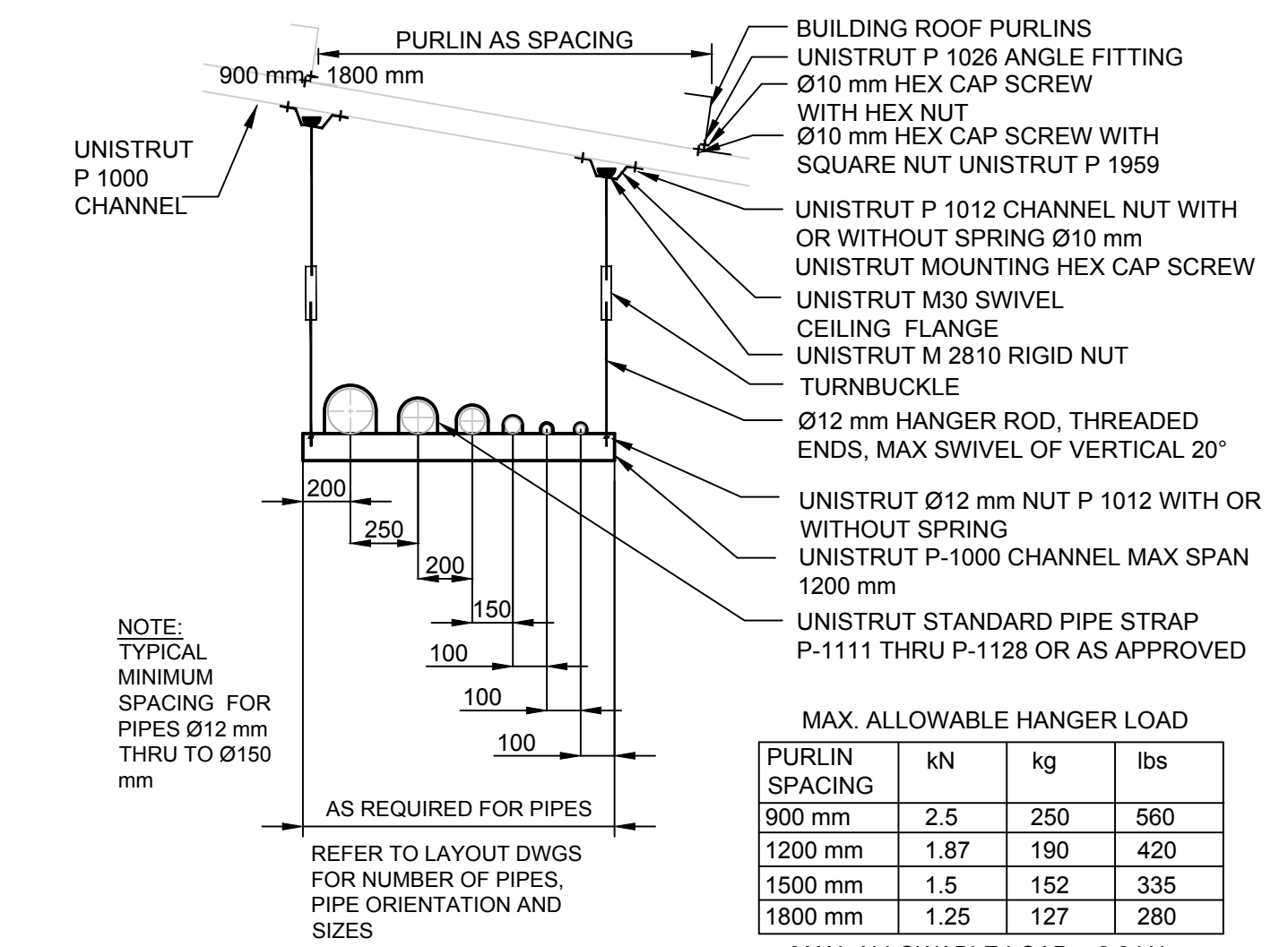
WALL BRACKET, MYATT FIG. 321, 322 (OR AS APPROVED) c/w CONCRETE INSERTS, HILTI KWIK HSA OR HILTI HIT HY 150 ADHESIVE SYSTEM (OR AS APPROVED ALTERNATE) SEE NOTE FOR OTHER METHOD OF FASTENING

NOTES:
CONCRETE INSERTS - 454kg MAXIMUM RECOMMENDED LOAD IN GOOD CONCRETE PER INSERT. ADJUST TO SUIT APPLICATION. USE BOLTS OF THE RECOMMENDED LOAD WHEN FASTENING TO STEEL COLUMNS, STEEL OR WOOD WALLS.
REFER TO U-BOLT AND BRACKET MANUFACTURERS DATA FOR CORRECT SIZE AND RECOMMENDED LOAD.
MUELLER U-BOLTS AND BRACKETS MAY BE USED AS AN APPROVED ALTERNATE.
IN WET AREAS ALL U-BOLTS, NUTS, WASHERS, ANCHOR BOLTS AND WALL BRACKET etc TO BE STAINLESS STEEL
IF PIPE IS INSULATED USE AN INSULATION SHIELD BETWEEN BRACKET AND INSULATION (MYATT FIG 251 OR APPROVED ALTERNATE)

