

Public Works and  
Government Services  
Canada

Real Property Services  
Western Region

Travaux publics et  
Services gouvernementaux  
Canada

Service Immobiliers  
Région de l'Ouest

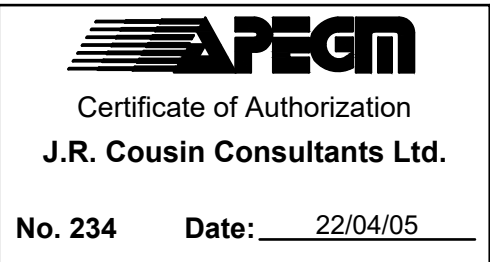
# RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

PROJECT NO.  
R.118541

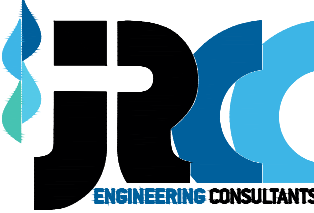
## DRAWING LIST

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<u>GENERAL INFORMATION</u>	
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GI02	DRAWING LEGEND, ABBREVIATIONS INDEX, KEY PLAN AND LOCATION PLAN
GI03	OVERALL LOCATION PLAN
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C03	TRENCH PIPING, MANHOLE, PIPE INSULATION, WATER SERVICE LINE, ROAD CROSS-SECTION, SWALE AND FENCE DETAILS
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JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

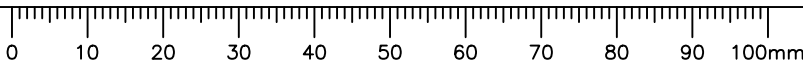
Project titleProjet

### RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWGSC Project Manager JASON FREZZA	Administrateur de Projets TPSCG
Drawing title	Titre du dessin

#### TITLE PAGE AND PLAN INDEX

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R-118541	GI01 OF 3	1



# Canada



DRAWING LEGEND:

PIPING:

	EXISTING WATERMAIN
	PROPOSED WATERMAIN
	FUTURE WATERMAIN
	EXISTING SEWERMAIN
	PROPOSED SEWERMAIN
	FUTURE SEWERMAIN
	EXISTING FORCEMAN/PRESSURE SEWER
	PROPOSED FORCEMAN/PRESSURE SEWER
	FUTURE FORCEMAN/PRESSURE SEWER
	EXISTING RAW WATERMAIN
	PROPOSED RAW WATERMAIN
	FUTURE RAW WATERMAIN
	EXISTING LAND DRAINAGE SEWER
	PROPOSED LAND DRAINAGE SEWER
	FUTURE LAND DRAINAGE SEWER
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	EXISTING VALVE
	PROPOSED VALVE
	EXISTING CLEANOUT
	PROPOSED CLEANOUT
	EXISTING MANHOLE
	PROPOSED MANHOLE
	EXISTING CURBSTOP
	PROPOSED CURBSTOP
	EXISTING CURB INLET
	PROPOSED CURB INLET
	EXISTING CATCH BASIN
	PROPOSED CATCH BASIN

ROADS AND DRAINAGE:

	EXISTING ROAD CENTERLINE
	PROPOSED ROAD CENTERLINE
	FUTURE ROAD CENTERLINE
	EXISTING ROAD SHOULDER
	PROPOSED ROAD SHOULDER
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	FUTURE ROAD EDGE
	EXISTING SIDEWALK
	PROPOSED SIDEWALK
	EXISTING DITCH
	PROPOSED DITCH
	EXISTING CULVERT
	PROPOSED CULVERT
	EXISTING DRAINAGE DIRECTION
	PROPOSED DRAINAGE DIRECTION
	CONTOURS - MAJOR INTERVALS
	CONTOURS - MINOR INTERVALS
	EXISTING GROUND ELEVATION
	PROPOSED GROUND ELEVATION
	EXISTING ROAD ELEVATION
	PROPOSED ROAD ELEVATION
	EXISTING SLOPE
	PROPOSED SLOPE
	ASPHALT SURFACE
	GRAVEL SURFACE

MISCELLANEOUS:

	EXISTING FENCE LINE
	PROPOSED FENCE LINE
	EXISTING PROPANE LINE
	PROPOSED PROPANE LINE
	EXISTING HYDRO LINE
	PROPOSED HYDRO LINE
	EXISTING GAS LINE
	EXISTING MTS LINE
	EXISTING BUILDING
	PROPOSED BUILDING
	LEGAL/LOT LINE
	RAILWAY LINE
	MATCH LINE
	EXISTING HYDRO POLE
	PROPOSED HYDRO POLE
	WATER HOLDING TANK
	SEPTIC TANK
	SEWAGE HOLDING TANK
	SURVEY BAR
	SURVEY MONUMENT/BENCHMARK
	EXISTING VEGETATION
	PROPOSED VEGETATION
	DOOR CONSTRUCTION TYPE
	WALL CONSTRUCTION TYPE
	WELDING SYMBOL
	EASEMENT
	NORTH ARROW

ABBREVIATIONS:

AT	AIR CONDITIONING
ALUM	ALUMINUM
ASPH	ASPHALT
AVE	AVENUE
AVG	AVERAGE
BD	BOTTOM OF DITCH
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCHMARK
BOT	BOTTOM
BP	BACKWASH PUMP
B/W	BOTHWAYS
CB	CATCH BASIN
CI	CAST IRON
CHKD	CHECKED
CNR	CANADIAN NATIONAL RAILWAY
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CPR	CANADIAN PACIFIC RAILWAY
C/W	COMPLETE WITH
DCW	DOMESTIC COLD WATER
DEG	DEGREE
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DP	DUTY PUMP
DR	DRIVE
DWG	DRAWING

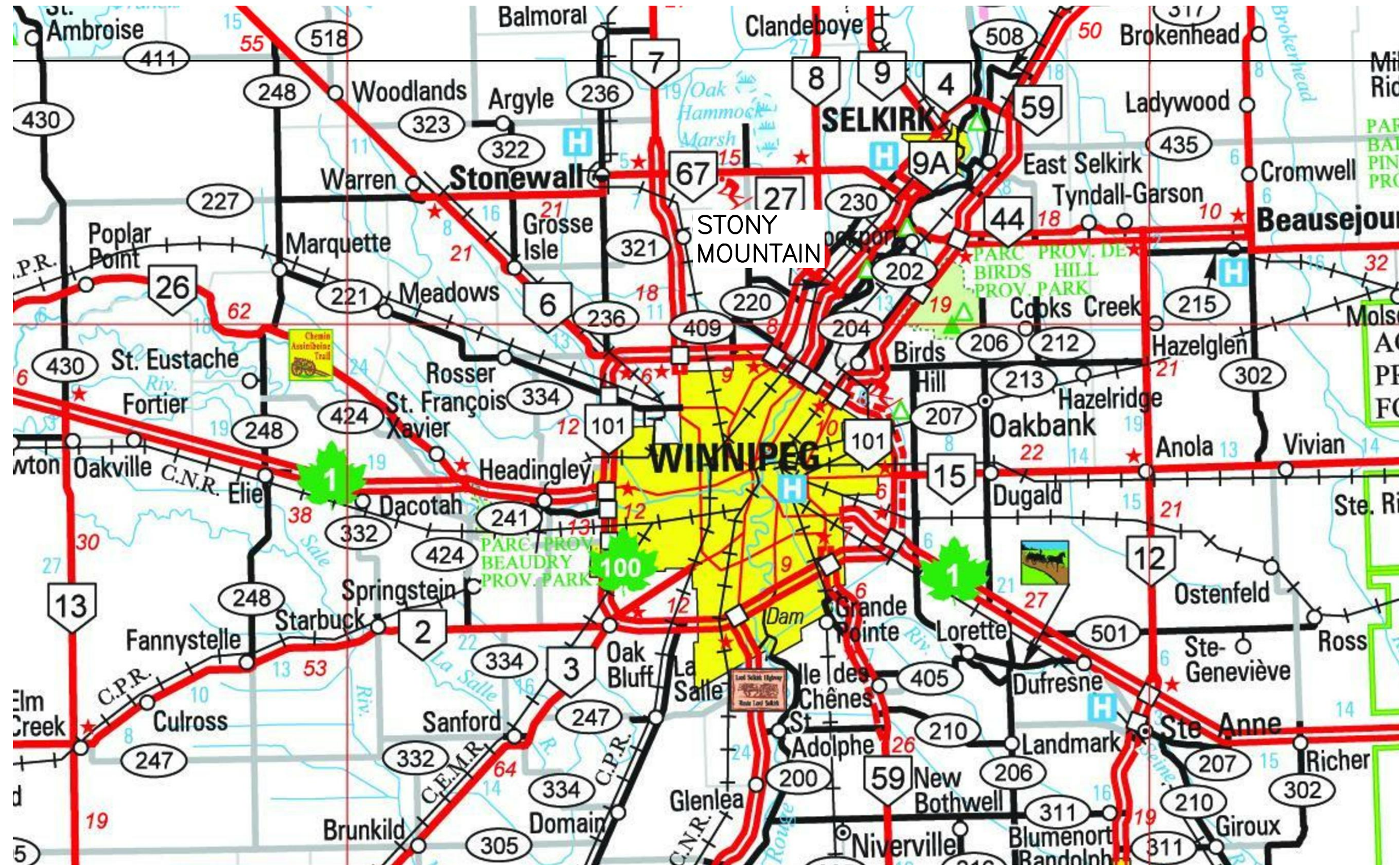
E	EAST
EC	END OF CURVE
EL	ELEVATION
ELEC	ELECTRICAL
EP	EDGE OF PAVEMENT
ER	EDGE OF ROAD
E/W	EACHWAY
EXT	EXTERIOR
FAX	FAX MACHINE STAND
FC	FILE CABINET
FD	FLOOR DRAIN
F/F	FACE TO FACE
FH	FIRE HYDRANT
FM	FORCEMAIN
FP	FIRE PUMP
FT	FOOT, FEET
GA	GAUGE
GALV	GALVANIZED
HA	HECTARE
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HI	HEIGHT OF INSTRUMENT
HPW	HIGH PRESSURE WATER LINE
HORIZ	HORIZONTAL
HP	HYDRO POLE
HR	HOUR
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER TANK
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
IL	ICE LEVEL
INCL	INCLUDE
INT	INTERIOR
INV	INVERT

JCT	JUNCTION
JP	JOCKEY PUMP
LAB	LABORATORY
LAM	LAMINATE
LAT	LATITUDE
LDS	LAND DRAINAGE SEWER
LFS	LEVEL FLOAT SWITCH
LONG	LONGITUDE
LWL	LOW WATER LEVEL
M	METRE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEMB	MEMBRANE
MH	MANHOLE
MIN	MINIMUM
MM	MILLIMETRE
N	NORTH
NAT	NATURAL
NBC	NATIONAL BUILDING CODE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O/C	ON CENTRE
O/D	OUTSIDE DIAMETER
O/F	OUTSIDE FACE
O/H	OVER HEAD
OD	OUTSIDE DIAMETER
ORIG	ORIGINAL
OWSJ	OPEN WEB STEEL JOIST
PLYWD	PLYWOOD
POLY	POLYETHYLENE
PROP	PROPERTY
PS	PRESSURE SEWER
PVC	POLY VINYL CHLORIDE

RAD	RADIUS
RD	ROAD
REV	REVISION
ROW	RIGHT OF WAY
RM	ROOM
S	SOUTH
SCH	SCHEDULE
SECT	SECTION
SHT	SHEET
SIB	STEEL IRON BAR
SPEC	SPECIFICATION
SQ	SQUARE
SSL	SEWER SERVICE LINE
ST	STREET
STD	STANDARD
SUSP	SUSPENDED
SW	SIDEWALK
TEL	TELEPHONE
TEMP	TEMPORARY
TP	TRUCKFILL PUMP
TYP	TYPICAL
VERT	VERTICAL
VOL	VOLUME
US	ULTRASONIC TRANSDUCER
VAR	VARIES
VB	VAPOUR BARRIER
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
W	WEST
W/O	WITHOUT
WL	WATER LEVEL
WM	WATERMAIN
WSL	WATER SERVICE LINE
WWS	WASTEWATER SEWER
WT	WEIGHT

NOTE:  
DECIMALIZED NUMBERS INDICATE METRES.  
WHOLE NUMBERS INDICATE MILLIMETRES.

A	A - DETAIL NUMBER	A
B	B - PLAN WHERE DETAIL EXPANDED	C
B	C - PLAN WHERE DETAIL ORIGINATES	B

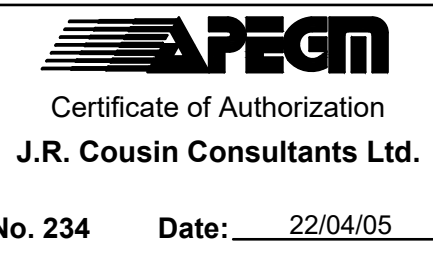
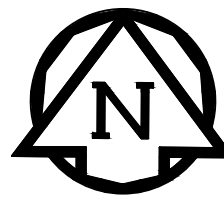
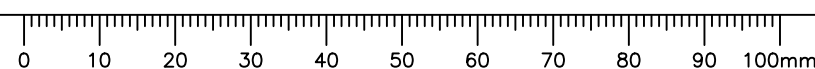
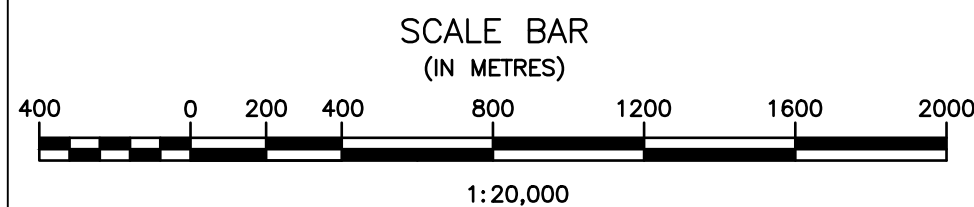


KEY PLAN  
SCALE = NTS

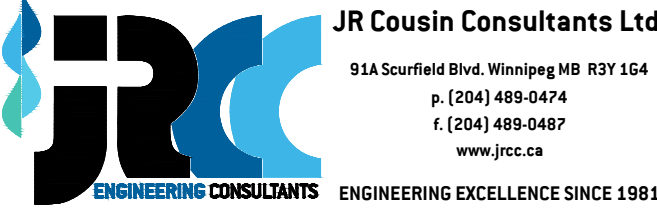


PROJECT BENCHMARK : MONUMENT AT THE NW  
CORNER OF NE 1/4 35-12-02  
N 5547228.194  
E 627615.304 EL. 233.636m

LOCATION PLAN  
SCALE = 1:20,000



JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by	Conçu par
DK	
Drawn by	Dessiné par
OT	
Approved by	Approuvé par
JRC	
PWGSC Project Manager	Administrateur de Projets TPSSGC
JASON FREZZA	
Drawing title	Titre du dessin

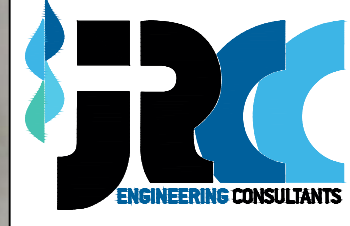
DRAWING LEGEND, ABBREVIATION  
INDEX, KEY PLAN AND  
LOCATION PLAN

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	GI02 OF 3	1





JRCC PROJECT # R-325.56

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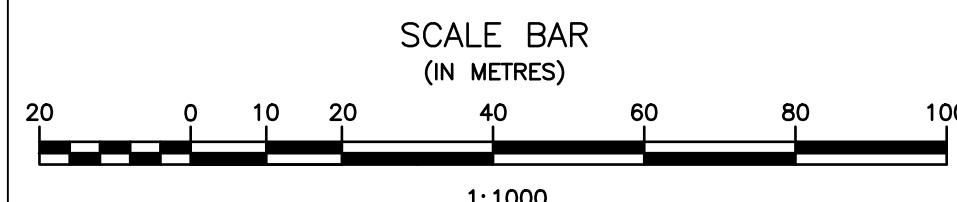
Project title  
Projet

**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC

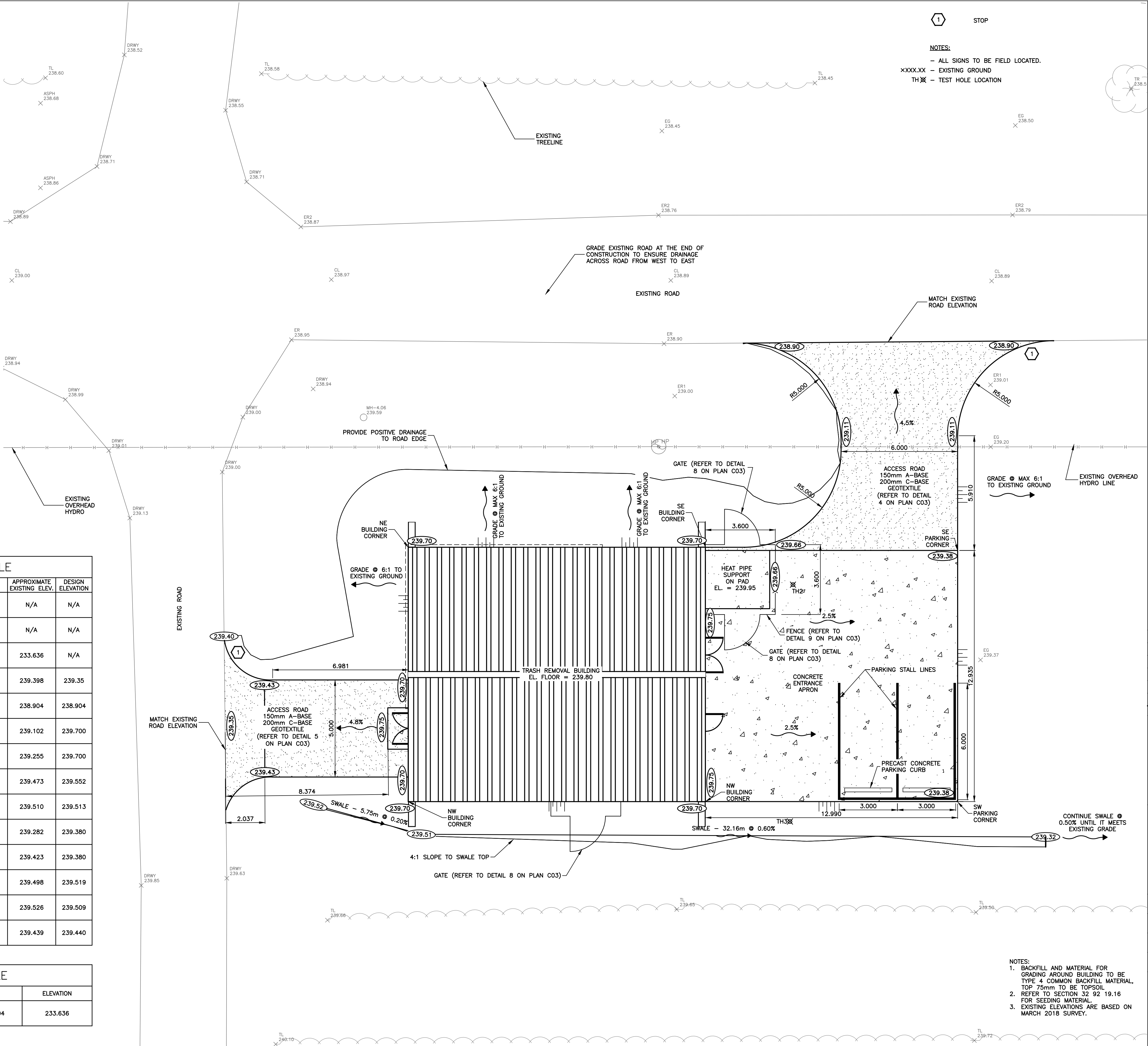
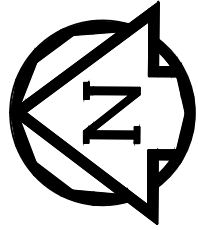
Drawing title  
Titre du dessin

**OVERALL LOCATION PLAN**



**1** OVERALL LOCATION PLAN  
03  
SCALE = 1:40





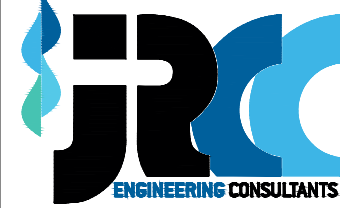
- 1 STOP
- NOTES:
- ALL SIGNS TO BE FIELD LOCATED.
  - XXX.XX - EXISTING GROUND
  - TH - TEST HOLE LOCATION



Certificate of Authorization  
J.R. Cousin Consultants Ltd.

No. 234 Date: 22/04/05

JRCC PROJECT # R-325.56



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Project title

## RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

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Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

## WASTEWATER TRASH REMOVAL BUILDING GRADE PLAN

Project no./No. du projet

R.118541

Drawing no./No. du dessin

C01

OF 3

Revision no.

1

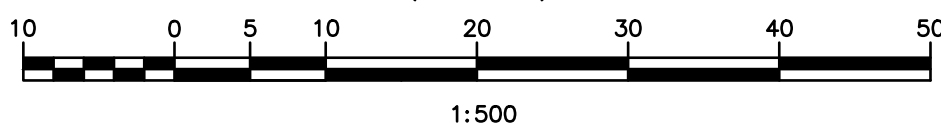
COORDINATES TABLE

COORDINATES POINT	NORTHING	EASTING	APPROXIMATE EXISTING ELEV.	DESIGN ELEVATION
NORTH ACCESS ROAD STOP SIGN	5548746201	627241.818	N/A	N/A
EAST ACCESS ROAD STOP SIGN	5548705.658	627258.045	N/A	N/A
PROJECT BENCHMARK (SEE PLAN G101)	5547228.194	627515.304	233.636	N/A
NORTH ACCESS ROAD CL MEETS EXISTING ROAD	5548746.779	627237.881	239.398	239.35
EAST ACCESS ROAD CL MEETS EXISTING ROAD	5548712.485	627258.519	238.904	238.904
NE BUILDING CORNER	5548737.548	627247.411	239.102	239.700
SE BUILDING CORNER	5548722.252	627247.732	239.255	239.700
NW BUILDING CORNER	5548737.275	627234.315	239.473	239.552
SW BUILDING CORNER	5548721.978	627234.635	239.510	239.513
SE PARKING LOT CORNER	5548709.262	627247.839	239.282	239.380
SW PARKING LOT CORNER	5548708.991	627234.907	239.423	239.380
START OF SWALE	5548741.554	627233.915	239.498	239.519
SWALE INFLECTION POINT	5548736.567	627232.645	239.526	239.509
END OF SWALE	5548704.416	627233.161	239.439	239.440

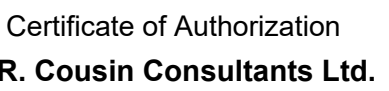
BENCHMARK TABLE

DESCRIPTION	NORTHING	EASTING	ELEVATION
MONUMENT AT THE NW CORNER OF NE 1/4 35-12-02	5547228.194	627515.304	233.636

SCALE BAR  
(IN METRES)







No. 234 Date: 22/04/05

JRCC PROJECT # R-325.56



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Revision	Description	Date
Client		client

Project title	Project
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Designed by	Conçu par
DK	

Drawn by	Dessiné par
----------	-------------

Drawn by \_\_\_\_\_ Dessiné par \_\_\_\_\_  
OT \_\_\_\_\_

Approved by \_\_\_\_\_ Approuvé par \_\_\_\_\_  
JRC

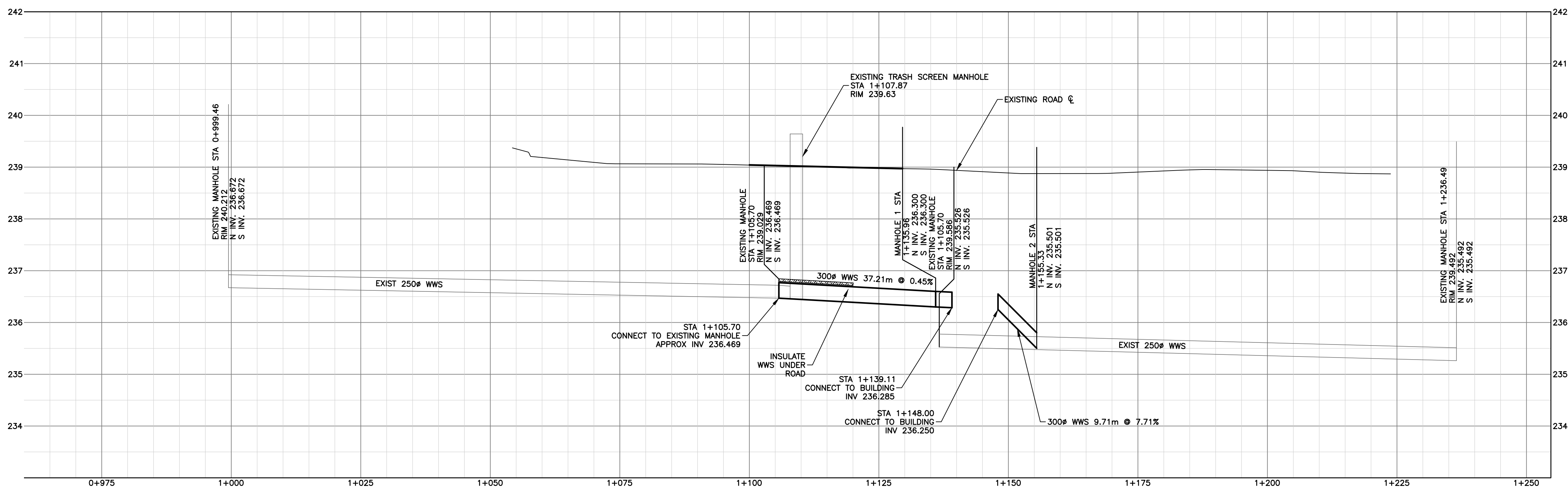
PWGSC Project Manager      Administrateur de Projets TPSGC  
**JASON FREZZA**

Drawing title	Titre du dessin
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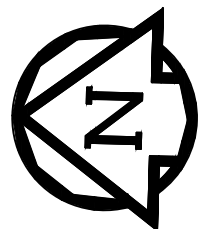
# WASTEWATER SEWER PLAN AND PROFILE

**STA 1+000.00 TO STA 1+236.49**

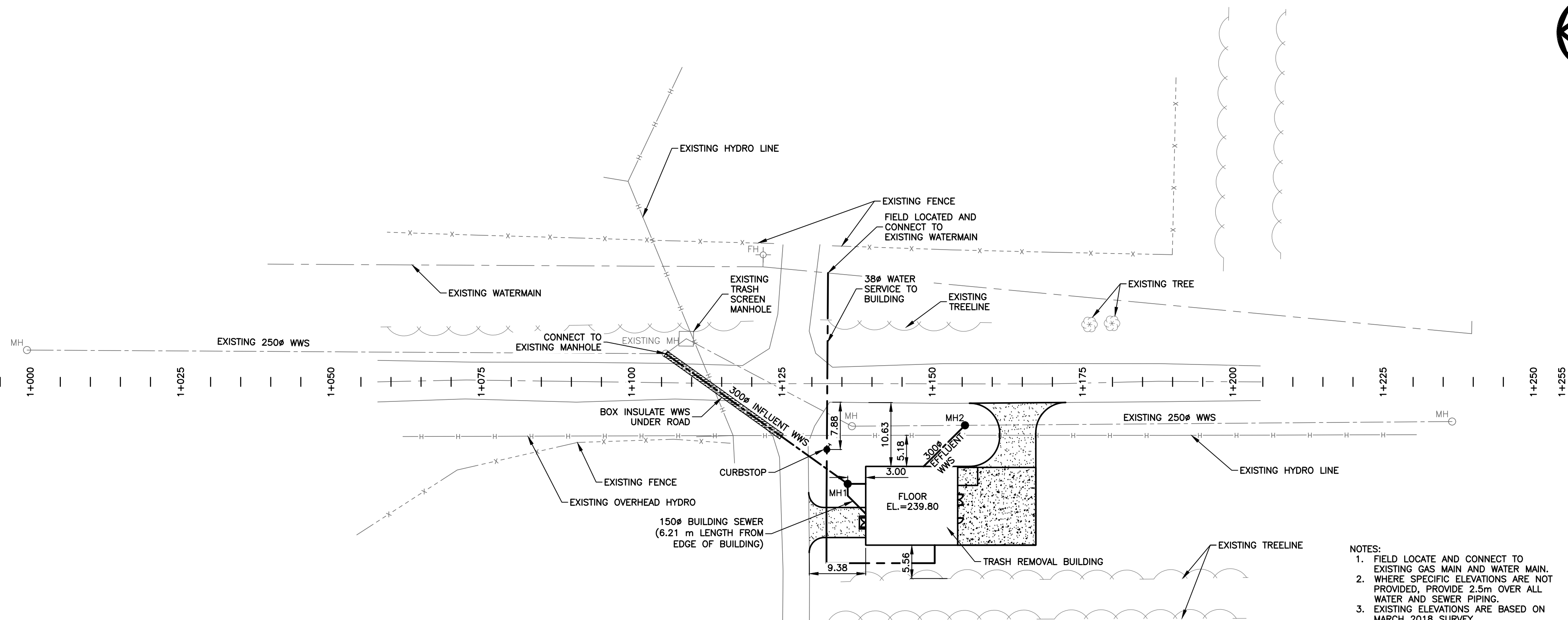
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
<b>R.118541</b>	<b>C02</b> OF 3	<b>1</b>



PROFILE STA 1+000.00 TO STA 1+246.49  
SCALE = 1:500 H, 1:50 V

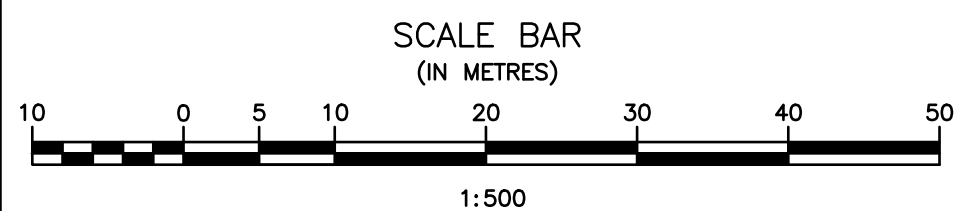


COORDINATES TABLE		
COORDINATES POINT	NORTHING	EASTING
MH 1	5548740.483m	627244.445m
MH 2	5548721.186m	627254.594m
APPROX. WM CONNECTION POINT	5548744.495m	627279.464m
EXISTING MH	5548771.186m	627265.466m



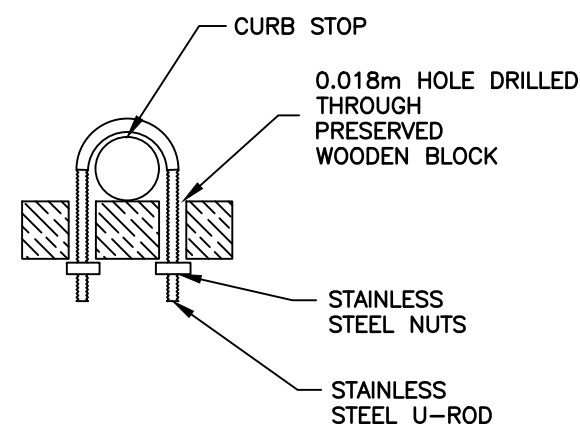
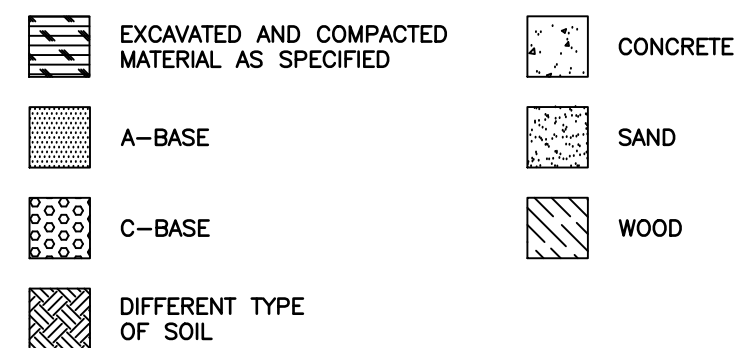
PLAN STA 1+000.00 TO STA 1+236.49  
SCALE = 1:500

- NOTES:**
1. FIELD LOCATE AND CONNECT TO EXISTING GAS MAIN AND WATER MAIN.
  2. WHERE SPECIFIC ELEVATIONS ARE NOT PROVIDED, PROVIDE 2.5m OVER ALL WATER AND SEWER PIPING.
  3. EXISTING ELEVATIONS ARE BASED ON MARCH 2018 SURVEY.
  4. CONFIRM EXISTING SEWER INVERTS PRIOR TO SETTING BUILDING ELEVATIONS.

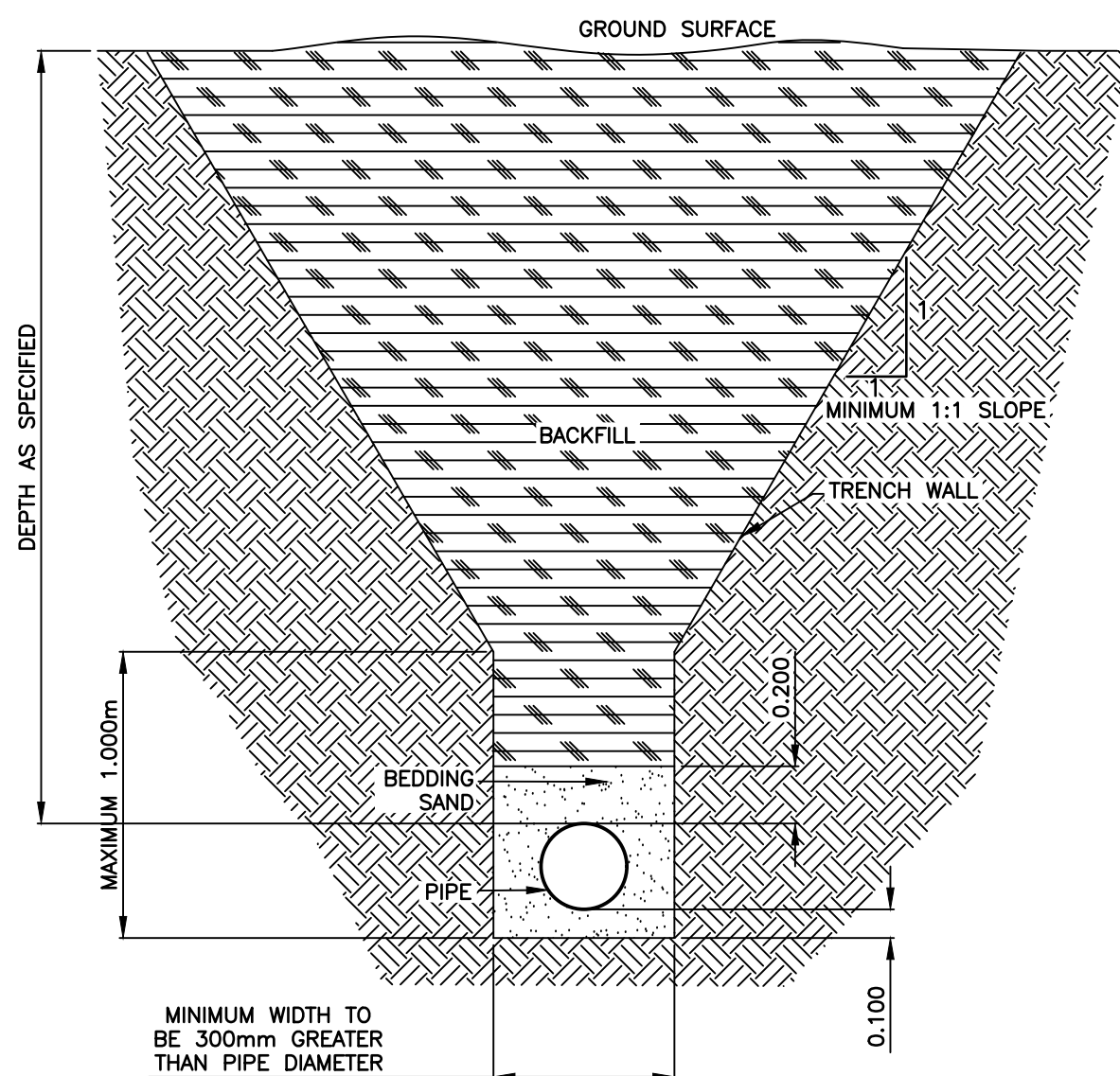
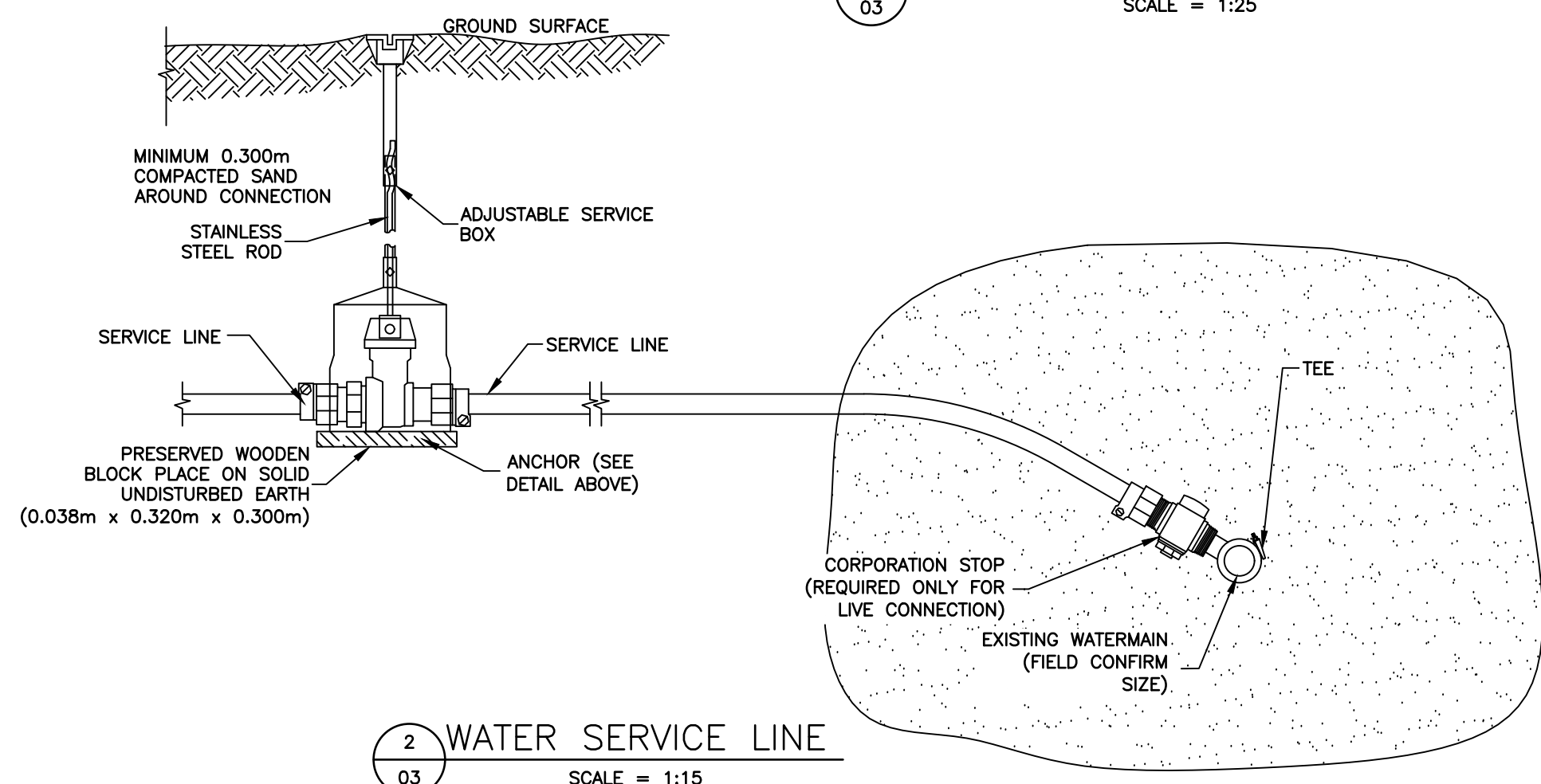




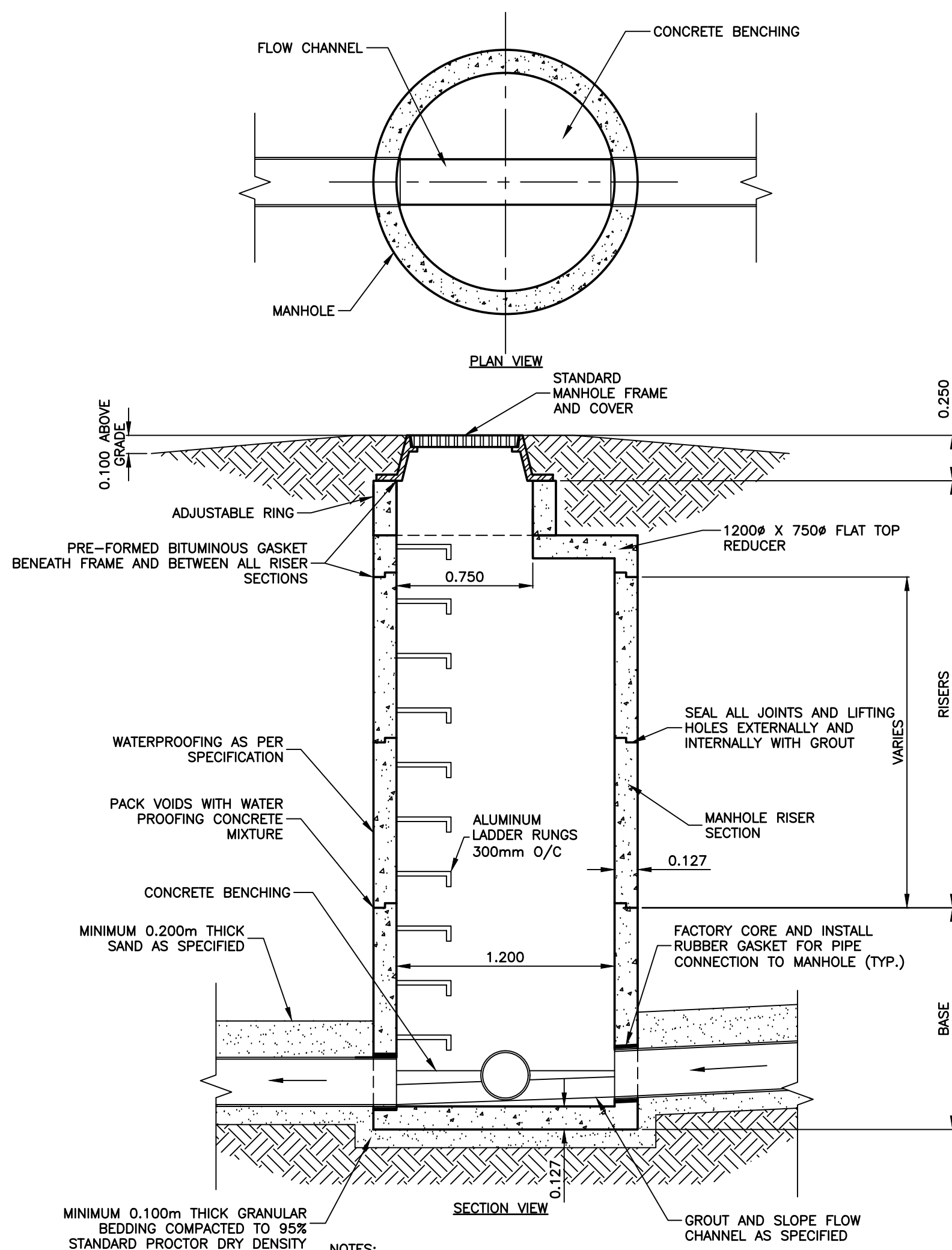
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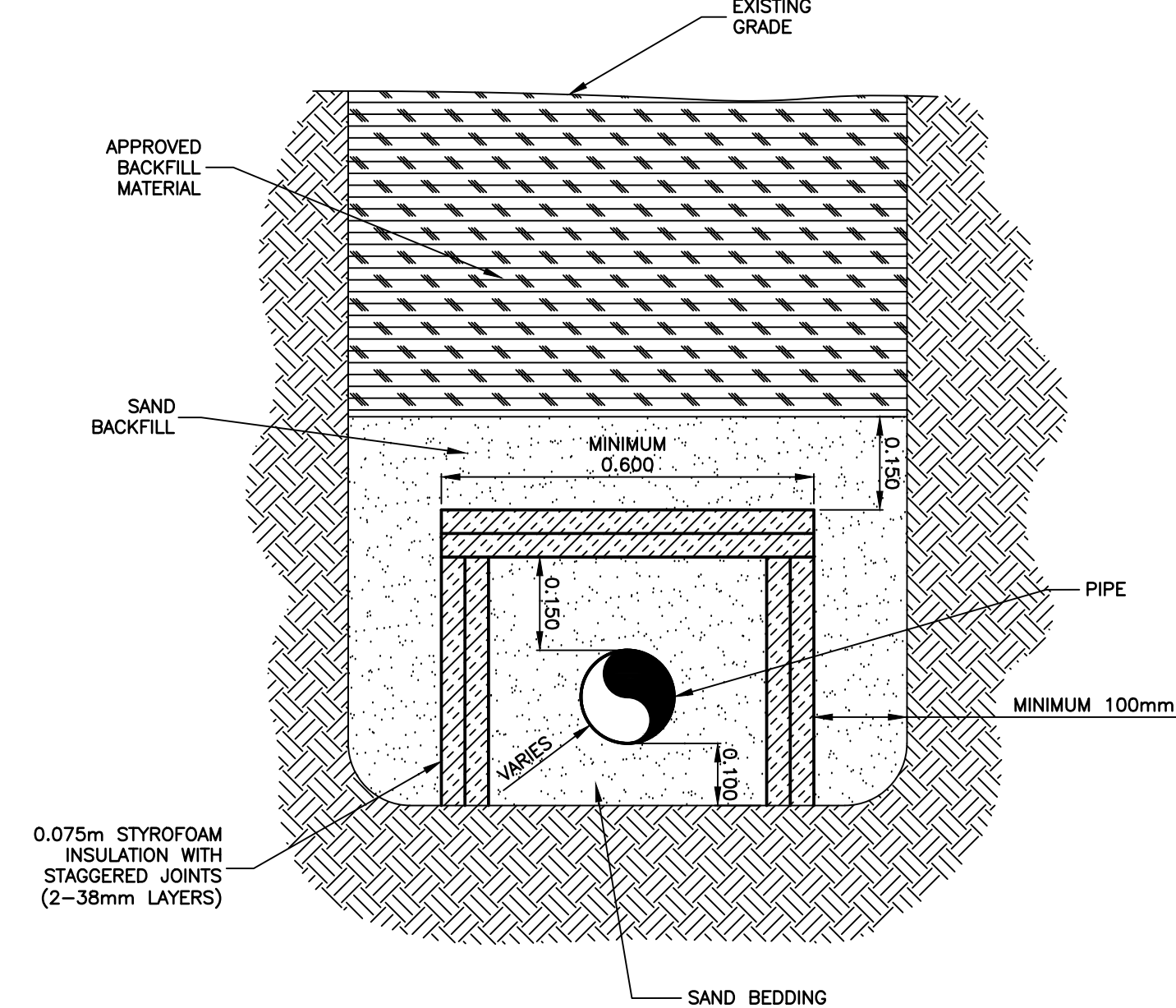
ANCHOR DETAIL  
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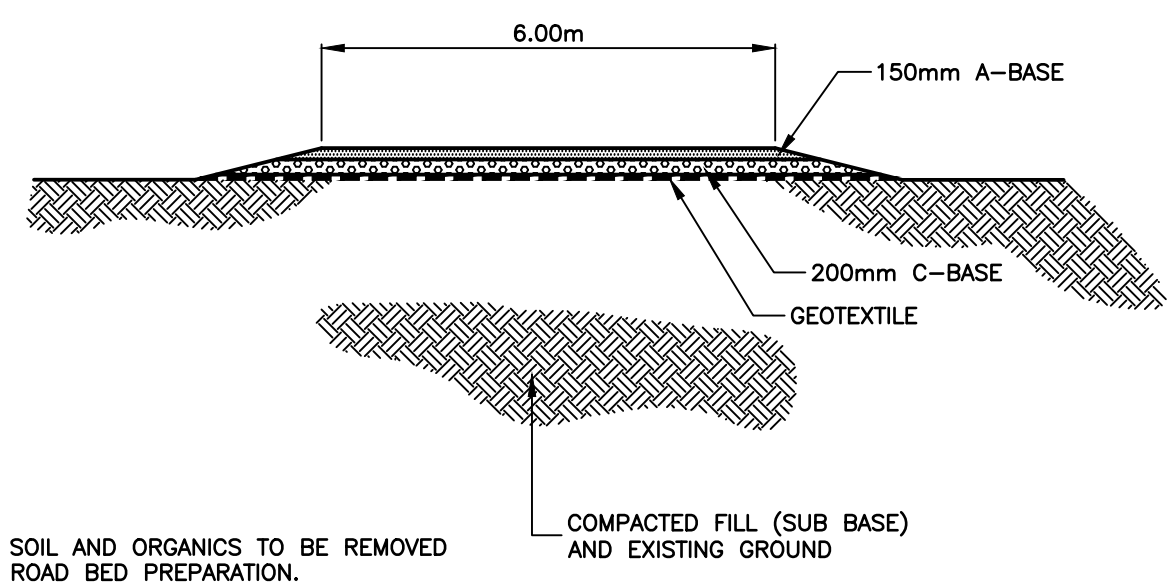
- NOTES:
- USE TRENCH CAGE UNLESS OTHERWISE APPROVED BY DEPARTMENTAL REPRESENTATIVE.
  - FOLLOW SAFE WORK MANITOBA GUIDE FOR EXCAVATION WORK.
  - TRENCH DIMENSIONS INDICATED ABOVE ASSUME TRENCH DEPTH OF LESS THAN 5.0m AND UNSATURATED SOILS. ADJUST TRENCH AS REQUIRED IF DIFFERENT SOILS ARE ENCOUNTERED.



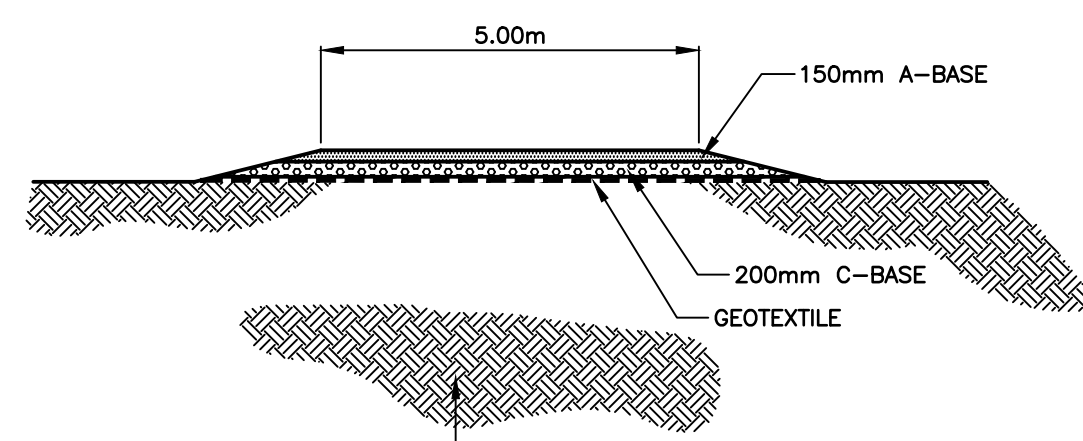
- NOTES:
- MINIMIZE NUMBER OF MANHOLE JOINTS.
  - MAXIMUM 0.300m ADJUSTABLE RING.
  - PROVIDE CONCRETE BENCHING.
  - PLACE LADDER RUNGS ON ROAD SIDE OF MANHOLE.
  - TOP OF MANHOLE TO FIRST LADDER RUNG - MAX. 0.600m.
  - BASE SECTION TO BE 1.220m HIGH C/W PRECAST FLOOR.



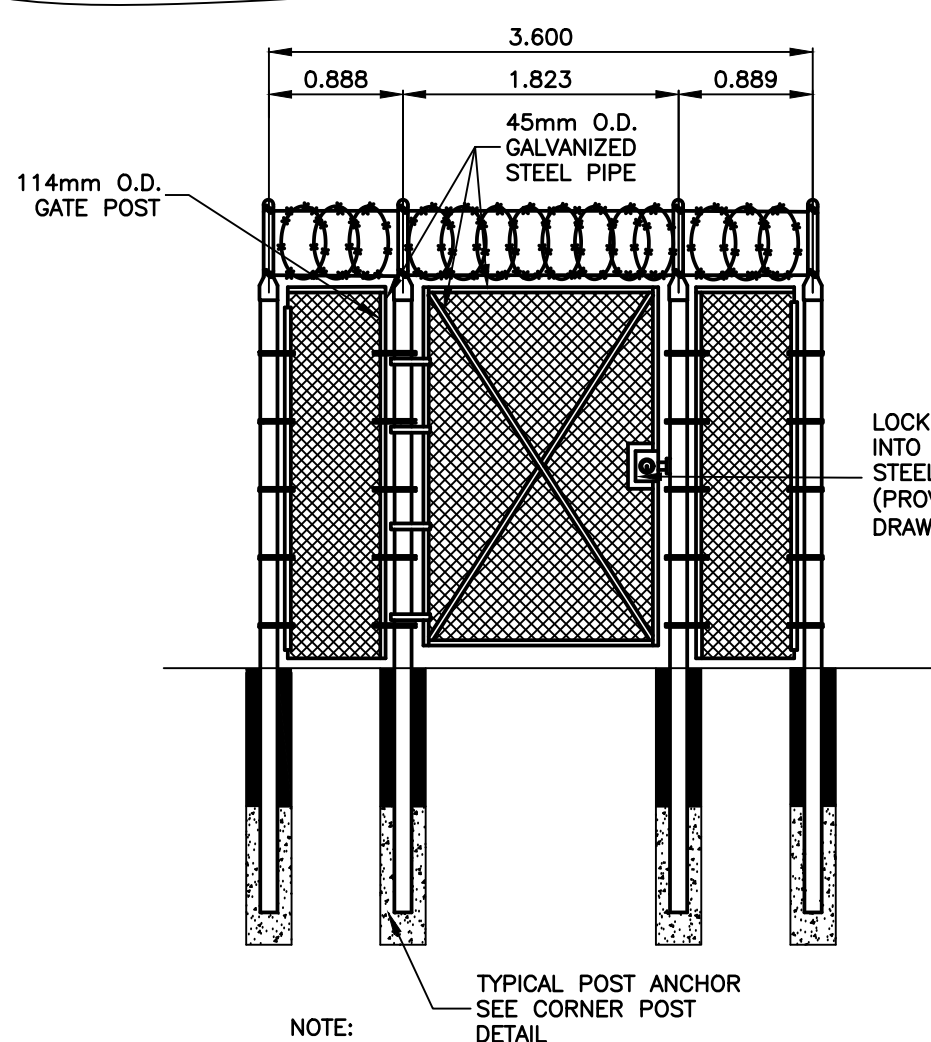
- NOTES:
- INSULATION SHALL BE USED WHERE PIPE COVER IS LESS THAN SPECIFIED.
  - ALL INSULATION SHALL BE STYROFOAM "SM" HI-40 FOR INGROUND APPLICATION.
  - SAND BACKFILL SHALL BE CAREFULLY APPLIED BY HAND TO A DEPTH OF 0.150m OVER INSULATION. REMAINING TRENCH BACKFILL SHALL BE SUITABLE EXCAVATED MATERIAL.