ANCHOR CHAIR MYATT FIG. 310, 312 (OR AS APPROVED)
ALTERNATE PIPE SEATING USING ANCHOR CHAIR

ROLLER SUPPORT MYATT FIG. 254, 265 (OR AS APPROVED)
ALTERNATE PIPE SEATING USING PIPE ROLLER

3 DETAIL PIPE SUPPORT - (SINGLE PIPE) WALL BRACKET NTS



TRAPEZE DETAIL

MAX. ALLOWABLE HANGER LOAD

PURLIN SPACING	kN	kg	lbs
900 mm	2.5	250	560
1200 mm	1.87	190	420
1500 mm	1.5	152	335
1800 mm	1.25	127	280

MAX. ALLOWABLE LOAD = 2.2 kN PER CONNECTION TO PURLIN

TRAPEZE HANGER

SWAY BRACE DETAIL

NOTE: PROVIDE ANTI SWAY BRACING ON EACH END AND EVERY THIRD TRAPEZE HANGER

6 DETAIL PIPING SUPPORT - TRAPEZE HANGER DETAIL NTS

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

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DATE: 2018-01-25; Tyler Dyckho

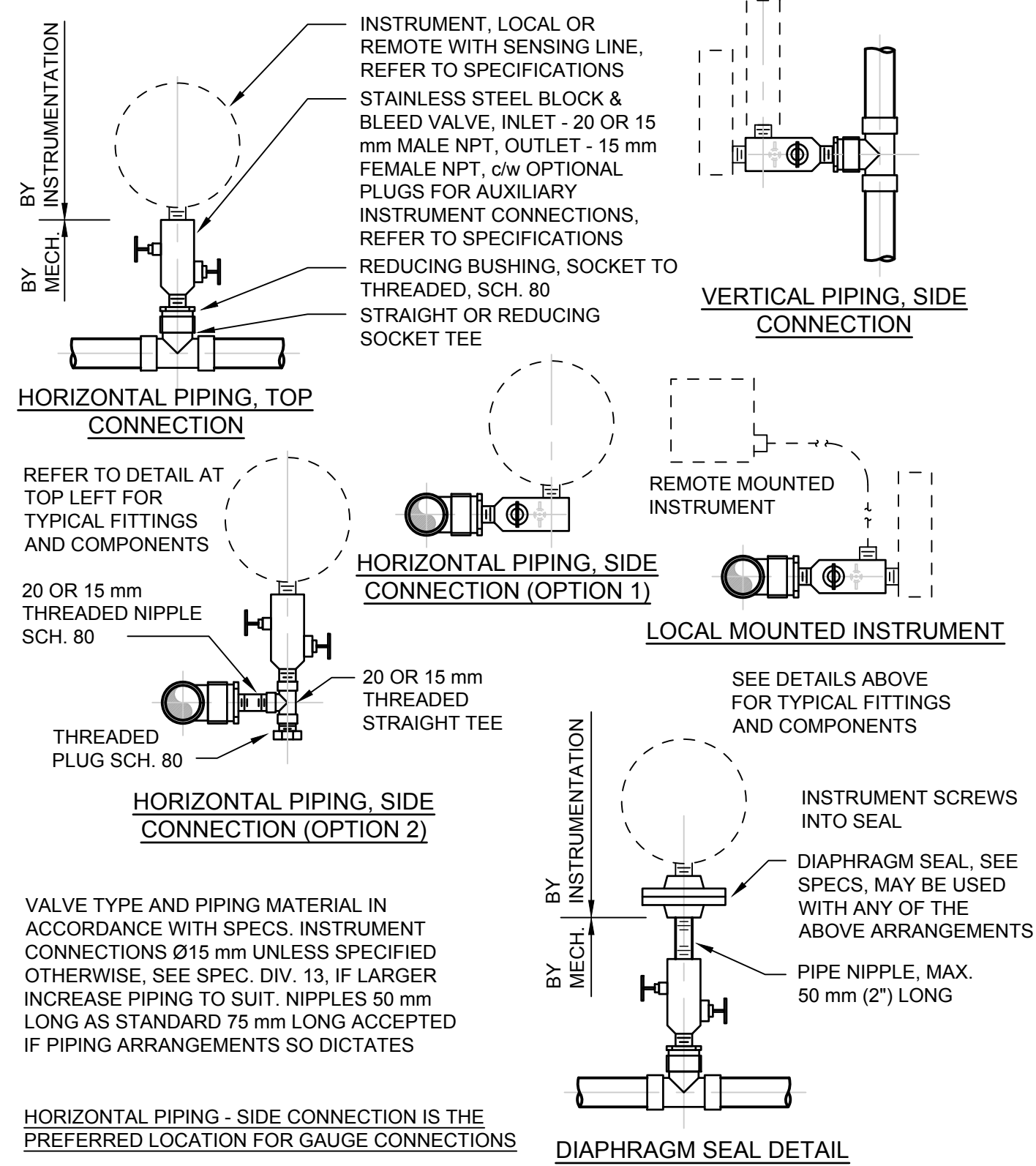
IF NOT 50 mm ADJUST SCALES

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (1'x17') SIZE DRAWINGS ARE 1/2" OF SCALES(S) SHOWN UNLESS NOTED OTHERWISE

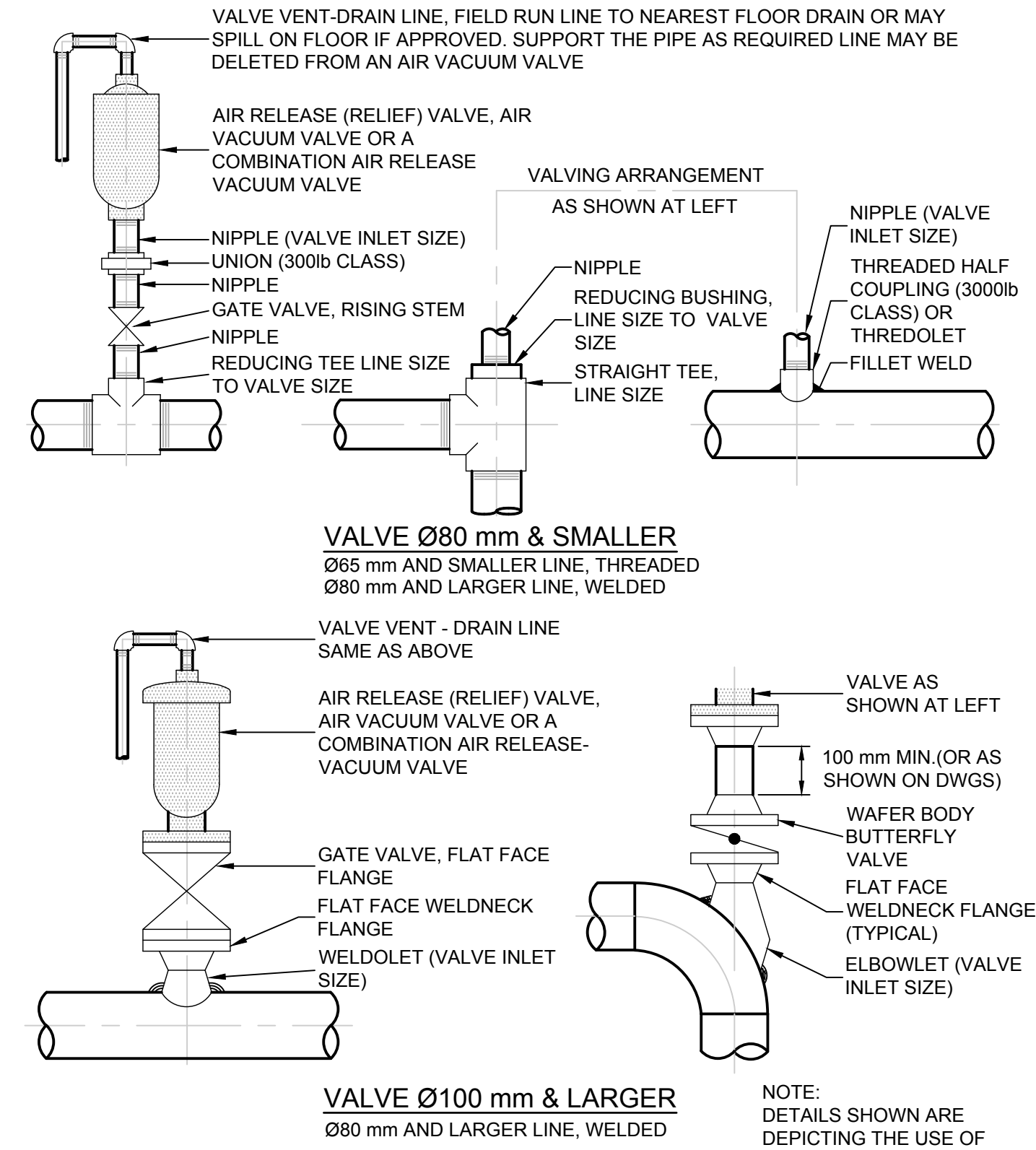
TABLE "C" PIPE LINES UP TO 40°C WITH SCH. 40 TO SCH 80 PVC PIPE, INSULATED OR UNINSULATED, SUPPORTED FROM STRUCTURES THAT CAN UTILIZE THE MAXIMUM SPACING FOR THE PIPE.

MAXIMUM HORIZONTAL SPACING BETWEEN PIPE SUPPORTS										
NOMINAL PIPE SIZE IN MILLIMETRES										
	15	20	25	40	50	65	80	100	150	200
MAX. SPAN (mm) WATER SERVICE	1000	1000	1200	1400	1800	1800	2100	2100	2400	2400
RECOMMENDED HANGER ROD SIZE	10	10	10	10	10	13	13	16	19	19

MAXIMUM HORIZONTAL SPACING BETWEEN PIPE SUPPORTS										
NOMINAL PIPE SIZE IN MILLIMETRES										
	250	300	350	400	450	500	600			
MAX. SPAN (mm) WATER SERVICE	2400	2400	2800	2800	2800	2800	2800			
RECOMMENDED HANGER ROD SIZE	22	22	25	25	25	25	25			