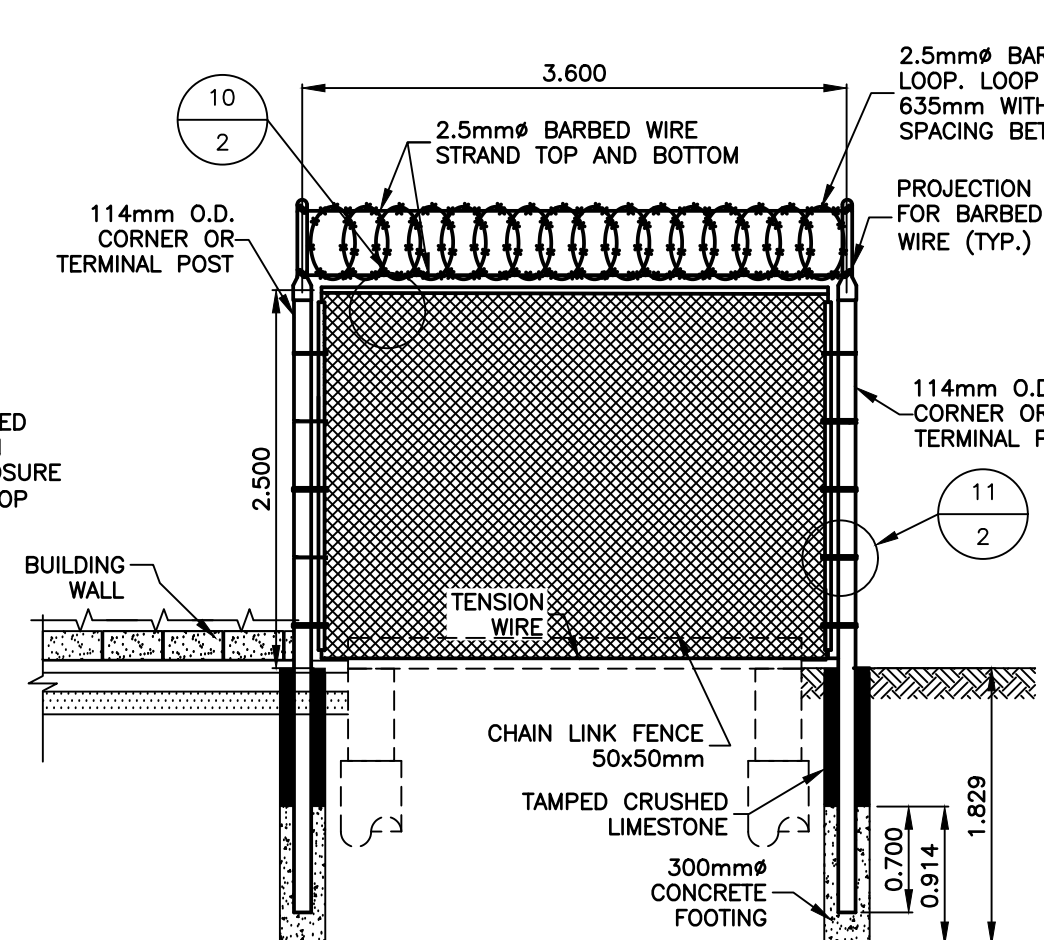
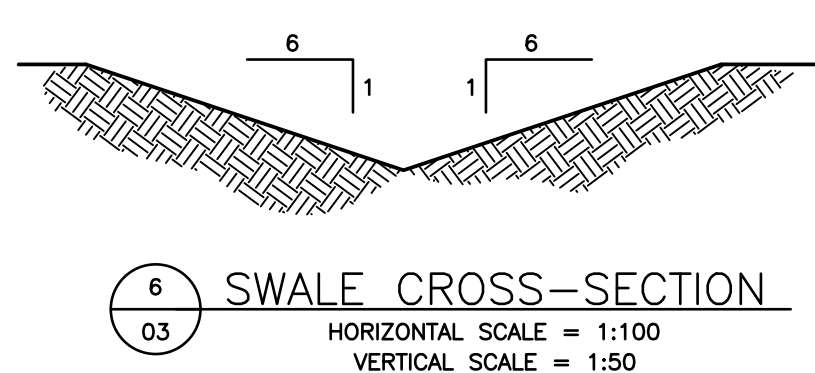
- NOTE:
- TOP SOIL AND ORGANICS TO BE REMOVED FOR ROAD BED PREPARATION.



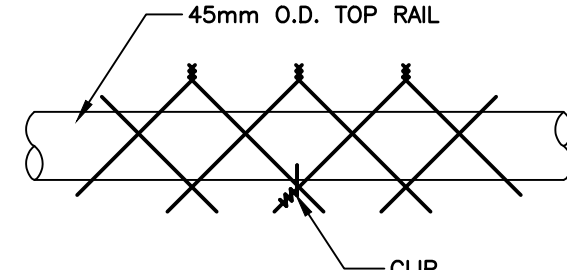
- NOTE:
- TOP SOIL AND ORGANICS TO BE REMOVED FOR ROAD BED PREPARATION.



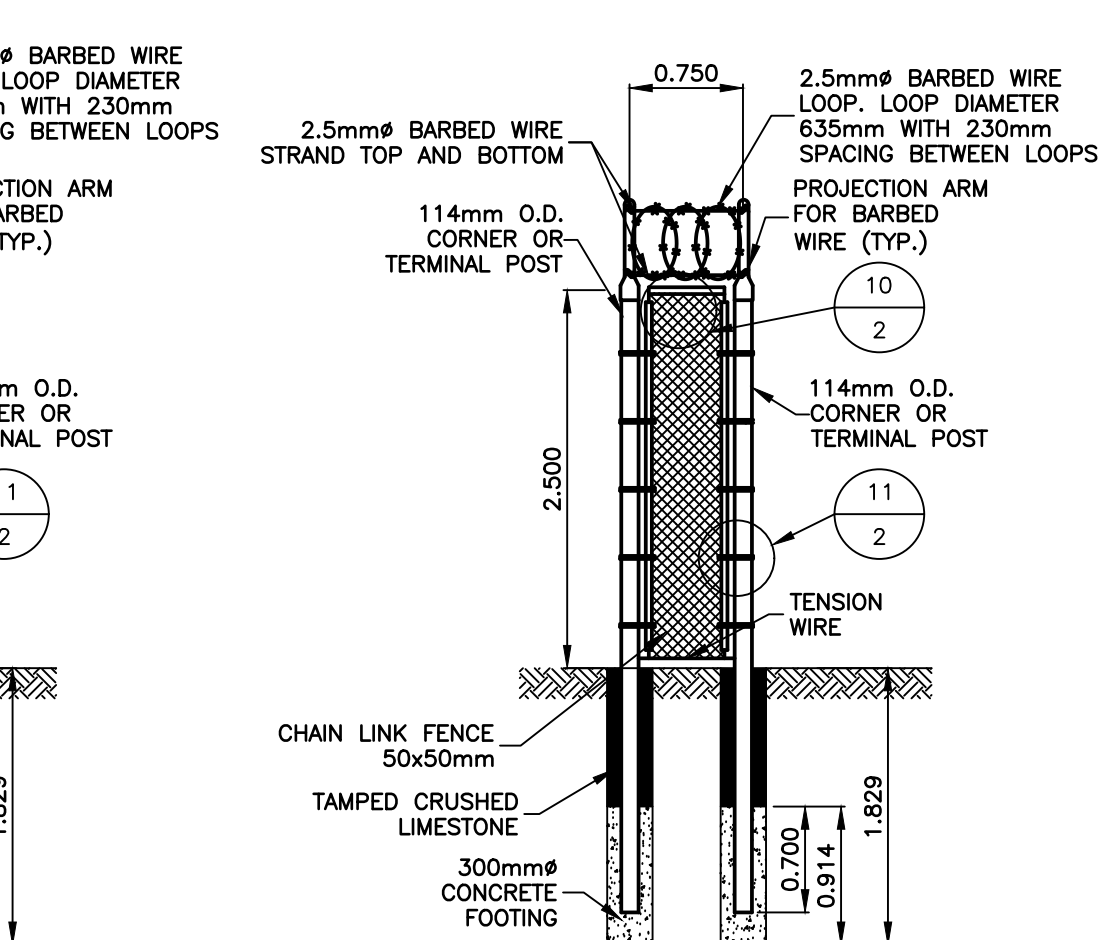
- NOTE:
- COORDINATE GATE WITH HEAT PIPE TO ENSURE REMOVAL OF FILTERS.



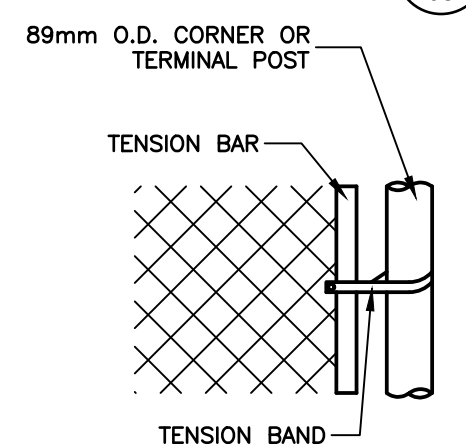
9 HEAT PIPE CORNER POST  
SCALE = 1:50



10 TOP RAIL  
SCALE = 1:5



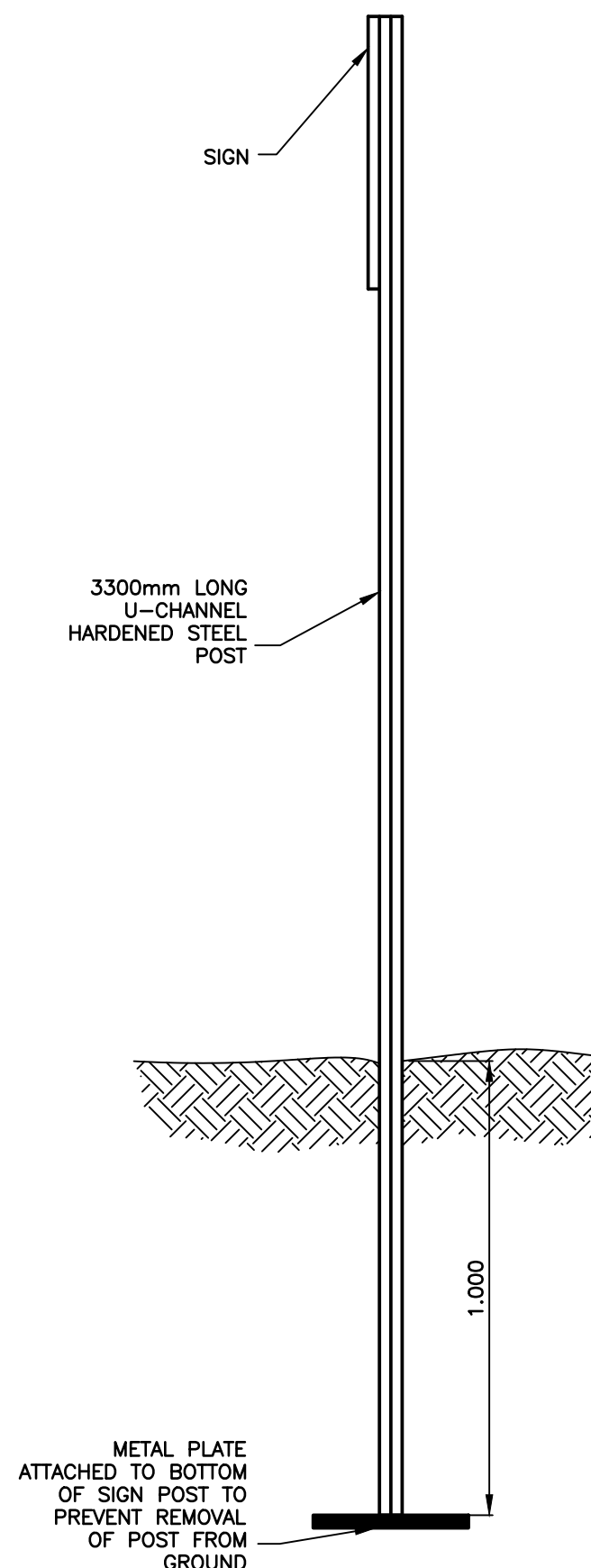
13 GAS METER CORNER POST  
SCALE = 1:50



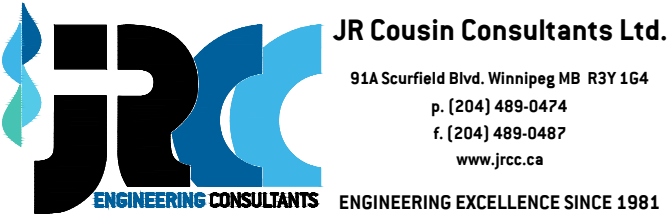
11 TENSION BAR  
SCALE = 1:15

- NOTES:
- SEE SPECIFICATIONS FOR SIGN SIZE AND POST DETAILS.

12 STOP SIGN DETAIL  
SCALE = 1:15



JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title

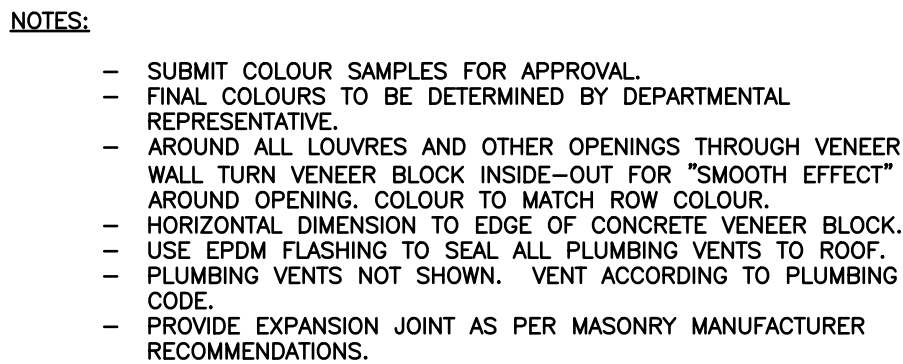
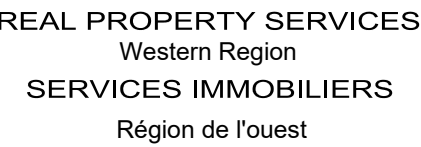
## RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

## TRENCH PIPING, MANHOLE, PIPE INSULATION, WATER SERVICE LINE, ROAD CROSS-SECTION, SWALE AND FENCE DETAILS

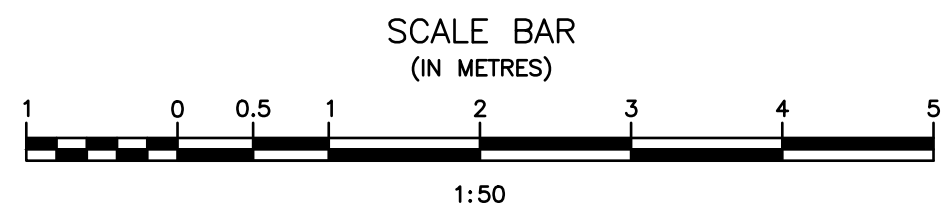
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	C03	1
	OF 3	



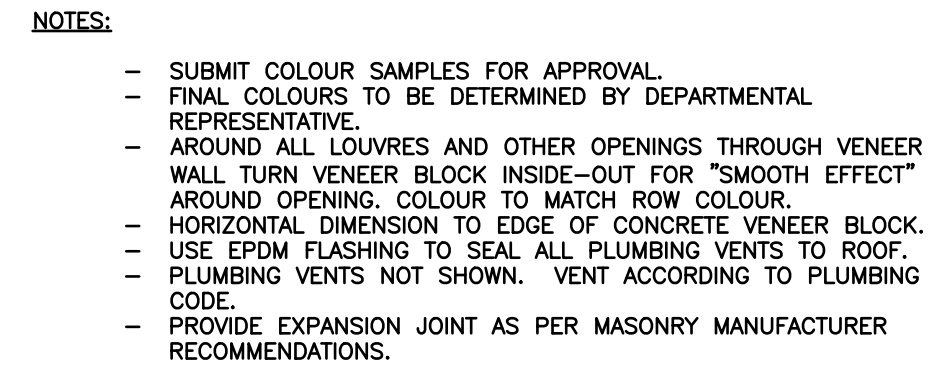
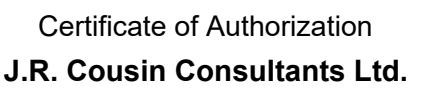


1 NORTH ELEVATION  
01 SCALE = 1:50

BUILDING COLOURS (EXTERIOR)	
OBJECT	COLOUR
BUILDING TRIM (EXTERIOR)	ANTIQUE LINEN
BUILDING DOOR TRIM (EXTERIOR)	ANTIQUE LINEN
WINDOW FRAME (EXTERIOR)	ANTIQUE LINEN
BUILDING ROOF (EXTERIOR)	SLATE BLUE
BUILDING DOORS (EXTERIOR)	ANTIQUE LINEN
SOFFIT AND EAVES	SLATE BLUE
DOWNSPOUTS, LOUVRES, AND FLASHING	ANTIQUE LINEN





A circular seal for the Province of Manitoba. The outer ring contains the text "PROVINCE OF MANITOBA" at the top and "REGISTERED PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the name "KELLY" is printed in large letters, with "Member" and "25462" below it. Handwritten in blue ink are the date "22-04-06" and the initials "D.R. J.R. 2556".

JRCC PROJECT # R-325.56



Project title	Project
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Designed by	Conçu par
DK	

Approved by <b>JRC</b>	Approuvé par
---------------------------	--------------

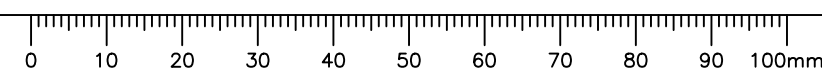
Drawing title	Titre du dessin
WEST AND EAST	

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
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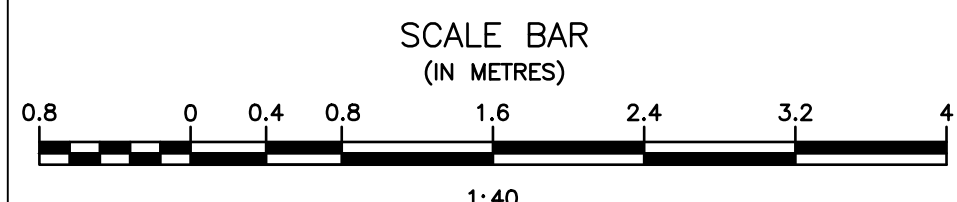
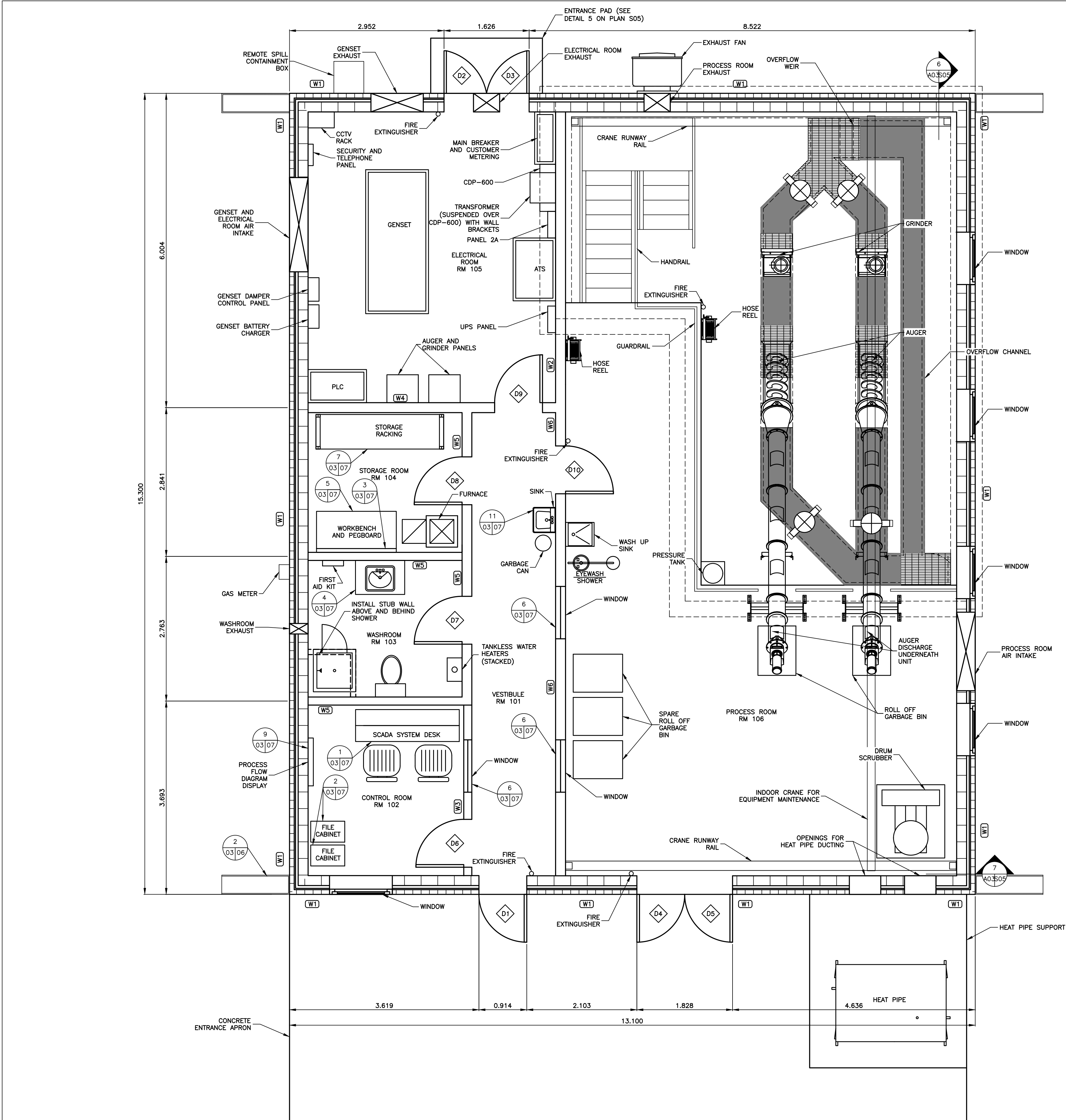
A02

F 11

A00







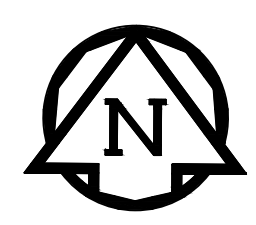
1 BUILDING OVERALL LAYOUT  
03 SCALE = 1:40

LEGEND:

- COVERED GRATING
- GRATING WITH OPEN AREA

WALL DETAIL:

- W1 - SEE DETAIL ON PLAN A05
  - W2 - 190mm STRUCTURAL CONCRETE BLOCK  
- MINIMUM 1 HOUR FIRE RATING FOR ELECTRICAL ROOM INTERIOR WALLS (NBCC 2015, APPENDIX D-2.1).
  - W3 - 12mm VERTICAL INTERLOCKING PVC PANELS  
- 12mm PLYWOOD  
- 92mm STEEL STUD  
- 12mm PLYWOOD  
- 12mm VERTICAL INTERLOCKING PVC PANELS
  - W4 - 190mm STRUCTURAL CONCRETE BLOCK  
- 12mm PLYWOOD  
- 12mm VERTICAL INTERLOCKING PVC PANELS (STORAGE ROOM SIDE)  
- MINIMUM 1 HOUR FIRE RATING FOR ELECTRICAL ROOM INTERIOR WALLS (NBCC 2015, APPENDIX D-2.1).
  - W5 - 12mm HORIZONTAL INTERLOCKING PVC LINER PANELS (FULL WALL HEIGHT)  
- 19mm THICK PLYWOOD  
- 1 LAYER OF 16mm TYPE "X" DRYWALL, JOINTS MUDD & TAPED  
- 15.9mm TYPE "X" DRYWALL, JOINTS MUDD & TAPED  
- 92mm STEEL STUD @ 400mm O/C  
- 1 LAYER OF 16mm TYPE "X" DRYWALL  
- 1 LAYER OF 19mm THICK PLYWOOD  
- 1 LAYER OF DRYWALL EACH SIDE  
- NO INSULATION  
- 12mm HORIZONTAL INTERLOCKING PVC LINER PANELS (FULL WALL HEIGHT)  
- EXTEND WALL TO INTERIOR CEILING  
- WALL TO HAVE 1 HOUR FIRE RATING (ULC DESIGN NO. U465)
  - W6 - 190mm STRUCTURAL CONCRETE BLOCK
- NOTES:
- REFER TO SPECIFICATION DOCUMENTS FOR DOOR SCHEDULE AND HARDWARE INFORMATION.
  - ACOUSTIC CEILINGS AT 2.7m IN VESTIBULE, WASHROOM AND CONTROL ROOM. EXTEND PVC PANELS AND PLYWOOD TO 0.3m ABOVE ACOUSTIC CEILING IN WASHROOM, VESTIBULE AND CONTROL ROOM.
  - 2 LAYERS OF 15.9mm TYPE "X" DRYWALL TO BE INSTALLED DIRECTLY TO UNDERSIDE OF TRUSSES IN ELECTRICAL ROOM, STORAGE ROOM AND WASHROOM.
  - STAGGER JOINTS BETWEEN LAYERS AND MUD & TAPE JOINTS IN OUTER LAYER.
  - INTERIOR WALL DIMENSIONS TO CENTERLINE OF WALL.
  - HWT = HOT WATER TANK
  - DOOR REFERENCE SYMBOL
  - REFER TO SPECIFICATION DOCUMENT FOR DOOR SCHEDULE
  - (WX) WALL CONSTRUCTION TYPE



JRCC PROJECT # R-325.56  
JR Cousin Consultants Ltd.  
91A Scourfield Blvd. Winnipeg MB R3Y 1G4  
p. (204) 489-9474  
f. (204) 489-0487  
www.jrcc.ca  
ENGINEERING CONSULTANTS ENGINEERING EXCELLENCE SINCE 1981

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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title Project

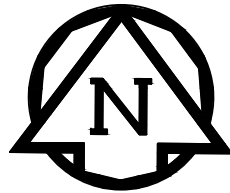
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSC Project Manager JASON FREZZA	Administrateur de Projets TPSCG
Drawing title	Titre du dessin

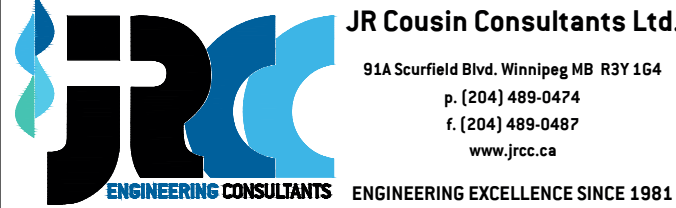
BUILDING OVERALL LAYOUT

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JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
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Client		client

Project title

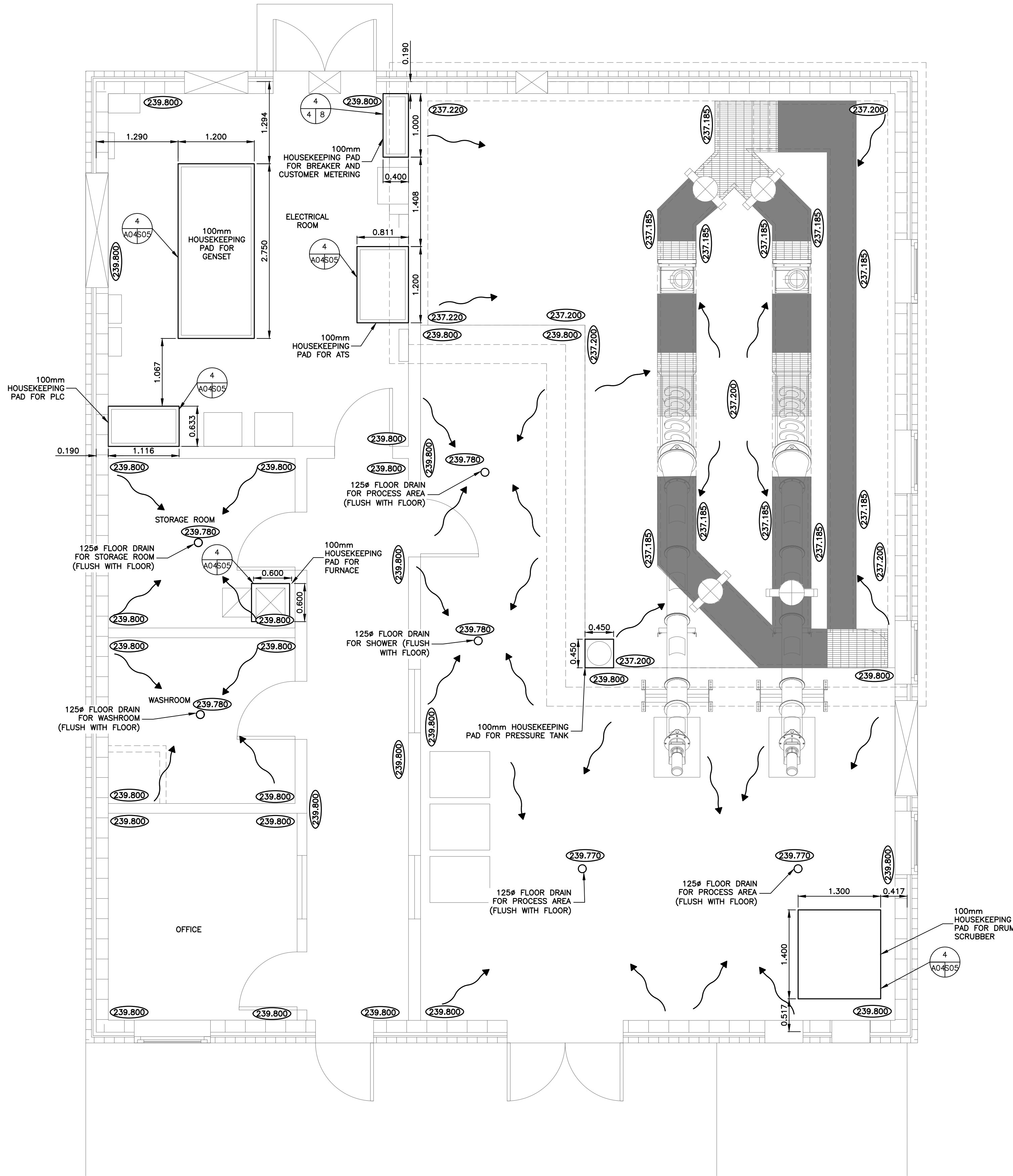
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

FLOOR DRAINAGE AND  
HOUSEKEEPING PAD PLAN

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	A04	1

OF 11

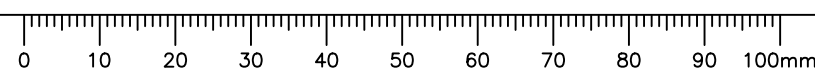
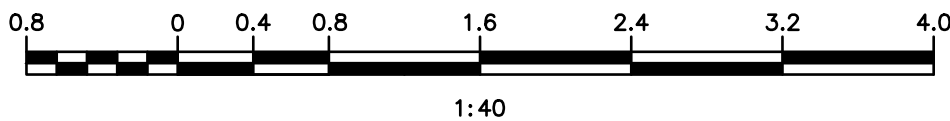


1 FLOOR DRAINAGE AND HOUSEKEEPING PAD PLAN  
04 SCALE = 1:40

HOUSEKEEPING PAD NOTES:

- THICKNESS OF ALL HOUSEKEEPING PADS ARE 100mm UNLESS OTHERWISE NOTED.
- CONTRACTOR TO ENSURE THAT ALL HOUSEKEEPING PADS ARE LEVEL.
- HOUSEKEEPING PADS MAY REQUIRE ADDITIONAL CONCRETE IN LOW AREAS OF THE FLOOR.
- CONFIRM ALL HOUSEKEEPING PAD SIZES WITH EQUIPMENT SHOP DRAWINGS.
- CAST IN PLACE 10M L-SHAPED HOOKS OR DRILL AND EPOXY 10M STEEL INTO CONCRETE FLOOR AT 400mm ON CENTER AROUND THE PERIMETER OF THE CONCRETE PAD AND PROVIDE 10M STEEL AROUND PERIMETER OF ALL PADS.
- VERIFY LOCATION OF IMBEDDED SERVICES PRIOR TO DRILLING FOR ANCHORS.
- PROVIDE 10M OR WIRE MECH AS REINFORCING STEEL IN MIDDLE TO PREVENT SHRINKAGE CRACKING, TIE TO DRILLED ANCHORS (400mm ON CENTER - BOTHWAYS)
- ALL DIMENSIONS TO EDGE OF CONCRETE SLAB.

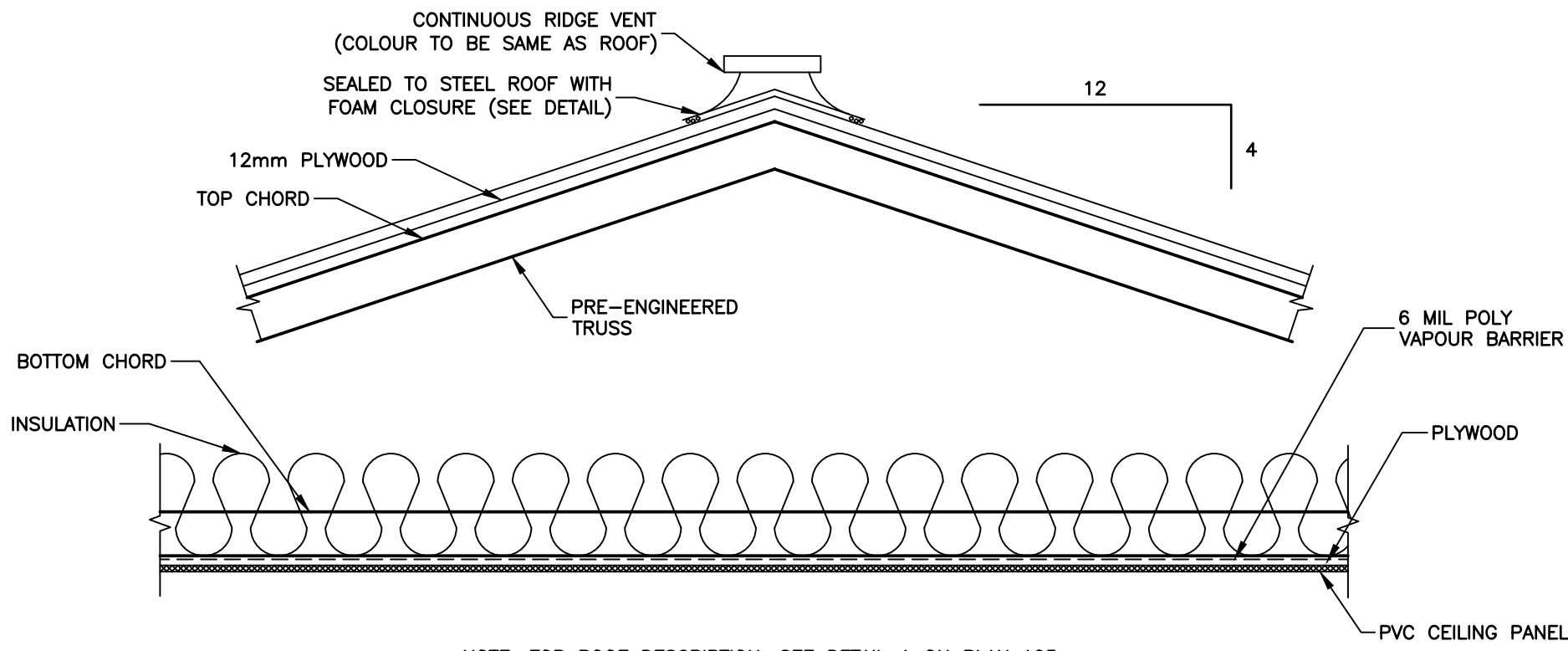
SCALE BAR  
(IN METRES)









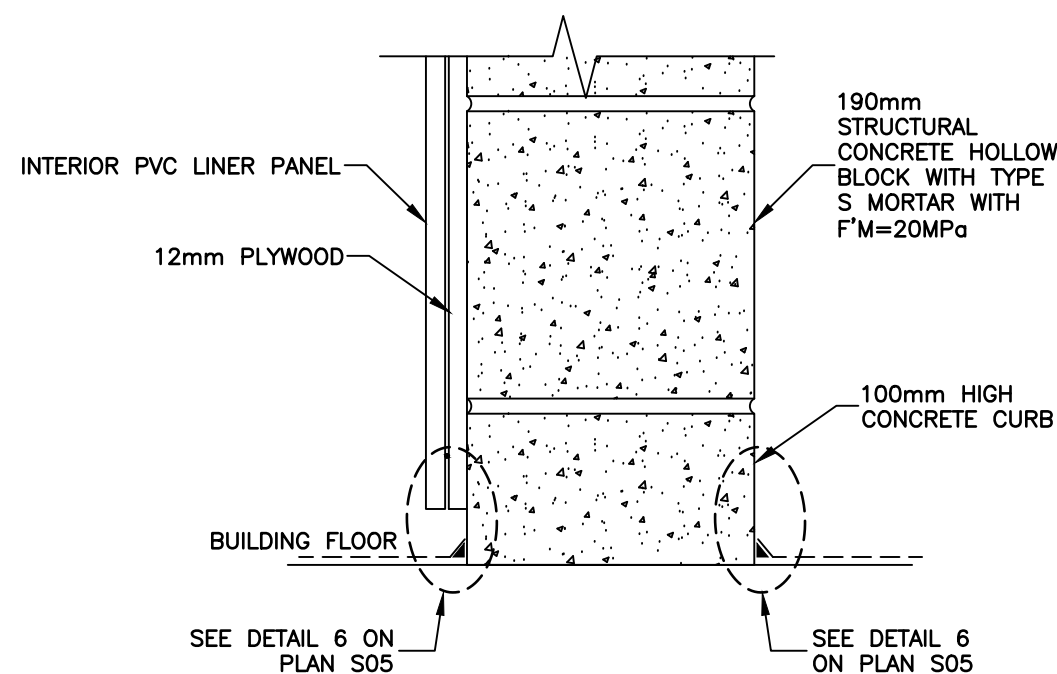


NOTE: FOR ROOF DESCRIPTION, SEE DETAIL 1 ON PLAN A05

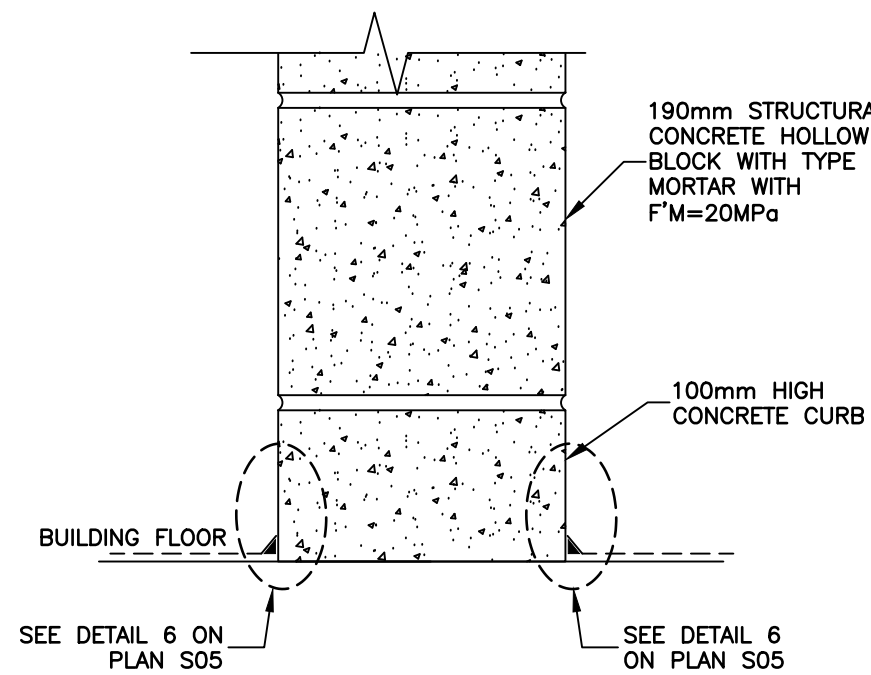
1 RIDGE CAP DETAIL  
SCALE = 1:20

#### ROOF FRAMING GENERAL NOTES:

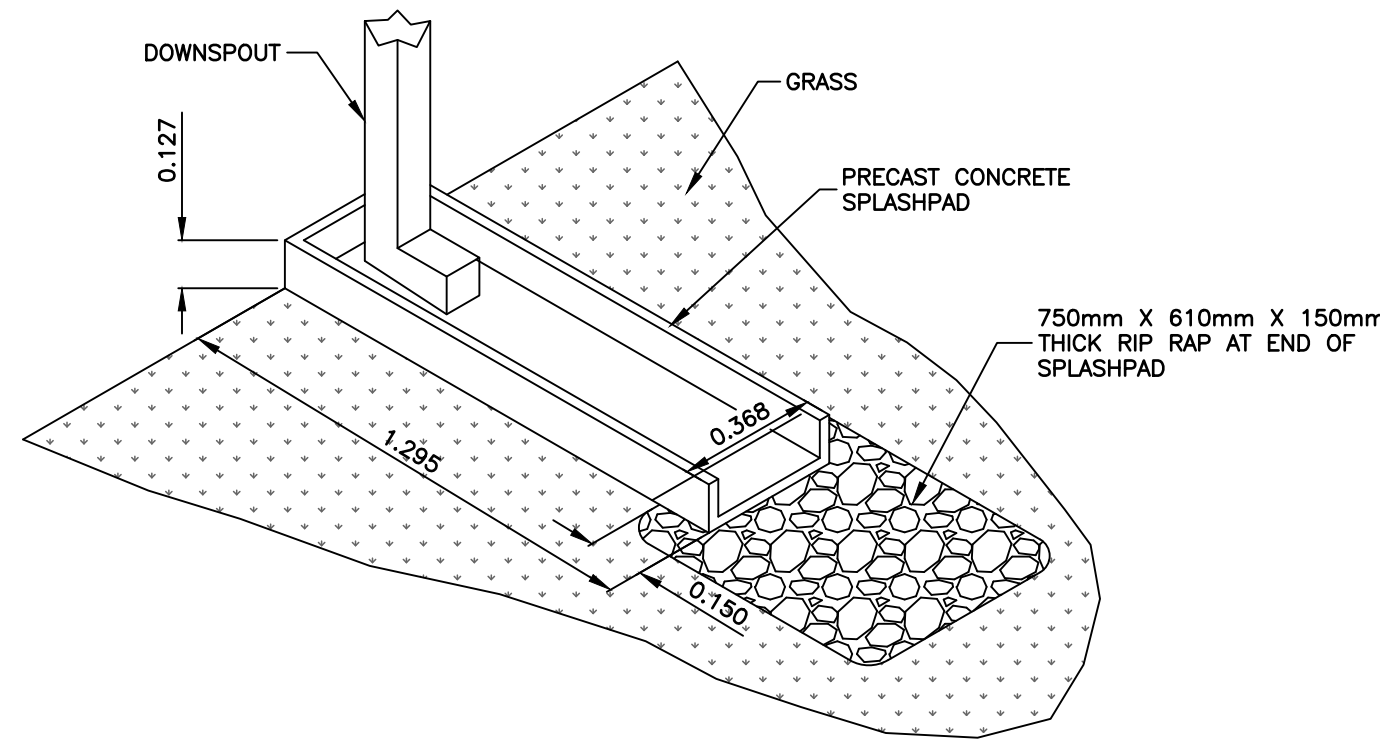
- INSTALL ALL BRACING SPECIFIED BY TRUSS MANUFACTURER AND/OR SPECIFIED ON TRUSS SHOP DRAWINGS.
- PROVIDE ANCHOR BRACING TO ALL MEMBERS WITH LATERAL WEB BRACING SPECIFIED BY TRUSS MANUFACTURER. BRACING TO BE INSTALLED OVER NOT LESS THAN 3 TRUSS BAYS AND EXTEND FROM ROOF PLANE TO CEILING PLANE. ADJUST ANGLE AS NECESSARY. INSTALL AT EACH GABLE END, AND AT 15.24m INTERVALS ALONG BUILDING.
- IN ADDITION TO THE ANCHOR BRACING REQUIRED AT THE LATERAL WEB BRACING, PROVIDE VERTICAL SWAY BRACING FOR ALL TRUSSES AT MIDSPANS. FOR TRUSSES WITH SPANS GREATER THAN 6.096m. INSTALL ADDITIONAL VERTICAL SWAY BRACING AT 1/4 POINTS. BRACING TO BE INSTALLED OVER NOT LESS THAN 3 TRUSS BAYS AND EXTEND FROM ROOF PLANE TO CEILING PLANE. ADJUST ANGLE AS NECESSARY. INSTALL AT EACH GABLE END, AND AT 15.24m INTERVALS ALONG BUILDING.
- PROVIDE CONTINUOUS LATERAL TRUSS BRACING ALONG BOTTOM CHORD AT VERTICAL SWAY-BRACING LOCATIONS DURING ERECTION.



6 INTERIOR WALL DETAIL  
FOR EPOXY FLOOR "W4"  
SCALE = 1:5

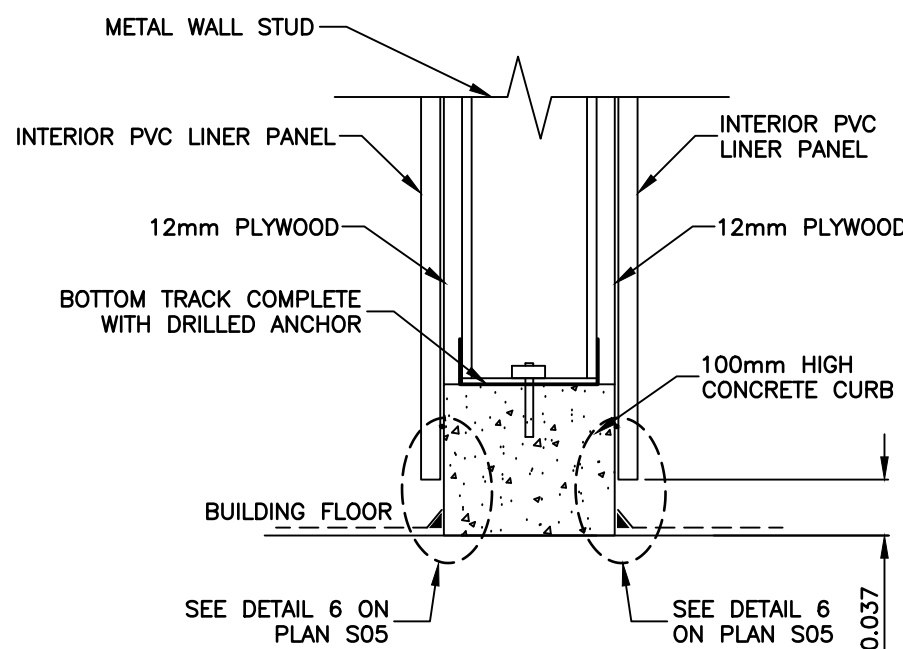


4 INTERIOR WALL DETAIL  
FOR EPOXY FLOOR "W2" AND "W6"  
SCALE = 1:5

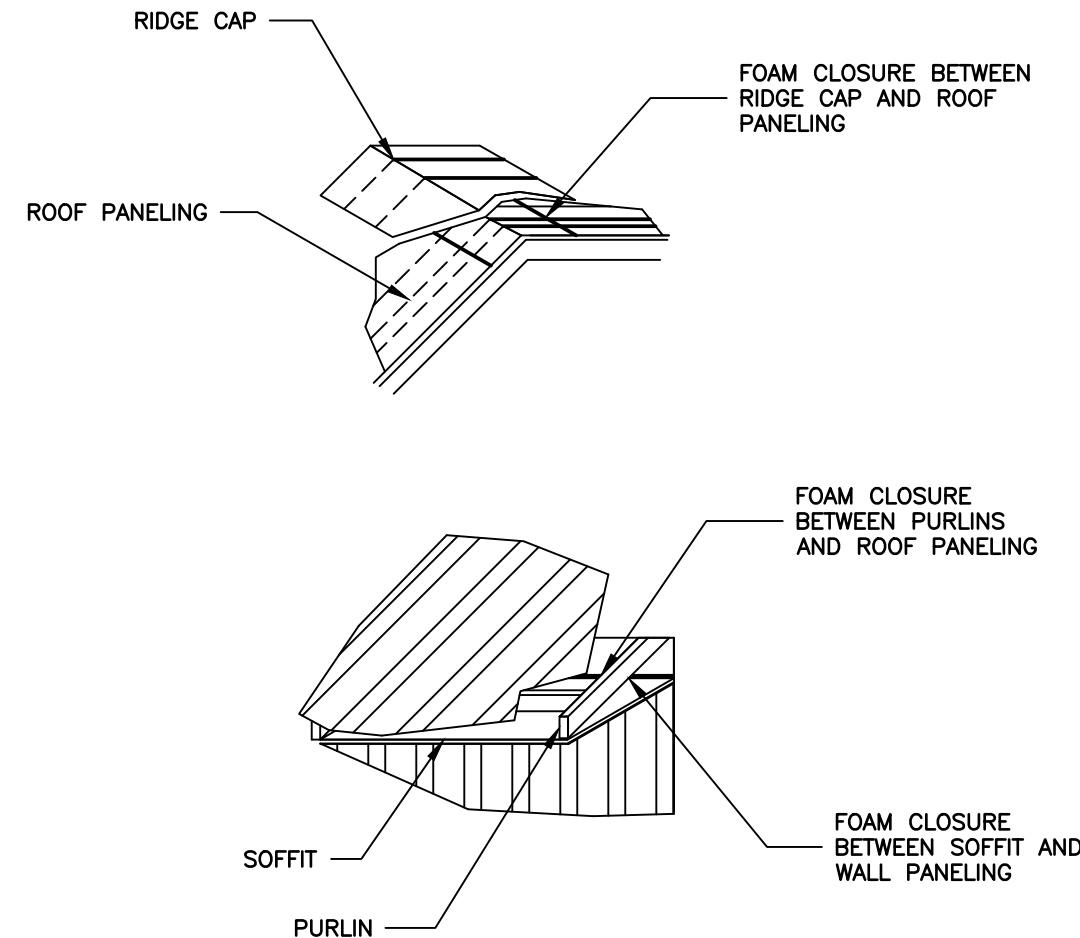


NOTE:  
- PRECAST CONCRETE SPLASHPAD BY BARKMAN CONCRETE OR APPROVED EQUAL.