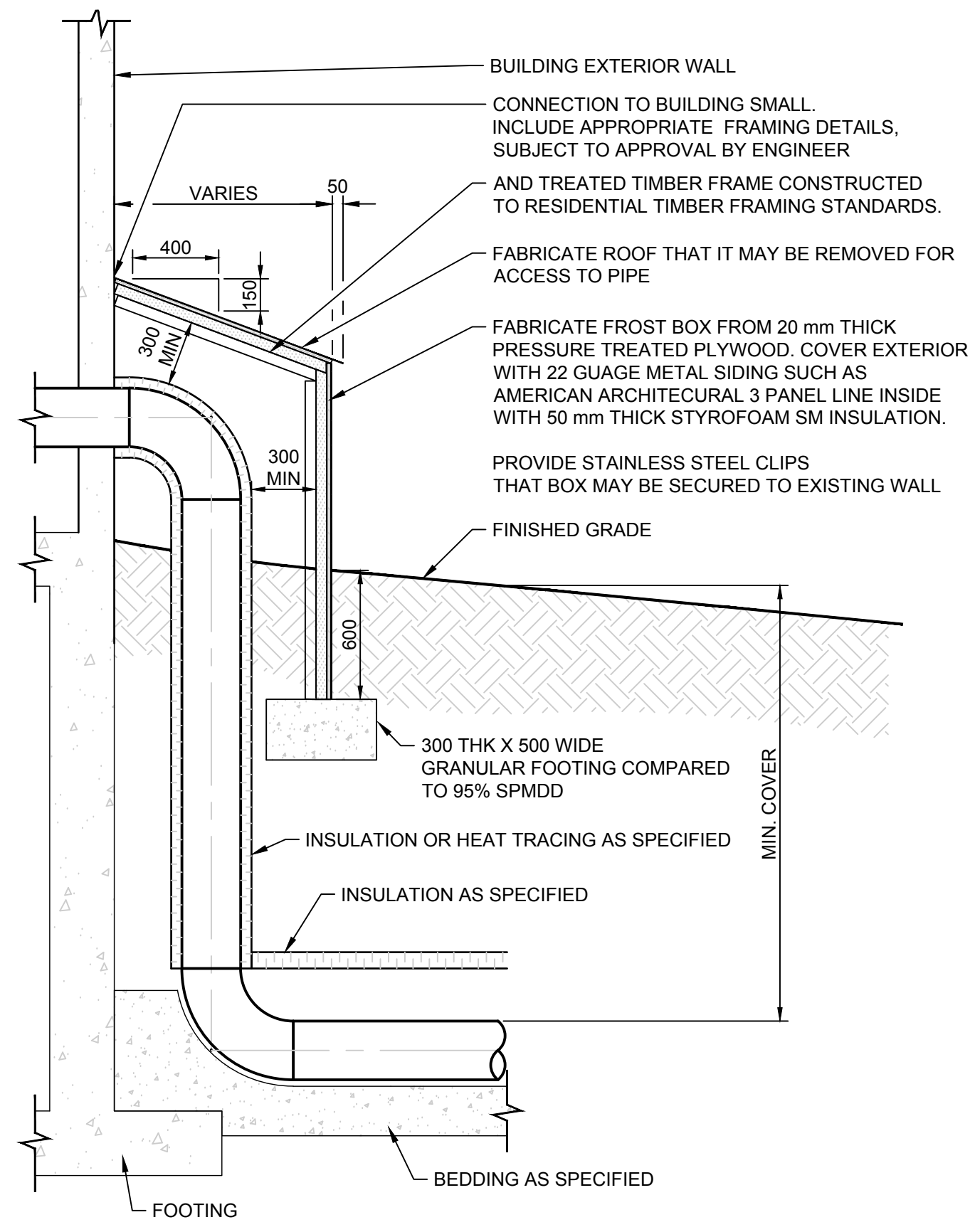


PLASTIC PIPING Ø150 mm AND SMALLER



NOTE: DETAILS SHOWN ARE DEPICTING THE USE OF EITHER A GATE VALVE OR BUTTERFLY VALVE, USE APPROPRIATE PIPING WITH CORRESPONDING VALVE.

1 DETAIL NTS
PIPE SUPPORT - SUPPORT SPACING CHART



4 DETAIL NTS
TYPICAL FROST BOX SECTION

2 DETAIL NTS
INSTRUMENT CONNECTION TO PVC PIPE - INSTRUMENT PIPING DETAIL

3 DETAIL NTS
COMBINATION AIR VACUUM, AIR RELIEF AND AIR VACUUM VALVE PIPING DETAIL



REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.

NORWAY HOUSE DETACHMENT
WATER TREATMENT PLANT

20174990-00

SCALE: AS SHOWN

PROCESS
DETAILS

DRAWING	REVISION	SHEET
4990-00-D-502	0	D5.2

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DATE: 2018-01-25; Tyler Dyckho

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS. TABLE D (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE
IF NOT 50 mm ADJUST SCALES 50 mm

EQUIPMENT LIST

TAG	DESCRIPTION	MANUFACTURER	MODEL NO.	COMMENTS
RWP-1001	WELL PUMP	GRUNDFOS	16S15-14	INSTALL IN EXISTING WET WELL
RWP-1002	WELL PUMP	GRUNDFOS	16S15-14	INSTALL IN EXISTING WET WELL
AE-1004-TUR	TURBIDIMETER			
PRV-1300	CONTROL VALVE	CLA-VAL	55B-60	
PALL-1301	PRESSURE SWITCH			
PAH-1302	PRESSURE SWITCH			
FE-1501	MAGNETIC	NEPTUNE		
HYD-1501	HYDRO-PNEUMATIC TANK	PENTAIR	CPV-40T	
HYD-1502	HYDRO-PNEUMATIC TANK	PENTAIR	CPV-40T	
PT-1503	PRESSURE TRANSMITTER			
FIL-2101	MULTIMEDIA FILTER	VIQUA	C53-AG16-15SM	
FIL-2102	MULTIMEDIA FILTER	VIQUA	C53-AG16-15SM	
PT-2101	PRESSURE TRANSMITTER			
PT-2102	PRESSURE TRANSMITTER			
FIL-2201	MULTIMEDIA FILTER	VIQUA	C53-AG16-15SM	
FIL-2202	MULTIMEDIA FILTER	VIQUA	C53-AG16-15SM	
FIL-2301	FILTER	HARMSCO	HUR-170	0.35 µm
FIL-2302	FILTER	HARMSCO	HUR-170	1.0 µm ABSOLUTE
PT-2301	PRESSURE TRANSMITTER			
OCR-3101	OCR FILTER	VIQUA	43X-1665-15SM-26	8 BED VOLUMES PER HOUR
OCR-3102	OCR FILTER	VIQUA	43X-1665-15SM-26	8 BED VOLUMES PER HOUR
PT-3101	PRESSURE TRANSMITTER			
PT-3102	PRESSURE TRANSMITTER			
FI-3112	ROTAMETER	KING INSTRUMENT	7331-3-6-2-0-64W	
FI-3113	ROTAMETER	KING INSTRUMENT	7331-3-6-2-0-64W	
UV-4001	UV REACTOR	VIQUA	PRO 30	INCLUDE FLOW METER SELENOID VALVE AND COMM CENTRE
UV-4002	UV REACTOR	VIQUA	PRO 30	INCLUDE PREFILTER, FLOW METER, SELENOID VALVE AND COMM CENTRE
UV-4003	UV REACTOR	VIQUA	PRO 30	INCLUDE FLOW METER SELENOID VALVE AND COMM CENTRE
FE-4011	MAGNETIC			SUPPLIED W/ UV UNIT
FE-4012	MAGNETIC			SUPPLIED W/ UV UNIT
FE-4013	MAGNETIC			SUPPLIED W/ UV UNIT
SV-4021	CONTROL VALVE			SUPPLIED W/ UV UNIT
SV-4022	CONTROL VALVE			SUPPLIED W/ UV UNIT
SV-4023	CONTROL VALVE			SUPPLIED W/ UV UNIT
PFIL-4101	UV PRE-FILTER			
PFIL-4201	UV PRE-FILTER			
PFIL-4301	UV PRE-FILTER			
FIT-5101	MAGNETIC	E&H	PROMAG 50	
CDP-6001	CHLORINE DOSING PUMP	GRUNDFOS	DDA7.5-16AR	WITH ACCESSORIES
IQ-6001	INJECTION QUILL	SAFTFLO	EB125-S-P-50-B-V	WITH FLEXIBLE HOSE ASSEMBLY
CDP-6002	CHLORINE DOSING PUMP	GRUNDFOS	DDA7.5-16AR	WITH ACCESSORIES
TK-6111	CHLORINE TANK	NORWESCO	MODEL 43608 (22GAL)	
TK-6121	SPILL CONTAINMENT	NEW PIG	POLY DRIP DECK(650x650x150)	
TK-7101	VESSEL	PENTAIR	RT-185F	
TK-7102	VESSEL	PENTAIR	RT-185F	
TK-7103	VESSEL	PENTAIR	RT-185F	
TK-7104	VESSEL	PENTAIR	RT-185F	
AE-7401-CL2	CHLORINE ANALYZER			
PT-7501	PRESSURE TRANSMITTER			
PT-7502	PRESSURE TRANSMITTER			
HYD-8001	HYDRO TANK	PENTAIR	CPV627	
HYD-8002	HYDRO TANK	PENTAIR	CPV627	



0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
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REV	DATE	DESIGN	DRAWN	DESCRIPTION
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R.C.M.P.
NORWAY HOUSE DETACHMENT
WATER TREATMENT PLANT
20174990-00
SCALE: AS SHOWN
PROCESS
EQUIPMENT SCHEDULE

DRAWING	REVISION	SHEET
4990-00-D-601	0	D6.0

P:\20174990\00_FCMP_Norway_House\Working_Dwg\400_Process_Mech\4990-00-d-601-602.dwg
DATE: 2018-01-25; Tyler Dyckho

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (220x) SIZE DRAWINGS. TABLE D (1'X17") SIZE DRAWINGS ARE 1/2" OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE