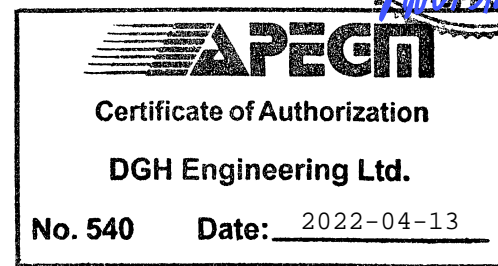
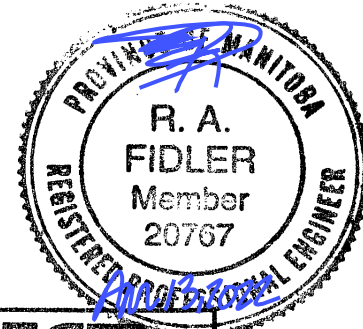
2 PRECAST CONCRETE SPLASHPAD  
SCALE = 1:20



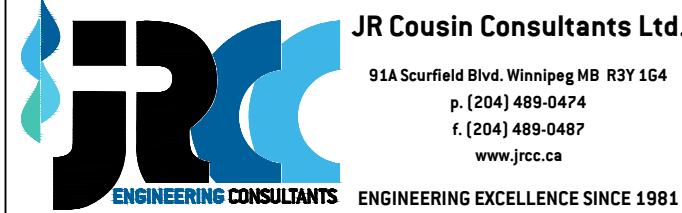
5 INTERIOR WALL DETAIL  
FOR EPOXY FLOOR "W3"  
SCALE = 1:5



3 FOAM CLOSURE LOCATION  
SCALE = NTS



JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
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Revision	Description	Date
Client		client

Project title / Projet

#### RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

Designed by RF	Conçu par
Drawn by OT	Dessiné par
Approved by JJP	Approuvé par
PWSC Project Manager JASON FREZZA	Administrateur de Projets TPSCG
Drawing title	Titre du dessin

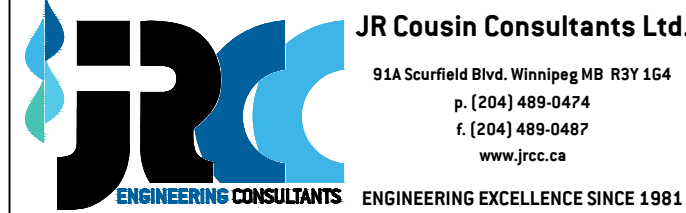
#### WALL AND ROOF FRAMING DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	A06 OF 11	1





JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
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Client		client

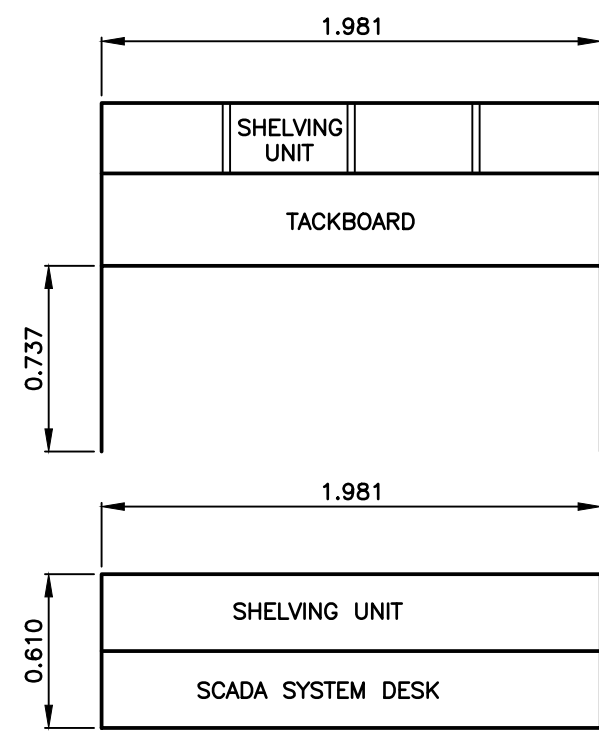
Project title

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

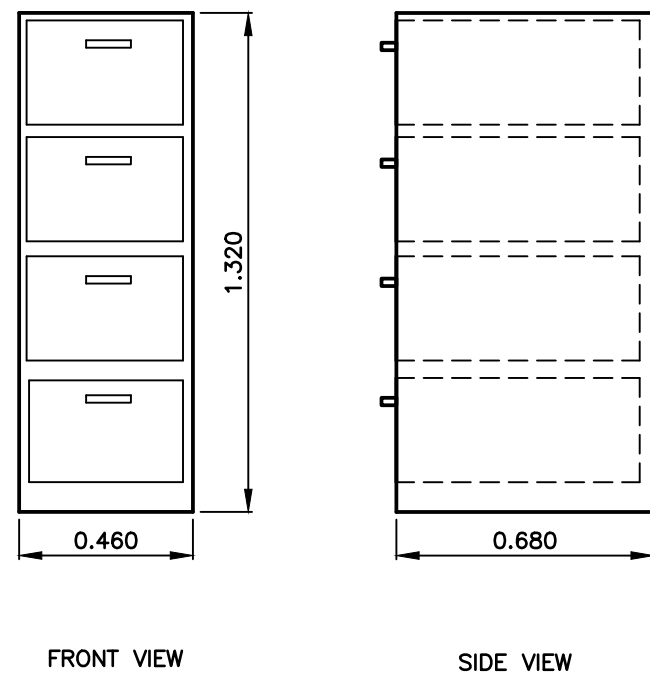
FURNITURE, INTERIOR WINDOW,  
STORAGE RACKING, FLOW DIAGRAM  
DISPLAY AND OUTDOOR  
BUILDING SIGN DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	A07 OF 11	1



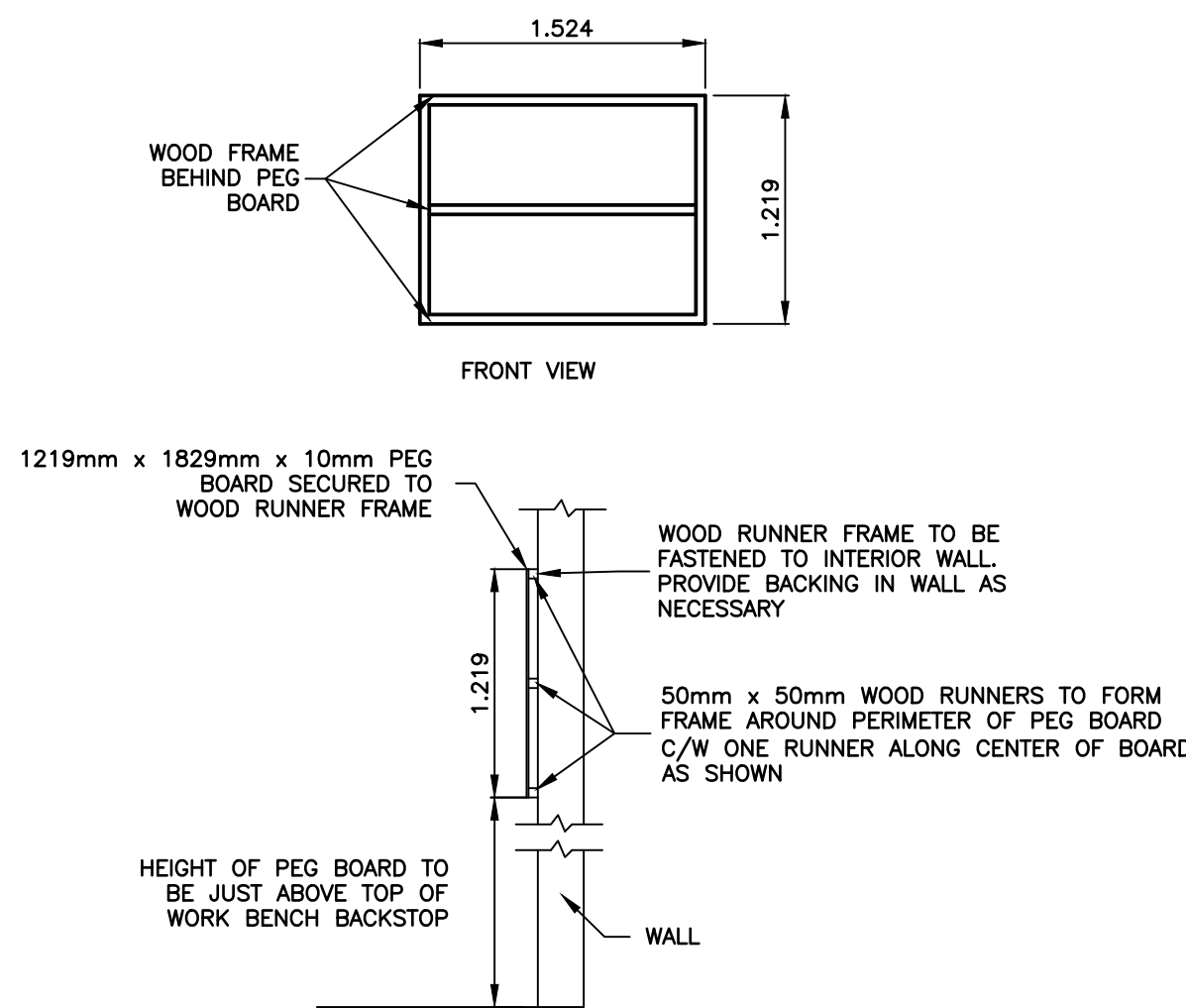
NOTE:  
- TO BE SUPPLIED AND INSTALLED BY OTHERS.

1 SCADA SYSTEM DESK  
03|07 SCALE = 1:30



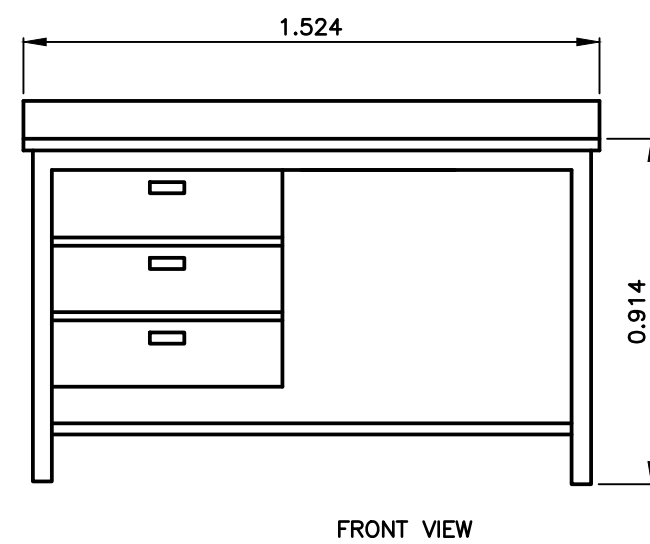
NOTE:  
- TO BE SUPPLIED AND INSTALLED BY OTHERS.

2 OFFICE FILE CABINET  
03|07 SCALE = 1:20



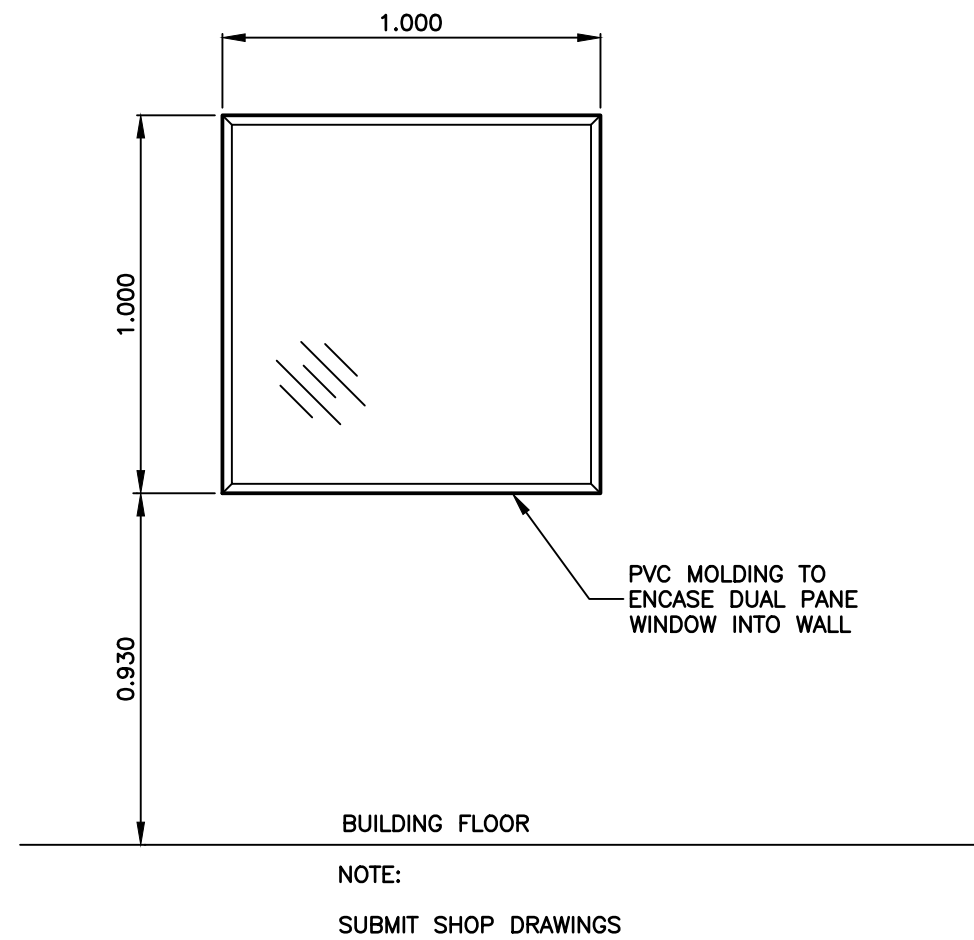
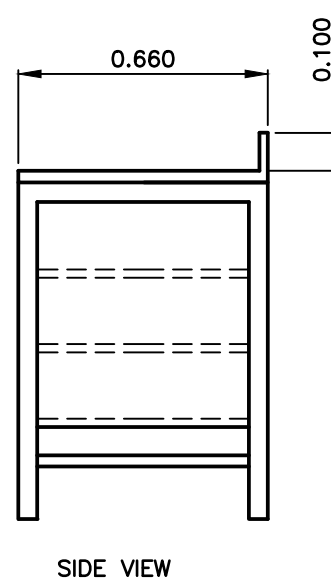
NOTE:  
- TO BE SUPPLIED AND INSTALLED BY OTHERS.

3 PEG BOARD DETAIL  
03|07 SCALE = 1:40

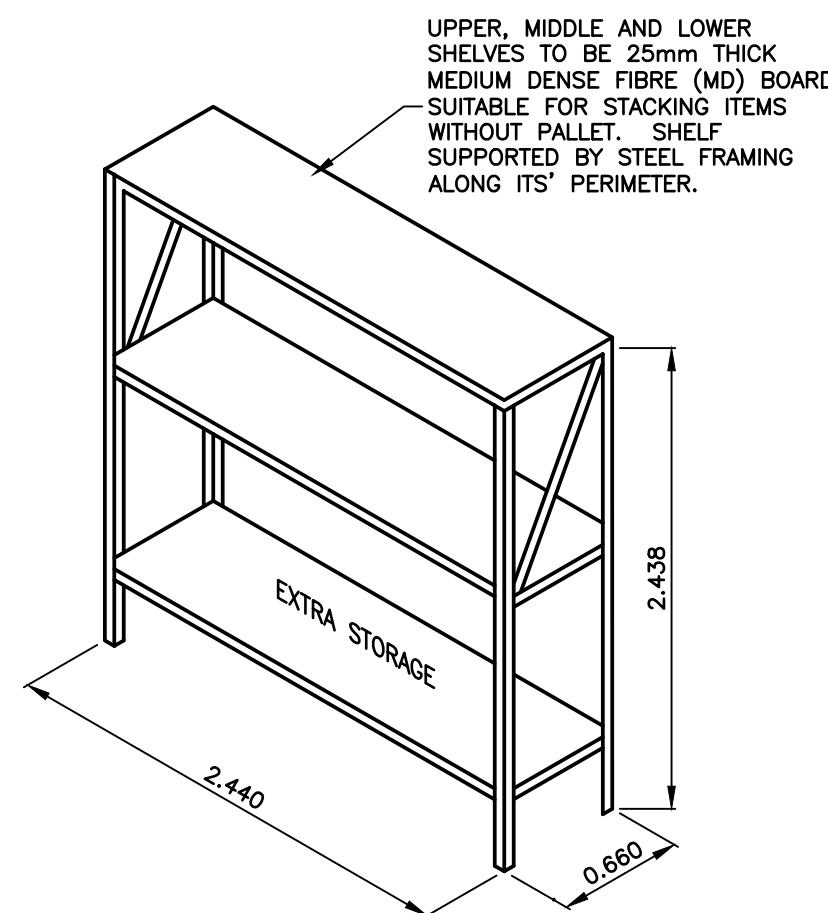


NOTES:  
- TO BE SUPPLIED AND INSTALLED BY OTHERS.

5 WORKBENCH  
03|07 SCALE = 1:20

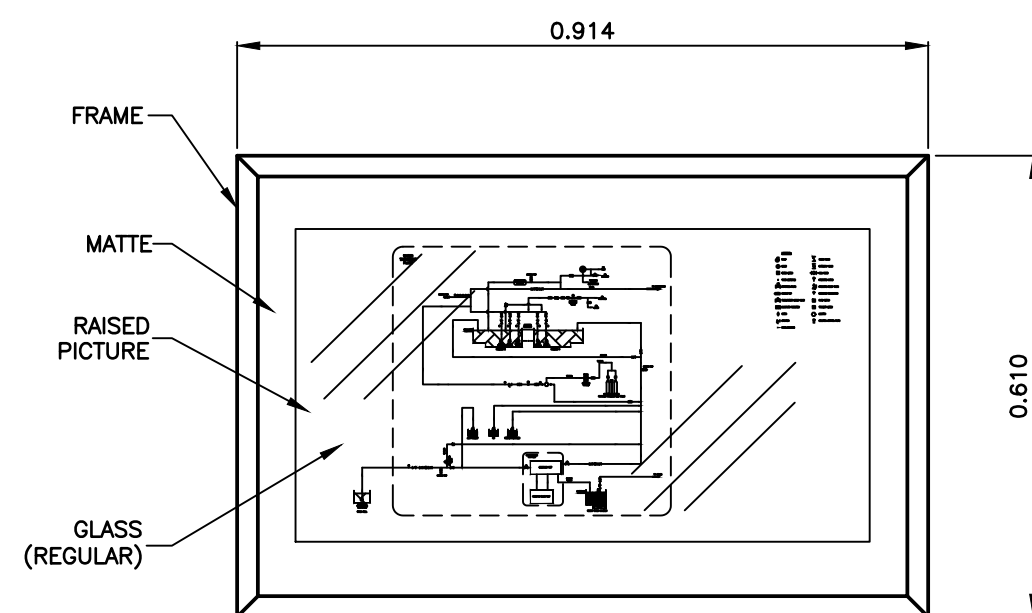


6 INTERIOR WINDOW DETAIL  
03|07 SCALE = 1:20



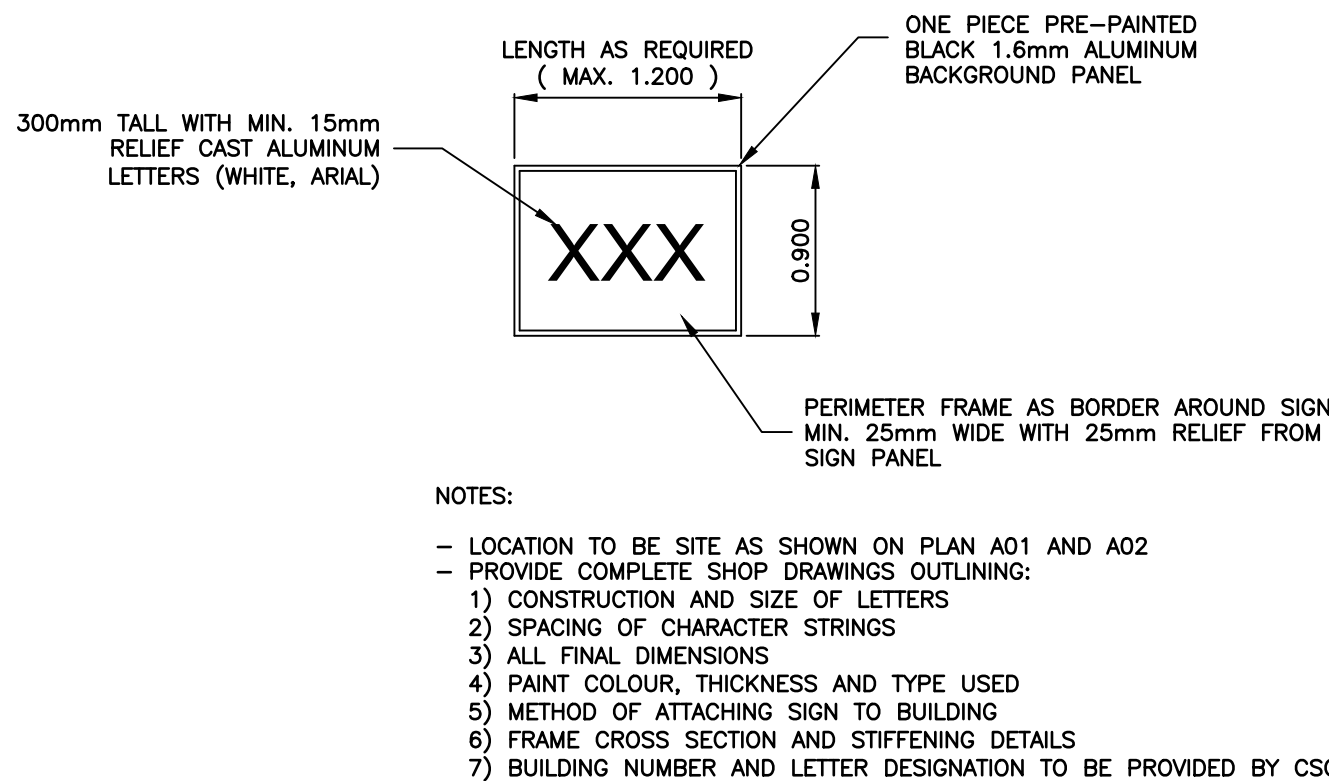
NOTES:  
- TO BE SUPPLIED AND INSTALLED BY OTHERS.

7 STORAGE RACKING  
03|07 SCALE = 1:40



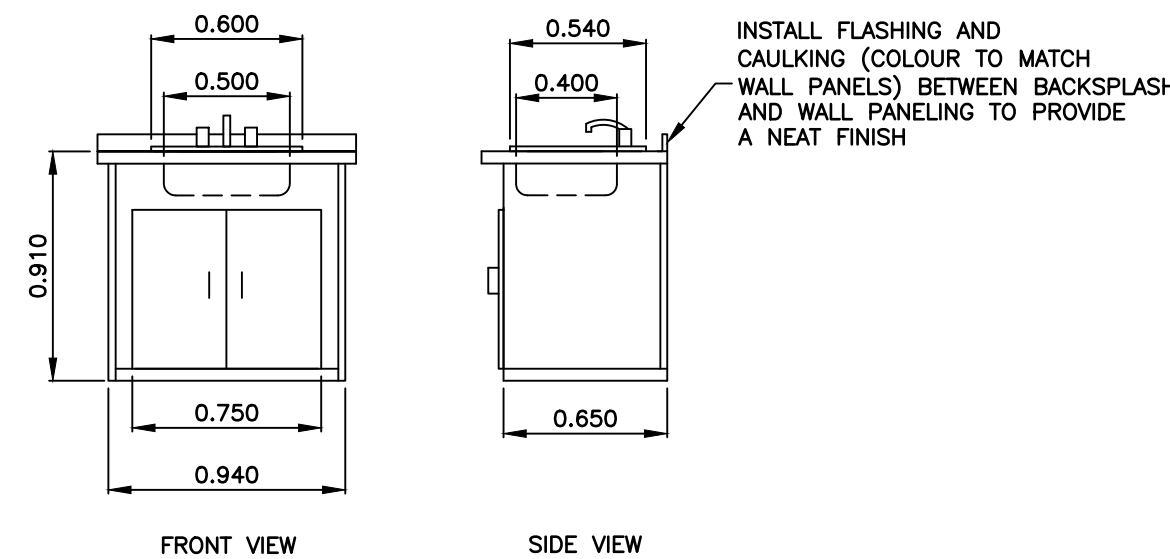
NOTES:  
- 25mm WIDE METAL GROOVED FRAME TO BE BLACK  
- LIGHT GREY MATTE TO BE 40mm  
- DRAWING TO BE RAISED  
- REGULAR GLASS  
- CONTRACTOR TO PROVIDE DEPARTMENTAL REPRESENTATIVE CONSULTANTS WITH FULL VALVE TAG LIST AND RED-LINED FLOW DIAGRAM  
- ENGINEER TO PROVIDE CONTRACTOR WITH 559mm X 864mm REVISED FLOW DIAGRAM FOR FRAMING.  
- CONTRACTOR TO HANG PICTURE FRAME ON BUILDING INTERIOR WALL (FRAME HEIGHT AND EXACT LOCATION ON WALL TO BE FIELD DETERMINED).  
- PROVIDE 1 UNIT FOR THE PROCESS DIAGRAM

9 PROCESS FLOW DIAGRAM DISPLAY  
03|07 SCALE = 1:10



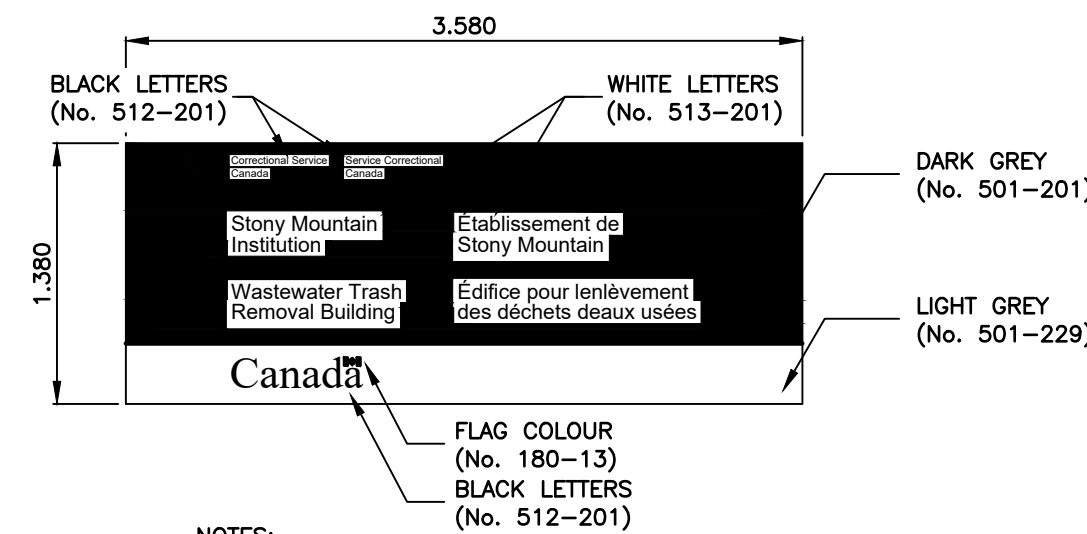
NOTES:  
- LOCATION TO BE SITE AS SHOWN ON PLAN A01 AND A02  
- PROVIDE COMPLETE SHOP DRAWINGS OUTLINING:  
1) CONSTRUCTION AND SIZE OF LETTERS  
2) SPACING OF CHARACTER STRINGS  
3) ALL FINAL DIMENSIONS  
4) PAINT COLOUR, THICKNESS AND TYPE USED  
5) METHOD OF ATTACHING SIGN TO BUILDING  
6) FRAME CROSS SECTION AND STIFFENING DETAILS  
7) BUILDING NUMBER AND LETTER DESIGNATION TO BE PROVIDED BY CSC

10 OUTDOOR BUILDING SIGN - NORTH AND EAST ELEVATIONS  
07 SCALE = 1:40



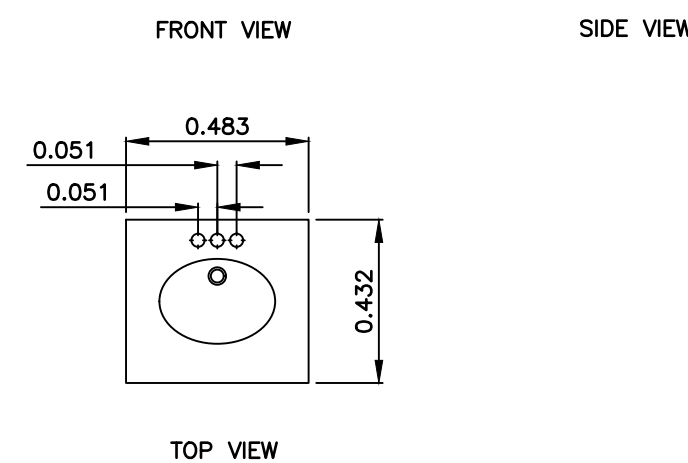
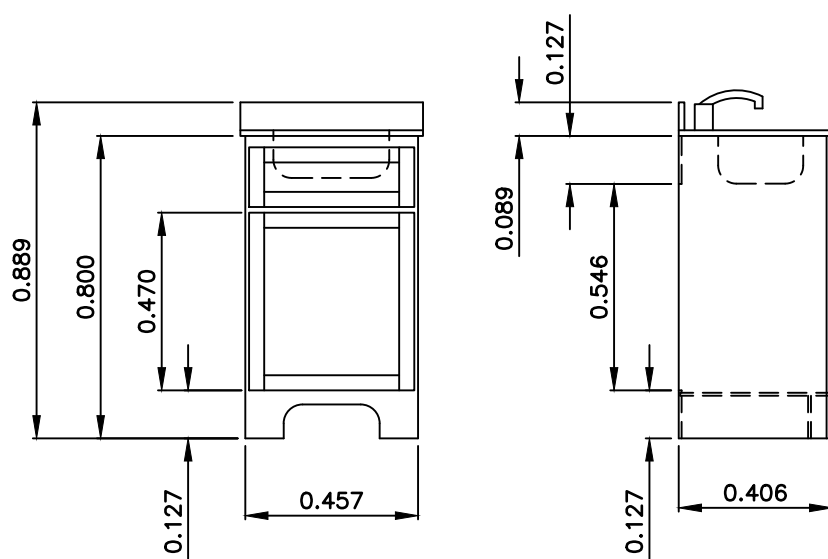
NOTE:  
- CABINET STYLE VANITY COMPLETE WITH TWO DOORS, SINK AND WHITE COLOURED COUNTER TOP WITH BACK SPLASH TO SUIT APPLICATION.  
- CONNECT DRAIN AND P-TRAP ASSEMBLY TO VENT STACK THRU SIDE OR BACK OF VANITY.  
- SUPPLY AND INSTALL WALL MIRROR ABOVE SINK AND TOWEL BAR HANGER IN BATHROOM.  
- CONNECT WATER SERVICE TO SINK THRU SIDE OR BACK OF VANITY.  
- SUBMIT SHOP DRAWINGS.

4 BATHROOM VANITY  
03|07 SCALE = 1:30



NOTES:  
- LOCATION TO BE SITE AS SHOWN ON PLAN A01  
- PROVIDE COMPLETE SHOP DRAWINGS OUTLINING:  
1) CONSTRUCTION AND SIZE OF LETTERS  
2) SPACING OF CHARACTER STRINGS  
3) ALL FINAL DIMENSIONS  
4) PAINT COLOUR, THICKNESS AND TYPE USED  
5) METHOD OF ATTACHING SIGN TO BUILDING  
6) FRENCH WORDING TO BE CONFIRMED IN SHOP DRAWINGS.

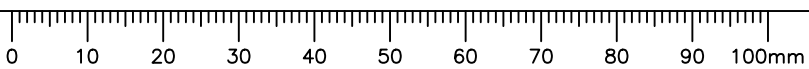
8 OUTDOOR BUILDING SIGN - SOUTH ELEVATION  
01|07 SCALE = 1:40



NOTE:  
- CABINET STYLE VANITY COMPLETE WITH ONE DOOR, SINK AND COUNTER TOP.  
- CONNECT DRAIN AND P-TRAP ASSEMBLY TO VENT STACK THRU SIDE OR BACK OF VANITY.  
- CONNECT WATER SERVICE TO SINK THRU SIDE OR BACK OF VANITY.  
- SUBMIT SHOP DRAWINGS.

11 VESTIBULE VANITY  
03|07 SCALE = 1:20





NATIONAL BUILDING CODE OF CANADA 2015 SUMMARY

1. Project Description

- 1.1.

This project consists of a new, single storey building with a footprint of 200.4 m<sup>2</sup>. The building will be used for wastewater trash removal operated by the Stony Mountain Institute. The building is located at NW 2-13-2E in the R.M. of Rockwood, MB.
- 1.2.

The design and construction of this building shall comply with the requirements of Section 9.36 of the Manitoba Building Code (MBC), Regulation 52/2015. Refer to Energy Code Analysis drawing(s) (Plan A11)) for additional information.

2. Code Summary

- 2.1.

Unless otherwise noted, all numbers reference the National Building Code of Canada 2015 Division B Part 9.
- Occupancy classification:

Group F3 (Part 9 compliance)
- Building area:

200.4 m<sup>2</sup>
- Building height:

1 storey
- Combustible construction:

Permitted
- Fire-fighter access (facing streets):

Needed 1 side
- Fire rated roof assemblies:

Not required
- Fire rated floor assemblies:

Not required for single storey building
- Fire rated loadbearing elements:

Not required
- Occupant load:

2 (intermittent, based on use)
- Sprinklers needed:

No
- Fire alarm needed:

No
- Standpipe needed:

No

3. Particular Considerations

- 3.1.

This building will be occupied only intermittently when maintenance and repair of the process equipment is required. Due to the nature of this work, persons of limited mobility will not be performing these tasks and thus barrier-free access is not provided.

4. Occupant Load

- 4.1.

The occupant load has been determined by use, as follows:
- Total occupant load:

10 (intermittent)
- 4.2.

A permanent sign declaring the maximum occupant load shall be posted in a conspicuous location near the principal entrances, as the occupant load is not designed according to Table 3.1.17.1 (Sentence 3.1.17.1.(2)).

5. Washroom Requirements

- 5.1.

Plumbing facilities, in occupancies other than dwelling units, shall be provided in conformance to Subsection 3.7.2 and Section 3.8 (Sentence 9.31.1.1.(2)). In this case, barrier-free access is not provided so the washroom does not meet the requirements for a barrier-free universal toilet room. Refer to item #3.1 under ‘Particular Considerations’ for further information.
- 5.2.

The number of water closets and lavatories in the building is sufficient to serve the expected occupant load.
- 5.3.

Where the occupant load is not more than 10, both sexes are permitted to be served by a single water closet (Sentence 3.7.2.2.(4)).

6. Fire-Rated Assemblies

- 6.1.

As the building is one storey and the roof is not rated, loadbearing walls, columns and arches are not required to have a fire-resistance rating (Article 9.10.8.3).
- 6.2.

No fire rated assemblies are required as this is a 1 storey, Part 9 building (Article 9.10.8.1).
- 6.3.

For information on interior walls and ceilings required to have a fire rating due to fire separation requirements, please see section 8 “Fire Separations” in this document.

7. Spatial Separations

- 7.1.

No fire rating is required for the north, south, and west exposing building faces due to limiting distances exceeding spatial separations requirements.

8. Fire Separations

- 8.1.

Service or mechanical rooms in which fuel-fired appliances are located must be separated from the remainder of the building by fire separations having a fire-resistance rating of not less than 60 minutes (Article 9.10.10.4).
- 8.2.

Doors having a fire-resistance rating of not less than 45 minutes must be used as closures in fire separations required to have a minimum fire-resistance rating of 60 minutes (Article 9.10.13.1).
- 8.3.

Doors used as closures in a fire separation must be equipped with a self-closing device (Article 9.10.13.10).
- 8.4.

Doors used as closures in a fire separation must not be held open except by hold-open devices designed to release from a signal from a heat actuated device, a smoke alarm, or the building fire alarm (Article 9.10.13.11 and Article 3.1.8.14).
- 8.5.

Doors used as closures in a fire separation must be equipped with a positive latching mechanism designed to hold the door in the closed position after each use (Article 9.10.13.9).

9. Penetrations

- 9.1.

Ducts that penetrate an assembly required to be a fire separation with a fire-resistance rating must be equipped with a fire damper (Article 9.10.13.13).
- 9.2.

Piping, tubing, wiring, conduit or raceways penetrating a membrane which is part of a fire separation shall be sealed with a fire-stop system (Sentence 9.10.9.6.(1)).
- 9.3.

Combustible drain, waste and vent piping not located in a vertical shaft, that penetrates a fire separation or membrane forming part of an assembly required to have a fire-resistance rating shall be sealed at the penetration with a fire stop having an F rating not less than the fire-resistance rating of the fire separation or rated assembly (Sentence 9.10.9.7.(2)).
- 9.4.

Written descriptions (e.g.: catalogue cuts) of all fire dampers, fire-stop caulking and other fire-stop systems, must be submitted to the engineer for approval prior to installation.

10. Finishes

- 10.1.

The interior partition and ceiling finishes must have a flame spread rating of no more than 150 (Article 9.10.17.1).
- 10.2.

The finish for treads and landings of exterior stairs must have a slip-resistant finish or be provided with slip resistant strips that extend not more than 1 mm above the finished surface (Article 9.8.9.6).

11. Guards

- 11.1.

Stairs and ramps shall have a wall or well-secured guard on each side where the difference in elevation between the walking surface and the adjacent surface is greater than 600 mm, or where there is a slope of more than 1 in 2 within 1.2 m of the walking surface (Sentence 9.8.8.1.(1)).
- 11.2.

All guards must be not less than 1070 mm in height, except that guards for flights of steps other than in required exit stairs must be not less than 900 mm in height (Article 9.8.8.3).
- 11.3.

Openings through guards serving industrial occupancies shall be of a size that prevents the passage of a sphere with a diameter of 535 mm (Article 9.8.8.5.(2)).

12. Handrails

- 12.1.

Stairs less than 1100 mm wide shall have a handrail on at least one side, and stairs equal to or over 1100 mm wide and ramps shall have handrails on both sides (Article 9.8.7.1).
- 12.2.

Handrails shall be continuously graspable along their entire length with no obstructions on or above them that would break a handhold (Sentence 9.8.7.5.(2)).
- 12.3.

Handrails shall be designed and attached to resist a concentrated load of not less than 0.9 kN applied at any point and in any direction, and a uniformly distributed load of 0.7 kN/m (Article 9.8.7.7).
- 12.4.

Handrails on stairs must not be less than 865 mm and not more than 1070 mm high, measured vertically from the top of the handrail to a straight line drawn tangent to the tread nosings, or from the top of the handrail to the surface of the ramp, floor or landing (Article 9.8.7.4). See Typical Stair Schematic.
- 12.5.

Except where interrupted by doorways, at least one handrail shall be continuous throughout the length of a stairway or ramp, including landings (Article 9.8.7.2).
- 12.6.

Handrails shall be terminated in a manner which will not obstruct pedestrian travel or create a hazard (Sentence 9.8.7.3.(1)).
- 12.7.

At least one handrail at the side of a stairway or ramp shall extend horizontally not less than 300 mm (12”) beyond the top and bottom of the stairway or ramp (Sentence 9.8.7.3.(2)).
- 12.8.

The clearance between a handrail and any surface behind it must not be less than 50 mm or 60 mm if the surface behind the handrail is rough or abrasive (Sentence 9.8.7.5.(1)).
- 12.9.

Handrails and their required supports shall not project more than 100 mm into the required width of a stair or a ramp (Article 9.8.7.6).

13. Treads and Risers

- 13.1.

Stairs shall have a rise between treads not less than 125 mm (5”) and not more than 180 mm (7”) between successive steps (Article 9.8.4.1). See “Stair Schematic for Code Compliance”.
- 13.2.

Stairs shall have a run of not less than 280 mm (11”) between successive steps (Article 9.8.4.2). See “Stair Schematic for Code Compliance”.
- 13.3.

Stairs serving areas used only as service rooms or service spaces need not conform to the rise and run requirements of Articles 9.8.4.1 and 9.8.4.2.

14. Landings

- 14.1.

The length of a landing shall be at least the width of the stairway in which it occurs, except that in a straight run the length of the landing need not be more than 1100 mm (44”) (Article 9.8.6.3).
- 14.2.

The slope of landings shall not exceed 1 in 50 (Sentence 9.8.6.3.(6)).
- 14.3.

Clear height over landings shall be not less than 2050 mm (Article 9.8.6.4).

15. Egress and Exits

- 15.1.

In an unsprinklered building of Group F, Division 3 occupancy where more than one exit is required, exits shall be placed so that the travel distance to at least one exit shall be not more than 30 m (Article 9.9.8.2).
- 15.2.

Exit signage is not required by Sentence 9.9.11.3.(1).
- 15.3.

Emergency lighting is required and must conform to Article 9.9.12.3.
- 15.4.

Headroom clearance along any means of egress and in exits must be at least 2100 mm (Sentence 9.9.3.4.(1)), except at doors: 2030 mm. Clear headroom under closers at doors must be at least 1980 mm (Article 9.9.6.2).
- 15.5.

Locking, latching and other fastening devices at exit doors must be installed no higher than 1200 mm above the floor and must permit the door to be opened readily from the inside with one hand, with not
- more than one releasing operation and without keys, specialized devices or specialized knowledge (Article 9.9.6.7).
- 15.6.

Panic hardware is not required on exit doors.
16. Barrier-Free Access
- 16.1.

Barrier-free access is not provided. Refer to item #3.1 under ‘Particular Considerations’ for further information.
17. Attic Access
- 17.1.

An access panel at least 550 mm x 900 mm is to be provided to any concealed roof space that is higher than 600 mm over an area not less than 3 m<sup>2</sup> and not less than 1 m in length or width (Article 9.19.2.1).
18. Attic Ventilation
- 18.1.

Total free vent area to the attic is to be at least 0.67 m<sup>2</sup>. Required vents may be roof type, eave type, gable-end type or any combination thereof, and shall be distributed uniformly throughout from opposite sides of the building, with not less than 25% of the required openings located at the top of the space, and with not less than 25% of the required openings located at the bottom of the space (Article 9.19.1.2). Attic ventilation is to be provided as indicated on the plans.
19. Mechanical Ventilation
- 19.1.

It is a code requirement that all occupied spaces be provided with fresh air by mechanical or natural ventilation according to Subsection 6.3.1.
20. Portable Fire Extinguishers
- 20.1.

All portable fire extinguishers must be type ABC installed in surface-mounted or recessed cabinets, or on wall-mount brackets. The minimum capacity of each extinguisher must be at least 4A-80B-C in the electrical room and 2A-20B-C in all other areas; extinguishers are to be provided as indicated on the plans and distributed so that at least one is accessible within 15.25 meters of any location.
21. Firefighter Access
- 21.1.

Access for fire department equipment shall be provided to each building by means of a street, private road or yard (Sentence 9.10.20.3.(1)).

21.2.

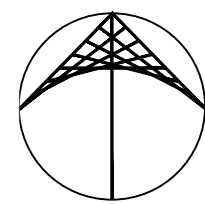
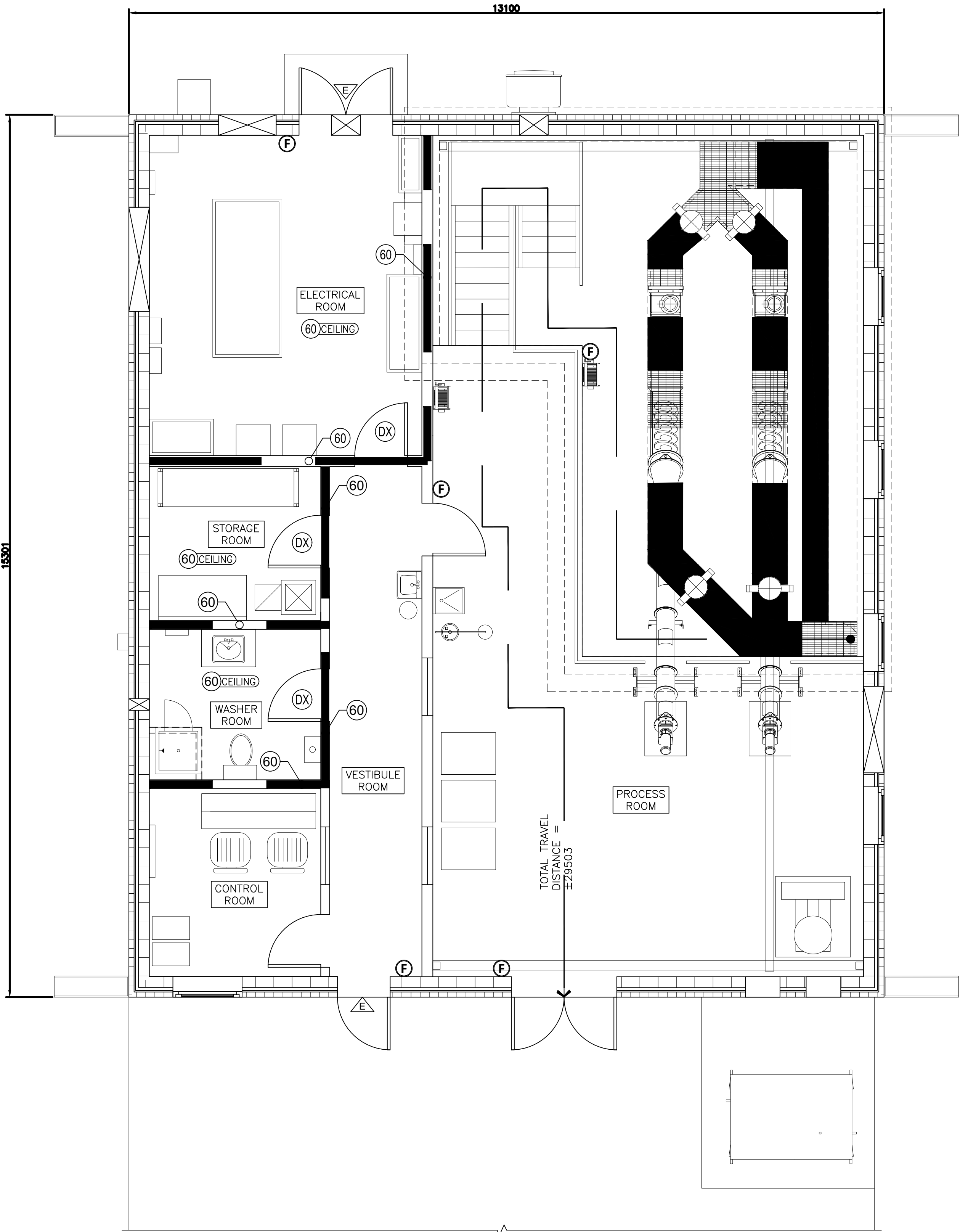
Firefighting vehicle access routes shall be designed to consider of the weight of firefighting vehicles, width of the roadway, radius of curves for turning, overhead clearance, location of hydrants and fire department connections, location of vehicular parking, and connection to public thoroughfares (Sentence 9.10.20.3.(2)).
22. Standpipes
- 22.1.

A standpipe system is not required (Table 3.2.5.8.).
23. Sprinklers
- 23.1.

A sprinkler system is not required for the occupancy classification of this building.
24. Fire Alarms
- 24.1.

A fire alarm system is not required (Article 9.10.18.2).
- 
- REAL PROPERTY SERVICES  
Western Region  
SERVICES IMMOBILIERS  
Région de l'ouest
- 
- 
- 
- SEAL
- JRCC PROJECT # R-325.56
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| 1        | ISSUED FOR TENDER | APR 2022 |
| 0        | DESIGN COMPLETION |          |
| Revision | Description       | Date     |
| Client   |                   | client   |
- Project titleProjet
- RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING
- |                                       |                                  |
|---------------------------------------|----------------------------------|
| Designed by<br>JJP                    | Conçu par                        |
| Drawn by<br>JRL                       | Dessiné par                      |
| Approved by<br>JJP                    | Approuvé par                     |
| PWGSC Project Manager<br>JASON FREZZA | Administrateur de Projets TPSSGC |
| Drawing title                         | Titre du dessin                  |
| CODE ANALYSIS SUMMARY                 |                                  |
- |                           |                           |              |
|---------------------------|---------------------------|--------------|
| Project no./No. du projet | Drawing no./No. du dessin | Revision no. |
| R.118541                  | A08<br>OF 11              | 1            |





# MAIN FLOOR

SCALE: 1:50

CODE ANALYSIS – EQUIPMENT & ROOM RATING		
ITEM	SYMBOL	REMARKS
FIRE EXTINGUISHER (WALL MOUNTED)	F	
FIRE RATED DOOR	DX	
TRAVEL DISTANCE FROM FURTHEST POINT	→	
FIRE SEPARATION (RATING AS PER ANNOTATION BUBBLE)		
ANNOTATION BUBBLE	60	NUMBER INDICATES TIME IN MINUTES FOR FIRE RATING
ANNOTATION BUBBLE (CEILING FRR)	60 CEILING	NUMBER INDICATES TIME IN MINUTES FOR FIRE RATING
REQUIRED EXIT DOOR	E	
NOTE: CODE ANALYSIS PLAN TO BE IN CONJUNCTION WITH ELECTRICAL LIFE SAFETY PLAN		



Public Works and Government Services Canada



Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES  
Western Region  
SERVICES IMMOBILIERS  
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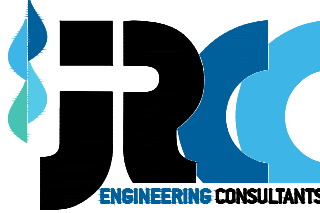




Certificate of Authorization  
DGH Engineering Ltd.  
No. 540 Date: 2022-04-13

SEAL

JRCC PROJECT # R-325.56



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ENGINEERING CONSULTANTS ENGINEERING EXCELLENCE SINCE 1981

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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title

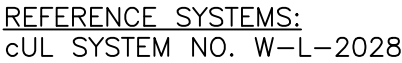
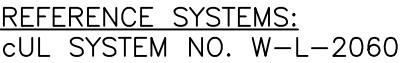
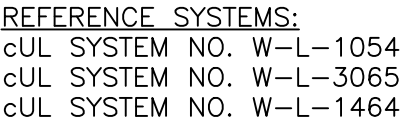
## RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

Designed by JJP	Conçu par
Drawn by JRL	Dessiné par
Approved by JJP	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

### CODE ANALYSIS PLAN MAIN FLOOR

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	A09 OF 11	1





1. FLEXIBLE STEEL CONDUIT, MAX DIAMETER OF OPENING TO BE 140mm $\phi$  (5 $\frac{1}{2}$ ") MAX. ANNUAL SPACE TO BE 76mm (3")
2. STEEL OR CAST IRON PIPE, DIAMETER TO BE 114mm (4 $\frac{1}{2}$ ") LARGER THAN PIPE TO A MAX. OF 368mm $\phi$  (14 $\frac{1}{2}$ ")
3. COPPER PIPE, DIAMETER TO BE 114mm (4 $\frac{1}{2}$ ") LARGER THAN PIPE TO A MAX. OF 267mm $\phi$  (10 $\frac{1}{2}$ ")
4. BUNDLE OF WIRES, WIRES OR BUNDLES TO FILL A MAX. OF 45% OF CROSS SECTION AREA OF OPENING. FOR 25mm $\phi$  (1") MAX. BUNDLE OPENING (WITHOUT STEEL SLEEVE) TO BE MAX. 100mm $\phi$  (4").



1. National Energy Code for Buildings NECB, Part 3 Building Envelope

- 1.1. Unless otherwise noted, all numbers in this section reference National Energy Code of Canada for Buildings 2017 Division B.
- 1.1.1. As permitted by Articles 9.36.1.3 and A-9.36.1.3, the subject building has been reviewed in compliance to the National Energy Code for Buildings in lieu of NBCC Section 9.36 Energy Efficiency requirements.
- 1.2. Reference Location: Winnipeg, MB  
Heating Degree Day Zone: 7A (Table 3.2.2.2)  
Heating Degree Days: 5670 (NBCC 2019, Div. B, Appendix C, Table C-2)
- 1.3. Compliance Path: Simple Trade-Off Path (Subsection 3.3.3)
- 1.3.1. Refer to Note 1.14 and 1.15 below for Simple Trade-Off calculations and applicable building assemblies.
- 1.4. The maximum allowable area of fenestrations and doors on the exterior walls of the building is 28.9% of the total exterior wall area (Sentence 3.2.1.4):  
Fenestration and door area to gross wall area ratio,  
 $FDWR \leq (2000 - 0.2 \times HDD) / 3000 = 28.9\%$  (Sentence 3.2.1.4.(1))
- 1.5. The maximum allowable area of skylights on the roof of the building is 2.0% of the total roof area (Section 3.2.1.4).
- 1.6. Actual FDWR = 4.9 %
- 1.7. Actual area percentage of skylights = 0%
- 1.8. Floors shall be insulated to the level required in Note [1.13] below and shall:
- 1.8.1. Be placed on the interior top or bottom surface of the floor 1.2 m from the perimeter, or;
- 1.8.2. Extend out from the exterior wall, below grade for a distance not less than 1.2 m.
- 1.9. Basement walls shall be insulated to the level required in Note [1.13] below and shall:
- 1.9.1. Extend 2.4m down from ground level or;
- 1.9.2. Extend to the bottom of the wall, whichever is less.
- 1.10. The maximum air leakage rate for fenestrations are as follows (Subsection 3.2.4):

Component	Maximum Allowable Air Leakage Rate	Test Standard
Fixed Windows	0.20 L/s·m <sup>2</sup> @ 75 Pa	AAMS/WDMA/CSA 101/I.S.2/A440
Operable Windows	0.50 L/s·m <sup>2</sup> @ 75 Pa	AAMS/WDMA/CSA 101/I.S.2/A440
Man Doors	0.50 L/s·m <sup>2</sup> @ 75 Pa	ASTM E 283
Overhead Doors	5.00 L/s·m <sup>2</sup> @ 75 Pa	ASTM E 283

NOTE: Main Exterior Entry Doors with a total area less than 2% of gross wall area may have an air leakage rate > 0.50 L/s·m<sup>2</sup> but not > 5.0 L/s·m<sup>2</sup> @ 75 Pa (Can / SI) (ASTM E 283).

- 1.11. Contractor to provide shop drawings of all doors, windows and attic access hatches to ensure thermal transmittance values do not exceed those listed in Note 1.13 below.
- 1.12. Vestibules are not required as permitted by Sentence 3.2.2.1.(3f) given that the exterior door opens from a space that is less than 150 sqm in size.
- 1.13. The U-values for the primary building envelope components are as follows:

U-VALUE TABLE		
Overall Thermal Transmittances of Opaque Building Assemblies		
Opaque Building Assemblies <sup>1</sup>	Maximum Permitted Overall Thermal Transmittance, <i>U</i> (W/m <sup>2</sup> K)	Actual Overall Thermal Transmittance, <i>U</i> (W/m <sup>2</sup> K)
<b>Wall Assemblies</b>		
Typical Exterior Wall Assembly [W1]	0.430 <sup>5</sup>	0.430
<b>Roof Assemblies</b>		
Typical Roof Assembly [R1]	0.143 <sup>5</sup>	0.143
<b>Floor Assemblies in Contact w/ Ground</b>		
Typical Floor Assembly <sup>2</sup> [F1]	0.757	0.757
<b>Wall Assemblies in Contact w/ Ground</b>		
Typical Basement Wall Assembly <sup>3</sup>	0.284	0.284
<b>Fenestrations</b>		
Typical Window <sup>4</sup>	4.00 <sup>5</sup>	1.90
<b>Doors</b>		
Typical Exterior Doors <sup>4</sup>	6.00 <sup>5</sup>	1.90
<b>Other</b>		
Attic Access Hatches <sup>4</sup>	1.30	1.30
NOTES: <sup>1</sup> Refer to Building series drawings for all wall, floor and roof construction types, and all window and door sizes. <sup>2</sup> Refer to Note 1.9 for placement of insulation. <sup>3</sup> Refer to Note 1.9 for placement of insulation. <sup>4</sup> Contractor to provide shop drawings of all doors, windows and attic access hatches to ensure thermal transmittance values do not exceed those listed above. Actual values shown are chosen to be the maximum value allowable by the Prescriptive Path; actual values to be confirmed upon engineer's receipt of shop drawings. <sup>5</sup> The maximum permitted thermal transmittance values indicated above are indicated based on Simple Trade-Off calculations as outlined in Note 1.14 and 1.15 below, as permitted by Subsection 3.3.3.		