IF NOT 50 mm ADJUST SCALES
30 mm

VALVE LIST

TAG	SIZE	SPEC	DESCRIPTION
CHV-1101	50	E1	CHECK VALVE
BAV-1102	50	E1	BALL VALVE
BAV-1103	15	H1	BALL VALVE
CHV-1201	50	E1	CHECK VALVE
BAV-1202	50	E1	BALL VALVE
BAV-1203	15	H1	BALL VALVE
ARV-1302	25	E1	AIR RELIEF VALVE
BAV-1304	25	E1	BALL VALVE
BAV-1305	25	E1	BALL VALVE
BAV-1306	15	E5	BALL VALVE
BAV-1307	50	E1	BALL VALVE
BAV-1408	15	H1	BALL VALVE
BAV-1409	15	H1	BALL VALVE
BAV-1501	50	E1	BALL VALVE
BAV-1502	50	E1	BALL VALVE
BAV-1511	15	H1	BALL VALVE
BAV-1560	25	E1	BALL VALVE
BAV-1561	25	E1	BALL VALVE
BAV-1562	25	E1	BALL VALVE
BAV-1581	25	E1	BALL VALVE
ARV-1582	25	E1	AIR RELIEF VALVE
BAV-1701	8	H1	SAMPLE PETCOCK
BAV-1813	25	E1	BALL VALVE
BAV-2111	32	E1	BALL VALVE
BAV-2112	32	E1	BALL VALVE
BAV-2113	15	E5	BALL VALVE
BAV-2121	32	E1	BALL VALVE
BAV-2122	32	E1	BALL VALVE
BAV-2123	15	E5	BALL VALVE
BAV-2180	50	E1	BALL VALVE
BAV-2185	50	E1	BALL VALVE
BAV-2187	15	H1	BALL VALVE
BAV-2190	50	E1	BALL VALVE
BAV-2211	32	E1	BALL VALVE
BAV-2212	32	E1	BALL VALVE
BAV-2213	15	E5	BALL VALVE
BAV-2221	32	E1	BALL VALVE
BAV-2222	32	E1	BALL VALVE
BAV-2223	15	E5	BALL VALVE
BAV-2301	50	E1	BALL VALVE
BAV-2302	15	H1	BALL VALVE
BAV-2310	25	H1	BALL VALVE
BAV-2311	50	E1	BALL VALVE
ARV-2311	25	H1	AIR RELIEF VALVE
BAV-2312	25	H1	BALL VALVE
BAV-2313	25	H1	BALL VALVE
BAV-2317	8	H1	BALL VALVE
BAV-2320	25	H1	BALL VALVE
ARV-2321	25	H1	AIR RELIEF VALVE
BAV-2322	25	H1	BALL VALVE
BAV-2323	25	H1	BALL VALVE
BAV-2327	8	H1	BALL VALVE
BAV-2331	25	E1	BALL VALVE
BAV-2803	25	E1	BALL VALVE
CAV-2811	25	E1	COMBINATION AIR VALVE
BAV-3101	50	E1	BALL VALVE
BAV-3102	32	E1	BALL VALVE
BAV-3105	15	H1	BALL VALVE
BAV-3111	32	E1	BALL VALVE
FCV-3111	32	E1	DIAPHRAGM VALVE
BAV-3211	32	E1	BALL VALVE
BAV-3212	32	E1	BALL VALVE
BAV-3301	50	E1	BALL VALVE
BAV-3401	25	E1	BALL VALVE
BAV-4111	25	E1	BALL VALVE
BAV-4112	32	E1	BALL VALVE
BAV-4115	25	E1	BALL VALVE
CHV-4116	25	E1	CHECK VALVE
BAV-4117	15	H1	BALL VALVE
BAV-4118	15	H1	BALL VALVE
BAV-4211	25	E1	BALL VALVE