- 1.14. The following is a summary of the Simple Trade-Off analysis completed for above-ground wall assemblies:

SIMPLE TRADE-OFF SUMMARY TABLE			
Above Ground Building Assemblies <sup>1</sup>	Thermal Transmittance, <i>U</i> (W/m <sup>2</sup> K)	Area, <i>A</i> (m <sup>2</sup> )	UA (W/K)
<b>Proposed Building (FDWR = 4.9%)<sup>2</sup></b>			
Typical Exterior Wall Assembly [W1]	0.430	270.75	116.42
Windows	4.00	4.72	18.88
Doors	6.00	9.32	55.93
<b>TOTAL UA:</b>			<b>191.23</b>
<b>NECB Reference Building (FDWR = 28.9%)<sup>2</sup></b>			
Typical Exterior Wall Assembly	0.210	202.58	42.54
Windows & Doors	1.90	82.21	156.20
<b>TOTAL UA:</b>			<b>197.74</b>
<b>UA of Proposed Building &lt; UA of NECB Reference Building</b>			
Therefore, Proposed Building is compliant with Subsection 3.3.3 and complies with the envelope requirements outlined in Part 3 of the NECB.			
NOTES: <sup>1</sup> Refer to Building series drawings for all Proposed wall construction types, and all window and door sizes. <sup>2</sup> FDWR values used in Simple Trade-Off Path are noted in Notes 1.4 and 1.6 above.			

- 1.14.1. The difference in UA between the Proposed and NECB Reference Building above permits the thermal transmittance of the exterior wall assemblies and window/door assemblies in the Proposed building to be increased the corresponding value in the U-Value table in Note 1.12.
- 1.15. The following is a summary of the Simple Trade-Off analysis completed for above-ground roof assemblies:

SIMPLE TRADE-OFF SUMMARY TABLE			
Above Ground Building Assemblies <sup>1</sup>	Thermal Transmittance, <i>U</i> (W/m <sup>2</sup> K)	Area, <i>A</i> (m <sup>2</sup> )	UA (W/K)
<b>Proposed Building (0% Skylights)</b>			
Typical Roof Assembly [R1]	0.143	200.43	28.66

<b>TOTAL UA:</b>			<b>28.66</b>
<b>MECB Reference Building (5% Skylights)</b>			
Typical Roof Assembly	0.138	196.42	27.11
Skylights	1.90	4.01	7.62
<b>TOTAL UA:</b>			<b>34.72</b>
<b>UA of Proposed Building &lt; UA of NECB Reference Building</b>			
Therefore, Proposed Building is compliant with Subsection 3.3.3 and complies with the envelope requirements outlined in Part 3 of the NECB.			
NOTES: <sup>1</sup> Refer to Building series drawings for all Proposed roof construction types.			

- 1.15.1. The difference in UA between the Proposed and NECB Reference Building above permits the thermal transmittance of the exterior wall assemblies and window/door assemblies in the Proposed building to be increased the corresponding value in the U-Value table in Note 1.12.

2. National Energy Code for Buildings, Part 4, Part 5, Part 6 and Part 7

- 2.1. The design of the lighting, HVAC, service water heating, and electrical power systems of the building shall be in accordance to the requirements of NECB, Division B, Parts 4, 5, 6 and 7. Please refer to electrical and mechanical construction drawings for details.
- 2.2. Parts 4, 5, 6, and 7 compliance shall be the responsibility of the Energy Code Coordinator along with the certifying Professional Engineers responsible for the Mechanical and Electrical systems of the project.

SEAL

JRCC PROJECT # R-325.56

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1	ISSUED FOR TENDER	APR 2022
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Revision	Description	Date
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Project title Projet

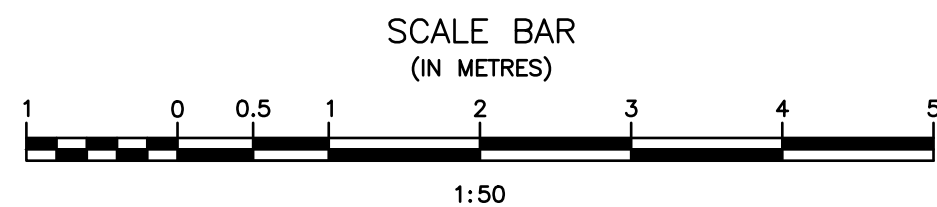
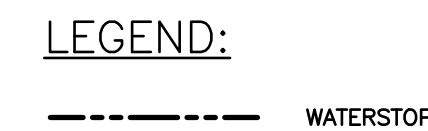
RM OF ROCKWOOD  
SMI WASTEWATER TASH  
REMOVAL BUILDING

Designed by SCM	Conçu par SCM
Drawn by SSM	Dessiné par SSM
Approved by JJP	Approuvé par JJP
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

ENERGY CODE  
ANALYSIS PLAN

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	A11 OF 11	1





A000

1. CLEAR COVER FOR ALL REINFORCING STEEL AND WATERSTOP TO BE 40mm UNLESS OTHERWISE SPECIFIED.
2. PROVIDE BEAM BOLSTERS C/W RUNNERS AS SUPPORT FOR ALL SLAB REINFORCING;
3. PROVIDE INDIVIDUAL HIGH CHAIRS C/W PLATE AS SUPPORT FOR ALL SLAB REINFORCING BARS, PROVIDE INDIVIDUAL HIGH CHAIRS C/W PLATE AS SUPPORT FOR ALL RESERVOIR FLOOR REINFORCING BARS.
4. PROVIDE COVER FOR REINFORCING STEEL TO BE 40mm UNLESS OTHERWISE INDICATED.
5. C.I.P. DESIGNATES CAST IN PLACE. B/W DESIGNATES BOTHWAYS, B/F DESIGNATES BOTH FACES.
6. FRAME REBAR AROUND ALL PIPES THROUGH CONCRETE WHICH ARE OF 100mm Ø OR GREATER.
7. PIPES LESS THAN 200mm Ø – FRAME WITH 10W X 1000mm LONG REINFORCING BARS. PIPES 200mm Ø OR GREATER – FRAME WITH 15W X 1800mm LONG REINFORCING BARS.
8. AT ALL PORT LOCATIONS PROVIDE ADDITIONAL STEEL AT EACH SIDE OF OPENING TOP AND BOTTOM (SIZE TO MATCH EXISTING STEEL).
9. PROVIDE 1-10M BAR AROUND PERIMETER OF ALL HOUSEKEEPING PADS.
10. C.I.P. DRAINAGE PIPING OMITTED FOR CLARITY.
11. EXISTING CONCRETE WASTEWATER TRENCH BUILDING FLOOR TO BE COMPLETELY POWER TROWELED TO PROVIDE A SMOOTH FINISHED SURFACE AT SLOPES AND DRAINAGE SHOWN ON DRAINAGE PLAN.
12. FLOOR THICKNESS OF 305mm ØR 203mm AS SHOWN RELATES TO THICKNESS AT DRAINS ONLY. TO ACHIEVE SLOPES AS SHOWN ON DRAINAGE PLAN, FLOOR MUST BE THICKENED BY APPROPRIATE AMOUNT AT THE EDGE OF THE SLAB.
13. SUBMIT REINFORCING SCHEDULE AND SHOP DRAWINGS FOR REVIEW AND APPROVAL.
14. STEEL SPECIFICATION: GRADE 400, TO CAN/CSA G30.18
15. STEEL OVERLAP TO BE MIN. 600mm FOR 15mm, 800mm FOR 20m AND 1000mm FOR 25mm
16. ALL BENDING DETAILS, DIMENSIONS, ANCHORAGE, CUT-OFF LENGTHS, BAR SUPPORTS, LAPPING AND LACING AND LACING AND LACING SPICES SHALL BE IN ACCORDANCE WITH A.23.3 LATEST EDIT ALL CONCRETE, UNLESS OTHERWISE STATED SHALL BE DESIGNED AS FOLLOWS:
  - TYPE HS CONCRETE
  - MIN. 56 DAYS COMPRESSIVE STRENGTH = 35mPa
  - AIR ENTRAINMENT (4/- -1%) = 6%
  - MAXIMUM SLUMP = 90mm
17. CONCRETE FOR FLOOR SLAB SHALL BE TYPE GU CONCRETE, MIN. 28 DAY COMPRESSIVE STRENGTH = 35mPa NATURAL AIR, MAXIMUM SLUMP = 90 mm.
18. DRAINAGE DESIGN AND ALL RECOMMENDATIONS CONTAINED IN THE WOOD ENVIRONMENT AND INFRASTRUCTURE SOLUTIONS TECHNOLOGICAL REPORT DATED AUGUST 14, 2018.
19. CONTRACTOR SHALL NOTIFY DEPARTMENTAL REPRESENTATIVE IF LOCAL CONDITIONS DIFFER FOR THOSE LISTED ABOVE.
20. EPOXY ALL REINFORCING BARS THROUGH COIL JOINTS WHEN NOTED.
21. PLACE, CAST IN PLACE AND PIPING IN MIDDLE IN SLAB.
22. ALL BENT STEEL MEASUREMENTS ARE FROM CENTRE TO CENTRE.
23. PROVIDE 2 ADDITIONAL STIRRUPS ON EITHER SIDE OF ALL PIPES THROUGH GRADE BEAMS.
24. IN LIEU OF BENDING THE STEEL AROUND WATER STOP, CONTRACTOR MAY PROVIDE BENT DOWELS. (SIZE AND SPACING TO MATCH THE STEEL OF THE STEEL STOP)
25. 15M WALL BASE ANGLE AND DOWELS MUST BE ACCURATELY PLACED INTO CHAMBER FLOOR AS THEY DETERMINE LOCATION AND COVER OF WALL STEEL.
26. EXTEND ALL HORIZONTAL STEEL MIN. 750 mm INTO ADJOINING WALL AND PROVIDE 50 MM COVER.
27. CONTRACTOR MAY BEND HORIZONTAL WALL STEEL TO PROVIDE HOOK (750 mm) AND ELIMINATE CORNER BARS.
28. 15M TO BE BENT AT 90° PROVIDE A 300mm HORIZONTAL CONNECTION AND 600mm VERTICAL. SEE NOTE 25 REGARDING POSITION.

- ENSURE POSITIVE DRAINAGE IN BASEMENT TO CHANNEL

ID	COMPONENT	DESCRIPTION	REBAR
P-1	PILE	400mm $\varnothing$ X 3.1m	4-15M CONT. C/W 10M RINGS @ 610 O/C

1. BUILDING DESIGN LOADS

1.1. BUILDING LOADS REFERENCED FROM NBCC, LATEST EDITION, MINNEAPOLIS, MANITOBA

GROUND SNOW LOAD 1.9 KPA

RAIN LOAD 0.2 KPA

TOP CHORD LIVE LOAD 2.15 KPA

BOTTOM CHORD LIVE LOAD 0.48 KPA

DEAD LOAD 0.57 KPA

WIND LOAD OSO 0.45 KPA

FLOOR LIVE LOAD 4.8 KPA

FINE SCREEN WEIGHT 4000 KG

GENSET WEIGHT 2000 KG

IS = 1.25

IW = 1.25

2. GENERAL CONSTRUCTION NOTES

2.1. BUILDING USE: WASTEWATER TRASH REMOVAL BUILDING

2.2. BUILDING AND FOUNDATION DESIGNED IN ACCORDANCE WITH THE NBCC 2015.

2.3. THE CONTRACTOR IS REQUIRED TO REVIEW THE COMPLETE SET OF CONTRACT DOCUMENTS AND CO-ORDINATE ALL TRADES. THE WORK MUST BE A COMPLETE, FUNCTIONING FACILITY, AS EXPLICITLY & IMPLICITLY DESCRIBED BY THE CONTRACT DOCUMENTS.

2.4. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WITH THE WORK. CONTRACTOR IS TO NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCY OR DEVIATION IN THE EXISTING CONDITION PRIOR TO COMMENCING WITH THE WORK FOR FURTHER INSTRUCTIONS.

2.5. DRAWINGS ARE NOT TO BE SCALED, BUT MUST BE USED TO DETERMINE THE GENERAL LAYOUT. ALL DIMENSION DISCREPANCIES ARE TO BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE.

2.6. VERIFY FINISHED SLAB ELEVATION RELATIVE TO SITE WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK. ALL FLOORS WITH IN-FLOOR-DRAINS ARE SLOPED TO DRAIN WITH MINIMUM 1% SLOPE, U.N.O.

2.8. ALL NEW GRADE WORK IS TO BE SLOPED AWAY FROM BUILDING.

2.9. CONTRACTOR TO PROVIDE TO THE DEPARTMENTAL REPRESENTATIVE FOR APPROVAL:

- SHOP DRAWINGS FOR TRUSSES
- SHOP DRAWINGS FOR STEEL MONORAIL SUPPORT STRUCTURE

3. FRAMING GENERAL NOTES

3.1. ALL FRAMING LUMBER SHALL COMPLY WITH PERTINENT PROVISIONS OF CSA 086 AND CSA 0141, AND TO THE NATIONAL LUMBER GRADE AUTHORITY, STANDARD GRADE RULE.

3.2. MOISTURE CONTENT SHALL NOT EXCEED 19% FOR EXTERIOR WORK AND 12% FOR INTERIOR WORK.

3.3. VERIFY FINISHED SLAB ELEVATION RELATIVE TO SITE WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.

3.4. FRAMING MATERIAL, UNLESS OTHERWISE NOTED, SHALL BE KILN DRIED LUMBER AS FOLLOWS:

UNIT:	LUMBER TYPE:
A) STUDS	#2 SPF GRADE
B) ALL JOISTS	#2 SPF GRADE
C) ALL INTELS	#2 SPF GRADE
D) LIGHT FRAMING MATERIALS AND PLATES	#2 SPF GRADE

3.1. ALL SHEATHING MATERIAL TO CSA 0121, SHEATHING GRADE AS FOLLOWS:


- ALL EXTERIOR WALL SHEATHING TO BE AS SPECIFIED ON THE ARCHITECTURAL SERIES DRAWINGS.
- ALL EXTERIOR WALL & ROOF SHEATHING TO BE 29GA HI-TENSILE PRE-FINISHED STEEL SHEET.

4.1. PROVIDE NOT LESS THAN 1/300 OF THE INSULATED CEILING AREA OF TOTAL UNOBSSTRUCTED VENT AREA. VENTS MAY BE ROOF TYPE, EAVE TYPE, GABLE END TYPE OR A COMBINATION THEREOF. VENTS ARE TO BE DISTRIBUTED EQUAL AND OPPOSITE SIDES OF THE BUILDING. OF THE TOTAL VENT AREA, A MINIMUM OF 25% SHALL BE POSITIONED AT THE TOP OF THE ATTIC SPACE & A MIN. OF 25% SHALL BE POSITIONED AT THE BOTTOM OF THE ATTIC SPACE.

- 5.1. THE CANADIAN STANDARDS ASSOCIATION FOR SPECIFICATIONS S-16 AND S-136 SHALL BE THE BASIS FOR DESIGN FABRICATION AND ERECTION OF ALL STRUCTURAL AND MISCELLANEOUS STEEL WORK ON THIS PROJECT.
- 5.2. STRUCTURAL SECTIONS INCLUDING ALL MISCELLANEOUS STEEL SHALL MEET THE REQUIREMENTS OF CSA G40.21 WITH A MINIMUM YIELD STRESS OF 345 MPa.
- 5.3. ALL SHOP CONNECTIONS SHALL BE WELDED; FIELD CONNECTIONS SHALL BE BOLTED IN ACCORDANCE WITH CSA-CISC S16. ALL WELDS SHALL BE FULL PENETRATION BUTT JOINTS.
- 5.4. STRUCTURAL STEEL FABRICATION AS PER G40.21/21 AND ERECTION AS PER S16. WELDING CERTIFICATION TO CSA STANDARD W47.1.
- 5.5. MINIMUM WELDS MAY TYPICALLY RANGE FROM 3/16TH TO 1/2" DEPENDING ON MATERIAL SIZE & THICKNESS UNLESS NOTED OTHERWISE. ROOT THICKNESS TO MATCH MINIMUM MEMBER SIZE WELDING DESIGN TO CSA STANDARD W59.
- 5.6. ALL STEEL MEMBERS SHALL BE COATED WITH ONE COAT PRIMER TO CSA A16.

- 6.1. MASONRY WORK TO CSA A371 (LATEST EDITION)
- 5.2. MORTAR TO CSA A179 (LATEST EDITION) – TYPE S
- 5.3. MASONRY UNITS CSA A3002
- 5.4. STRUCTURAL DESIGN OF MASONRY TO CSA S304.1 (LATEST EDITION)
- 5.5. TYP CONC BLOCKS TO BE 54% SOLID TO CSA A165 (LATEST EDITION)
- 5.6. BLOCK STRENGTH TO BE MIN 15 MPa
- 5.7. MORTAR STRENGTH TO BE 20 MPa

- 7.1 GALVANIZED COATING IS APPLIED TO GENERAL STEEL ARTICLES, STRUCTURAL SECTIONS, FABRICATED STEEL ASSEMBLIES AND THREADED FASTENERS.
- 7.2 STEEL MEMBERS, FABRICATIONS, AND ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION BY THE HOT DIP PROCESS IN ACCORDANCE CSA G164--M92 (R2003).
- 7.3 BOLTS, NUTS, WASHERS AND IRON AND STEEL HARDWARE COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH CSA G164--M92 (R2003).
- 7.4 THE WEIGHT OF THE GALVANIZED COATING SHALL CONFORM TO TABLE 1 OF CSA G164-- M92 (R2003).
- 7.5 THE GALVANIZED COATING SHALL BE CONTINUOUS, ADHERENT, AS SMOOTH AND EVENLY DISTRIBUTED AS POSSIBLE AND FREE FROM ANY DEFECT THAT IS DETRIMENTAL TO THE STATED END USE OF THE COATED ARTICLE.
- 7.6 THE INTEGRITY OF THE COATING SHALL BE DETERMINED BY VISUAL INSPECTION AND COATING THICKNESS MEASUREMENTS.
- 7.7 THE GALVANIZED COATING SHALL BE SUFFICIENTLY ADHERENT TO WITHSTAND NORMAL HANDLING DURING TRANSPORT AND ERECTION.
- 7.8 FABRICATION PRACTICES FOR PRODUCTS TO BE GALVANIZED SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF CANADIAN AND U.S. STANDARDS AS SPECIFIED HEREIN. CARE SHALL BE TAKEN TO AVOID DISTORTION TECHNIQUES WHICH COULD CAUSE DISTORTION OR EMBRITTELEMENT OF THE STEEL. BEFORE FABRICATION PROCEEDS, THE DEPARTMENTAL REPRESENTATIVE SHALL BE NOTIFIED OF POTENTIAL WARPAGE PROBLEMS WHICH MAY REQUIRE MODIFICATION IN DESIGN.



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Client		client

Project title	Project
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**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by <b>RF</b>	Conçu par
Drawn by <b>OT</b>	Dessiné par
Approved by <b>JJP</b>	Approuvé par

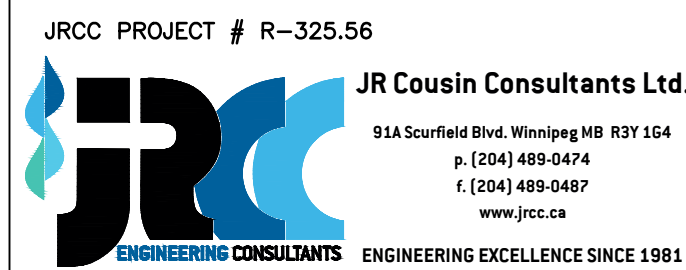
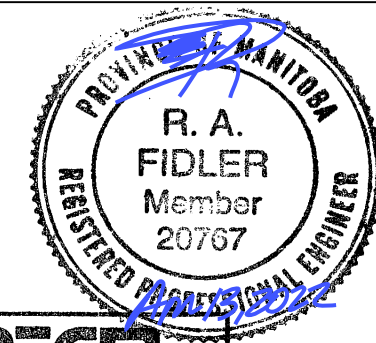
Drawing title

Titre du dessin

**FOUNDATION LAYOUT**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
<b>R.118541</b>	<b>S01</b> OF 6	<b>1</b>





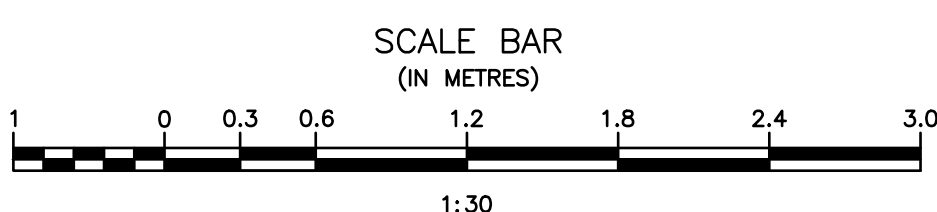
Project title	Project
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Designed by RF	Conçu par
Drawn by OT	Dessiné par
Approved by JJP	Approuvé par

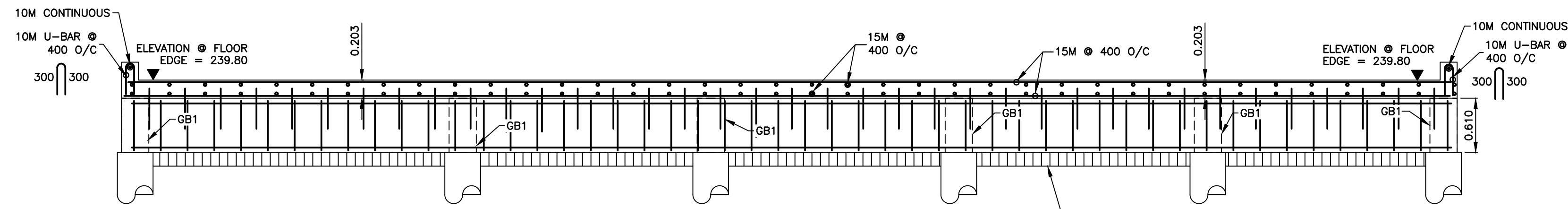
PWGSC Project Manager      Administrateur de Projets TPSGC  
**JASON FREZZA**

Drawing title	Titre du dessin
<p align="center"><b>BASEMENT FOUNDATION LAYOUT AND SLAB DRAINAGE</b></p>	

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
<b>R.118541</b>	<b>S02</b> OF 6	<b>1</b>

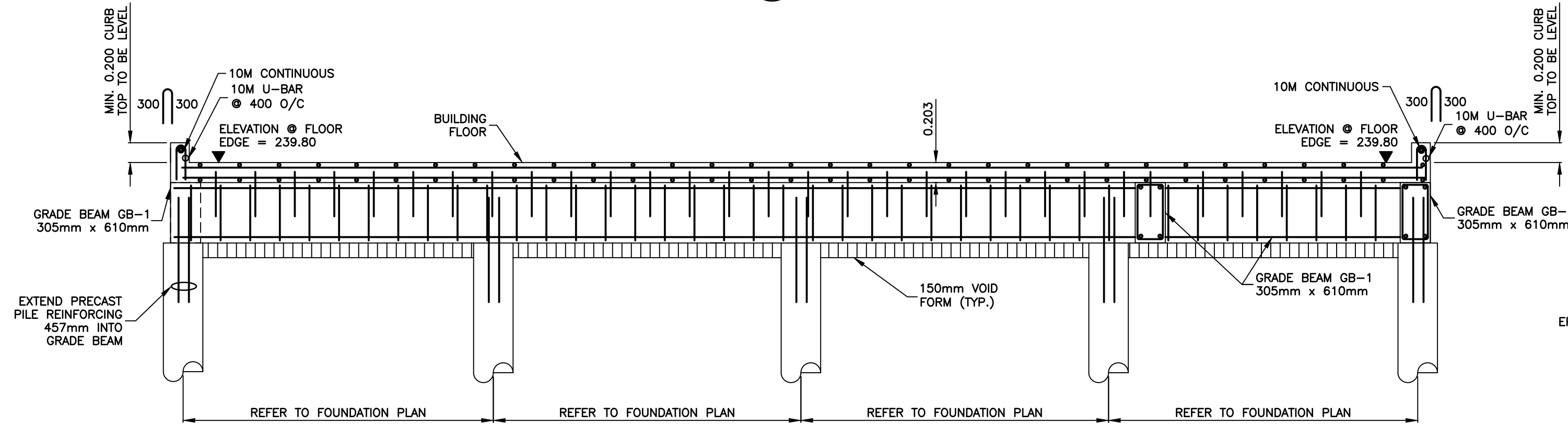






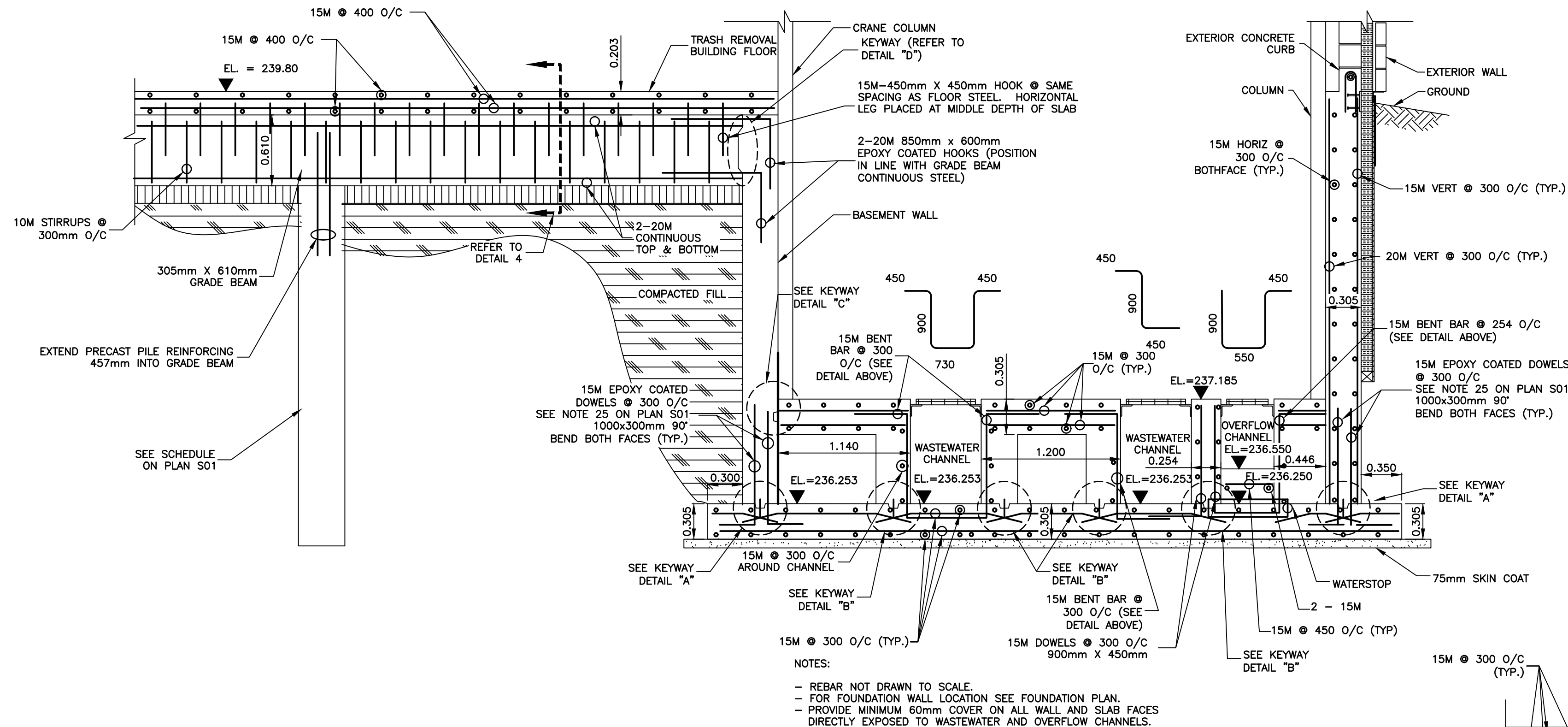
NOTE:  
- PILE STEEL AND DOWELS NOT SHOWN.  
- PLACE 2 - 15M BARS ABOVE AND BELOW BRICK SUPPORT.

1 FOUNDATION SECTION A  
SCALE = 1:40

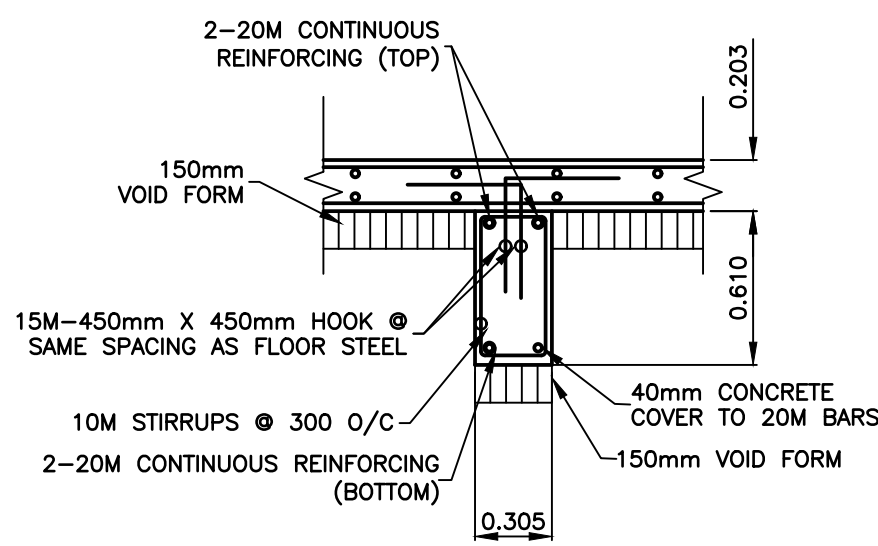


NOTES:  
- REBAR NOT DRAWN TO SCALE  
- CURB STOPS AT BUILDING FRAME LOCATION

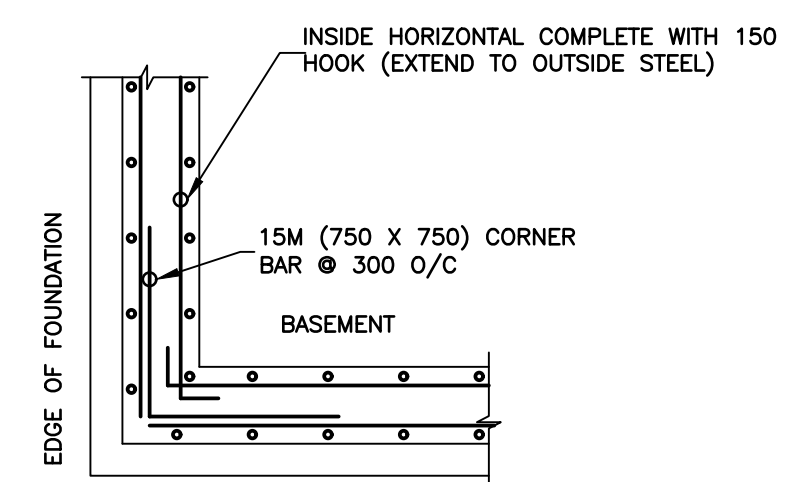
2 GRADE BEAM AND PILE SECTION  
SCALE = 1:40



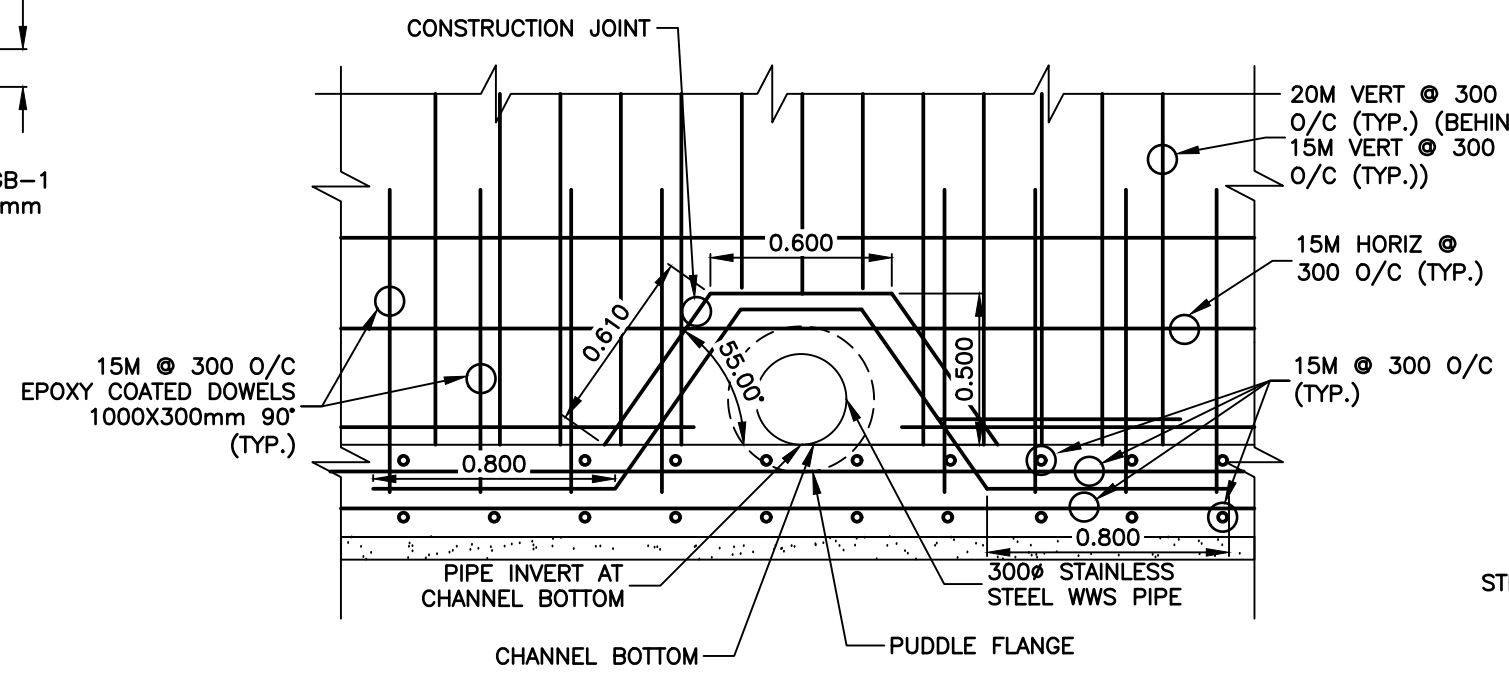
3 TYPICAL SLAB REINFORCING DETAIL, GRADE BEAM AND PROCESS ROOM WALL CONNECTION  
SCALE = 1:30



4 TYPICAL GRADE BEAM GB-1 SECTION  
SCALE = 1:30

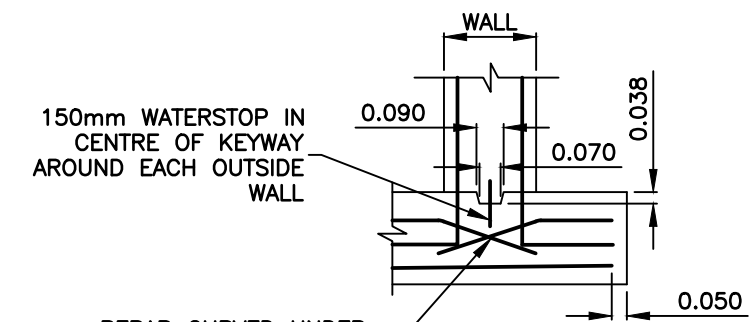


5 CORNER WALL DETAIL  
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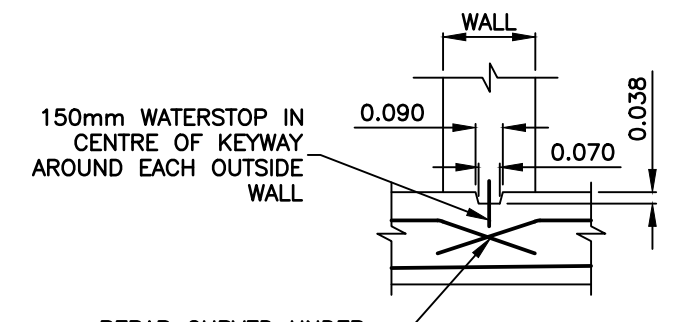


NOTES:  
- INSTALL WATERSTOP IN JOINT.  
- INSTALL PUDDLE FLANGE ON ANGLE FOR BUILDING DISCHARGE.  
- PROVIDE MINIMUM 60mm COVER ON ALL WALL AND SLAB FACES DIRECTLY EXPOSED TO WASTEWATER AND OVERFLOW CHANNELS.

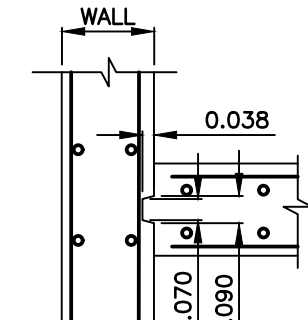
5 CHANNEL WALL AT PIPE PENETRATION  
SCALE = 1:25



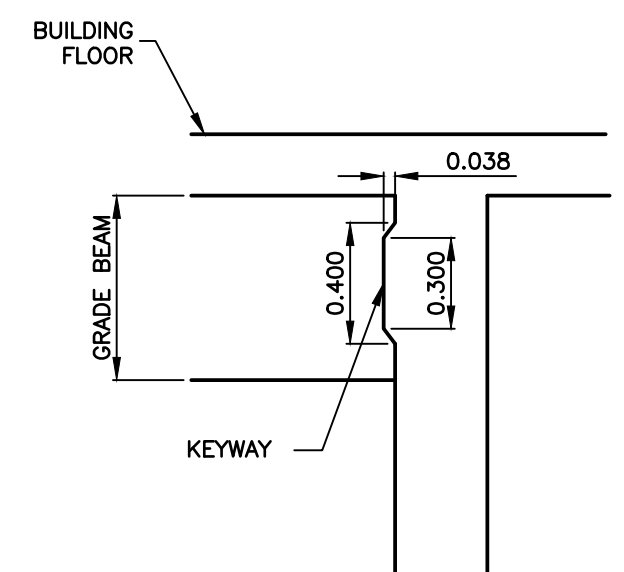
KEYWAY DETAIL "A"  
SCALE = 1:25



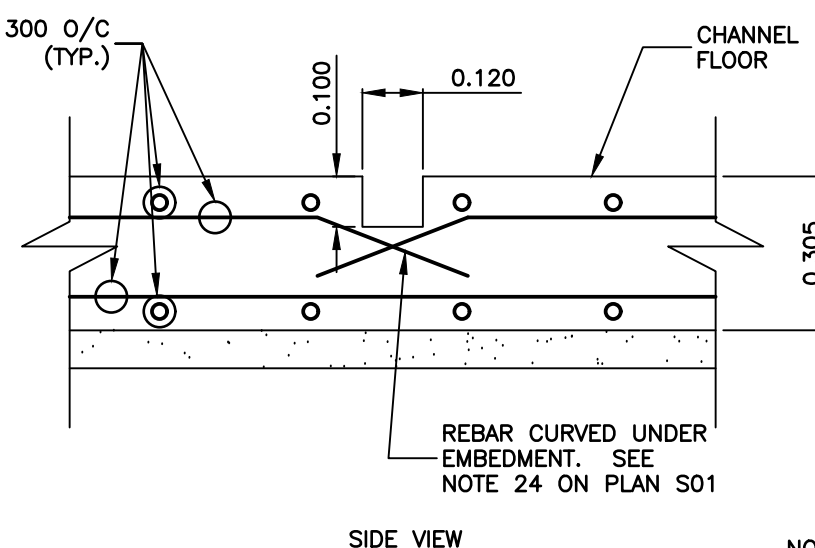
KEYWAY DETAIL "B"  
SCALE = 1:25



KEYWAY DETAIL "C"  
SCALE = 1:25



DETAIL "D" - KEYWAY  
SCALE = 1:25



NOTE:  
- EMBEDMENT TO BE FILLED WITH NON-SHRINK GROUT AFTER VALVE IS INSTALLED.  
- CONFIRM EMBEDMENT DIMENSIONS WITH VALVE MANUFACTURER.  
- WATERSTOP TO HAVE MINIMUM 40mm COVER

6 BOTTOM SEAL SLUICE GATE VALVE EMBEDMENT DETAIL  
SCALE = 1:15

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Revision	Description	Date
Client		client

Project title  
Projet

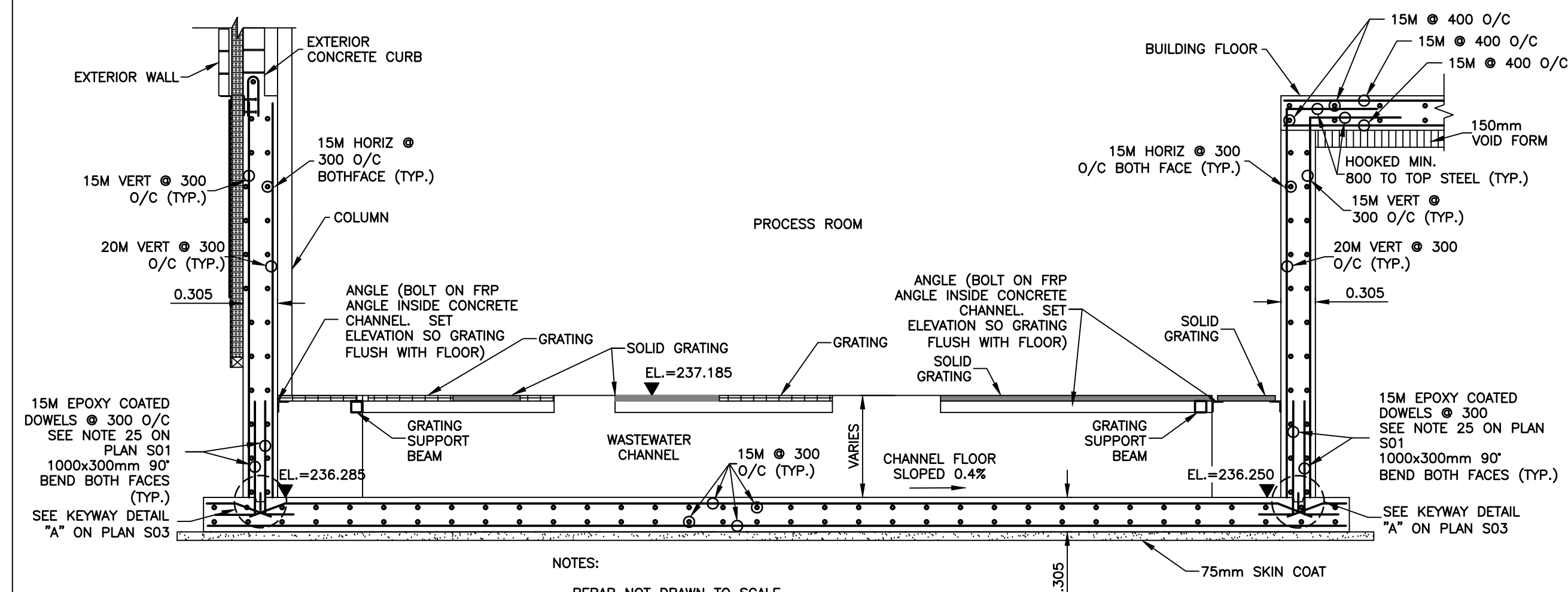
## RM OF ROCKWOOD SMI WASTEWATER TRASH REMOVAL BUILDING

Designed by RF	Conçu par
Drawn by OT	Dessiné par
Approved by JJP	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

## GRADE BEAM, PILE AND BASEMENT REINFORCING DETAILS

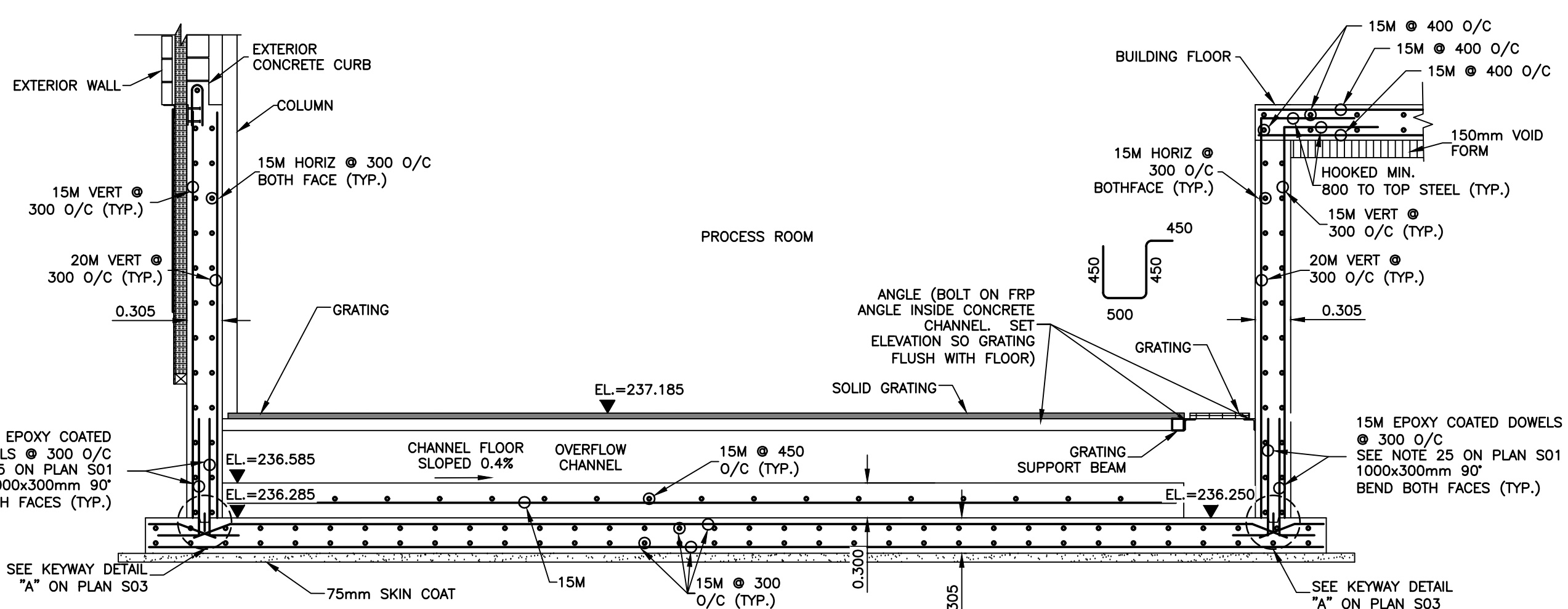
Project no./No. du projet R.118541	Drawing no./No. du dessin S03 OF 6	Revision no. 1
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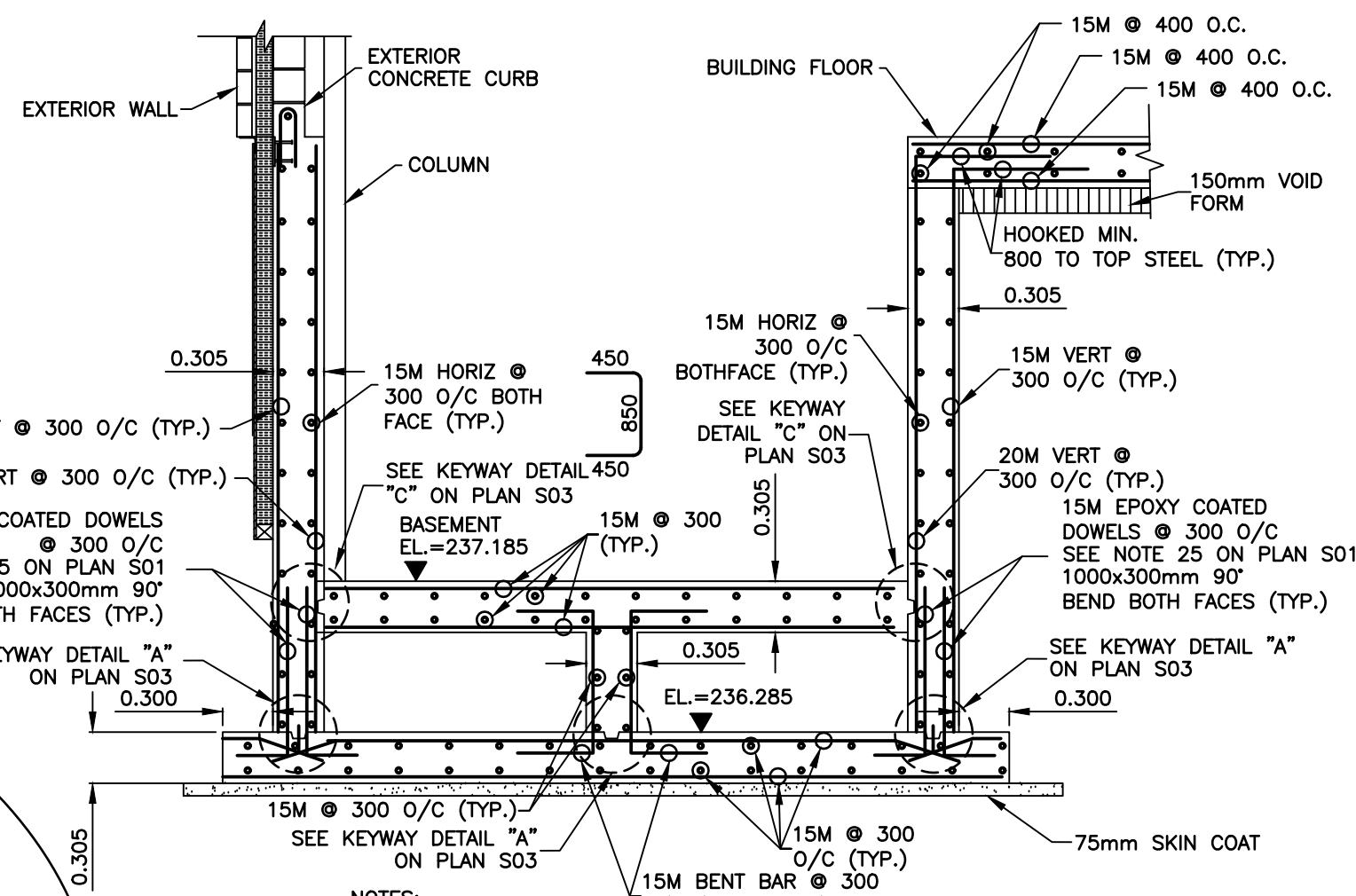
NOTES:  
 - REBAR NOT DRAWN TO SCALE.  
 - FOR FOUNDATION WALL LOCATION SEE FOUNDATION PLAN.  
 - PROVIDE MINIMUM 60mm COVER ON ALL WALL AND SLAB FACES DIRECTLY EXPOSED TO WASTEWATER AND OVERFLOW CHANNELS.

1 PROCESS ROOM SECTION DETAIL 1  
 SCALE = 1:40



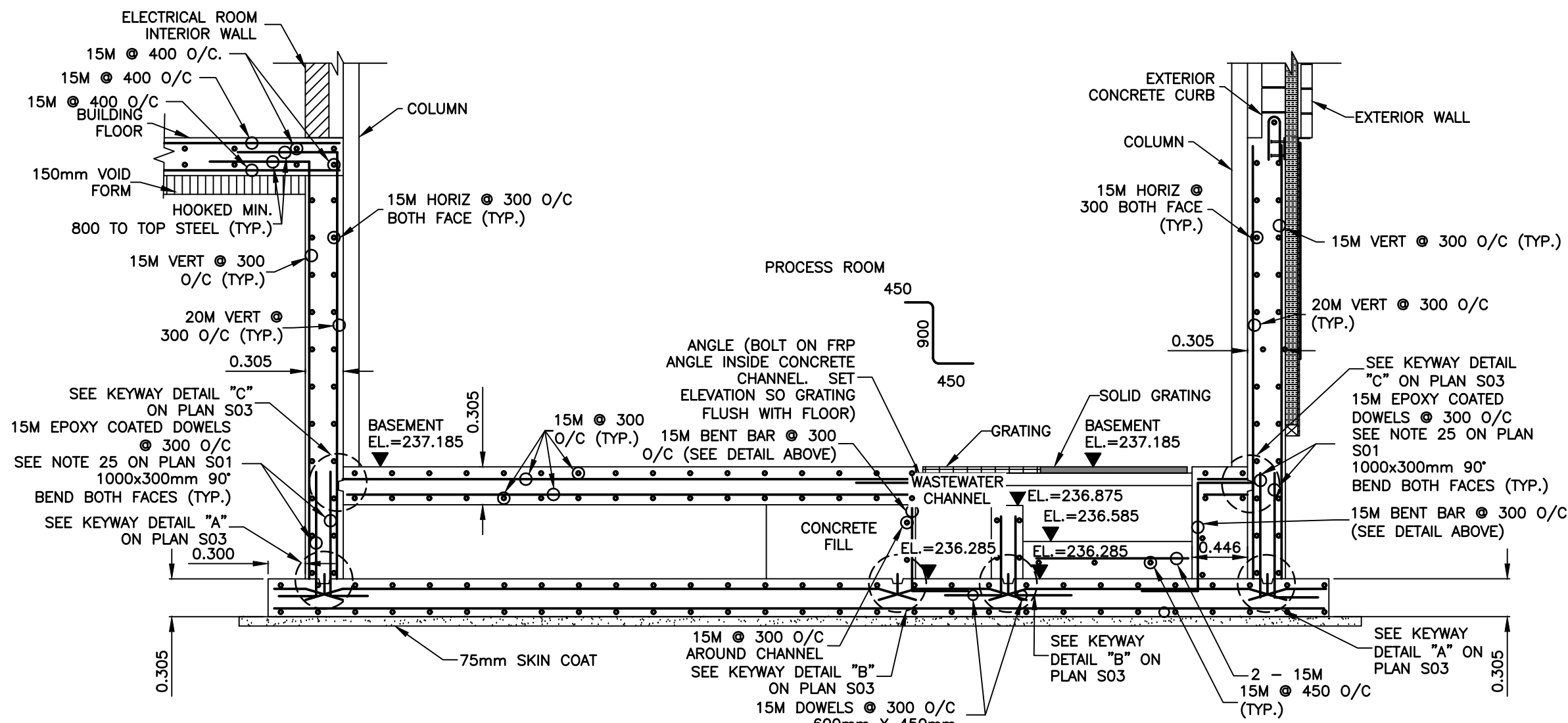
NOTES:  
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2 PROCESS ROOM SECTION DETAIL 3  
 SCALE = 1:40



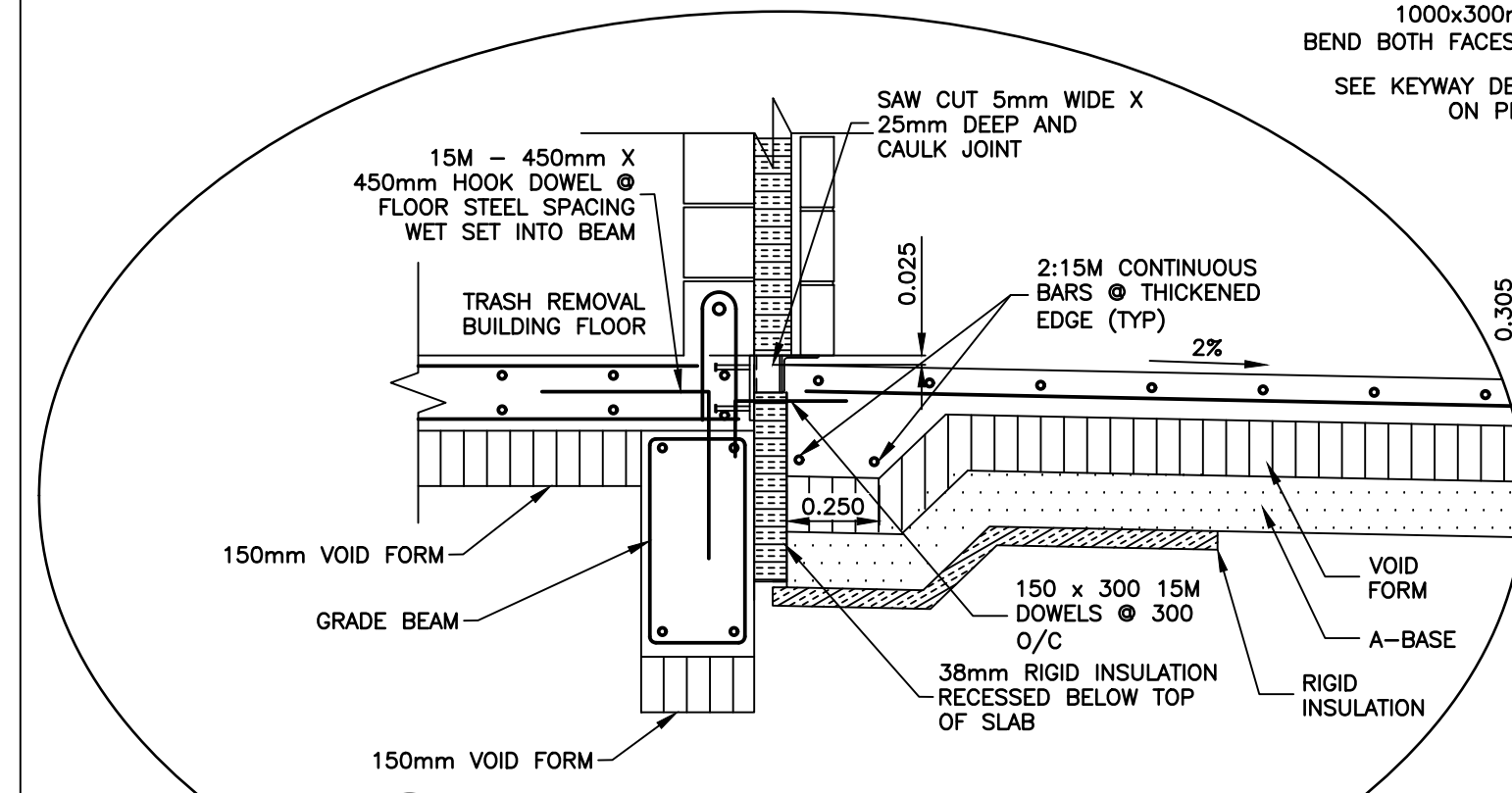
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3 PROCESS ROOM SECTION DETAIL 4  
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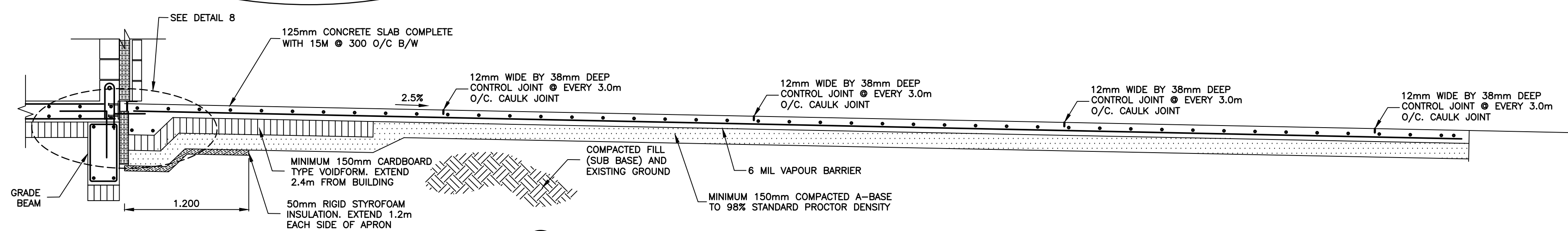


NOTES:  
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 - FOR FOUNDATION WALL LOCATION SEE FOUNDATION PLAN.  
 - PROVIDE MINIMUM 60mm COVER ON ALL WALL AND SLAB FACES DIRECTLY EXPOSED TO WASTEWATER AND OVERFLOW CHANNELS.

4 PROCESS ROOM SECTION DETAIL 2  
 SCALE = 1:40

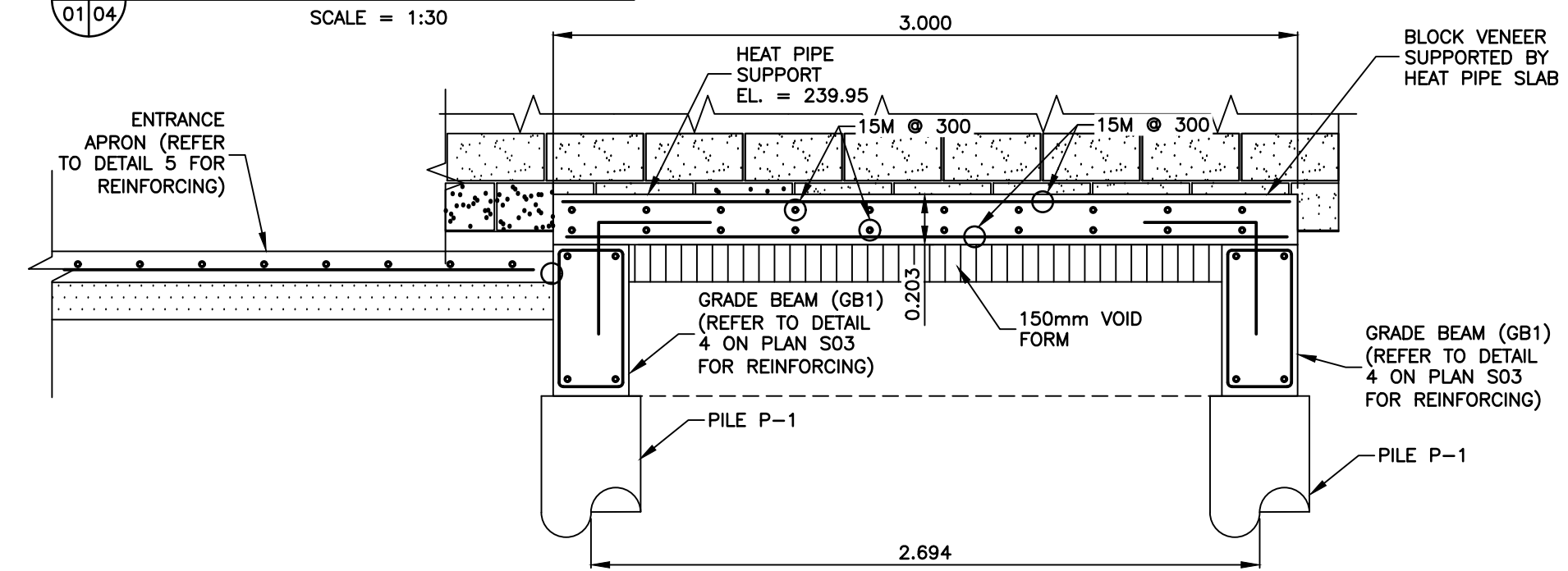


5 APRON CONNECTION TO BUILDING  
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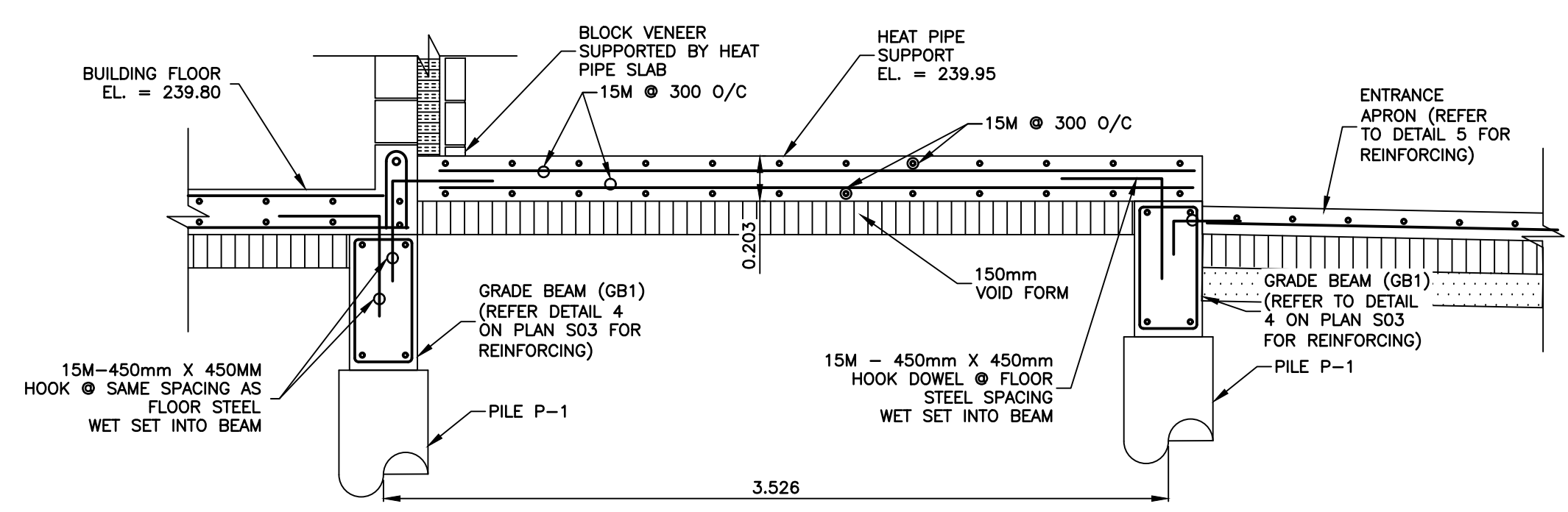


5 ENTRANCE APRON SECTION  
 SCALE = 1:30

CONCRETE APRON GENERAL NOTES:  
 - EXPOSURE CLASS: C1  
 - MAX WATER TO CEMENT RATIO: 0.4  
 - COMPRESSIVE STRENGTH (56 DAYS): 35MPa  
 - AGGREGATE SIZE: 19mm  
 - AIR ENTRAINMENT: 5%-8%  
 - TOP OF APRON TO HAVE COARSE BROOM FINISH



6 HEAT PIPE SUPPORT  
 SCALE = 1:25



7 HEAT PIPE SUPPORT  
 SCALE = 1:25

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**R. A. FIDLER**  
 Member 20767  
 REGISTERED PROFESSIONAL ENGINEER

**APEGM**  
 Certificate of Authorization  
 DGH Engineering Ltd.  
 No. 540 Date: 2022-04-13

JRCC PROJECT # R-325.56

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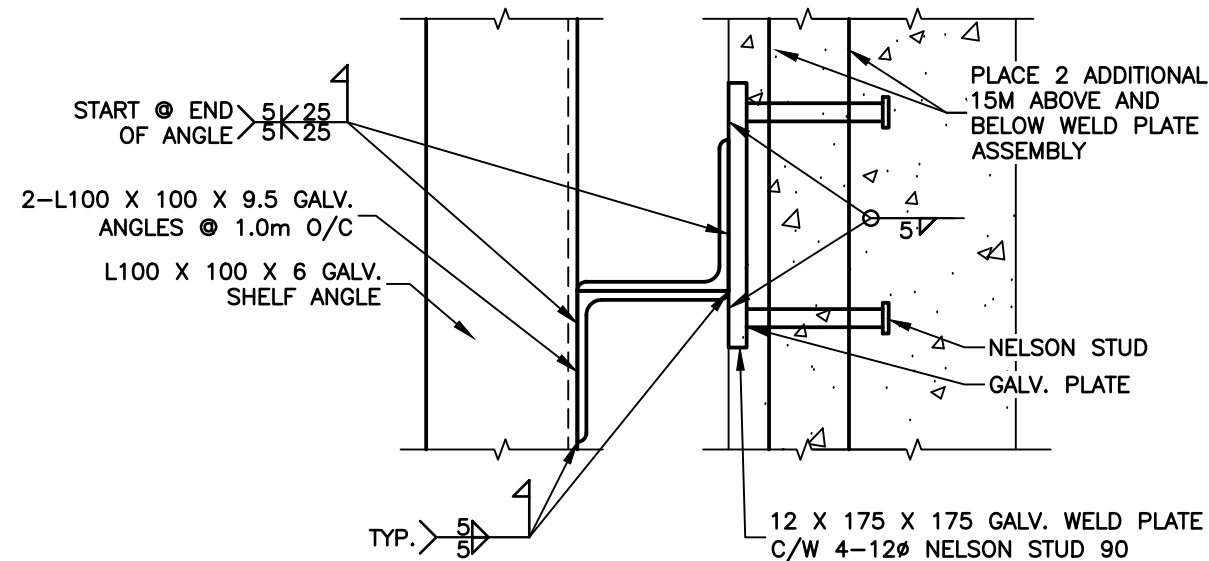
**RM OF ROCKWOOD  
 SMI WASTEWATER TRASH  
 REMOVAL BUILDING**

Designed by RF Conçu par  
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 PWSC Project Manager Administrateur de Projets TPSCG  
 JASON FREZZA  
 Drawing title Titre du dessin

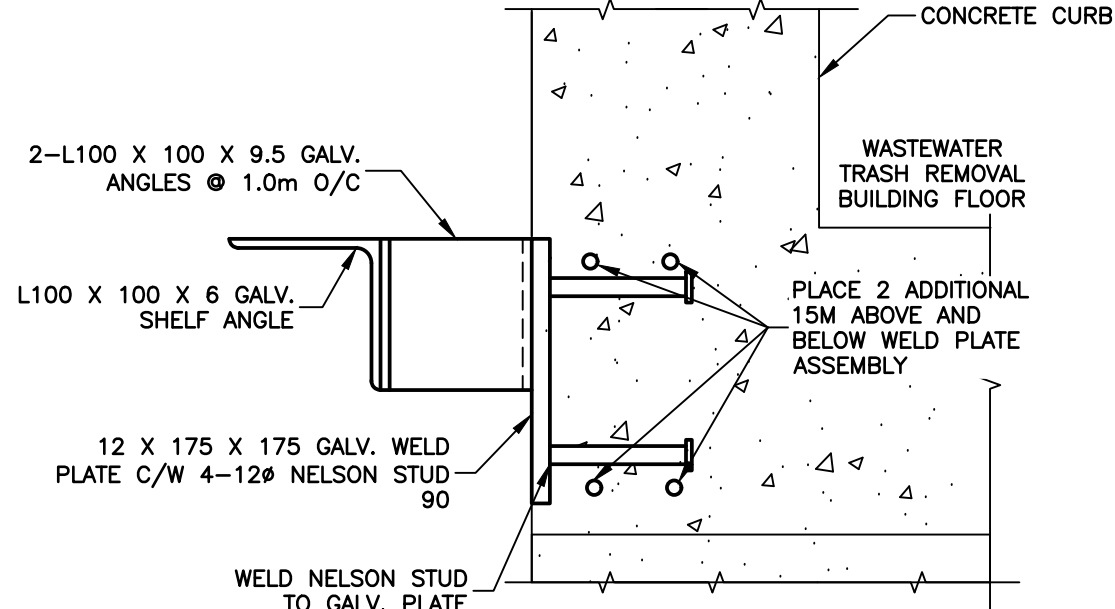
**BASEMENT REINFORCING SECTIONS  
 AND ENTRANCE APRON SECTION  
 DETAILS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	S04 OF 6	1





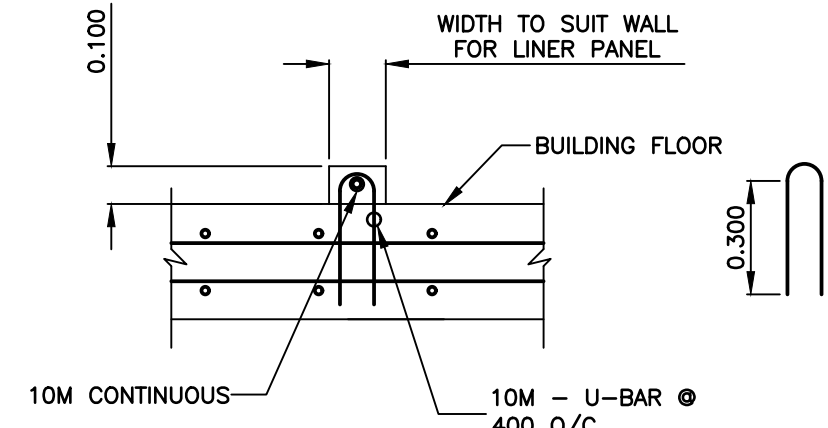
TOP VIEW



SIDE VIEW

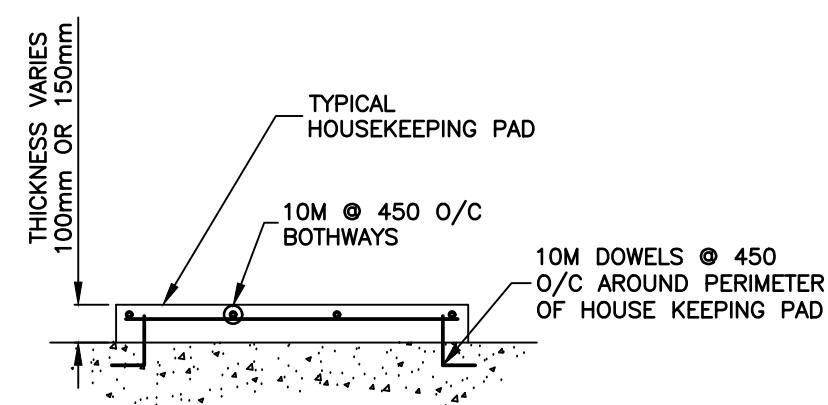
1 CONCRETE VENEER BLOCK SUPPORT SYSTEM

SCALE = 1:5



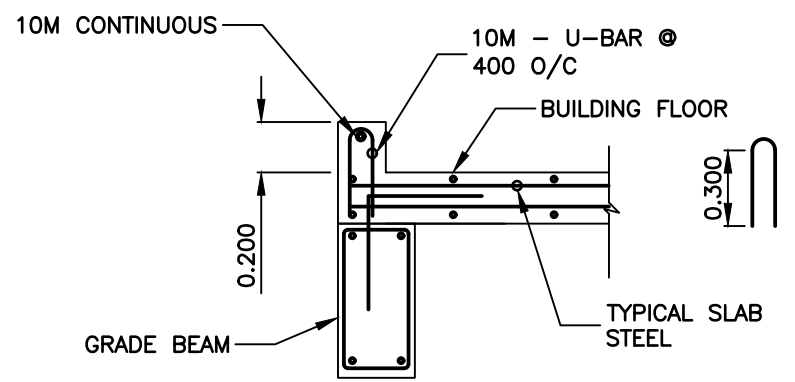
3 TYPICAL INTERIOR CURB DETAIL

SCALE = 1:20



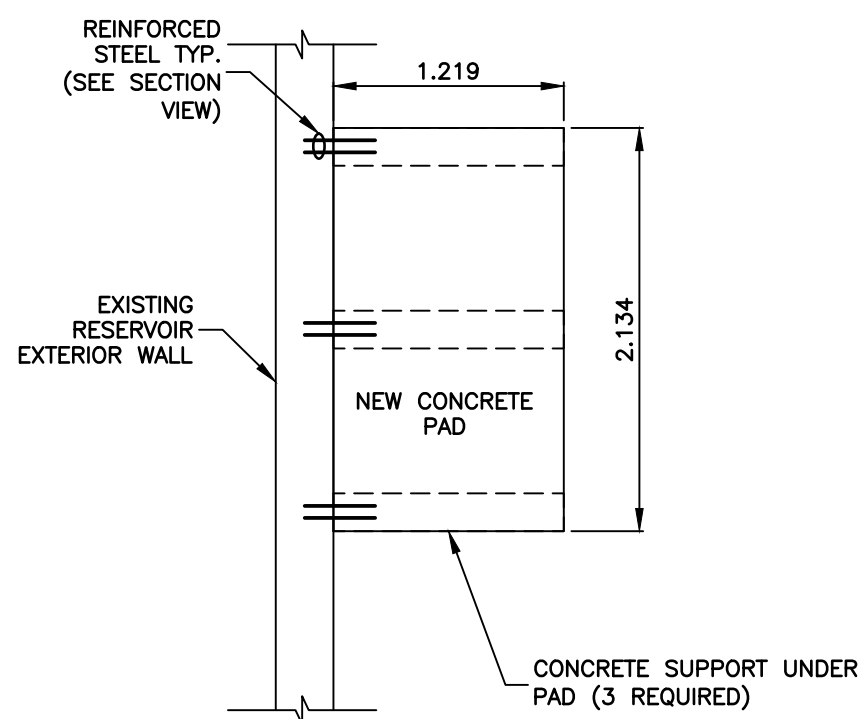
4 HOUSEKEEPING PAD DETAIL

SCALE = 1:30

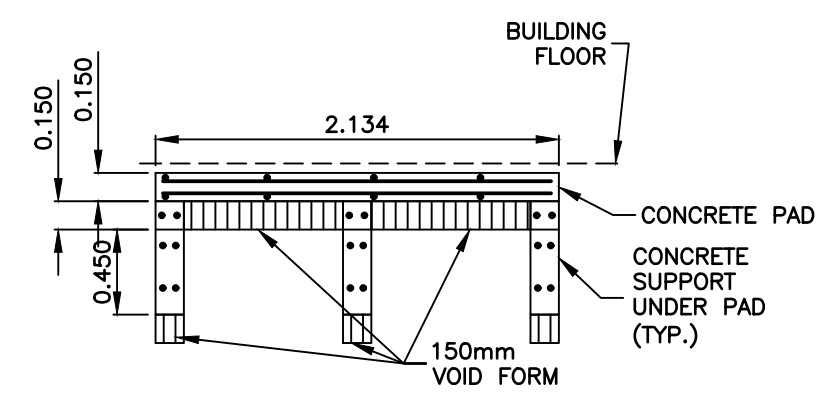


2 TYPICAL EXTERIOR CURB DETAIL

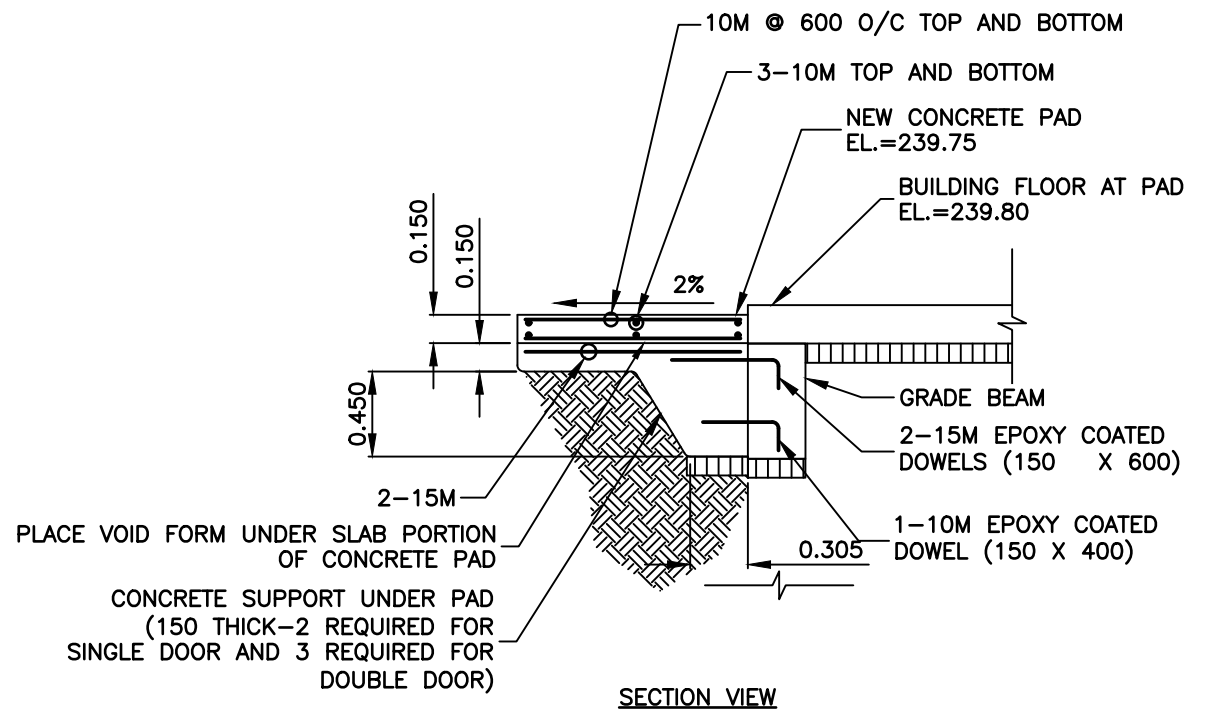
SCALE = 1:30



DOUBLE DOOR ENTRANCE PAD - TOP VIEW



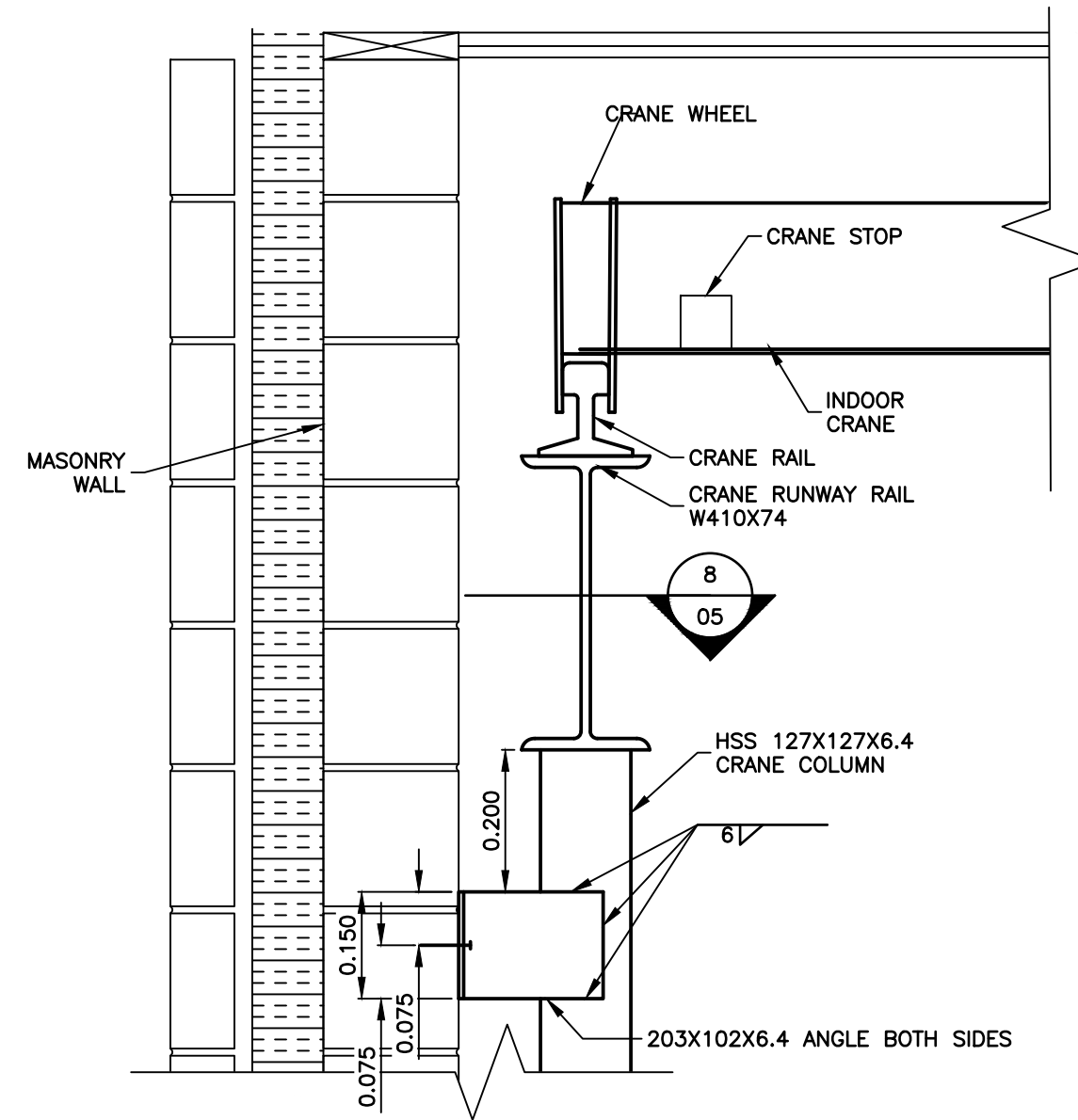
DOUBLE DOOR ENTRANCE PAD - FRONT VIEW



SECTION VIEW

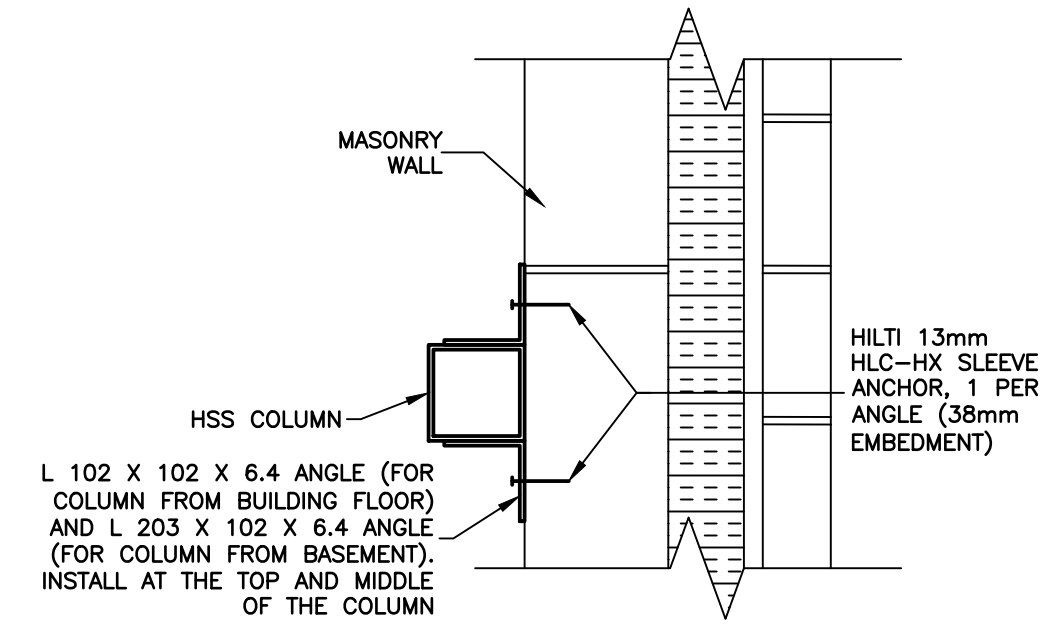
5 DOUBLE DOOR ENTRANCE PAD DETAIL

SCALE = 1:40



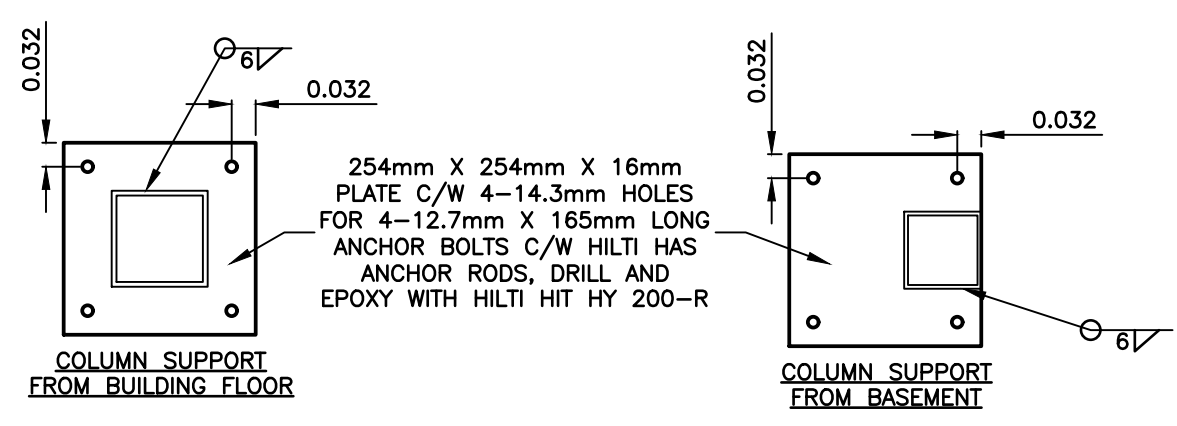
COLUMN SUPPORT FROM PROCESS ROOM AT MASONRY WALL (TYPICAL) - SIDE VIEW

SCALE = 1:10



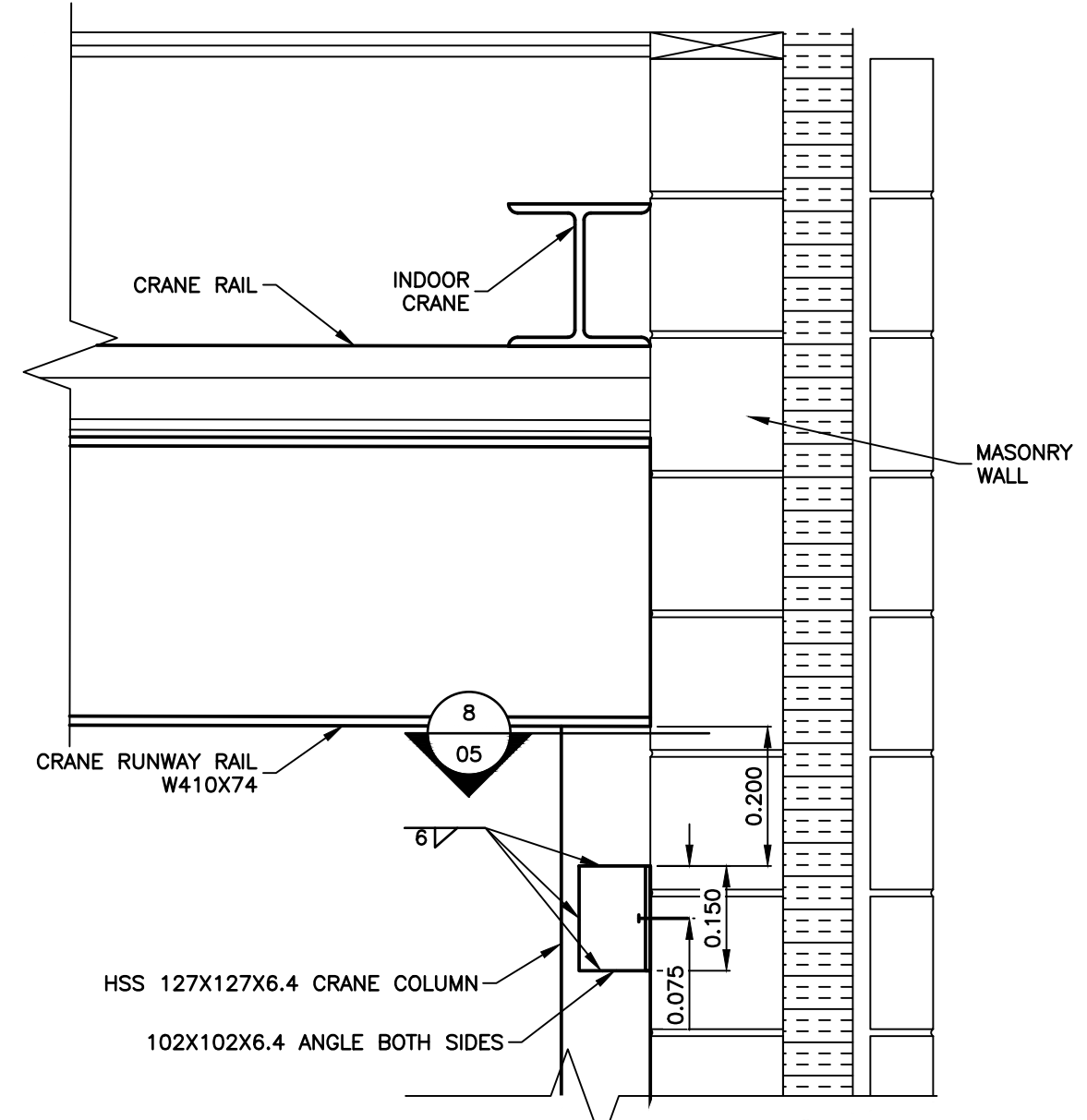
8 COLUMN SUPPORT AT MASONRY WALL (TYPICAL) - TOP VIEW

SCALE = 1:10



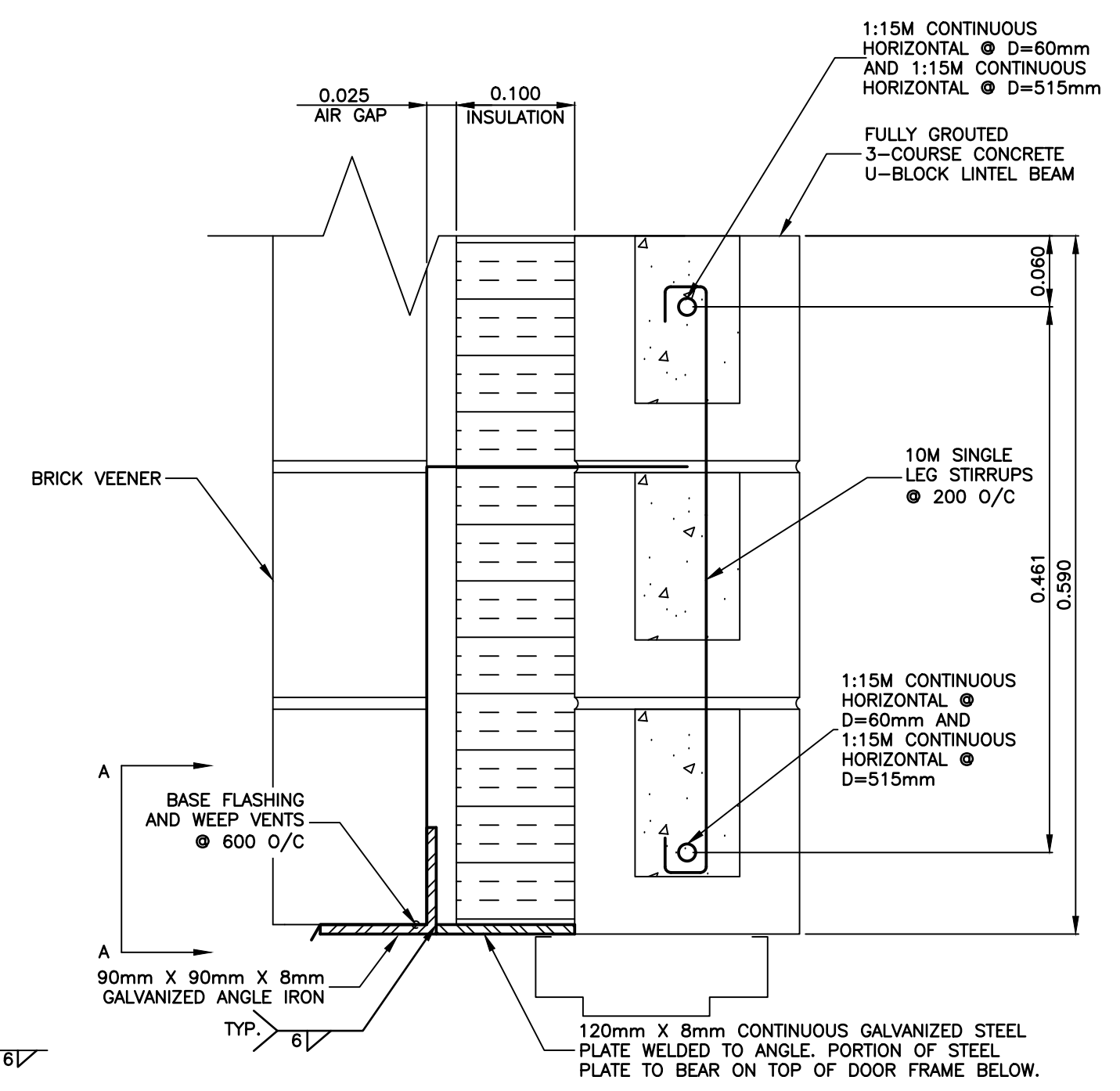
9 CRANE RUNWAY RAIL SUPPORT COLUMN TO BUILDING FLOOR AND PROCESS ROOM FLOOR DETAIL

SCALE = 1:10



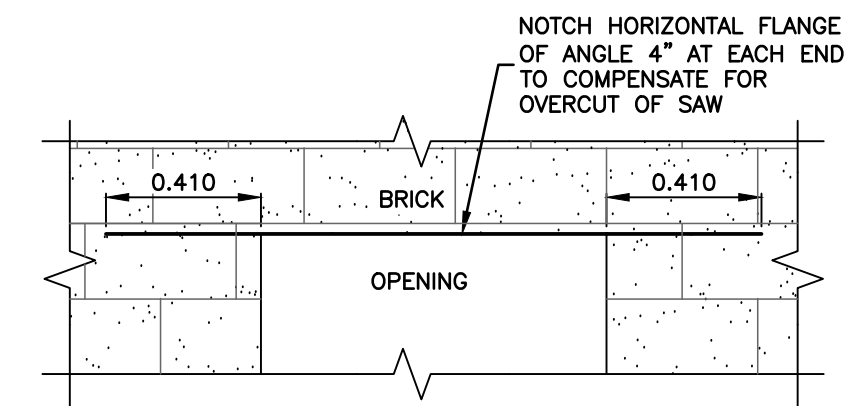
COLUMN SUPPORT FROM BUILDING FLOOR AT MASONRY WALL (TYPICAL) - SIDE VIEW

SCALE = 1:10



10 MASONRY LINTEL DETAIL

SCALE = 1:5



DETAIL A-A

SCALE = 1:20

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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title / Projet

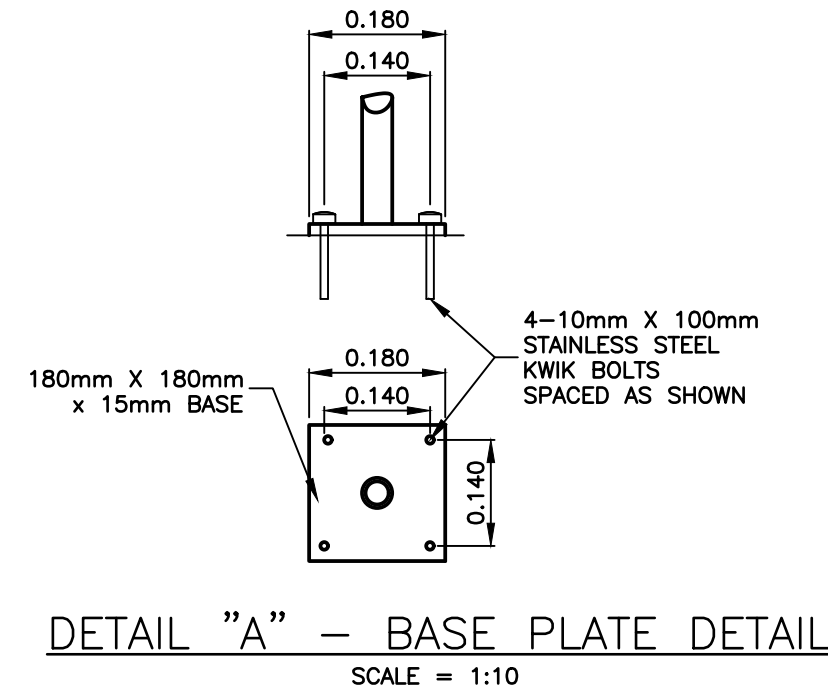
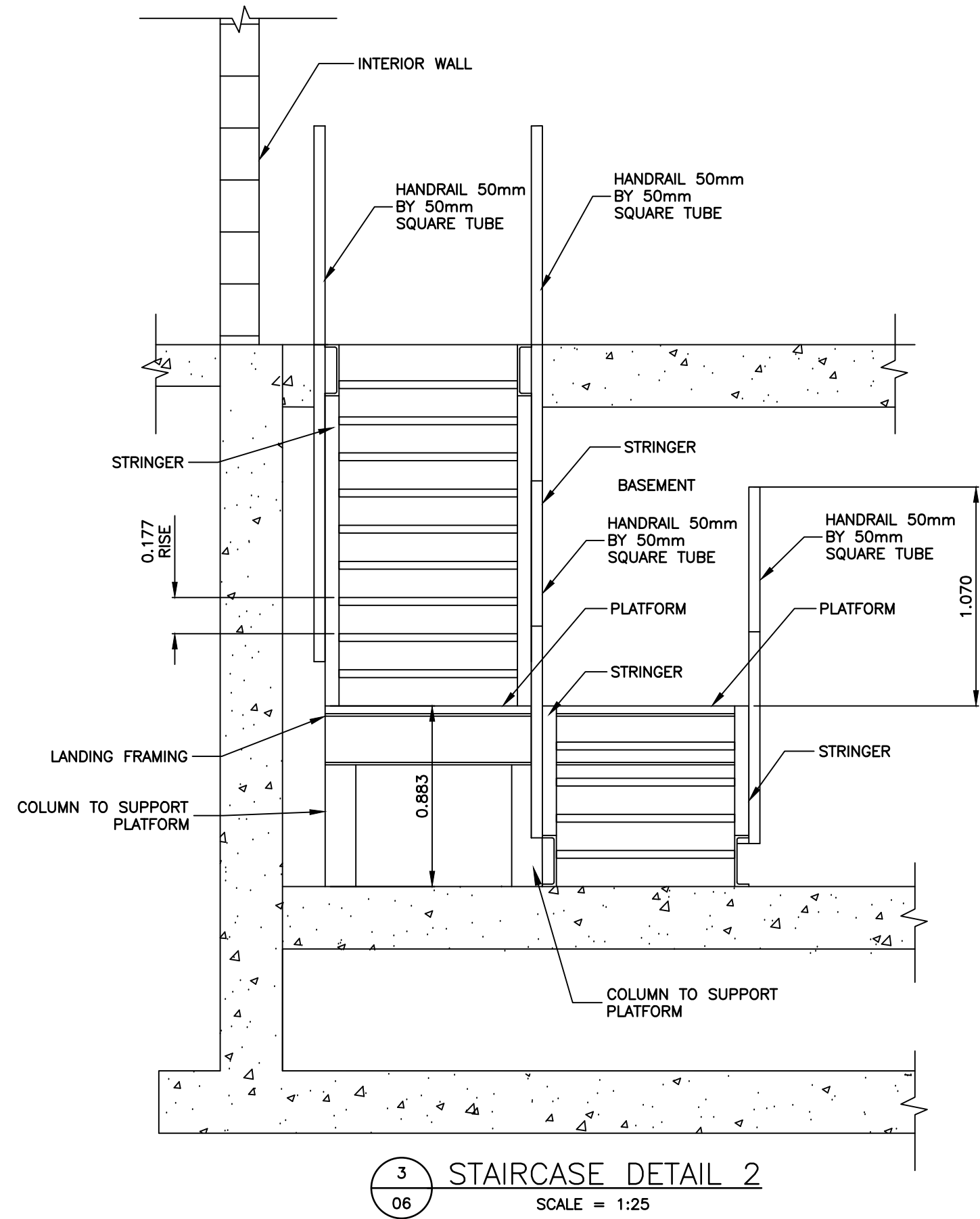
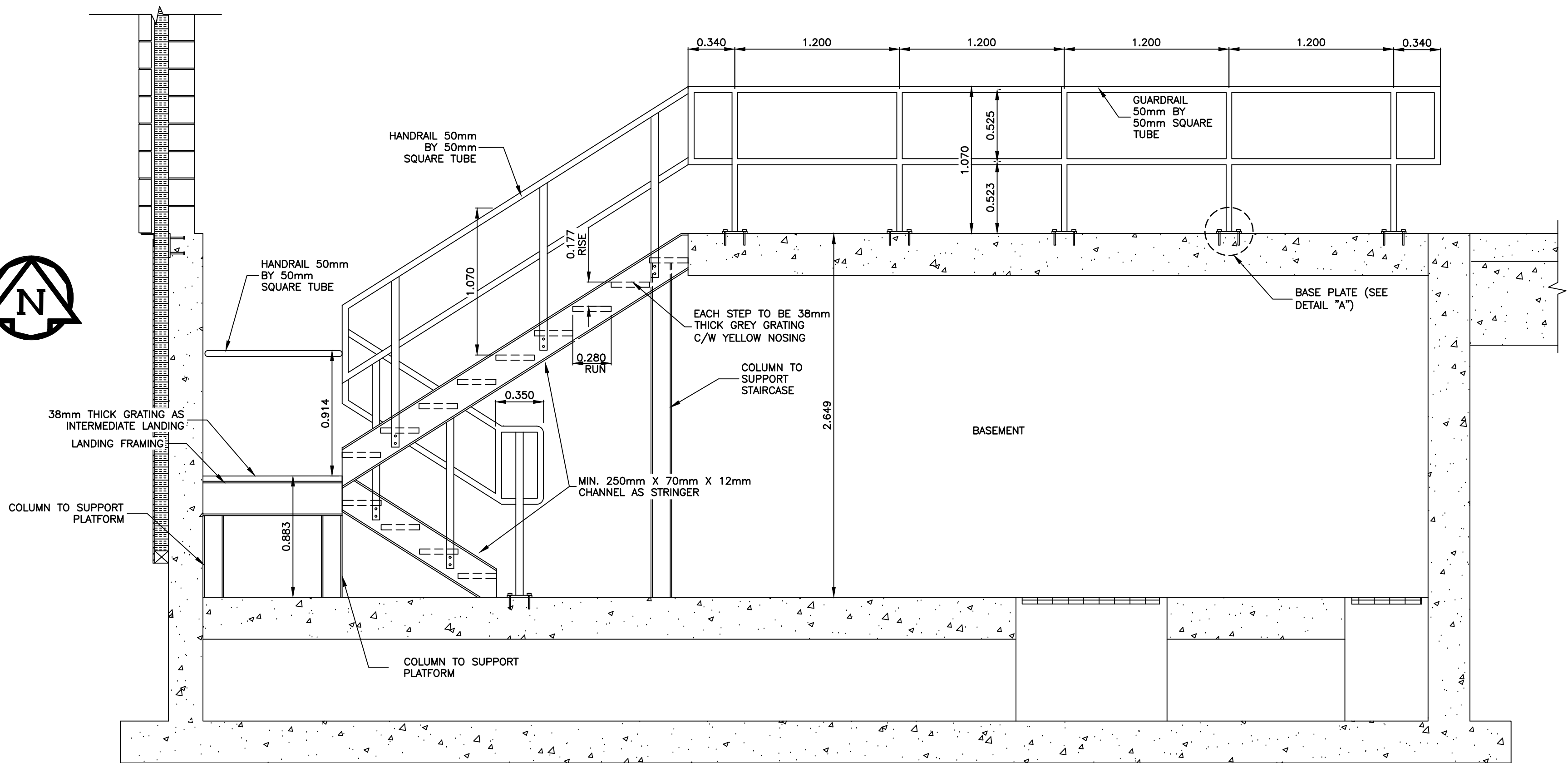
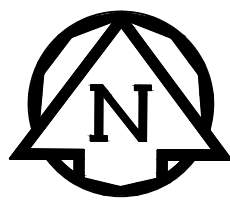
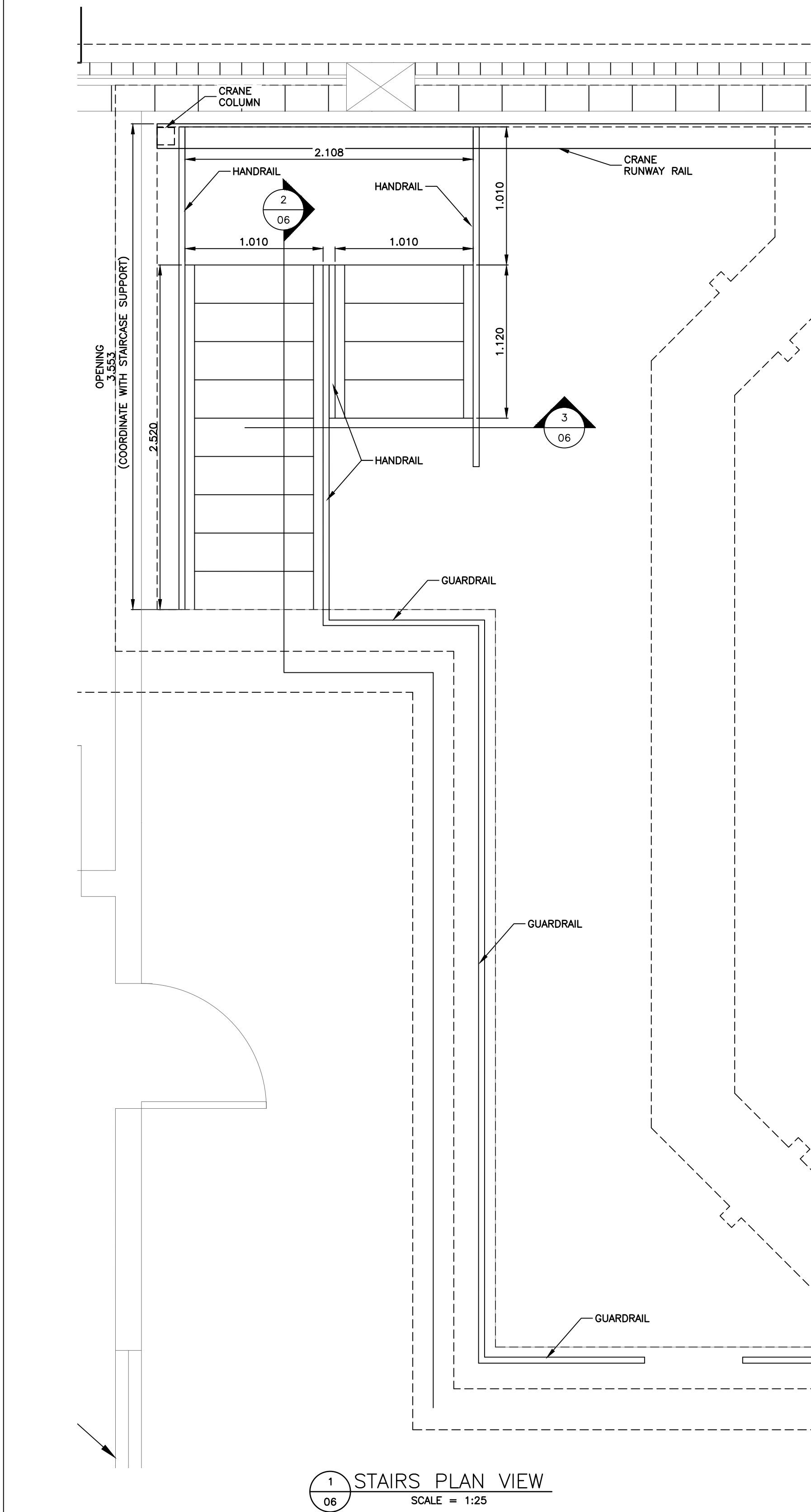
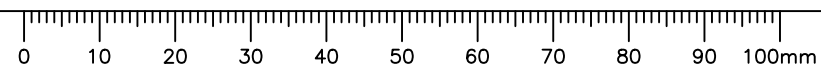
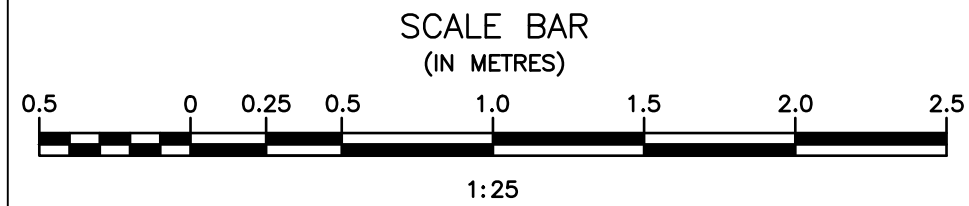
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by RF	Conçu par
Drawn by OT	Dessiné par
Approved by JJP	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

ENTRANCE PAD, HOUSEKEEPING PAD,  
BRICK SUPPORT SYSTEM, COLUMN  
SUPPORT, LINTEL AND  
CONCRETE CURB DETAILS

Project no./No. du projet R.118541	Drawing no./No. du dessin S05 OF 6	Revision no. 1
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- NOTES:
- FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
  - ALL STAIRCASE AND HANDRAIL MATERIALS TO BE COMPOSED OF FIBERGLASS REINFORCEMENT AND RESIN.
  - PROVIDE 316 SS BOLTS AND FASTENERS.
  - GRATINGS TO HAVE SLIP RESISTANT GRIT-TYPE SURFACE.