VALVE LIST

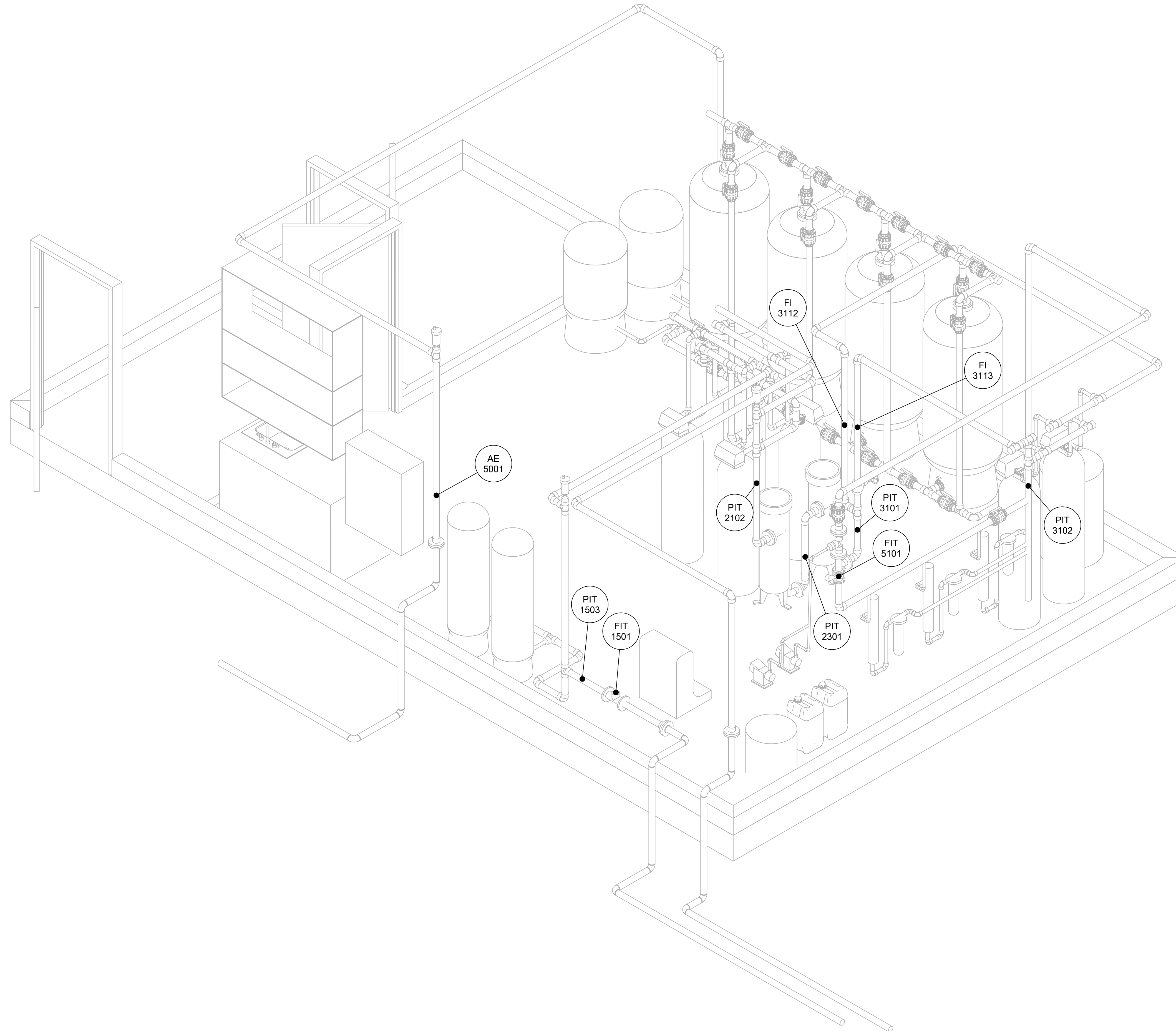
TAG	SIZE	SPEC	DESCRIPTION
BAV-4212	32	E1	BALL VALVE
BAV-4215	25	E1	BALL VALVE
CHV-4216	25	E1	CHECK VALVE
BAV-4217	15	H1	BALL VALVE
BAV-4218	15	H1	BALL VALVE
BAV-4311	25	E1	BALL VALVE
BAV-4312	32	E1	BALL VALVE
BAV-4315	25	E1	BALL VALVE
CHV-4316	25	E1	CHECK VALVE
BAV-4317	15	H1	BALL VALVE
BAV-4318	15	H1	BALL VALVE
BAV-4401	50	E1	BALL VALVE
BAV-5101	50	E1	BALL VALVE
BAV-5102	50	E1	BALL VALVE
FV-6011	25	E1	FOOT VALVE
FV-6012	25	E1	FOOT VALVE
MFV-6021			MULTI-FUNCTION VALVE
MFV-6022			MULTI-FUNCTION VALVE
BAV-6031	20	E1	BALL VALVE
BAV-6032	20	E1	BALL VALVE
BAV-6301	10	E1	BALL VALVE
BAV-6401	20	E1	BALL VALVE
BAV-6501	20	E1	BALL VALVE
BAV-7001	8	H1	BALL VALVE
BAV-7101	50	E1	BALL VALVE
BAV-7102	50	E1	BALL VALVE
BAV-7111	50	E1	BALL VALVE
BAV-7112	50	E1	BALL VALVE
BAV-7201	50	E1	BALL VALVE
BAV-7202	50	E1	BALL VALVE
BAV-7211	50	E1	BALL VALVE
BAV-7212	50	E1	BALL VALVE
BAV-7301	50	E1	BALL VALVE
BAV-7302	50	E1	BALL VALVE
BAV-7311	50	E1	BALL VALVE
BAV-7312	50	E1	BALL VALVE
BAV-7401	50	E1	BALL VALVE
BAV-7402	50	E1	BALL VALVE
BAV-7511	15	H1	BALL VALVE
BAV-7512	15	H1	BALL VALVE
BAV-7513	15	H1	BALL VALVE
BAV-7701	50	E1	BALL VALVE
BAV-8003	25	E1	BALL VALVE
WHYD-801	15	G1	GLOBE VALVE
BAV-8011	25	E1	BALL VALVE
BAV-8012	25	E1	BALL VALVE
BAV-8101	32	G1	BALL VALVE
BFP-8102	32	G1	BACKFLOW PREVENTOR
BAV-8103	32	G1	BALL VALVE
BAV-821	15	G1	BALL VALVE
BAV-822	15	G1	BALL VALVE
BAV-823	15	G1	BALL VALVE
BAV-824	20	G1	BALL VALVE
BAV-825	15	G1	BALL VALVE
BAV-826	15	G1	BALL VALVE
BAV-827	15	G1	BALL VALVE
BAV-9810	32	G1	BALL VALVE