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title  
Projet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

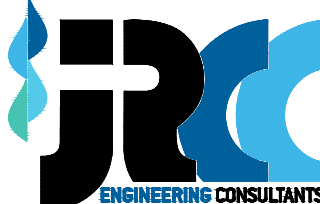
STAIR DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	S06 OF 6	1





JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title

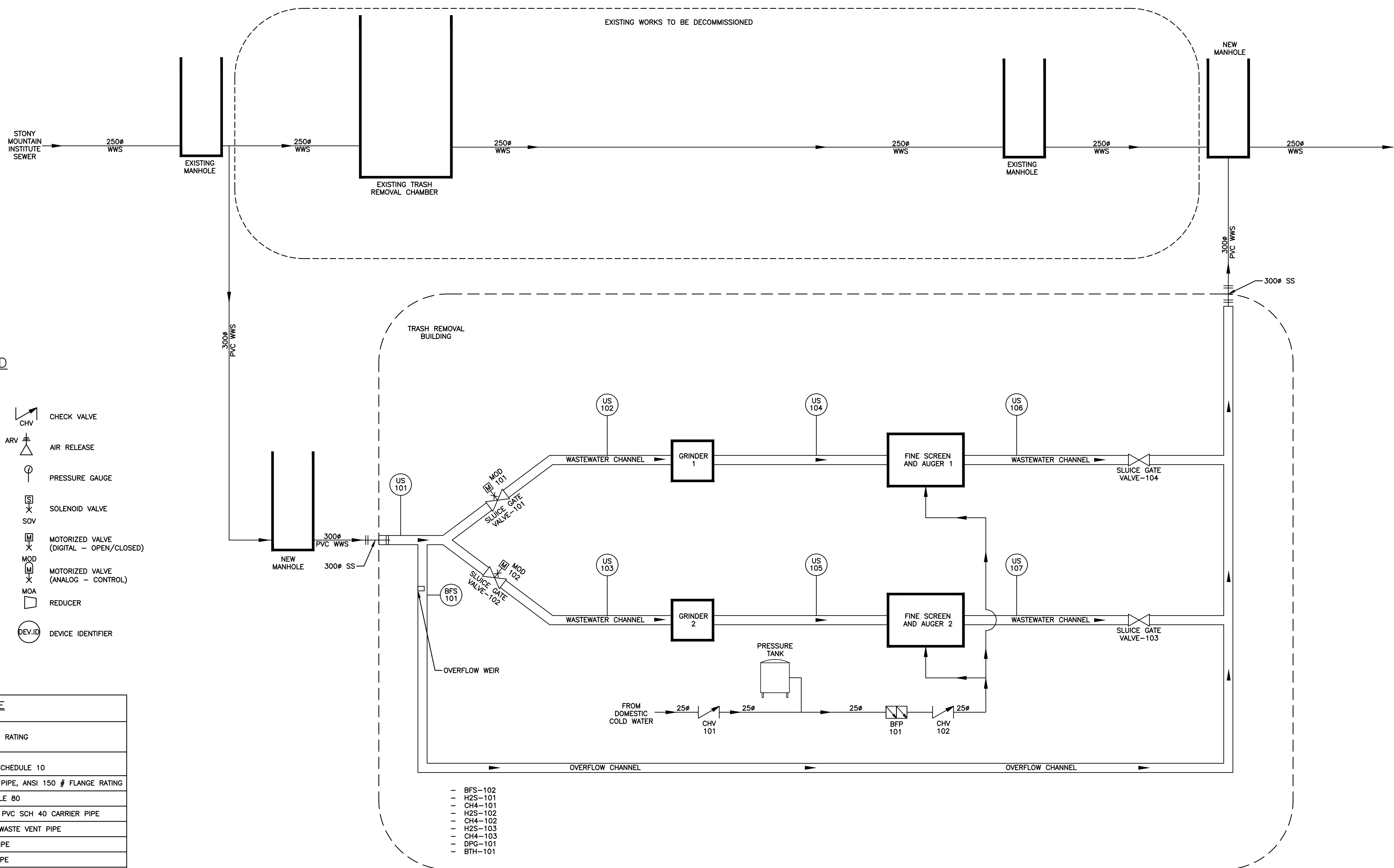
Projet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING


Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin


SEWAGE TREATMENT PROCESS  
DIAGRAM PROPOSED WORKS


Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	P01 OF 1	1





LEGEND


PUMP


MAG METER


GATE VALVE (GENERAL)


BALL VALVE


BUTTERFLY VALVE


SAMPLE TAP


FLOW DIRECTION


FLANGE CONNECTION


BACKFLOW PREVENTER


CHECK VALVE


AIR RELEASE


PRESSURE GAUGE

SOLENOID VALVE


MOTORIZED VALVE (DIGITAL - OPEN/CLOSED)


MOTORIZED VALVE (ANALOG - CONTROL)


REDUCER


DEVICE IDENTIFIER


PIPE MATERIAL CODE	
CODE	PIPE MATERIAL AND RATING
SS10	STAINLESS STEEL SCHEDULE 10
GSP	GALVANIZED STEEL PIPE, ANSI 150 # FLANGE RATING
PVC80	PVC PIPE, SCHEDULE 80
TUBING	TEFLON TUBING IN PVC SCH 40 CARRIER PIPE
CI	CAST IRON-DRAIN WASTE VENT PIPE
COPK	TYPE K COPPER PIPE
COPL	TYPE L COPPER PIPE
INS	INSULATED PIPE
HDPE DR17	HIGH DENSITY POLYETHYLENE DR17
CLEAR PVC	CLEAR PVC PIPE SCHEDULE 40


TEMPERATURE TRANSMITTER


PRESSURE TRANSDUCER


DISSOLVED OXYGEN UNIT


COMBINED PH & ORP SENSOR


HYDROSTATIC LEVEL SENSOR WITH TEMPERATURE


FILTER FLOOD SWITCH


BUILDING FLOOD SWITCH


ULTRASONIC TRANSDUCER


FLOAT SWITCH

TURBIDITY METER

MOTOR

DIFFERENTIAL PRESSURE GAUGE

PH SENSOR

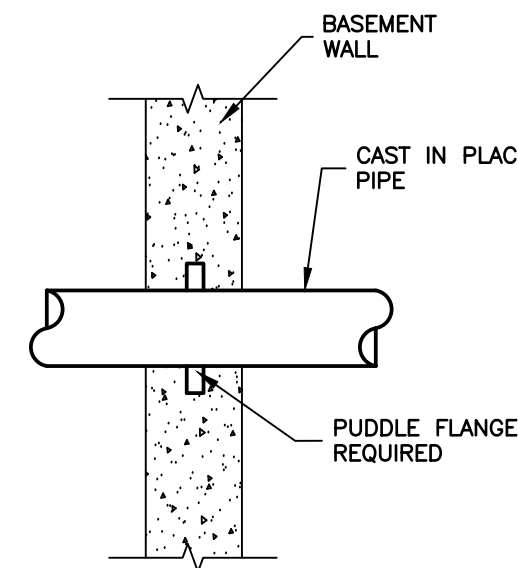
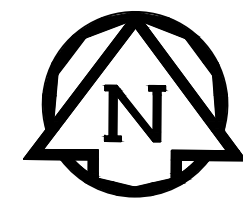
HYDROSTATIC LEVEL SENSOR

1  
01

SEWAGE TREATMENT PROCESS DIAGRAM  
SCALE = NTS

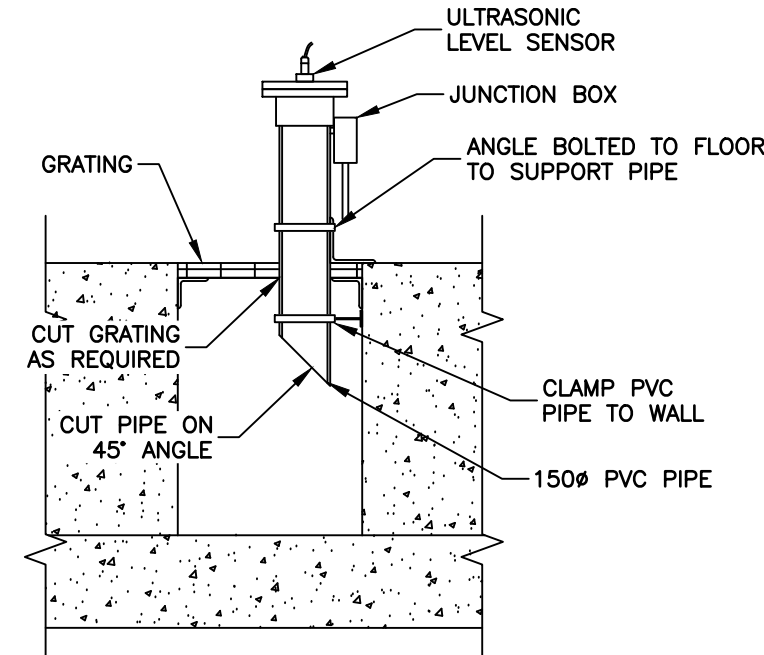
- BFS-102
- H2S-101
- CH4-101
- H2S-102
- CH4-102
- H2S-103
- CH4-103
- DPG-101
- BTH-101





NOTE:  
ALL CAST IN PLACE PIPING THROUGH BASEMENT  
WALL TO HAVE A PUDDLE FLANGE UNLESS  
OTHERWISE NOTED.

2 TYPICAL PUDDLE FLANGE DETAIL  
SCALE = 1:20

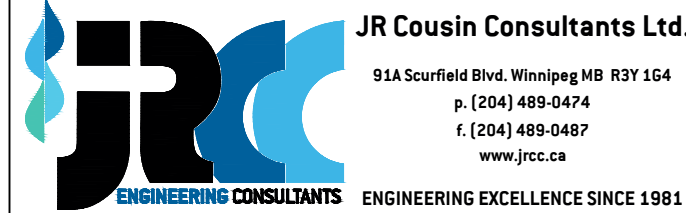


NOTE:  
- REVIEW ULTRASONIC BEAM ANGLE AND  
ADJUST PLACEMENT AS REQUIRED TO  
ENSURE CHANNEL WALL DOES NOT  
INTERFERE WITH MEASUREMENT

3 ULTRASONIC LEVEL ENCASEMENT DETAIL  
SCALE = 1:25



JRCC PROJECT # R-325.56



Revision	Description	Date
5		
4		
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1	ISSUED FOR TENDER	APR 2022
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Client		client

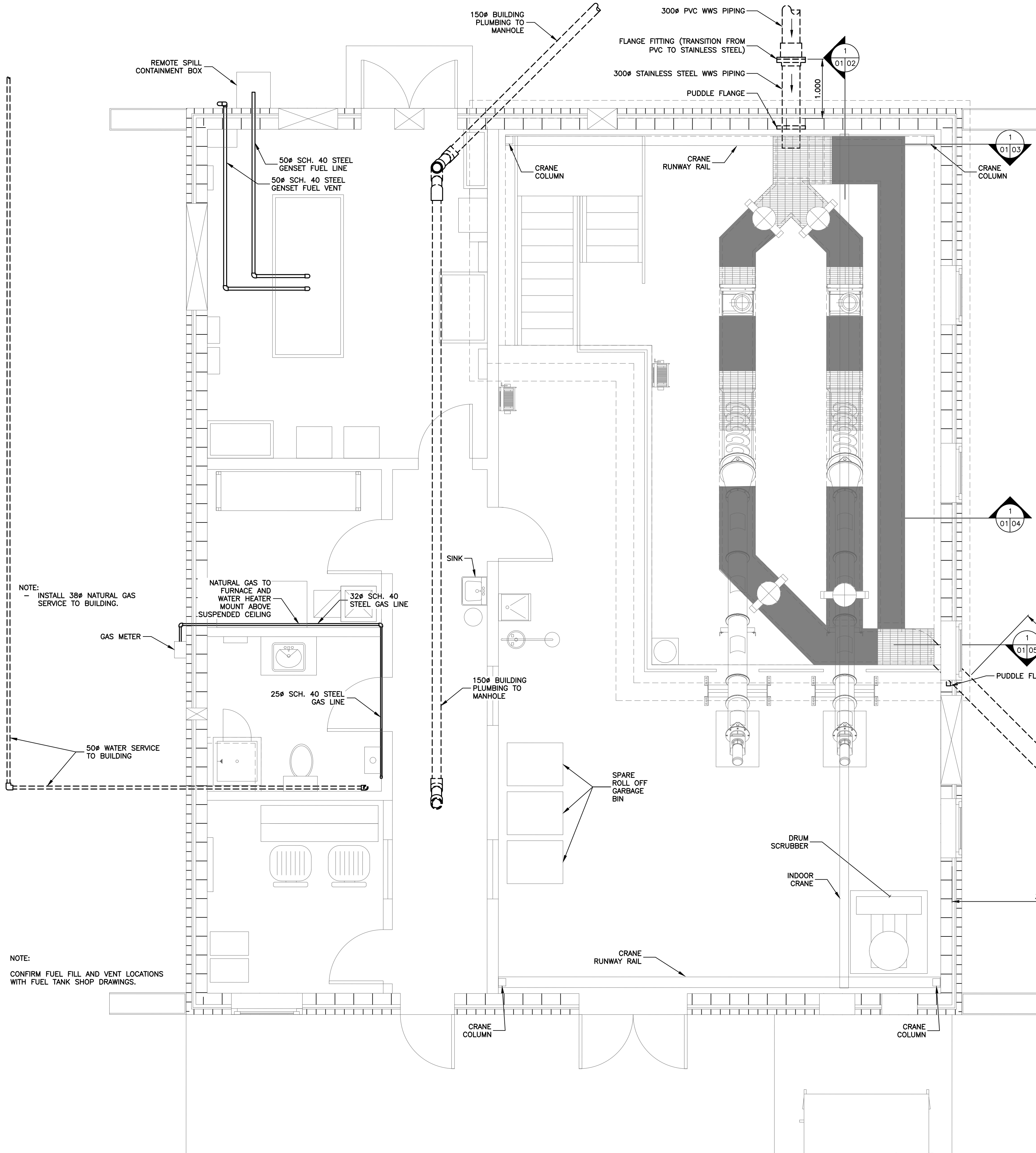
Project title

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

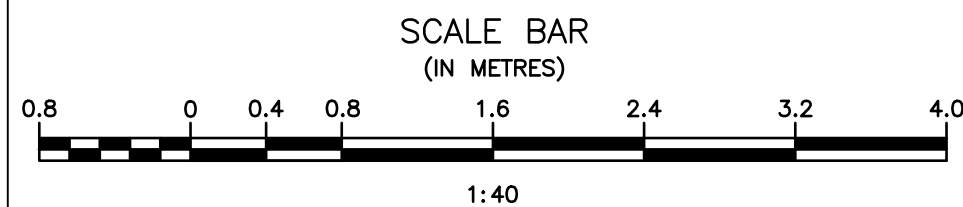
Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

MECHANICAL LAYOUT,  
PUDDLE FLANGE AND  
ULTRASONIC LEVEL DETAILS

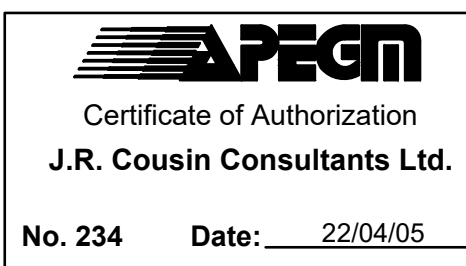
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M01 OF 9	1



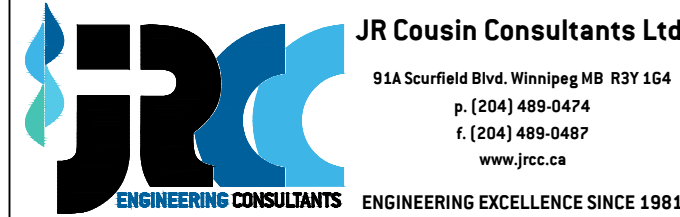
1 MECHANICAL LAYOUT  
SCALE = 1:40







JRCC PROJECT # R-325.56



Revision	Description	Date
5		
4		
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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	

Client

Project title

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by  
DK

Drawn by  
OT

Approved by  
JRC

PWSSC Project Manager  
JASON FREZZA

Drawing title

BUILDING INTERIOR  
ELEVATION 1

Project no./No. du projet

R.118541

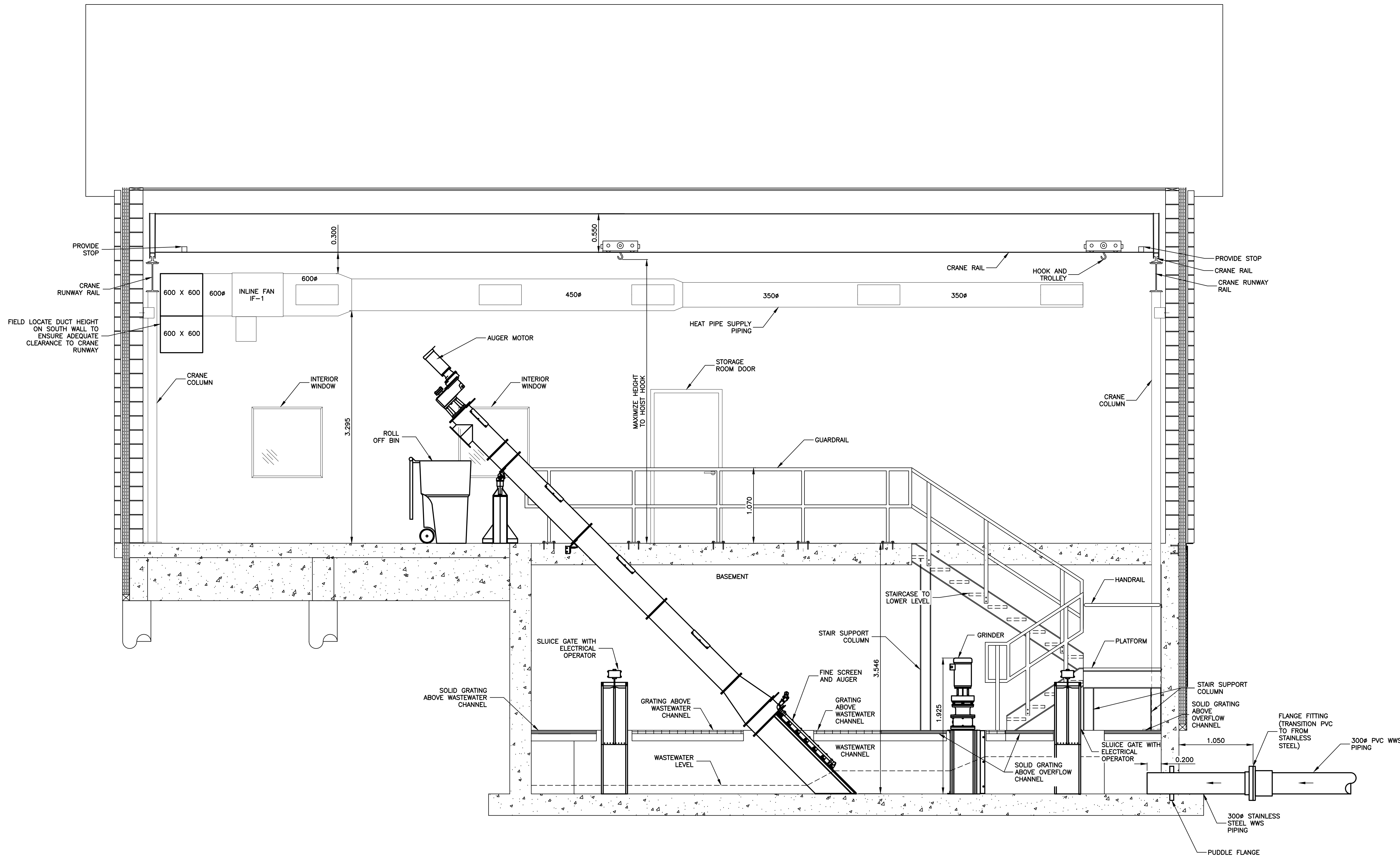
Drawing no./No. du dessin

M02

OF 9

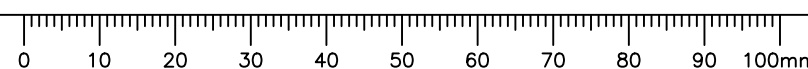
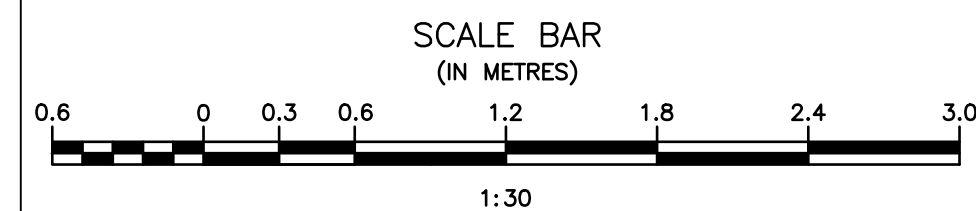
Revision no.

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1  
01/02

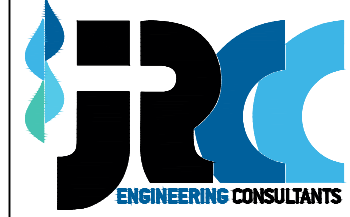
INTERIOR ELEVATION 1  
SCALE = 1:30







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Revision	Description	Date
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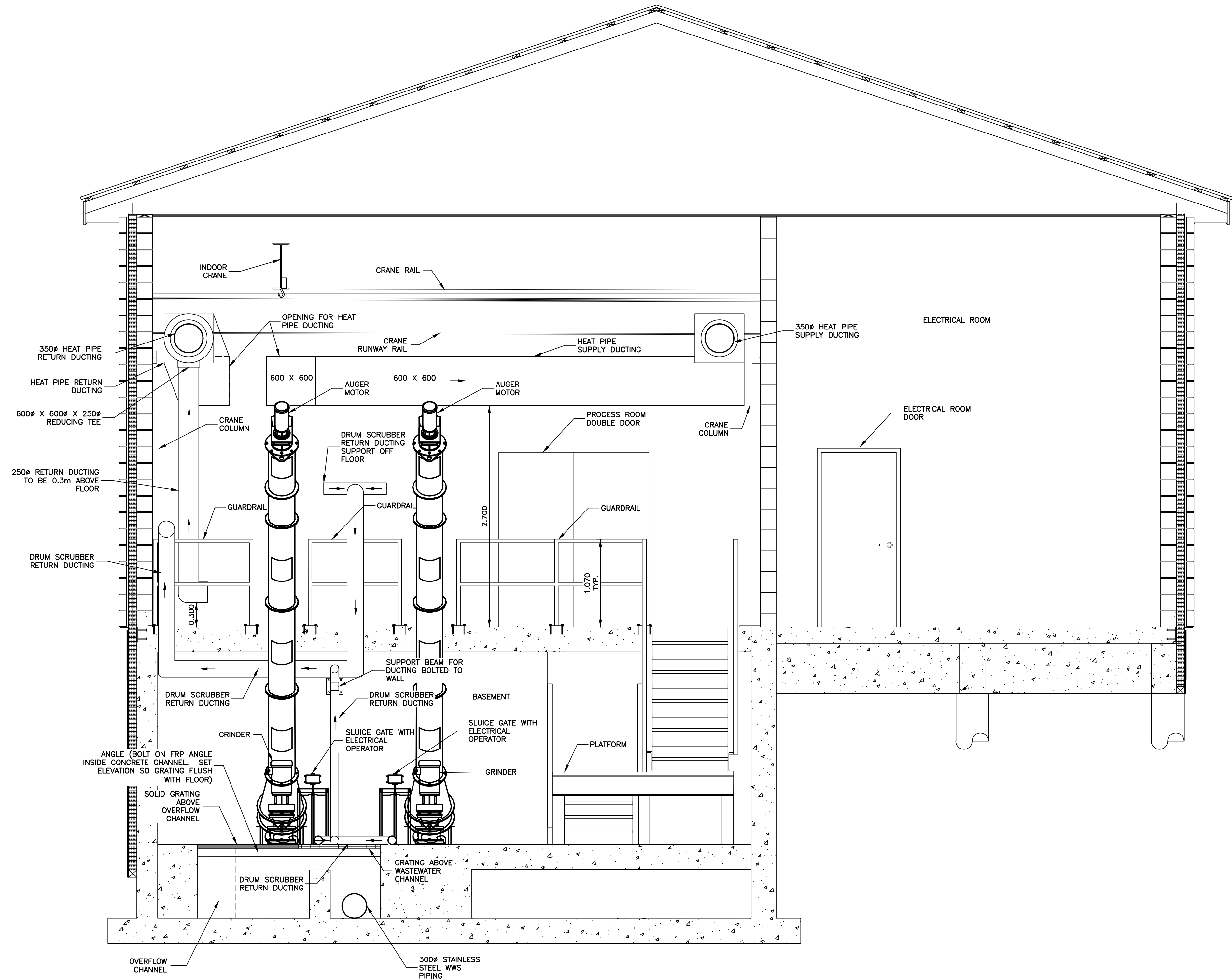
Project titleProjet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

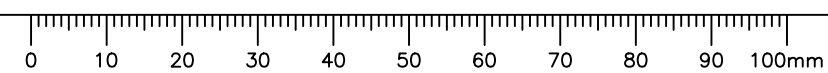
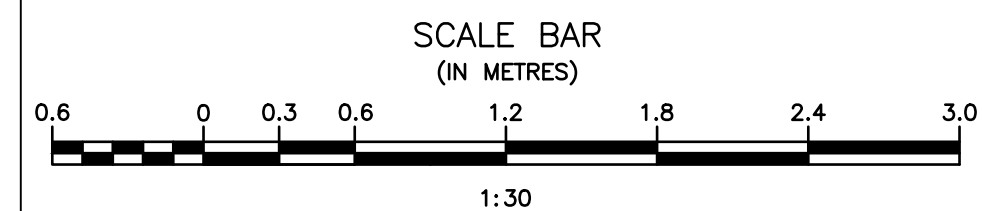
Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

BUILDING INTERIOR  
ELEVATION 2

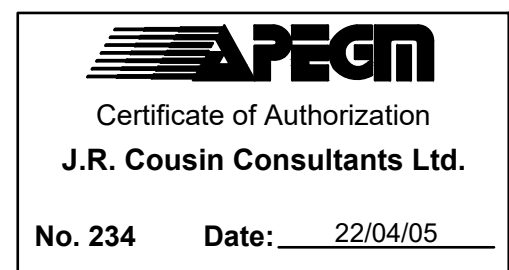
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M03 OF 9	1



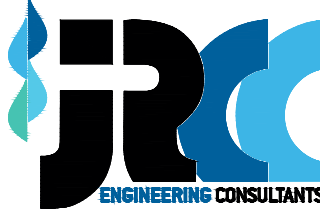
1 INTERIOR ELEVATION 2  
01/03 SCALE = 1:30







JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project title

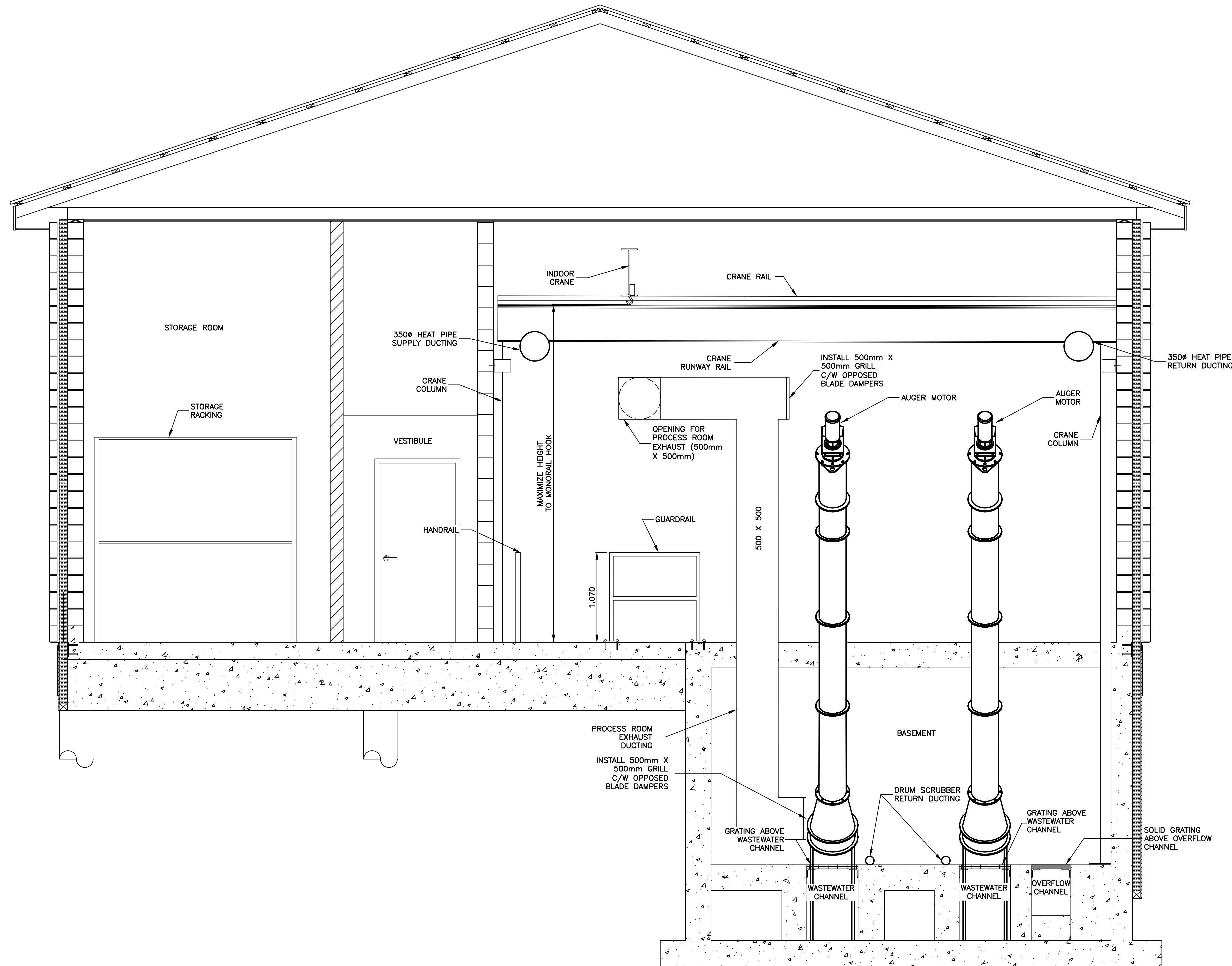
Projet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

BUILDING INTERIOR  
ELEVATION 3

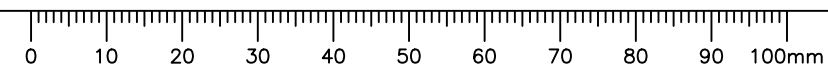
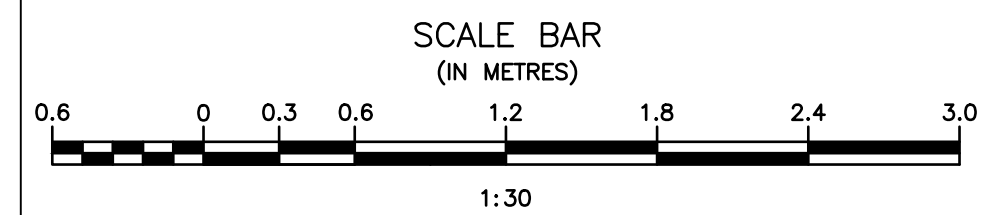
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M04 OF 9	1



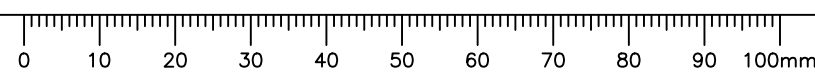
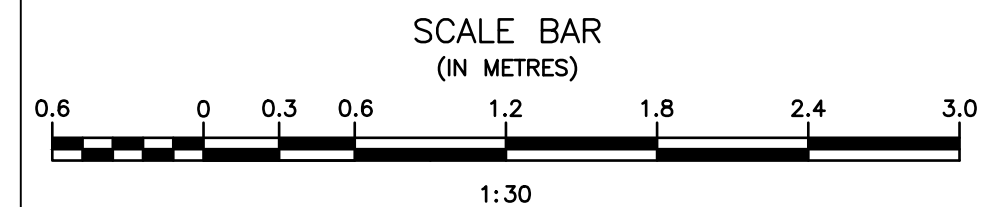
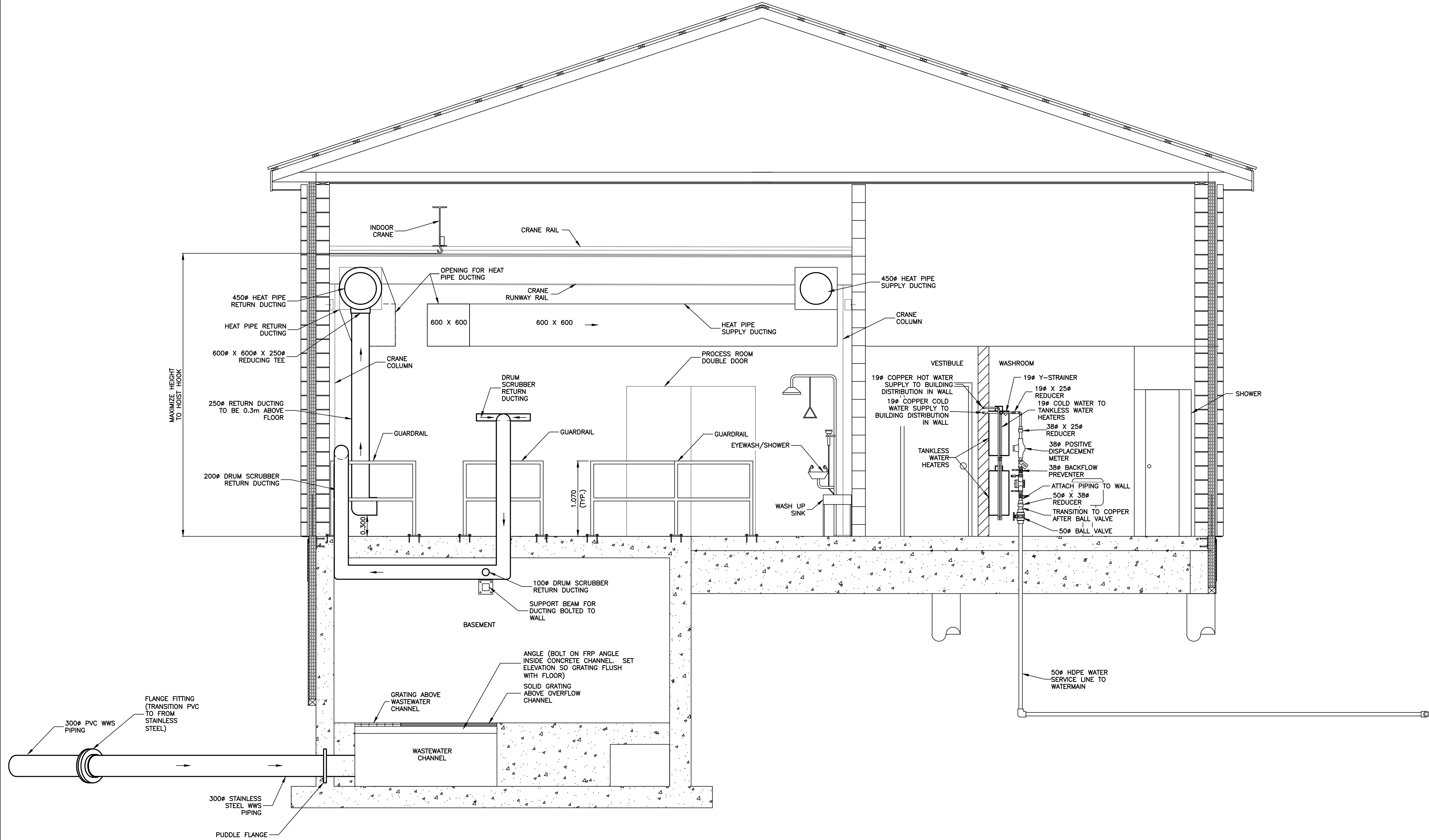
1  
01/04

INTERIOR ELEVATION 3

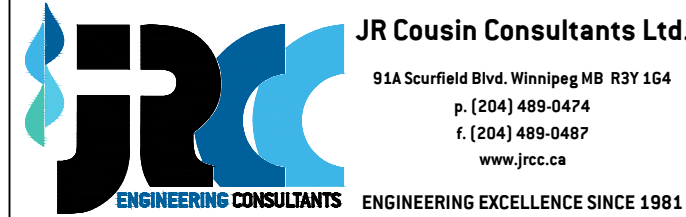
SCALE = 1:30







JRCC PROJECT # R-325.56



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Revision	Description	Date
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Project title

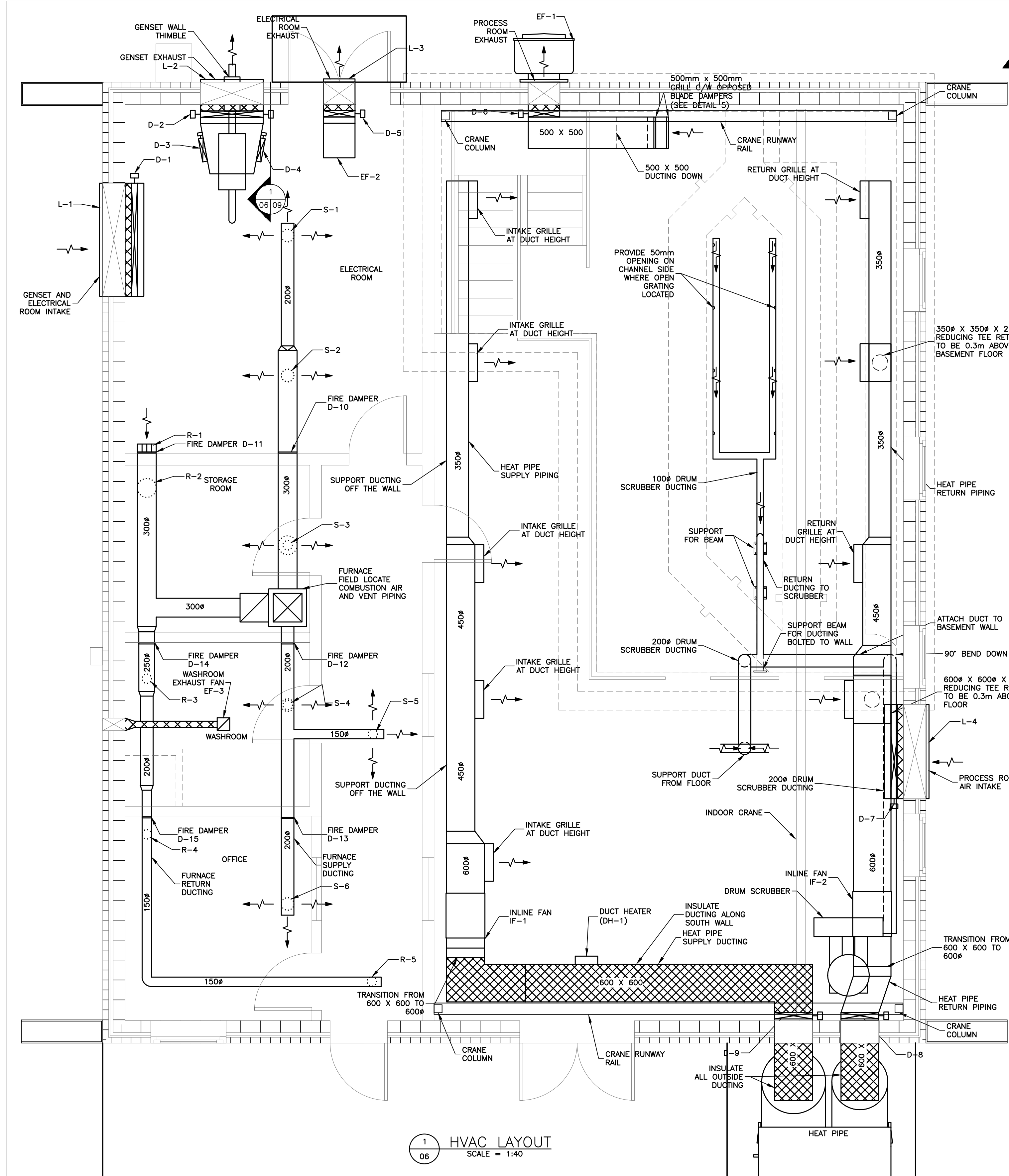
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWGSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

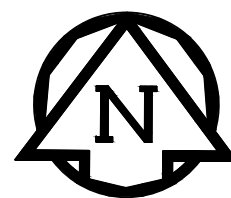
BUILDING INTERIOR  
ELEVATION 4

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M05 OF 9	1





1 HVAC LAYOUT  
SCALE = 1:40

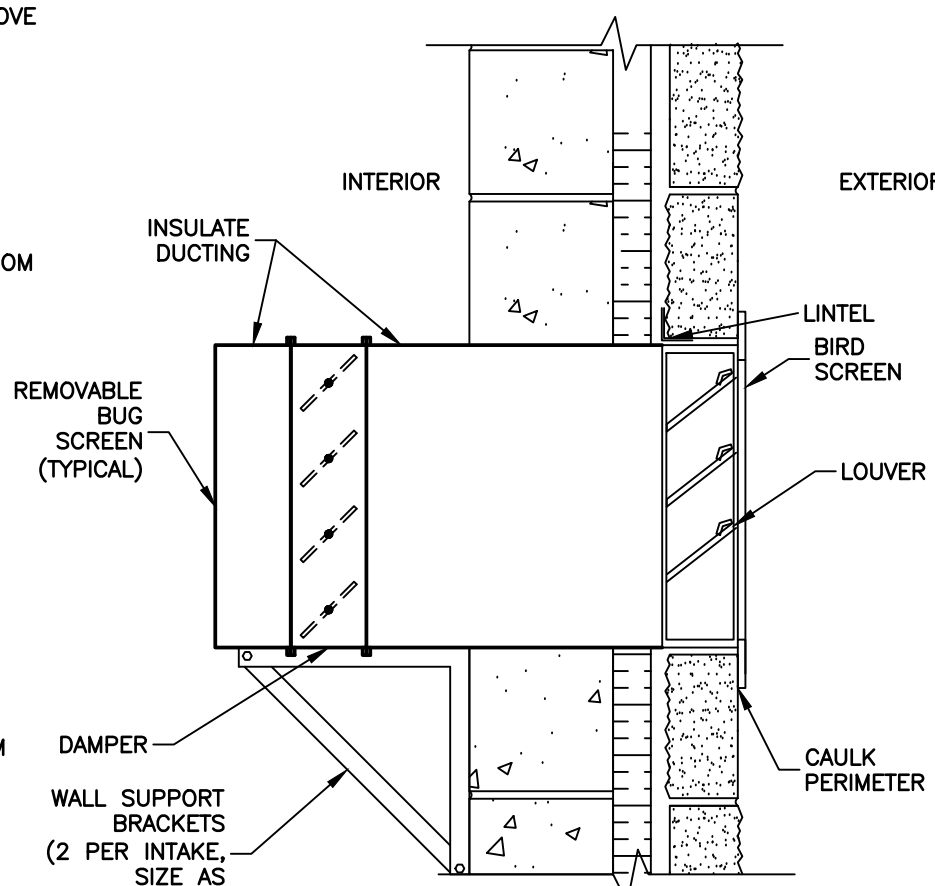


LEGEND

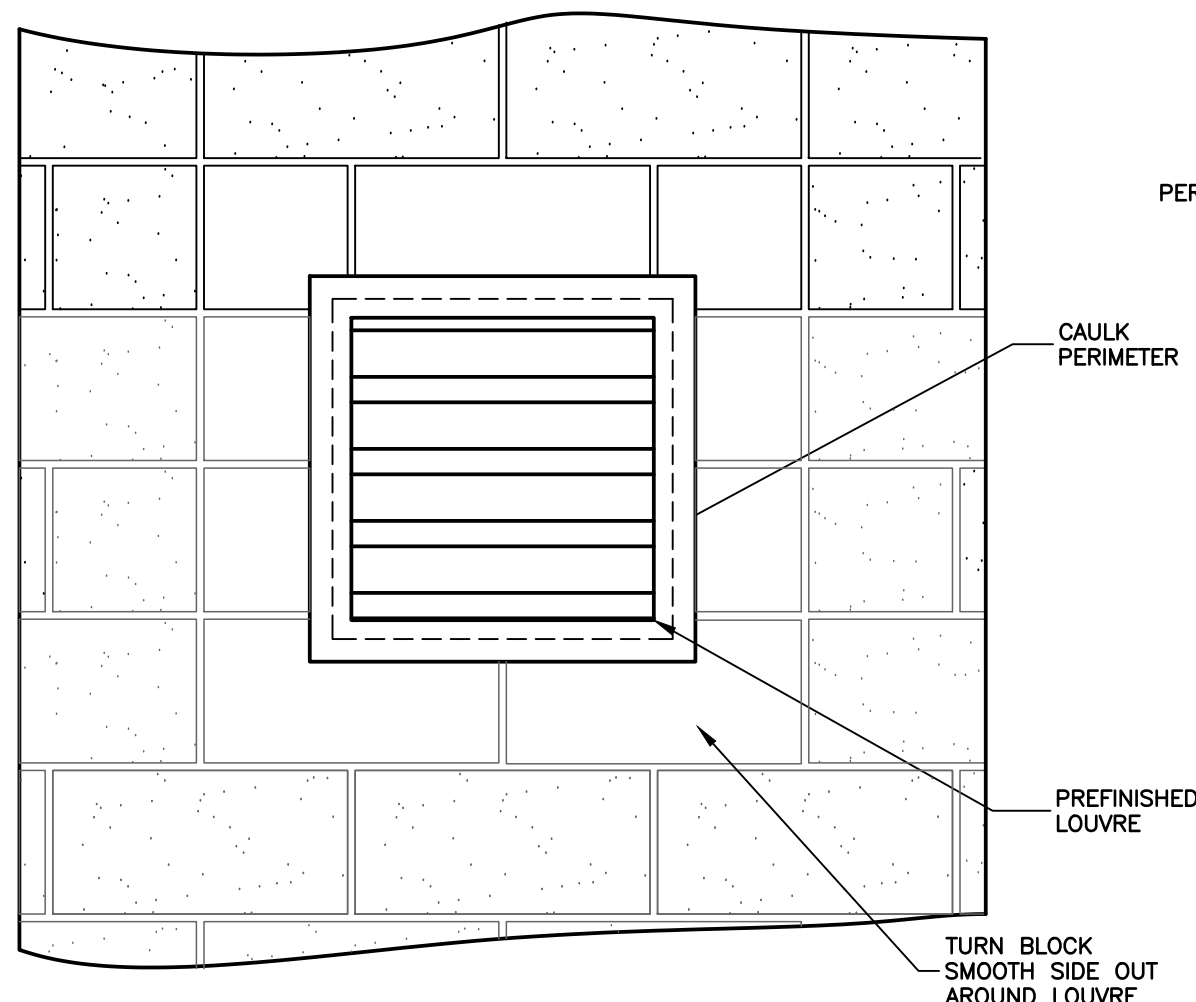
- INSULATED DUCTWORK  
DAMPER WITH DAMPER ACTUATOR  
BALANCING DAMPER  
DUCT SIZING  
D = DAMPER  
L = LOUVER  
DIF = DIFFUSER  
R = RETURN AIR GRATE  
EF = EXHAUST FAN  
WG = GRILLE IN WALL  
HRV = HEAT RECOVERY VENTILATOR  
DH = DUCT HEATER  
WC = HOODED WALL CAP  
G = GRILLE

NOTES:

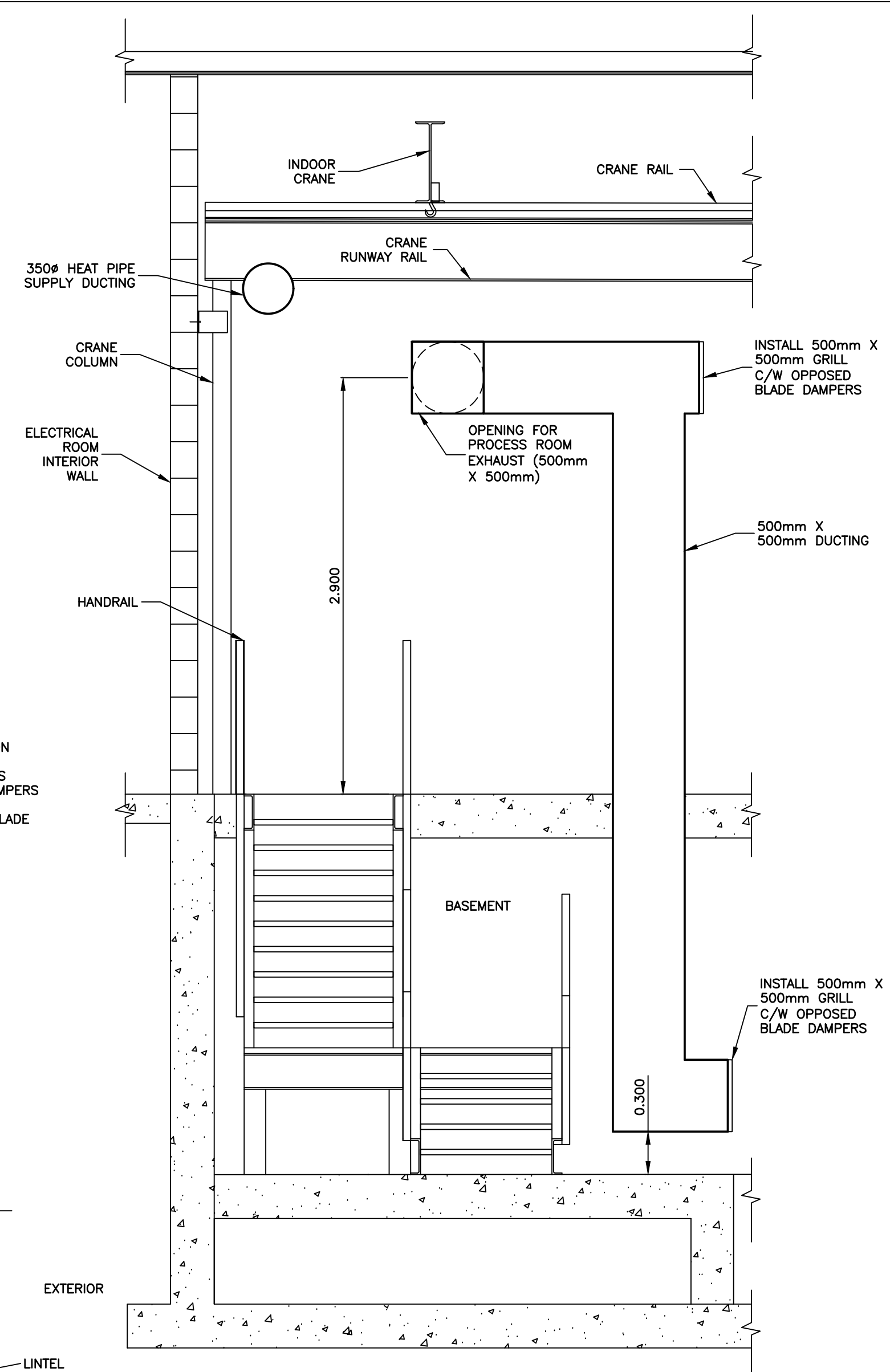
- PREFINISHED LOUVER COLOURS AS PER PLAN A01.
- INSULATE DUCTWORK WITH FOIL BACK FIBERGLASS INSULATION WHERE SHOWN.
- REFER TO SPECIFICATION FOR COMPLETE VENTILATION TABLES.
- PROVIDE ACCESS HATCH IN DUCTS FOR ACCESS TO ALL DAMPERS AND BUG SCREENS.
- GRILLES ON HEAT PIPE DUCTWORK TO INCLUDE OPPOSED BLADE DAMPERS FOR BALANCING. REFER TO SPECIFICATIONS.



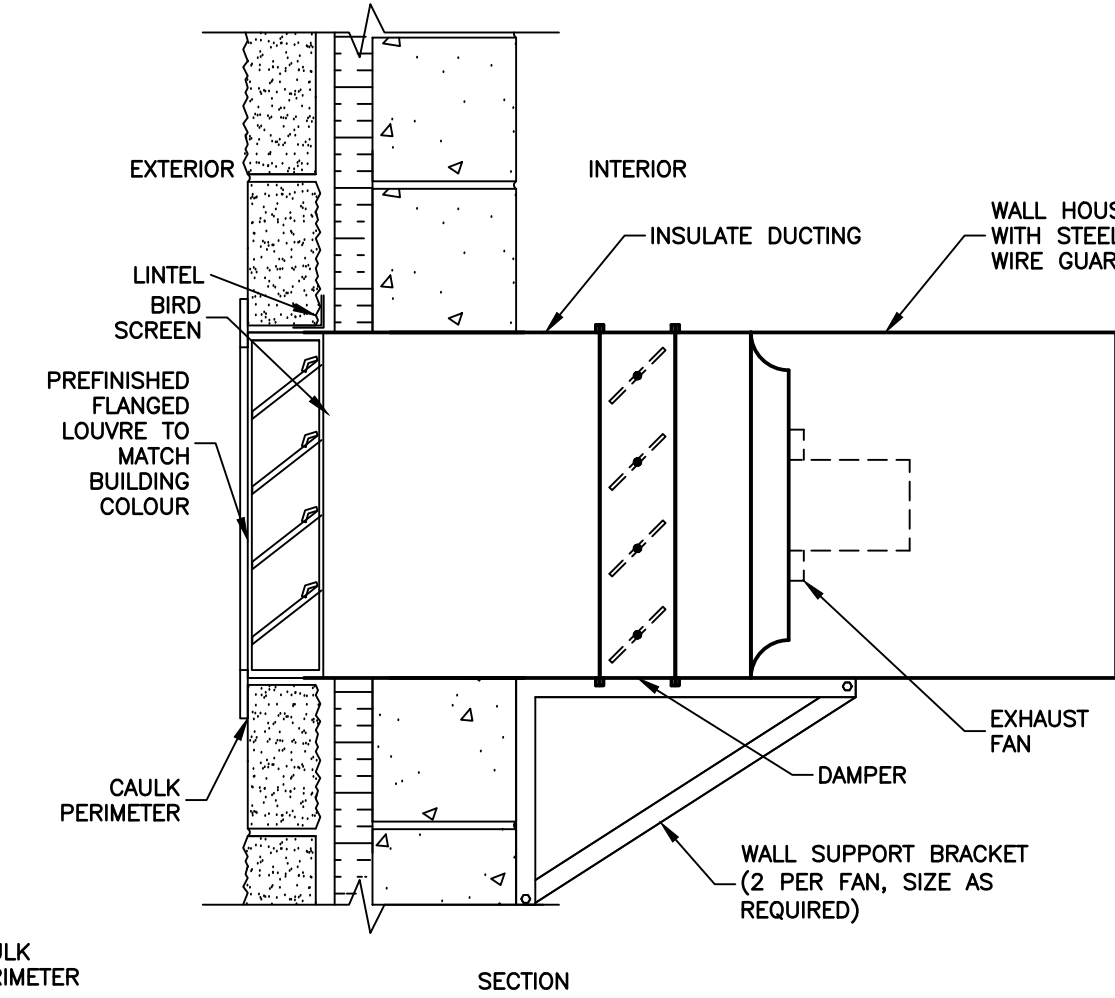
3 TYPICAL AIR INLET LOUVER  
SCALE = 1:10



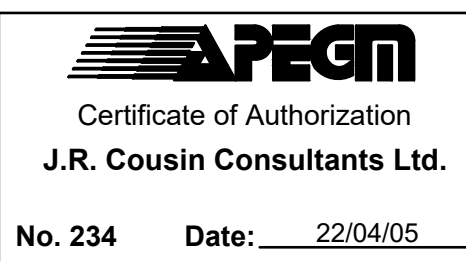
4 TYPICAL LOUVER FINISHING DETAIL  
SCALE = 1:10



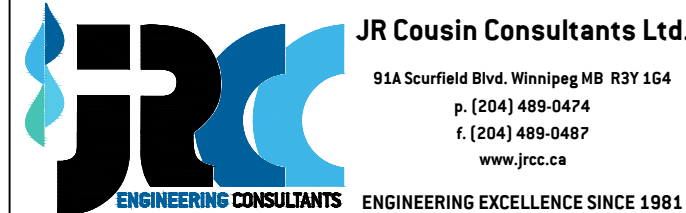
5 PROCESS ROOM EXHAUST FAN DETAIL  
SCALE = 1:30



2 ELECTRICAL ROOM EXHAUST FAN DETAIL  
SCALE = 1:10



JRCC PROJECT # R-325.56



Revision	Description	Date
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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Client		client

Project title  
Project

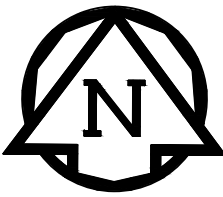
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

BUILDING HVAC LAYOUT AND  
VENTILATION DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M06	1
	OF 9	

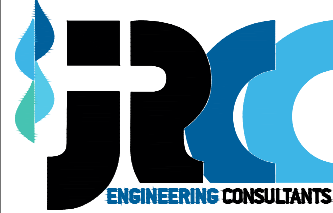




Certificate of Authorization  
J.R. Cousin Consultants Ltd.

No. 234 Date: 22/04/05

JRCC PROJECT # R-325.56



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Project title

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by  
DK

Conçu par

Drawn by  
OT

Dessiné par

Approved by  
JRC

Approuvé par

PWSSC Project Manager  
JASON FREZZA

Administrateur de Projets TPSGC

Drawing title

PLUMBING PLAN

Project no./No. du projet

R.118541

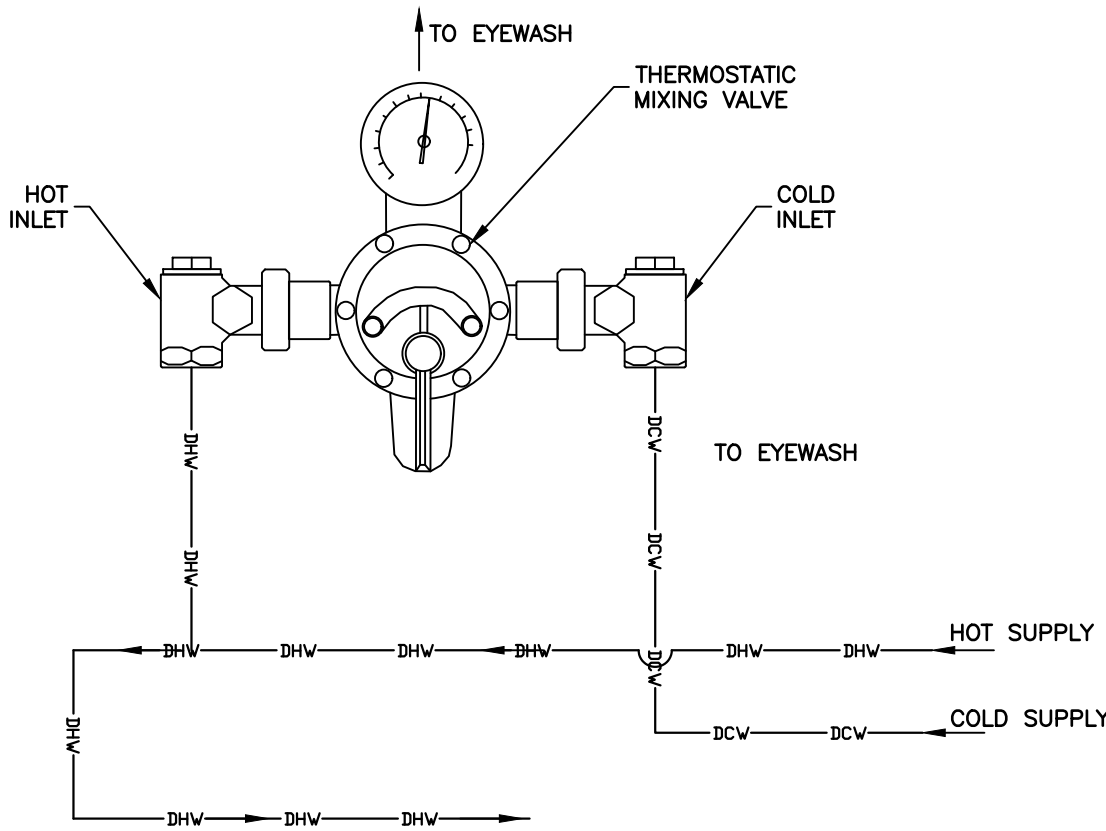
Drawing no./No. du dessin

M07

OF 9

Revision no.

1

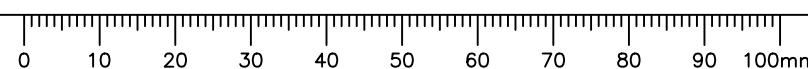
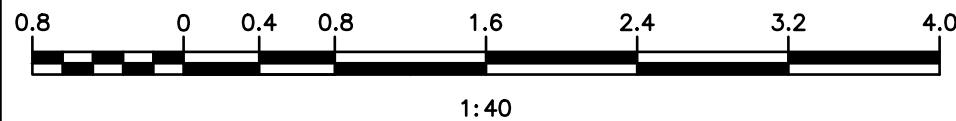


2 MIXING VALVE SCHEMATIC  
07 SCALE = NTS

NOTES:

- CONFIRM ALL DRAIN LOCATIONS FOR EYEWASH, WATER CLOSET, SHOWER AND SINKS WITH SHOP DRAWINGS (FIELD LOCATE).
- ALL EXTERIOR HOSE BIBS TO HAVE AN INTERNAL SHUT-OFF VALVE.
- INSTALL BRASS FLOOR CAP OVER ALL CLEAN-OUTS (CAP TO BE FLUSH WITH FLOOR).
- USE PVC 90° ELBOW TO SLEEVE ALL DOMESTIC WATER PIPING THROUGH SLAB.
- ALL EXPOSED DOMESTIC PIPING IN PROCESS ROOM TO BE
- P-TRAP

SCALE BAR  
(IN METRES)



1 PLUMBING PLAN  
07 SCALE = 1:40





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Project title

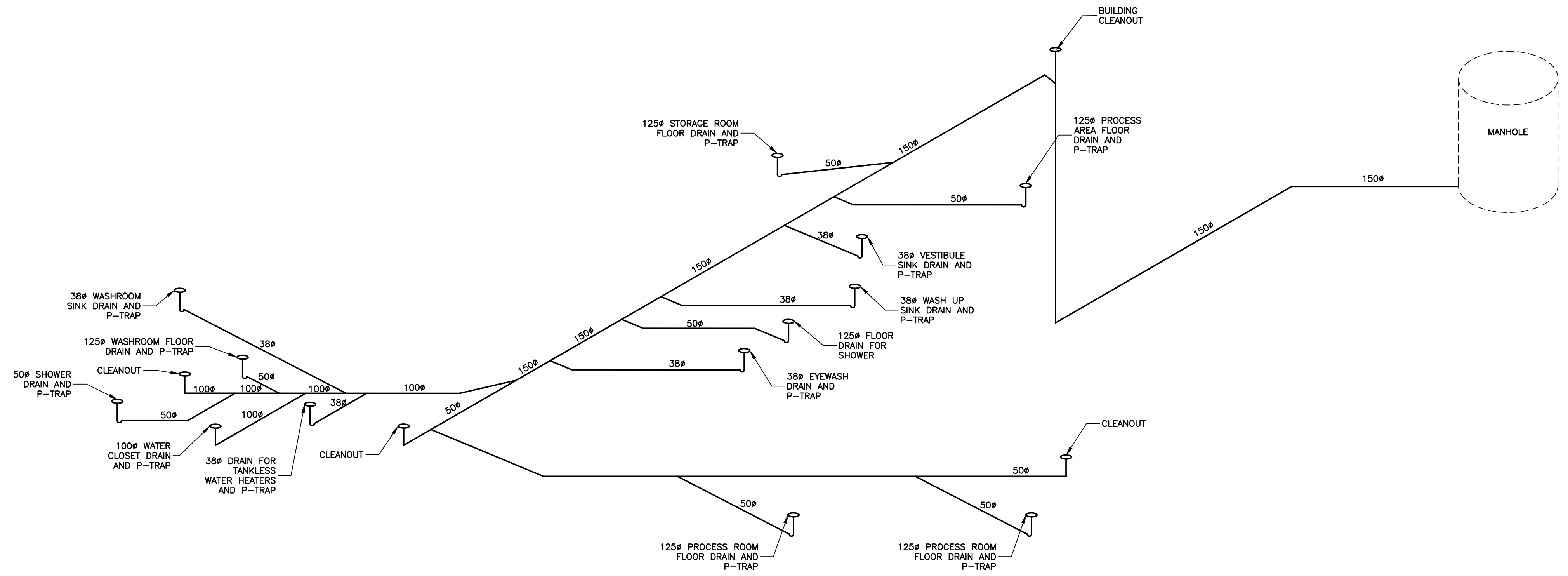
Projet

**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

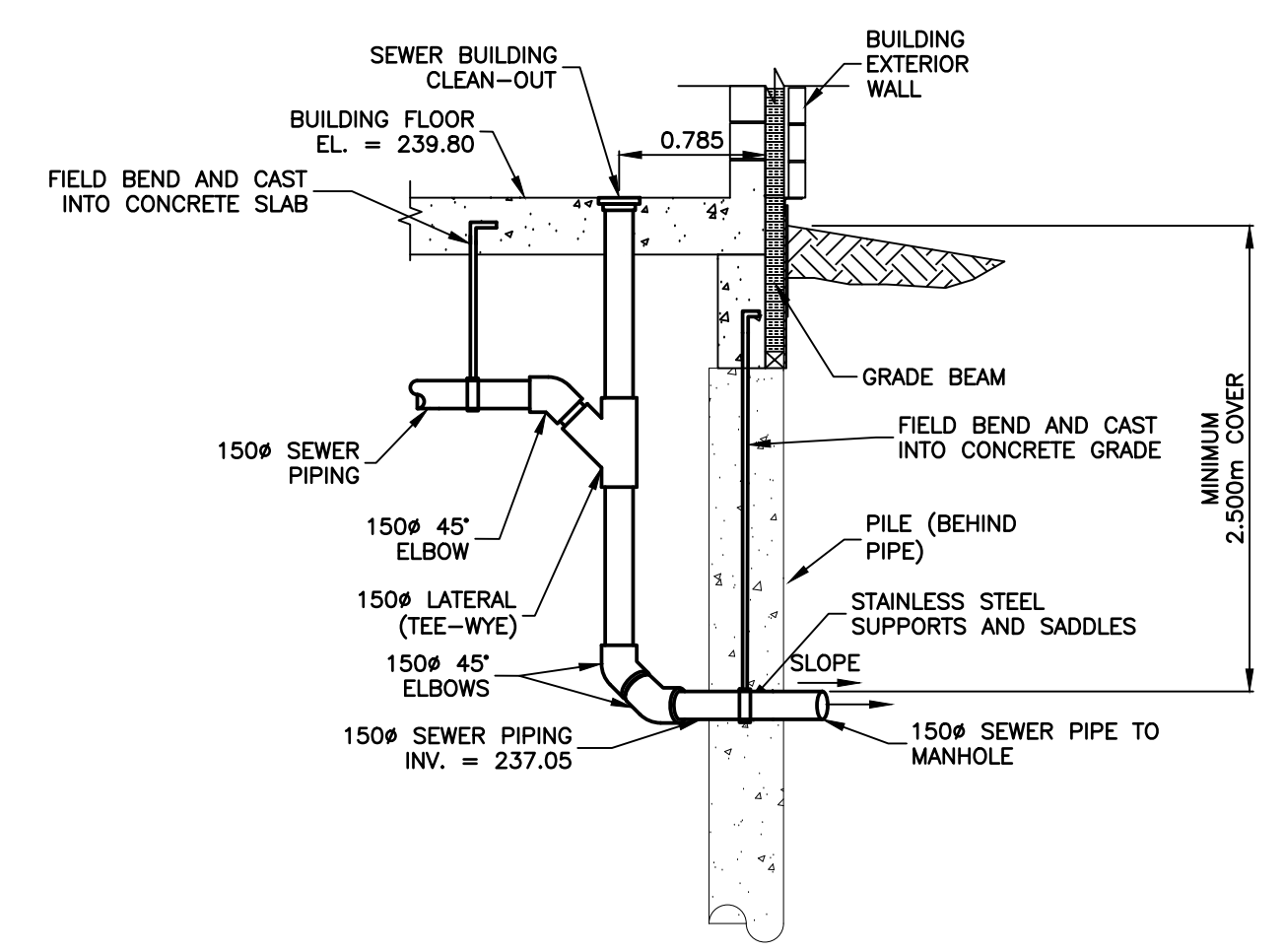
**PLUMBING DIAGRAM, CLEANOUT,  
PIPING SUPPORT AND WATER  
SERVICE PIPING CONNECTION  
DETAILS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R-118541	M08 OF 9	1



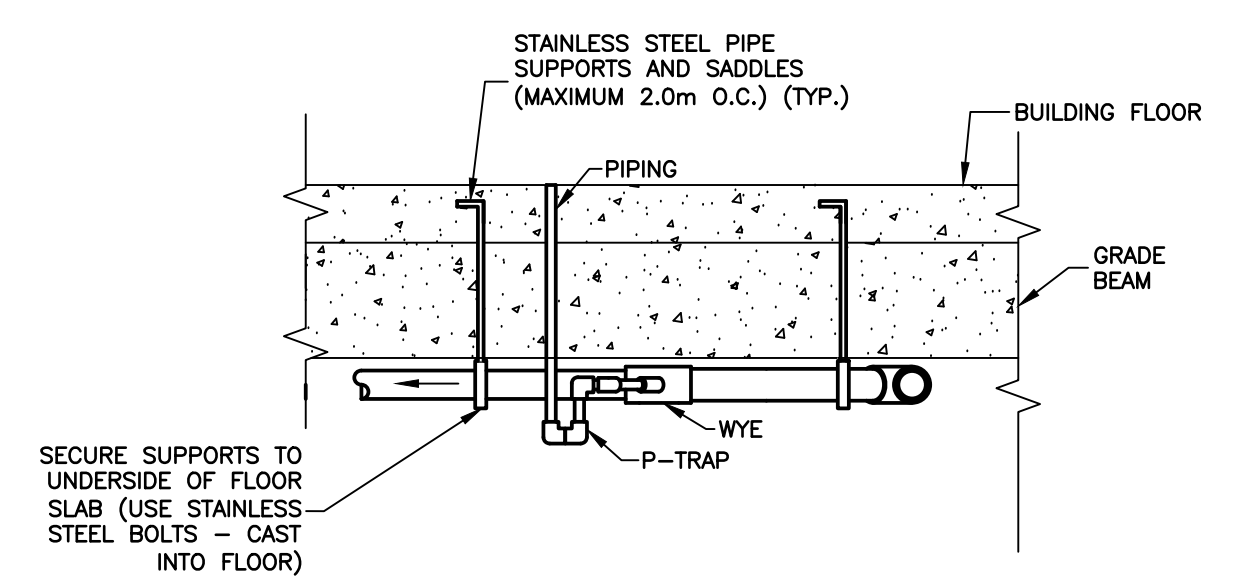
NOTE:  
- COMPLETE VENTING AS REQUIRED TO MEET PLUMBING CODE.

**1 PLUMBING DIAGRAM**  
SCALE = NTS



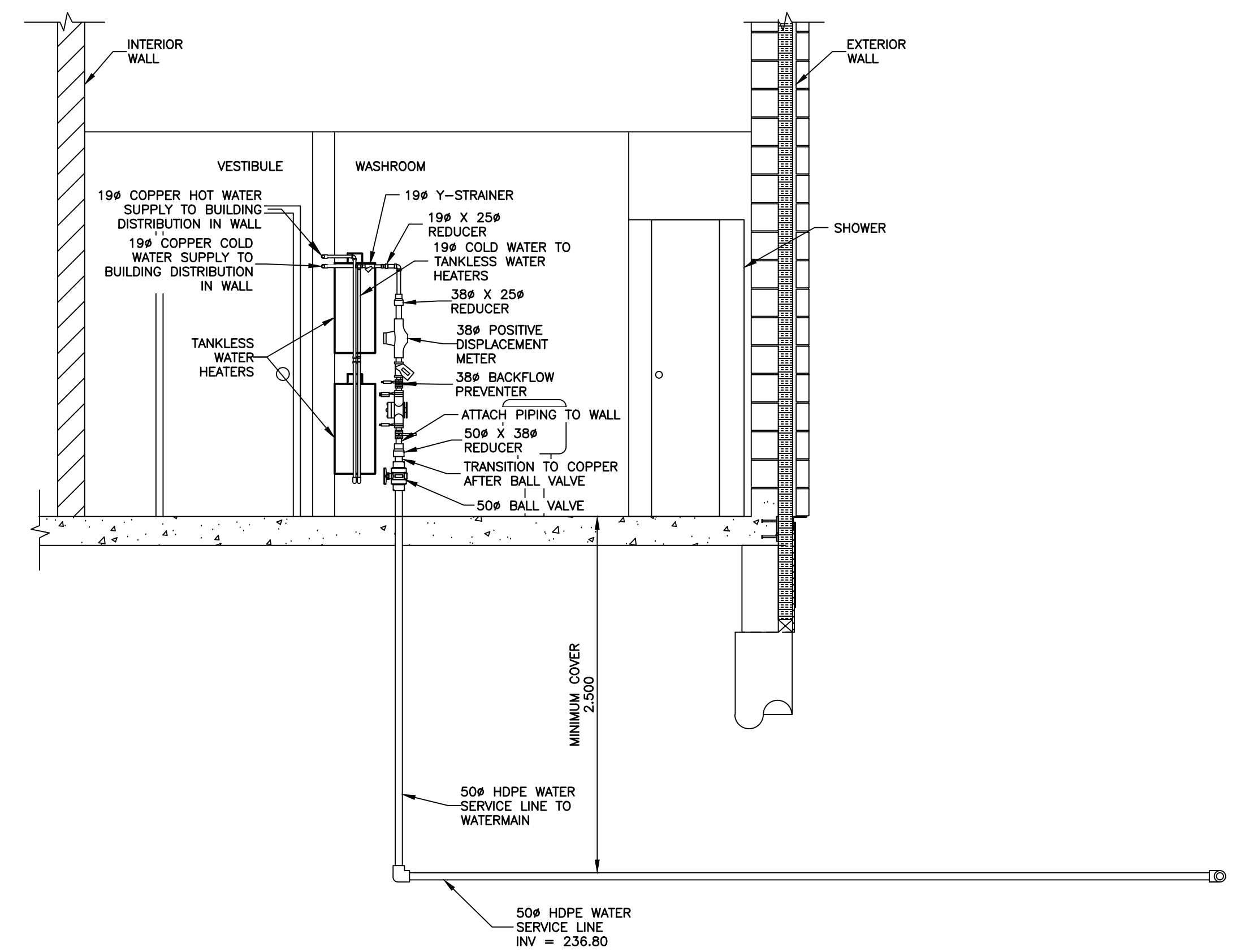
NOTES:  
- ALL PIPING AND FITTINGS PVC UNLESS OTHERWISE NOTED.  
- PROVIDE SUPPORT AND RESTRAINT FOR ALL PIPING AS REQUIRED.  
- BACKFILL NOT SHOWN.

**2 BUILDING CLEANOUT FOR SEWER PIPING**  
SCALE = 1:40



NOTES:  
- PROVIDE 150mm SAND BEDDING UNDER PIPE.  
- DETAIL APPLIES TO ALL PROCESS PIPING AND BUILDING PLUMBING UNDER FLOOR SLAB  
- SUPPORT PIPING AT ALL GRADE BEAMS AND FROM CONCRETE FLOOR (FIELD BEND SUPPORTS AND CAST INTO GRADE BEAMS)

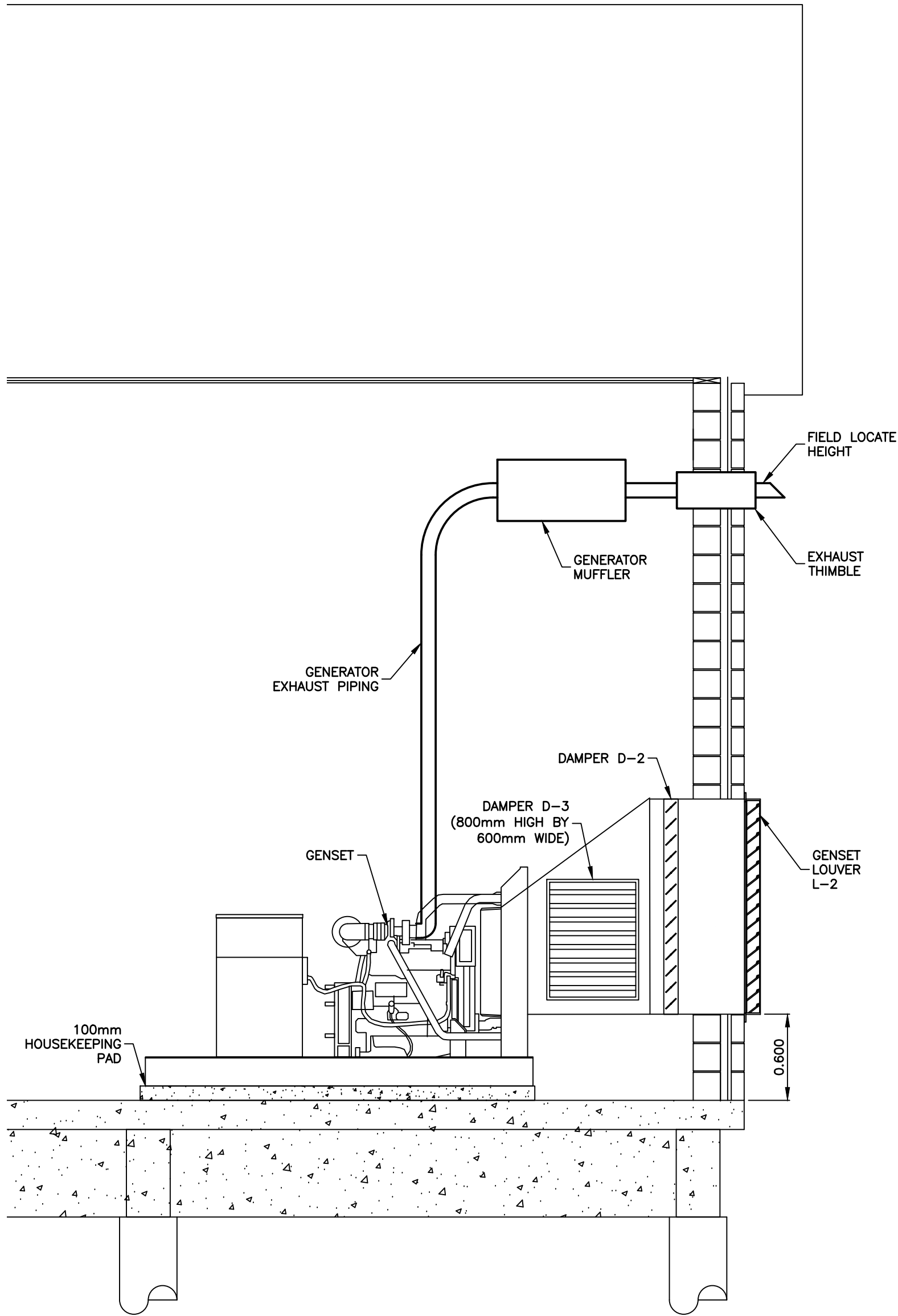
**3 TYPICAL PIPING SUPPORT DETAIL**  
SCALE = 1:40



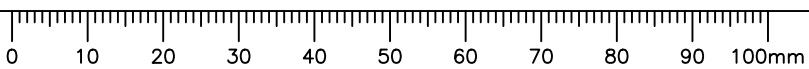
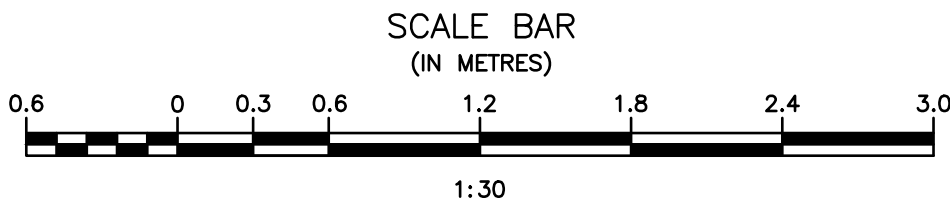
NOTES:  
- PROVIDE SUPPORT AND RESTRAINT FOR ALL PIPING AS REQUIRED.  
- BACKFILL NOT SHOWN.  
- ALL DOMESTIC HOT AND COLD WATER PIPING TO BE COPPER.  
- FIELD LOCATE COMBUSTION AIR AND VENT PIPING

**4 WATER SERVICE PIPING AND TANKLESS WATER HEATER DETAIL**  
SCALE = 1:30



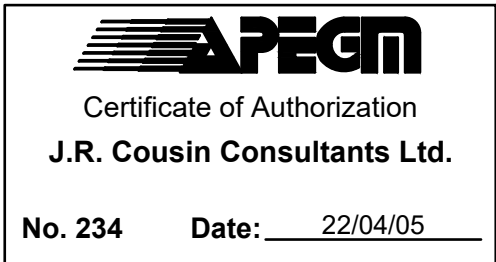


1 GENSET EXHASUT DETAIL  
06/06 SCALE = 1:30

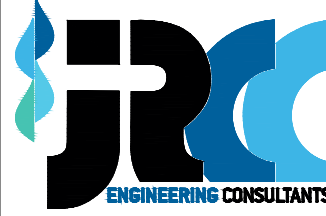


PLUMBING FIXTURE SCHEDULE		
NAME	LOCATION	NOTES
SHOWER	WASHROOM	12# DHW AND 12# DCW SUPPLY
WATER CLOSET	WASHROOM	12# DCW SUPPLY
WASHROOM SINK	WASHROOM	12# DHW AND 12# DCW SUPPLY
TANKLESS WATER HEATER 1	WASHROOM	FED FROM 2A-1
TANKLESS WATER HEATER 2	WASHROOM	FED FROM 2A-3
BACKFLOW PREVENTER	WASHROOM	38#, ON WATER SERVICE TO BUILDING
WATER METER	WASHROOM	38#
WASH UP SINK	PROCESS ROOM	12# DHW AND 12# DCW SUPPLY
EYEWASH/SHOWER	PROCESS ROOM	19# DHW AND 19# DCW SUPPLY C/W MIXING VALVE
HOSE REEL	PROCESS ROOM	12# DCW SUPPLY
HOSE REEL	PROCESS ROOM (BASEMENT)	12# DCW SUPPLY
BACKFLOW PREVENTER (BFP-1)	PROCESS ROOM (BASEMENT)	25# DCW SUPPLY
VESTIBULE SINK	VESTIBULE	12# DHW AND 12# DCW SUPPLY
WASHROOM TRAP PRIMER	WASHROOM	
VESTIBULE TRAP PRIMER	VESTIBULE	

NOTE: EXHAUST FANS AND PROCESS EQUIPMENT ON  
MOTOR/EQUIPMENT SCHEDULE ON PLAN E05



JRCC PROJECT # R-325.56



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1	ISSUED FOR TENDER	APR 2022
0	DESIGN COMPLETION	
Revision	Description	Date
Client		client

Project titleProjet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DK	Conçu par
Drawn by OT	Dessiné par
Approved by JRC	Approuvé par
PWGSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

GENSET EXHASUT DETATIL  
AND PLUMBING FIXTURE SCHEDULE

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	M09 OF 9	1

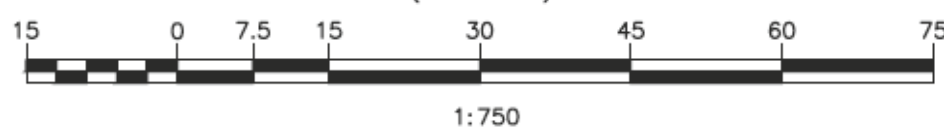




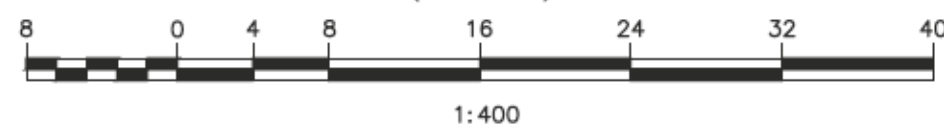
**DRAWING NOTES:**

1. PROVIDE THE FOLLOWING UNDERGROUND CONDUITS/CONDUCTORS FOR COMMUNICATIONS SYSTEM TIE-INS TO EXISTING SYSTEMS WITHIN THE EXISTING 50 BED COMPLEX:
  - A. FIRE ALARM - PROVIDE 1-53mm CONDUIT C/W FIBRE OPTIC CABLE FOR CONNECTION OF NEW WASTEWATER BUILDING FIRE ALARM CONTROL PANEL TO EXISTING SIEMENS FIREFINDER XLS CONTROL PANEL. PROVIDE 1-27mm CONDUIT C/W 8 TWISTED PAIR FOR THE FOLLOWING FIRE ALARM SIGNAL CONNECTIONS BETWEEN EXISTING 50 BED COMPLEX AND NEW WASTEWATER BUILDING. (ALARM, TROUBLE, SUPERVISORY)
  - B. PA SYSTEM - PROVIDE 1-53mm CONDUIT C/W FIBRE OPTIC CABLE FOR CONNECTION OF NEW WASTEWATER BUILDING PA SYSTEM TO EXISTING PA SYSTEM HEAD END IN THE EXISTING 50 BED COMPLEX.
  - C. BUILDING ALARM - PROVIDE 1-27mm CONDUIT C/W 8 TWISTED PAIR FOR THE FOLLOWING WASTEWATER BUILDING SCADA SYSTEM ALARMS TIE-IN WITH EXISTING BMS SYSTEM AT THE EXISTING 50 BED COMPLEX. (CRITICAL ALARM, GENERAL ALARM)
2. PA SYSTEM - PROVIDE FIBRE OPTIC CONVERTERS AT THE EXISTING HEAD END IN THE 50 BED BUILDING AND IN THE WASTEWATER TRASH REMOVAL BUILDING. PROVIDE AMPLIFIER AND SPEAKERS IN WASTEWATER TRASH REMOVAL BUILDING. REFER TO PLAN E3 FOR SPEAKER LOCATIONS. CONFIRM EXISTING EQUIPMENT PRIOR TO INSTALLATION.

SCALE BAR  
(IN METRES)

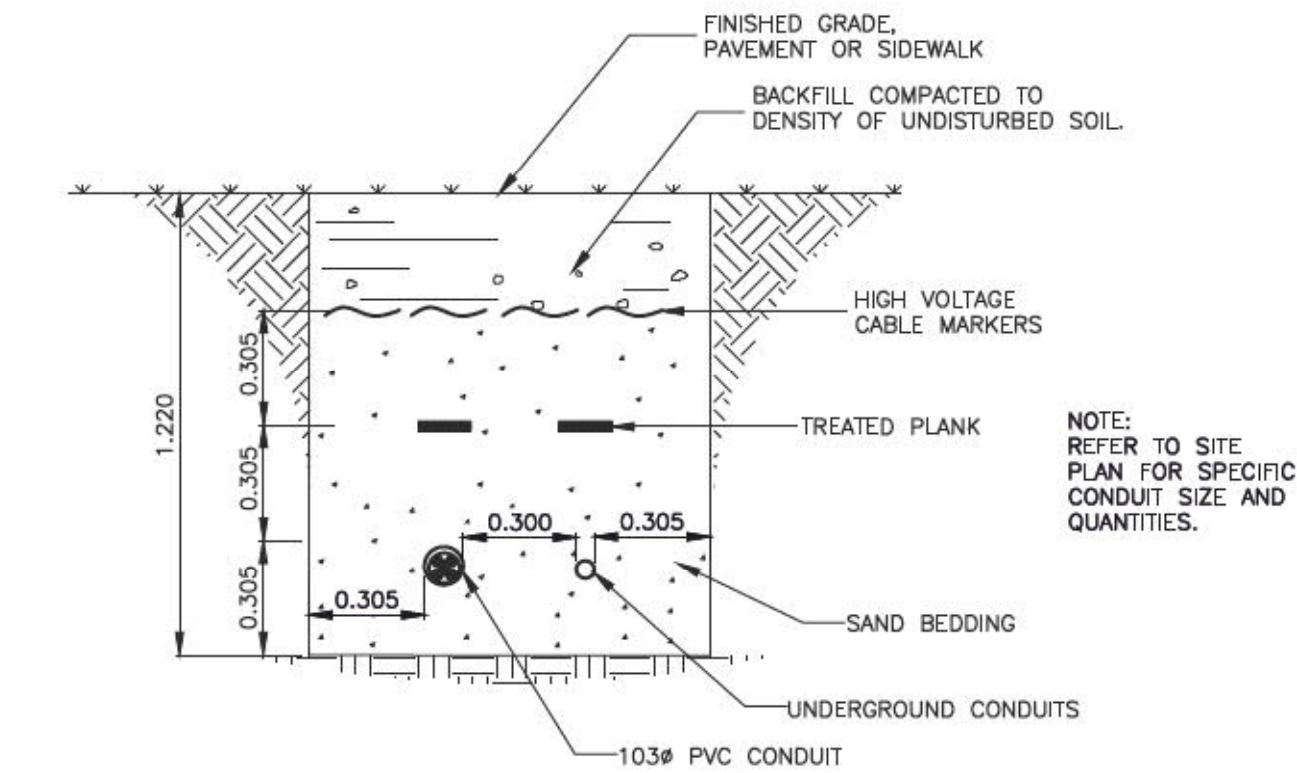


SCALE BAR  
(IN METRES)

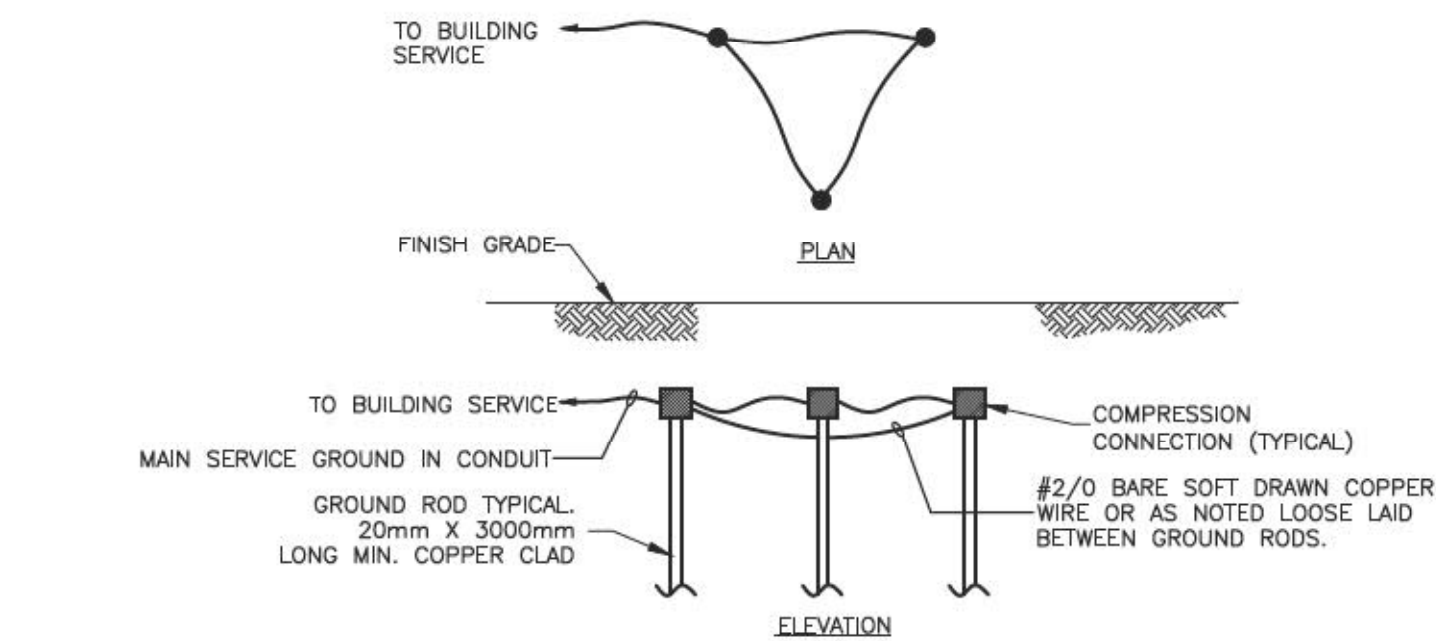


1 ELECTRICAL SITE PLAN

SCALE = 1:750

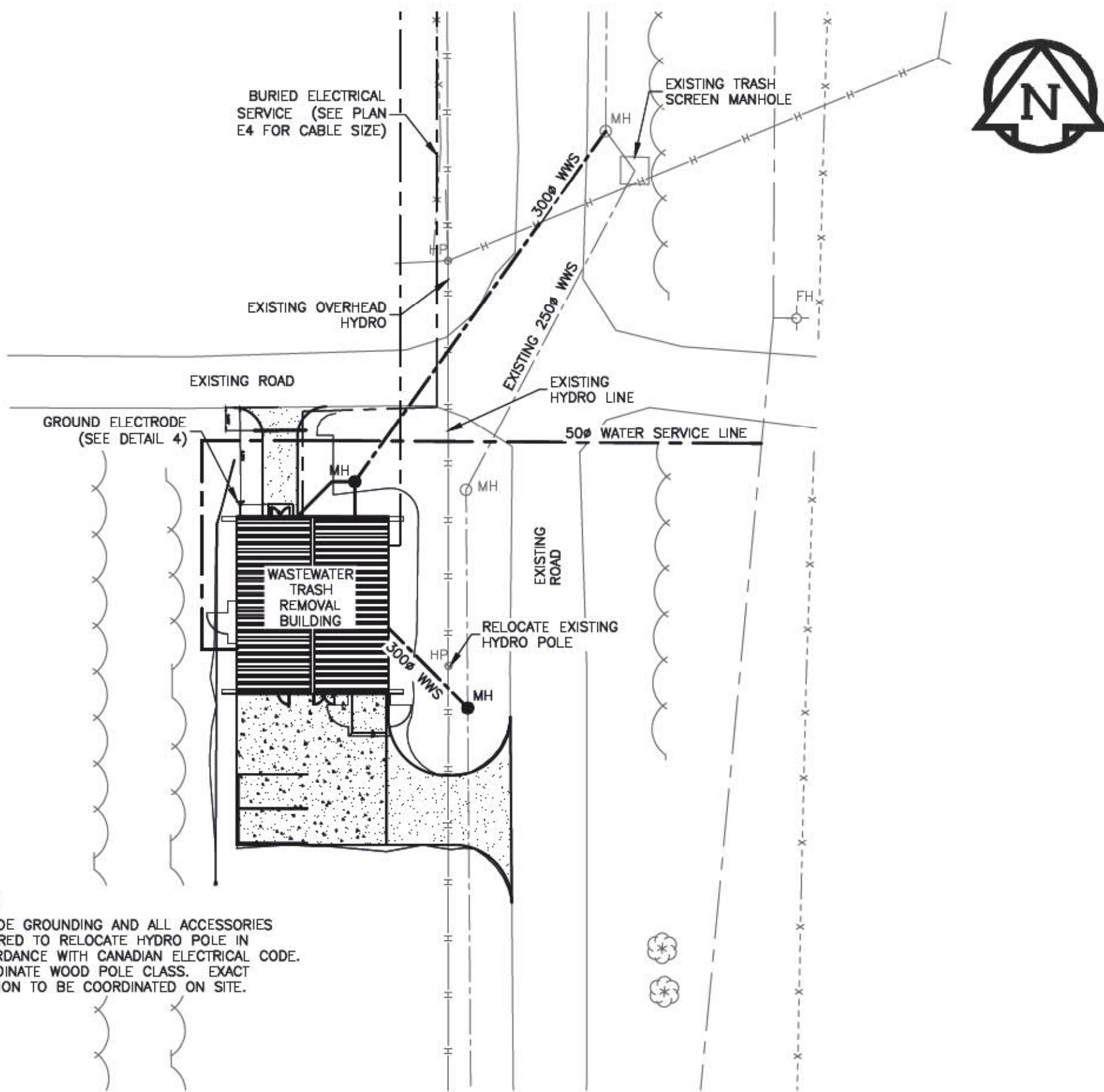


3 TYPICAL UNDERGROUND FEEDER DETAIL



4 GROUND ELECTRODE DETAIL

SCALE = NTS



2 ELECTRICAL SITE PLAN - AT BUILDING

SCALE = 1:400



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1	ISSUED FOR TENDER	APR 2022
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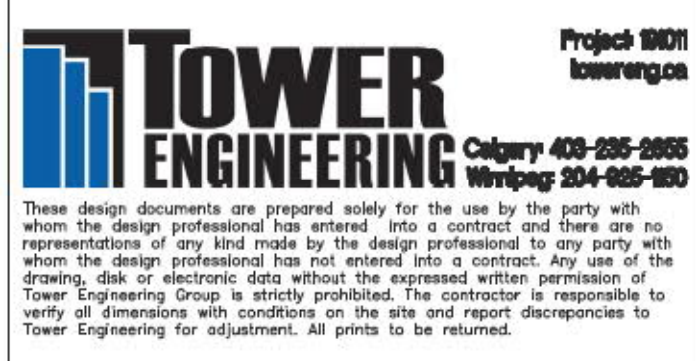
**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by DG	Conçu par
Drawn by OT	Dessiné par
Approved by SL	Approuvé par
PM/SC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

**ELECTRICAL SITE PLAN  
AND ELECTRICAL DETAILS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	E01 OF 7	1





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**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

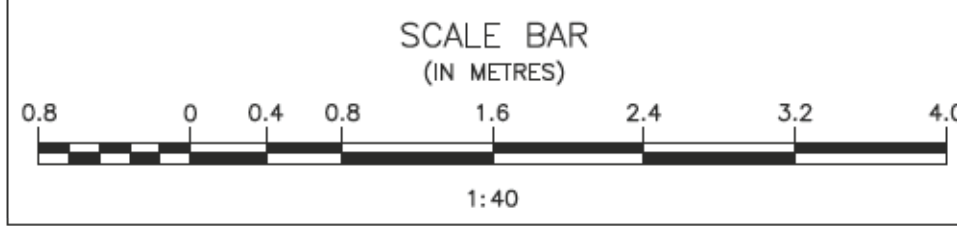
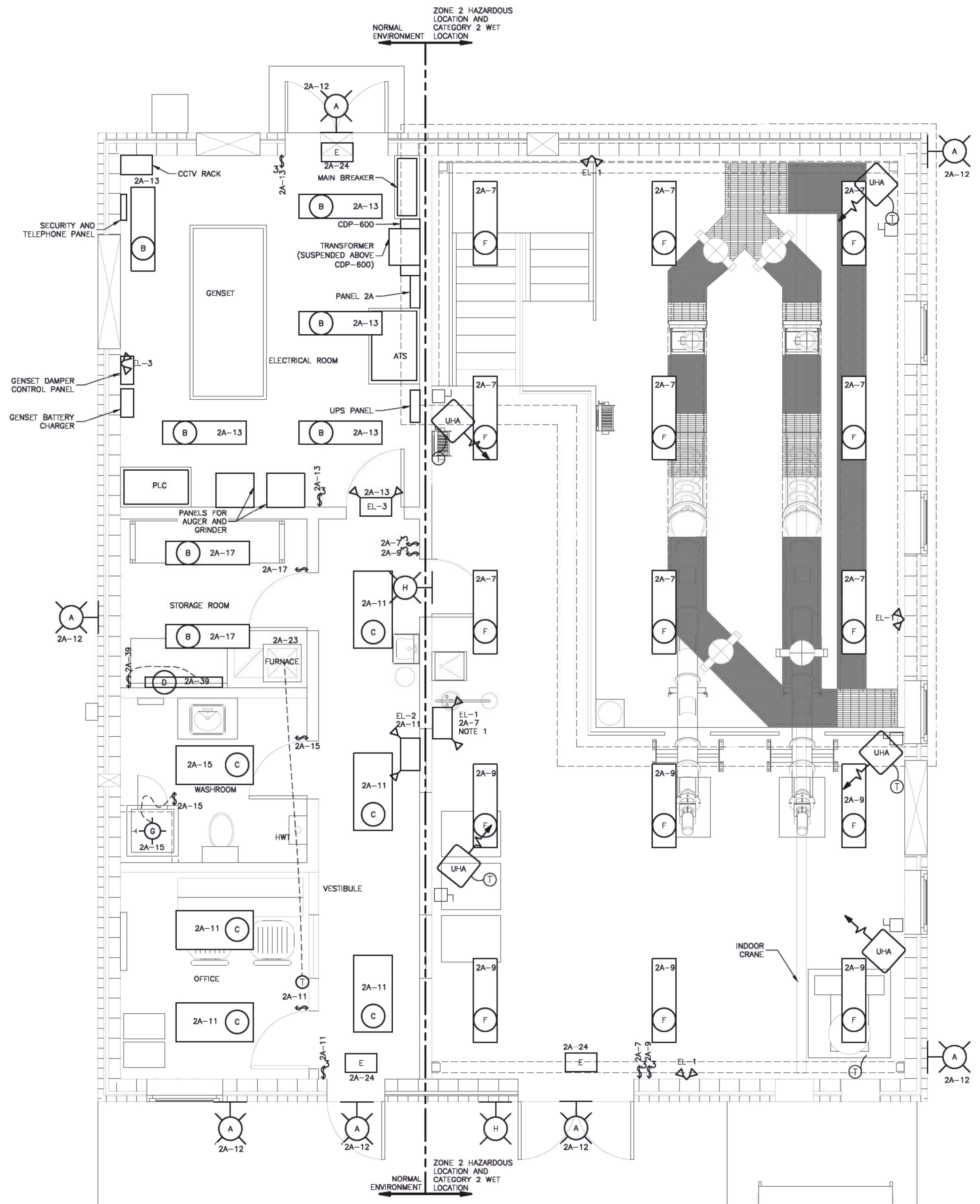
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PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

**ELECTRICAL LIGHTING AND  
HEATERS LAYOUT**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	E02 OF 7	1

LEGEND:	
	WALL MOUNTED LIGHT FIXTURE ("X" DENOTES TYPE)
	2'x4' LED LIGHT ("X" DENOTES TYPE)
	LED Highbay ("X" DENOTES TYPE)
	EMERGENCY BATTERY BANK UNIT C/W HEAD LIGHTS
	EMERGENCY LIGHT (REMOTE - 2 HEADS)
	EXIT LIGHT
	EXIT LIGHT C/W DIRECTIONAL ARROWS AS SHOWN
	DUPLEX RECEPTACLE
	DRYER RECEPTACLE
	MOTOR CONNECTION
	DISCONNECT SWITCH
	THERMOSTAT
	CEILING FAN SPEED CONTROL
	SINGLE POLE SWITCH (3 DENOTE 3 WAY SWITCH)
	CLOSE CIRCUIT TELEVISION SYSTEM CAMERA
	TELEPHONE OUTLET
	DATA OUTLET
	MOTORIZED DAMPER
	SMOKE/CO ALARM
	ELECTRICAL HEATER
	ELECTRICAL HEATER

- DRAWING NOTES:
1. PROVIDE VOLTAGE SENSING RELAYS TO MONITOR CIRCUITS 2A-7 AND 2A-9. EMERGENCY LIGHTING SHALL BE ACTIVATED IF EITHER CIRCUIT LOSES POWER.
  2. ALL PENETRATIONS THROUGH NORMAL ENVIRONMENT AND ZONE 2 HAZARDOUS AND CATEGORY 2 WET LOCATION TO BE SEALED TO PREVENT GASES FROM PASSING THROUGH THE WALL.