0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER
REV	DATE	DESIGN	DRAWN	DESCRIPTION

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT
 20174990-00
 SCALE: AS SHOWN
 PROCESS
 VALVE SCHEDULE

DRAWING	REVISION	SHEET
4990-00-D-602	0	D6.1



REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

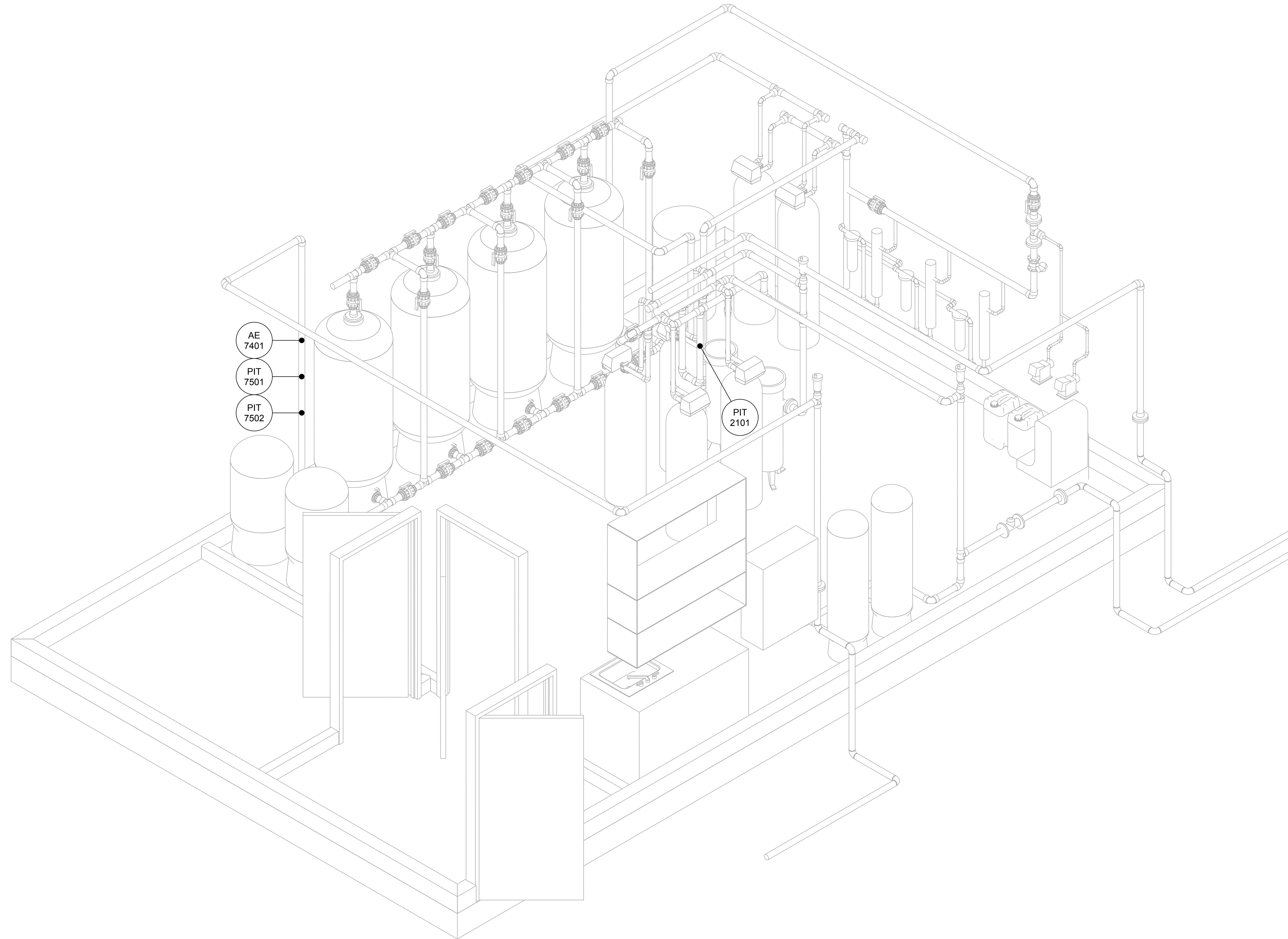
R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT

20174990-00

SCALE: AS SHOWN

PROCESS
 MAIN FLOOR PLAN
 3D VIEW

DRAWING	REVISION	SHEET
4990-00-D-901	0	D7.0



REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2018JAN25	K. ANDERSON	C. REESE	ISSUED FOR TENDER

R.C.M.P.
 NORWAY HOUSE DETACHMENT
 WATER TREATMENT PLANT

20174990-00

SCALE: AS SHOWN

PROCESS
 MAIN FLOOR PLAN
 3D VIEW

DRAWING	REVISION	SHEET
4990-00-D-902	0	D7.1