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Winipeg 204-925-4200  
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Revision	Description	Date
Client		client

Project title Project

**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by DG	Conçu par
Drawn by OT	Dessiné par
Approved by SL	Approuvé par
PWSSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

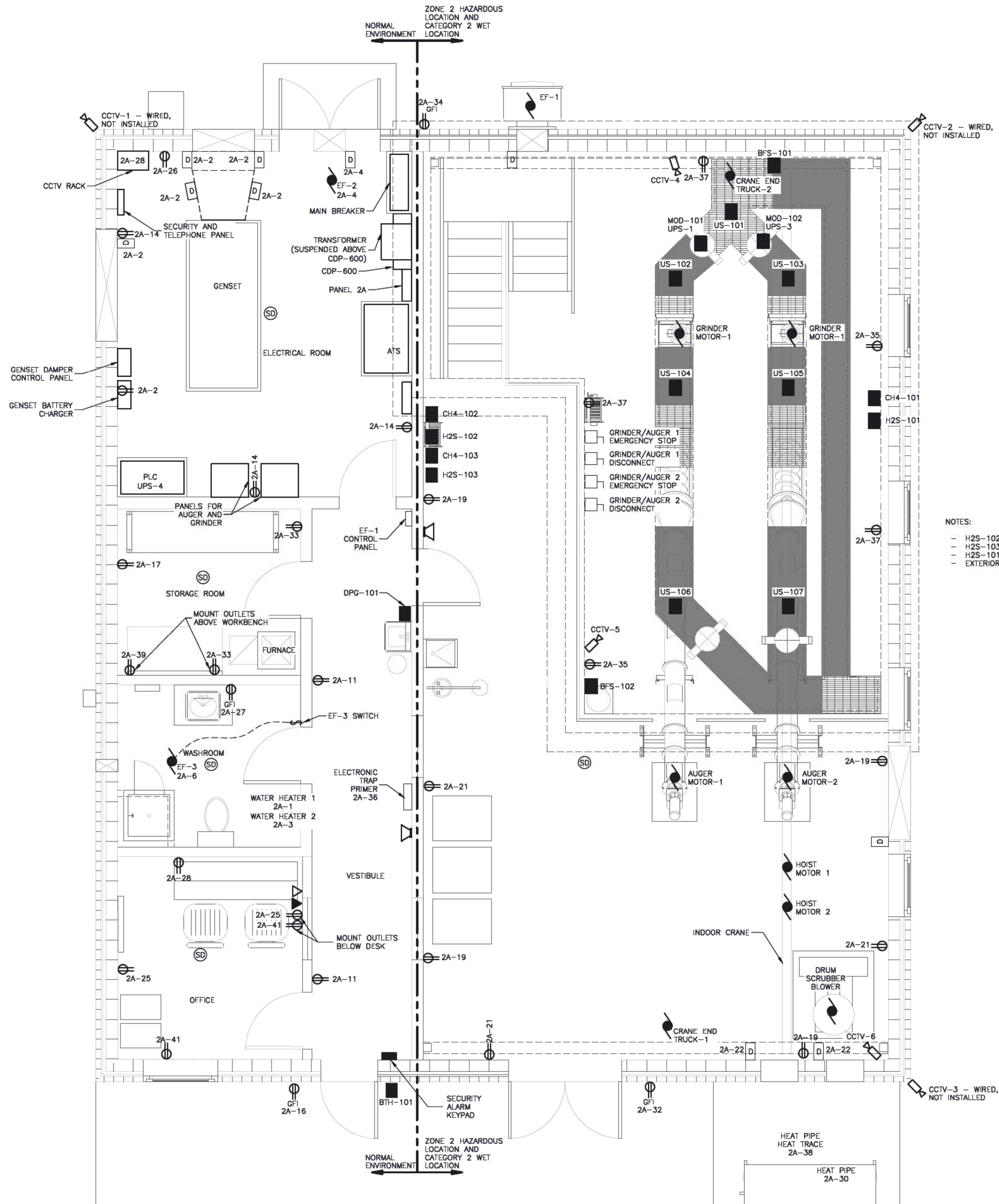
**POWER AND CONTROL LAYOUT**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.118541	E03 OF 7	1

LEGEND:	
	WALL MOUNTED LIGHT FIXTURE ("X" DENOTES TYPE)
	2'x4' LED LIGHT ("X" DENOTES TYPE)
	LED HIGHBAY ("X" DENOTES TYPE)
	EMERGENCY BATTERY BANK UNIT C/W HEAD LIGHTS
	EMERGENCY LIGHT (REMOTE - 2 HEADS)
	EXIT LIGHT
	EXIT LIGHT C/W DIRECTIONAL ARROWS AS SHOWN
	DUPLEX RECEPTACLE
	DRYER RECEPTACLE
	MOTOR CONNECTION
	DISCONNECT SWITCH
	THERMOSTAT
	CEILING FAN SPEED CONTROL
	SINGLE POLE SWITCH (3 DENOTE 3 WAY SWITCH)
	CLOSE CIRCUIT TELEVISION SYSTEM CAMERA
	TELEPHONE OUTLET
	DATA OUTLET
	MOTORIZED DAMPER
	SMOKE/CO ALARM
	ELECTRICAL HEATER
	ELECTRICAL HEATER
	INSTRUMENT
	PA SYSTEM SPEAKER

DRAWING NOTES:

1. PROVIDE VOLTAGE SENSING RELAYS TO MONITOR CIRCUITS 2A-7 AND 2A-9. EMERGENCY LIGHTING SHALL BE ACTIVATED IF EITHER CIRCUIT LOSES POWER.
2. ALL PENETRATIONS THROUGH NORMAL ENVIRONMENT AND ZONE 2 HAZARDOUS AND CATEGORY 2 WET LOCATION TO BE SEALED TO PREVENT GASES FROM PASSING THROUGH THE WALL.



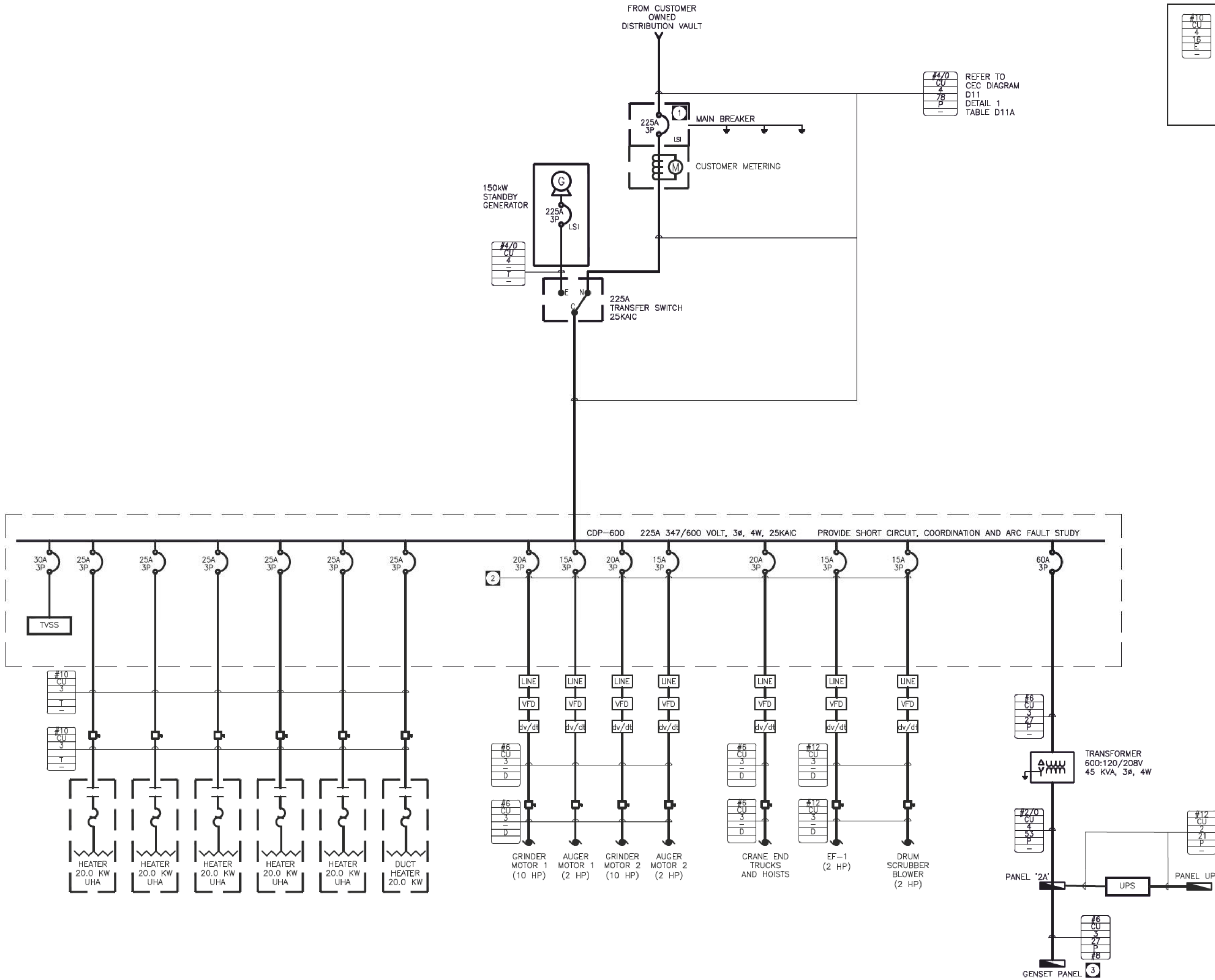


DRAWING NOTES:


- 1 FULLY ADJUSTABLE IN ALL REGIONS.
- 2 ALL BREAKERS TO BE LOCKABLE AND CLEARLY LABELLED AS INDICATED.
- 3 PANEL TO BE PROVIDED BY GENERATOR SUPPLIER. ELECTRICAL CONTRACTOR TO PROVIDE FEEDER CABLE AND TERMINATE TO PANEL.

#10	MINIMUM CONDUCTOR SIZE: RW90
CU	CU= COPPER & AL= ALUMINUM
4	NO. OF CONDUCTORS
15	CONDUIT SIZE (MM)
E	E = EMT CONDUIT
P	P = PVC CONDUIT
R	R = RIGID STEEL CONDUIT
T	T = TECK CABLE
A	A = ACWU
RA	RA = RA90
D	D = DRIVE TYPE TECK CABLE
	BONDING CONDUCTOR


REFER TO  
CEC DIAGRAM  
D11  
DETAIL 1  
TABLE D11A




SINGLE LINE DIAGRAM  
SCALE = NTS



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No. 4156



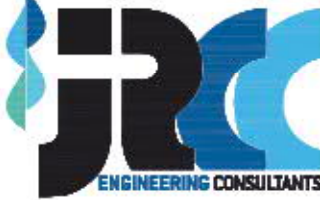
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Member  
31171  
2022-04-06



Project 19001  
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Revision	Description	Date
Client		client

Project title

Projet

RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by  
DG

Conçu par

Drawn by  
OT

Dessiné par

Approved by  
SL

Approuvé par

PWSCC Project Manager  
JASON FREZZA

Administrateur de Projets TPSGC

Drawing title

Titre du dessin

BUILDING ELECTRICAL  
SINGLE LINE DIAGRAM

Project no./No. du projet

Drawing no./No. du dessin

Revision no.

R.118541

E04  
OF 7

1




PANEL '2A'		VOLTAGE : SEE SINGLE LINE BUS : 200A						PHASE : SEE SINGLE LINE WIRE : SEE SINGLE LINE	
DESCRIPTION	LOAD WATTS	BREAKER SIZE	CIRCUIT				BREAKER SIZE	LOAD WATTS	DESCRIPTION
TANKLESS WATER HEATER 1		15	1	X			2	15	GENSET VENTILATION AND DAMPERS
TANKLESS WATER HEATER 2		15	3		X		4	15	EF-2 ELECTRICAL ROOM AND DAMPER
SPARE		15	5			X	6	15	EF-3 WASHROOM
LIGHTING – PROCESS ROOM		15	7	X			8	15	SPARE
LIGHTING – PROCESS ROOM		15	9		X		10	15	SPARE
LIGHTING – OFFICE/VESTIBULE		15	11			X	12	15	LIGHTING EXTERIOR
LIGHTING – ELECTRICAL ROOM		15	13	X			14	15	RECEPTACLE – ELECTRICAL ROOM
LIGHTING – WASHROOM		15	15		X		16	15	RECEPTACLE GFI EXTERIOR
LIGHTING/RECEPTACLE – STORAGE ROOM		15	17			X	18	15	UPS PANEL
RECEPTACLE – PROCESS ROOM		15	19	X			20	2P	
RECEPTACLE – PROCESS ROOM		15	21		X		22	15	DAMPER IF-1&IF-2
FURNACE		15	23			X	24	15	EXIT SIGNS
RECEPTACLE – OFFICE		15	25	X			26	15	SECURITY SYSTEM
RECEPTACLE – GFI WASHROOM		15	27		X		28	15	VIDEO (CCTV) SYSTEM
GENSET PANEL		60 2P	29			X	30	15	HEAT PIPE
			31	X			32	15	RECEPTACLE GFI EXTERIOR
RECEPTACLE – STORAGE ROOM		15	33		X		34	15	RECEPTACLE GFI EXTERIOR
RECEPTACLE – BASEMENT		15	35			X	36	15	TRAP PRIMER
RECEPTACLE – BASEMENT		15	37	X			38	15	HEAT PIPE HEAT TRACE
WORKBENCH LIGHT AND RECEPTACLE		15	39		X		40	15	SPARE
RECEPTACLE – OFFICE		15	41			X	42	15	SPARE
HTG. : kW	LIG. : kW	MTR. : kW				MISC. : kW TOTAL : kW			

PANEL 'UPS'		VOLTAGE : SEE SINGLE LINE BUS : 225A						PHASE : SEE SINGLE LINE WIRE : SEE SINGLE LINE	
DESCRIPTION	LOAD WATTS	BREAKER SIZE	CIRCUIT				BREAKER SIZE	LOAD WATTS	DESCRIPTION
MOD-101	15	15	1	X		2	15		SPARE
MOD-102	15	15	3		X	4	15		PLC
SPARE	15	15	5	X		6	15		SPARE
SPARE	15	15	7		X	8	15		SPARE
SPARE	15	15	9	X		10	15		SPARE
SPARE	15	15	11		X	12	15		SPARE
SPARE	15	15	13	X		14	15		SPARE
SPARE	15	15	15		X	16	15		SPARE
SPARE	15	15	17	X		18	15		SPARE

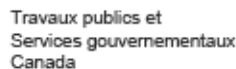
MOTOR/EQUIPMENT SCHEDULE							
EQUIPMENT					FEED FROM	REMARKS	SEE NOTES BELOW
ITEM	DESCRIPTION	LOCATION	KW/HP/AMPS	VOLTS/φ			
AUGER 1	AUGER MOTOR 1	PROCESS ROOM	2 HP	600V/3	CDP-600		
AUGER 2	AUGER MOTOR 2	PROCESS ROOM	2 HP	600V/3	CDP-600		
GRINDER 1	GRINDER MOTOR 1	BASEMENT	10 HP	600V/3	CDP-600		
GRINDER 2	GRINDER MOTOR 2	BASEMENT	10 HP	600V/3	CDP-600		
DS	DRUM SCRUBBER	PROCESS ROOM	2 HP	600V/3	CDP-600		
CET&H	CRANE END TRUCKS AND HOISTS	PROCESS ROOM		575V/3	CDP-600		
EF-1	EXHAUST FAN	PROCESS ROOM	2 HP	575V/3	CDP-600	INTERLOCK WITH D6, D8	
EF-2	EXHAUST FAN	ELECTRICAL ROOM	1.5 HP	208V/3	PNL 2A	INTERLOCK WITH D1, D5	
EF-3	EXHAUST FAN	WASHROOM	FRAC	120V/1	PNL 2A		
DH-1	HRV DUCT HEATER	PROCESS ROOM	20 kW	600V/3	CDP-600		
GENERAL NOTES: A. MANUAL MOTOR STARTER TO BE C/W PILOT LIGHT AND OVERCURRENT PROTECTION. B. ALL STARTERS TO BE SUPPLIED & INSTALLED BY THE ELECTRICAL CONTRACTOR (EC) UNLESS OTHERWISE NOTED. C. DISCONNECT SWITCHES TO BE SUPPLIED & INSTALLED BY THE ELECTRICAL CONTRACTOR (EC) D. ELECTRICAL CONTRACTOR TO PROVIDE CIRCUIT BREAKERS AND WIRING ACCORDING TO THE FINAL NAMEPLATES OF THE MECHANICAL EQUIPMENT NO COST. E. REFER TO PANELBOARD SCHEDULES AND SINGLE LINE DIAGRAM FOR MOTOR AND EQUIPMENT OVERLOAD PROTECTION.					FVNR = FULL VOLTAGE NON-REVERSING RVNR = REVERSE VOLTAGE NON-REVERSING MAN = MANUAL STARTER MAG = MAGNETIC STARTER HOA = HAND/OFF/AUTO SS = SOFT STARTER PL = PILOT LIGHT MS = MANUAL SWITCH Y = YES F = FLOAT SWITCH NT = INTEGRAL  AD = AMMONIA DETECTION SYSTEM CO = CARBON MONOXIDE SENSO MT = MANUAL TIMER (WALL MOUNTED) MS = MANUAL SWITCH ESC = ELECTRIC SPEED CONTROLLER LS = LEVEL SWITCH TDS = TIME DELAY SWITCH (WALL MTD) CO2 = CARBON DIOXIDE SENSOR CHL = CHLORINE SENSOR  VFD = VARIABLE FREQUENCY DRIVE PB = PUSH BUTTON I = INTERLOCK TC = TIME CLOCK DDC = DIGITAL DATA CONTROL SYSTEM T = THERMOSTAT		

ELECTRICAL HEATER SCHEDULE						
TYPE	DESCRIPTION	KW	VOLTS/φ	MOUNTING	REMARKS	NOTES
UHA	INDUSTRIAL UNIT HEATER	20.0	600/3	S/W	C/W THERMOSTAT, LV RELAY KIT & REMOTE THERMOSTAT EXPLOSION PROOF	
NOTES: 1. FINISH/COLOUR AS SELECTED BY OWNER. W = WALL P = PENDANT CH = CHAIN S = SUSPENDED DW = DRYWALL						

LUMINAIRE SCHEDULE							
TYPE	LAMPS		VOLTS	MOUNTING	REMARKS	NOTES	WATTS
	NO.	TYPE					
A	—	LED	120V	S/W	LOW BEAM ANGEL C/W WIRE GUARD & PHOTOCELL		79
B	—	LED	120V	S/CH	MOUNT LIGHTS 3.6m A.F.F.	1	81
C	—	LED	120V	TB		1	65
D	—	LED			WALL MOUNT 2.1m A.F.F.	1,3	27
E			120V	S/W	EXIT (SEE SPEC). TO BE SUITABLE FOR ZONE 2 HAZARDOUS LOCATION AND CATEGORY 2 WET LOCATION IN PROCESS ROOM		3
F		LED		S/CH	MOUNT LIGHTS 3.6m A.F.F. TO BE SUITABLE FOR ZONE 2 HAZARDOUS LOCATION AND CATEGORY 2 WET LOCATION IN PROCESS ROOM		74
G			120V		SEE SPEC -- PROVIDED BY SHOWER MANUFACTURER		50
H	—	A19 LED	120V	W	INDICATOR LIGHT		
NOTES: 1. ALL LED LAMPS ARE TO BE 35 00K AND MINIMUM 82 CRI UNLESS NOTED OTHERWISE. 2. FINISH AS SELECTED BY OWNER. 3. FOR WORKBENCH LIGHT, PROVIDE RUST-PROOF WALL BRACKETS TO SUSPEND LIGHT OVER WORKBENCH FROM WALL.						S = SURFACE W = WALL TB = T-BAR R = RECESSED V = VALANCE PO = POLE C = CEILING P = PENDANT CH = CHAIN	




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Certificate of Authorization  
Tower Engineering Group  
No. 4156



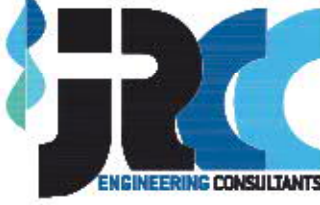
PROVINCE OF MANITOBA  
REGISTERED PROFESSIONAL ENGINEER  
Member  
31171  
2022-04-06



**TOWER  
ENGINEERING**  
Calgary 403-295-2955  
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JRCC PROJECT # R-325.56



ENGINEERING CONSULTANTS

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1	ISSUED FOR TENDER	APR 2022
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Client		client

Project titleProjet

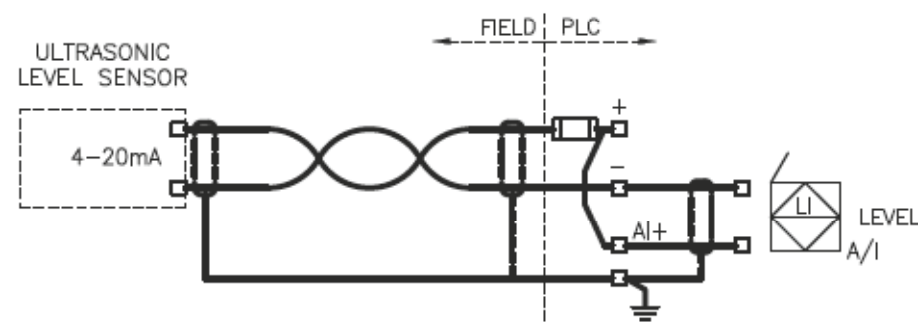
RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING

Designed by DG	Conçu par
Drawn by OT	Dessiné par
Approved by SL	Approuvé par
PM/SC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

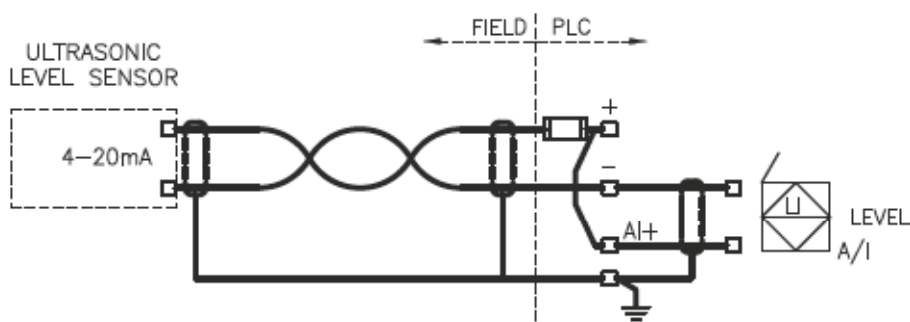
ELECTRICAL SCHEDULES

Project no./No. du projet R.118541	Drawing no./No. du dessin E05 OF 7	Revision no. 1
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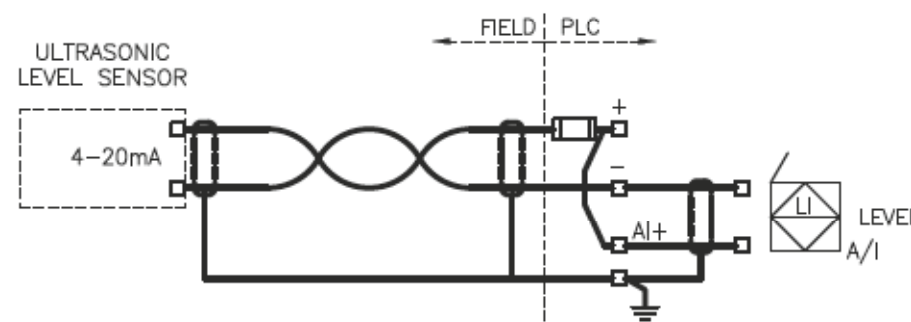




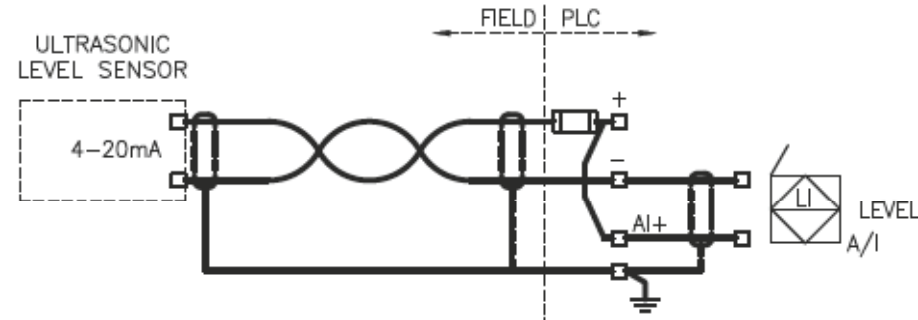
INFLUENT LEVEL (US-101)



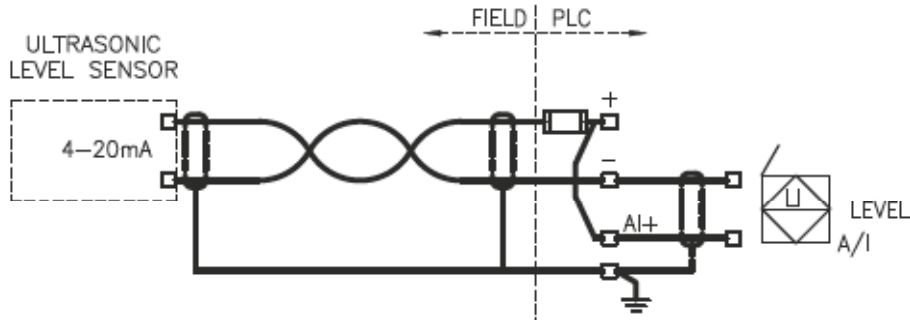
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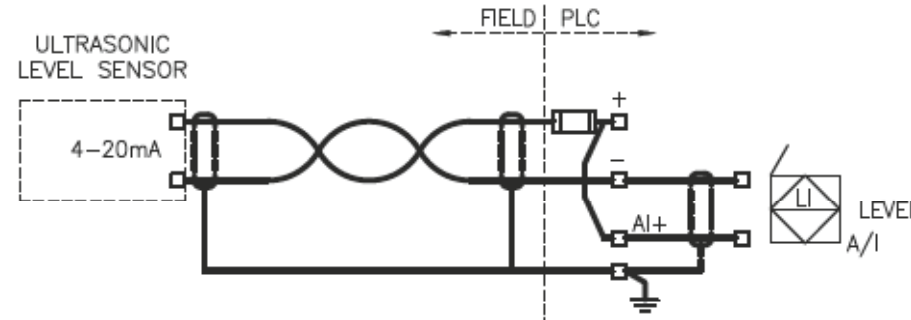
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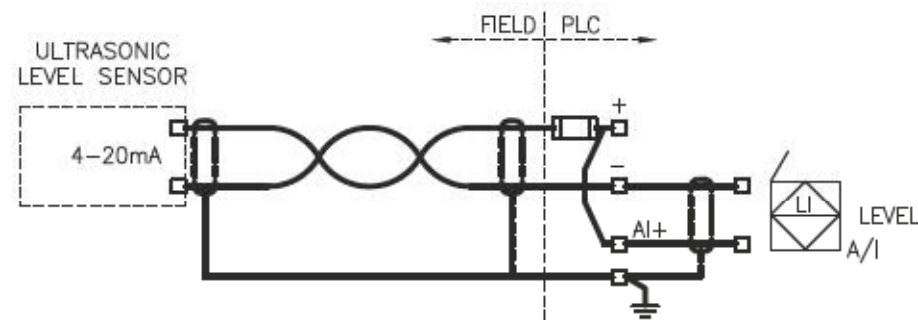
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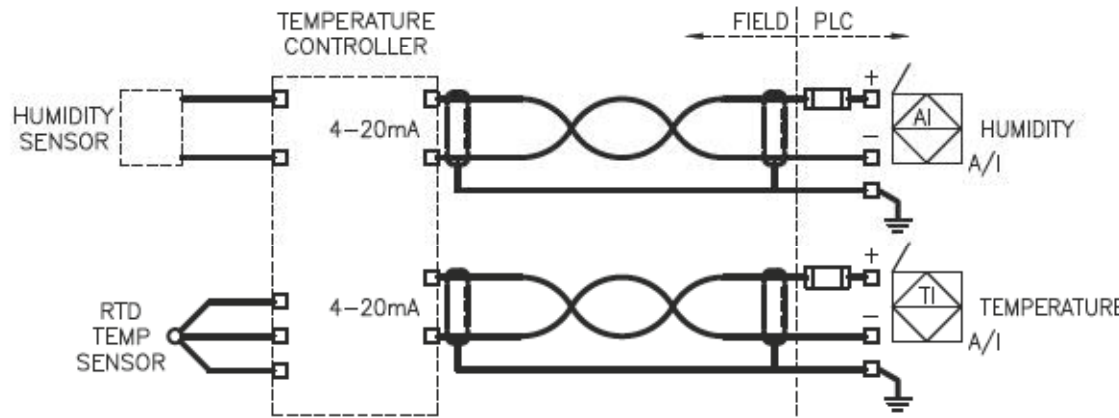
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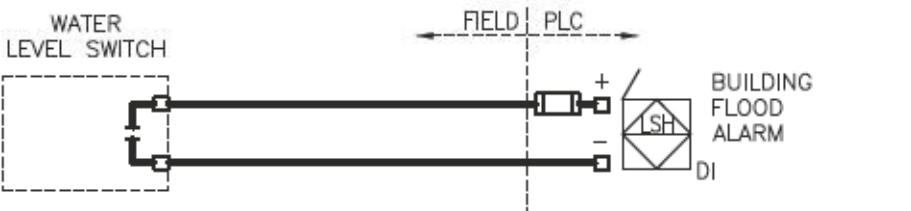
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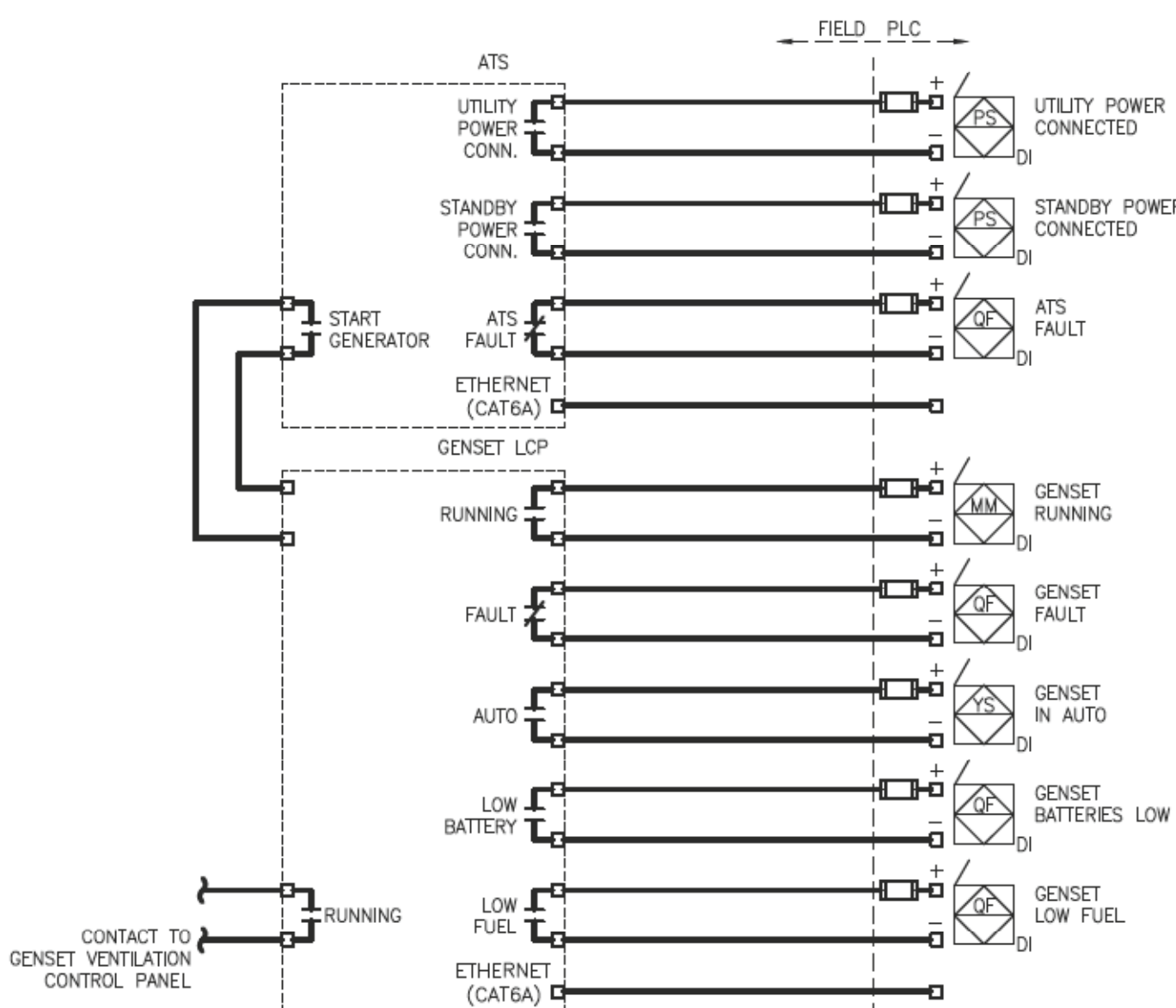
POST-AUGER 2 LEVEL (US-107)



BUILDING TEMPERATURE AND HUMIDITY (BTH-101)



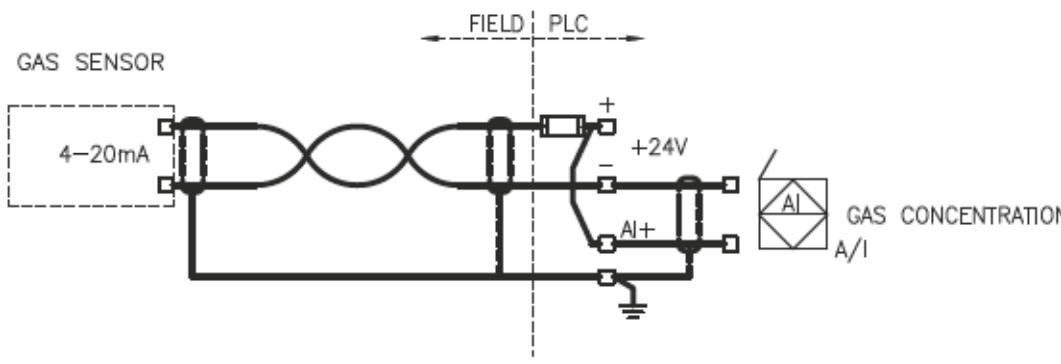
OUTFLOW CHANNEL FLOOD SWITCH (BFS-101)



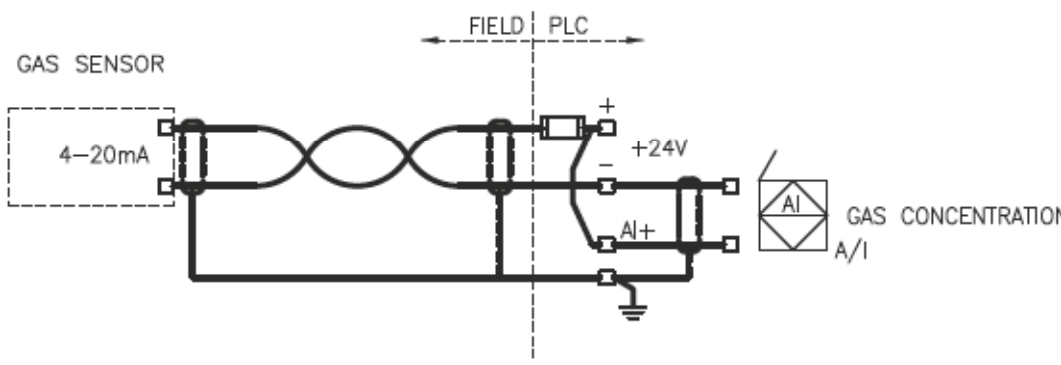
ATS & GENSET LCP CONTROL PANEL



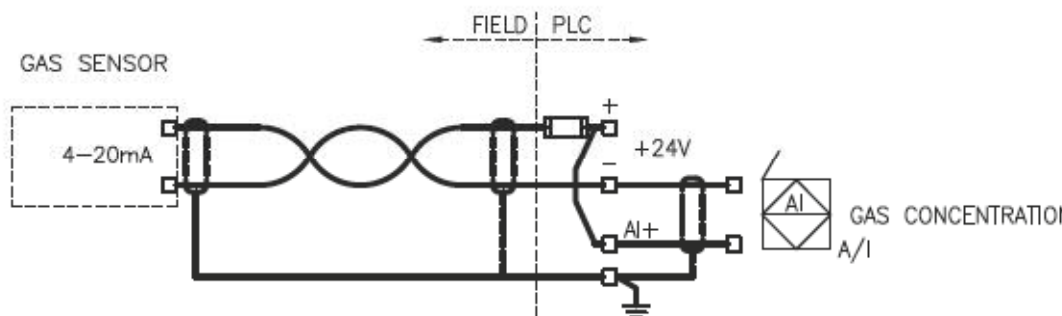
BASEMENT FLOOD SWITCH (BFS-102)



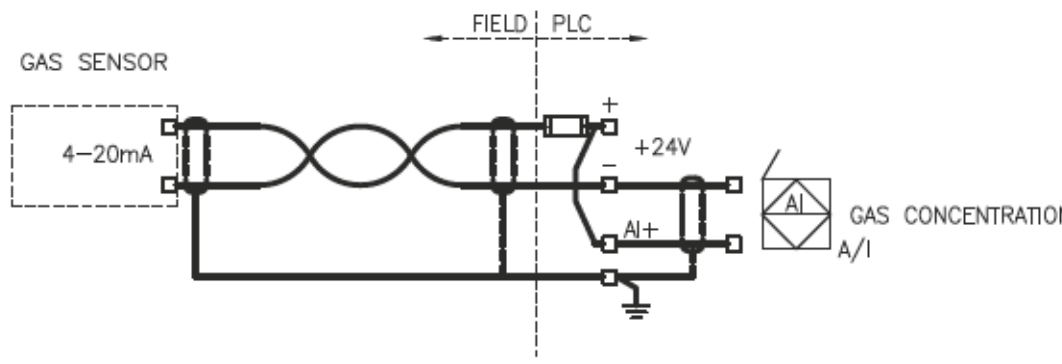
HYDROGEN SULPHIDE (H2S) GAS DETECTOR (H2S-101)



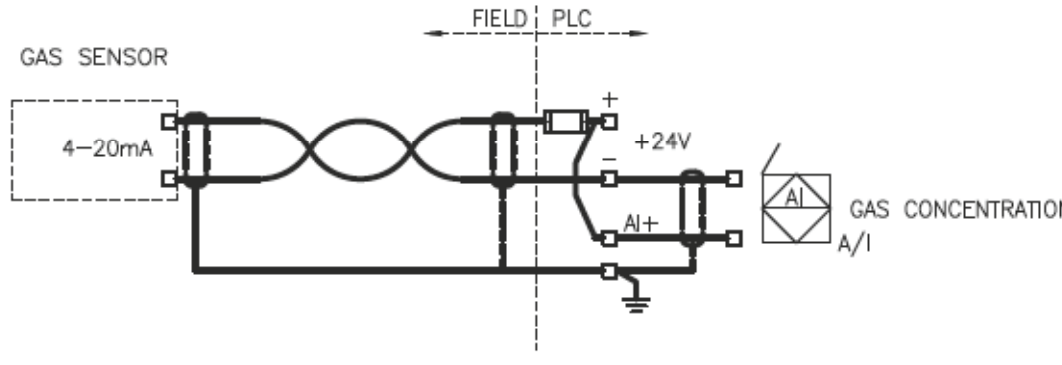
HYDROGEN SULPHIDE (H2S) GAS DETECTOR (H2S-102)



METHANE (CH4) GAS DETECTOR (CH4-103)



METHANE (CH4) GAS DETECTOR (CH4-101)



METHANE (CH4) GAS DETECTOR (CH4-102)

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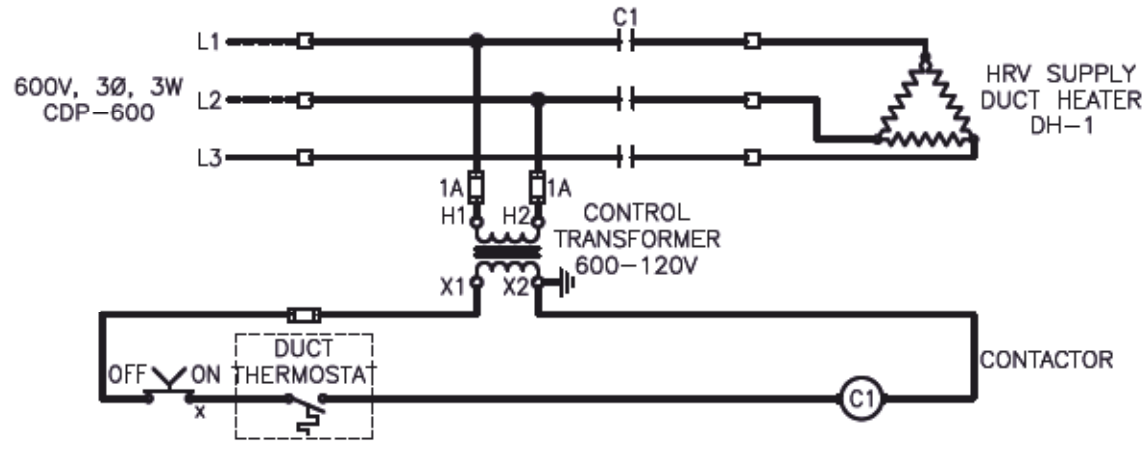
**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
REMOVAL BUILDING**

Designed by DG	Conçu par
Drawn by OT	Dessiné par
Approved by SL	Approuvé par
PWOSC Project Manager JASON FREZZA	Administrateur de Projets TPSGC
Drawing title	Titre du dessin

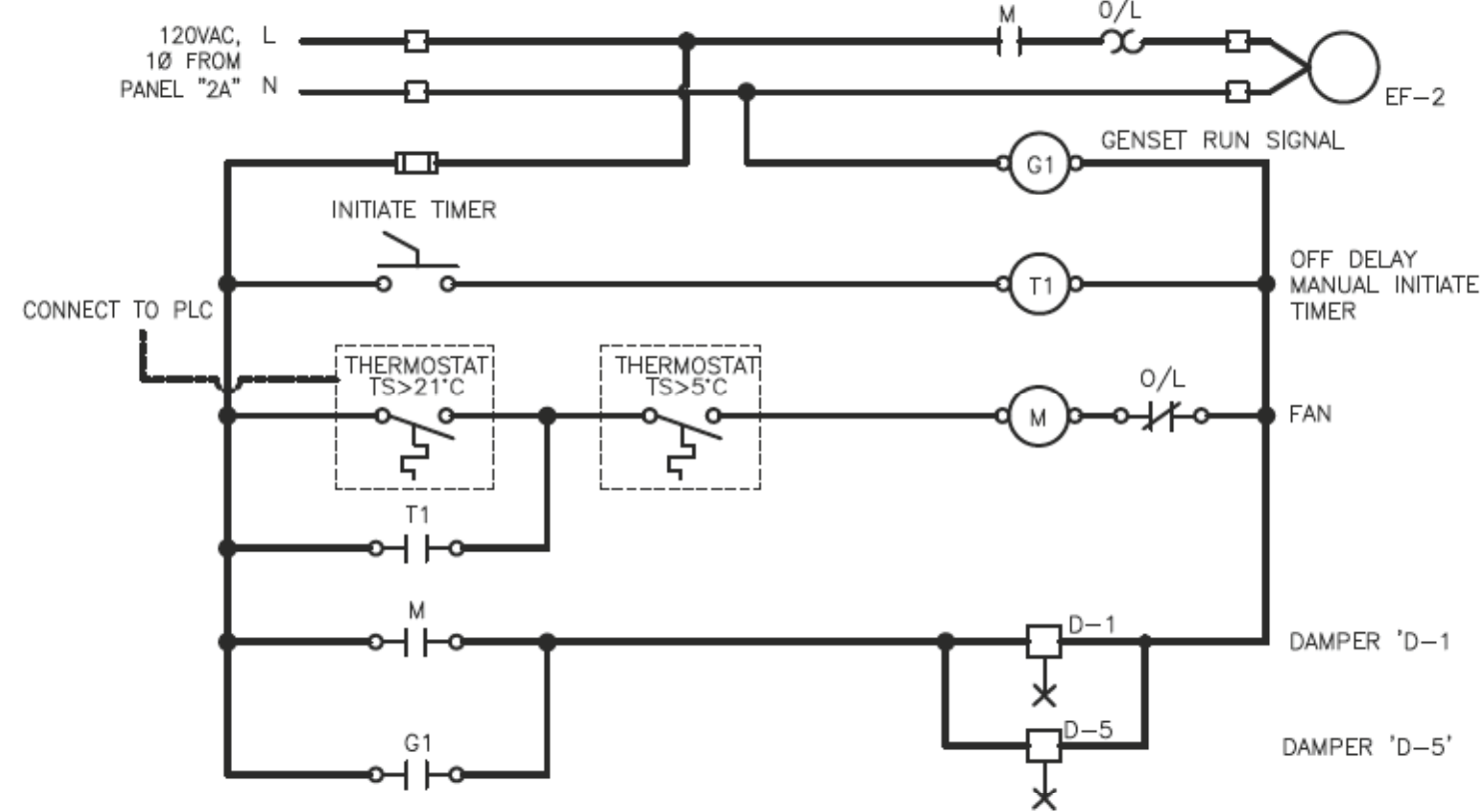
**ELECTRICAL PROCESS DIAGRAM**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
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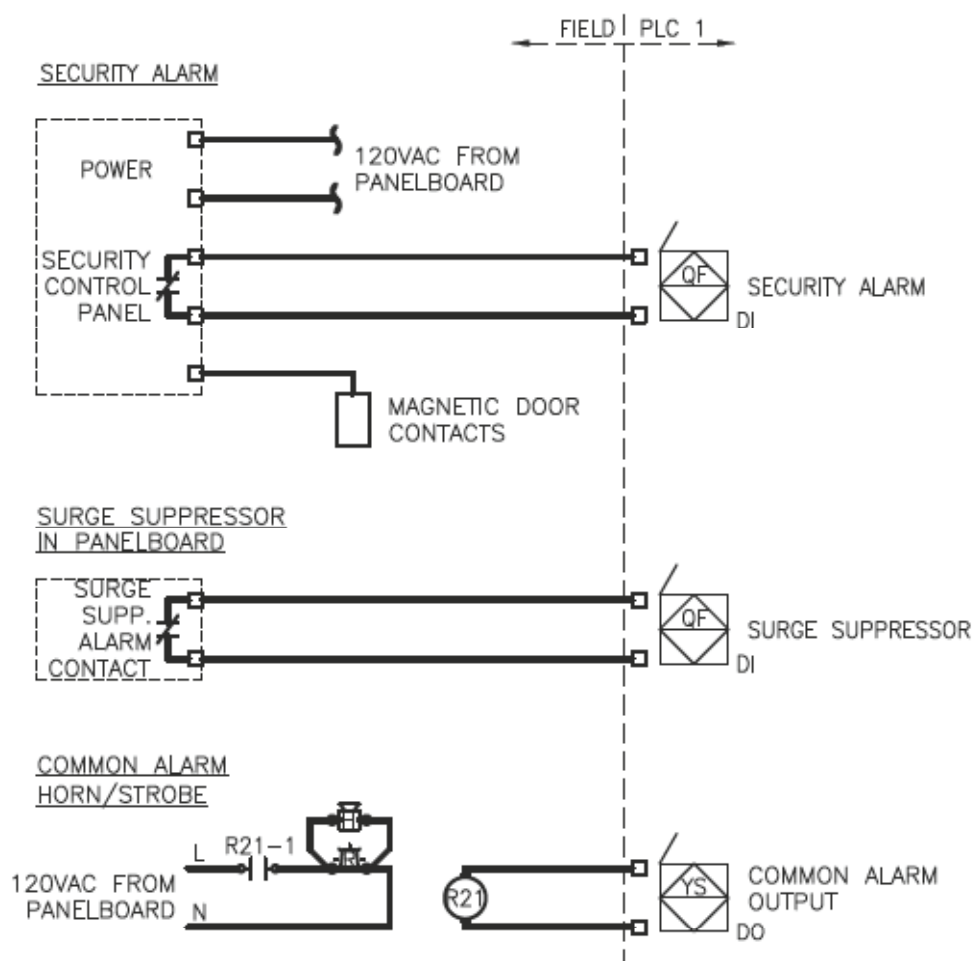


PREHEAT COIL CONTROL

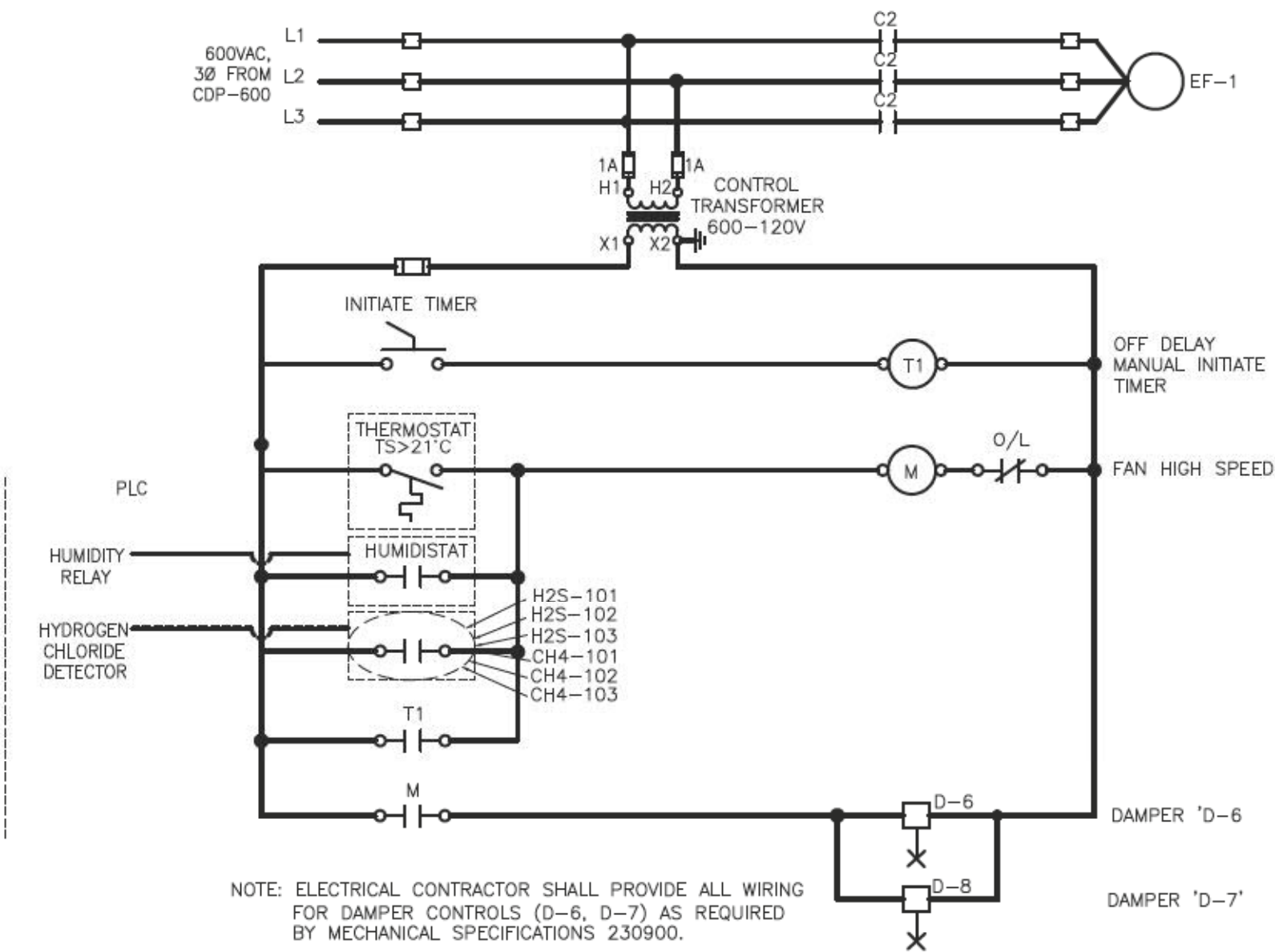


NOTE: ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRING FOR DAMPER CONTROLS (D-1, D-5) AS REQUIRED BY MECHANICAL SPECIFICATIONS 230900.

ELECTRICAL ROOM EXHAUST FAN (EF-2)

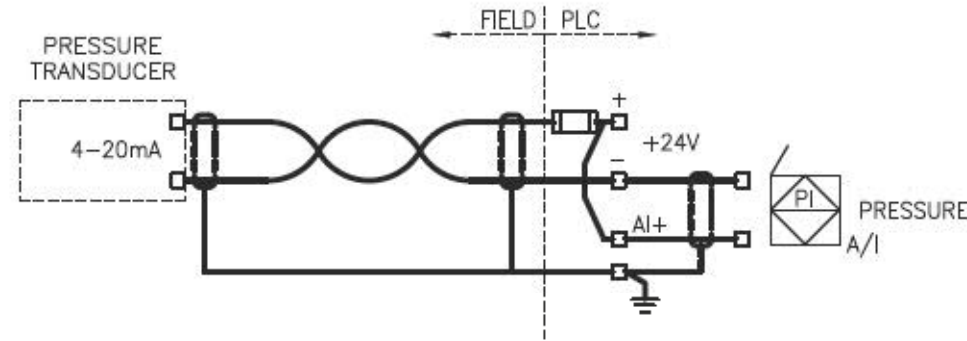


BUILDING SECURITY SYSTEM

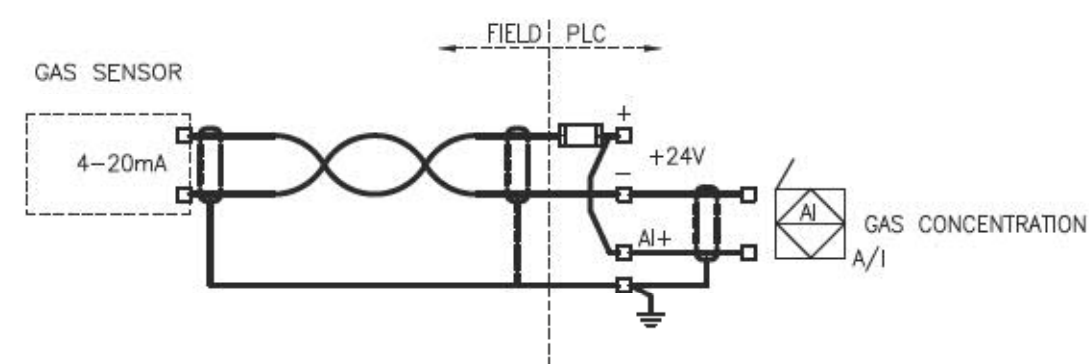


NOTE: ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRING FOR DAMPER CONTROLS (D-6, D-7) AS REQUIRED BY MECHANICAL SPECIFICATIONS 230900.

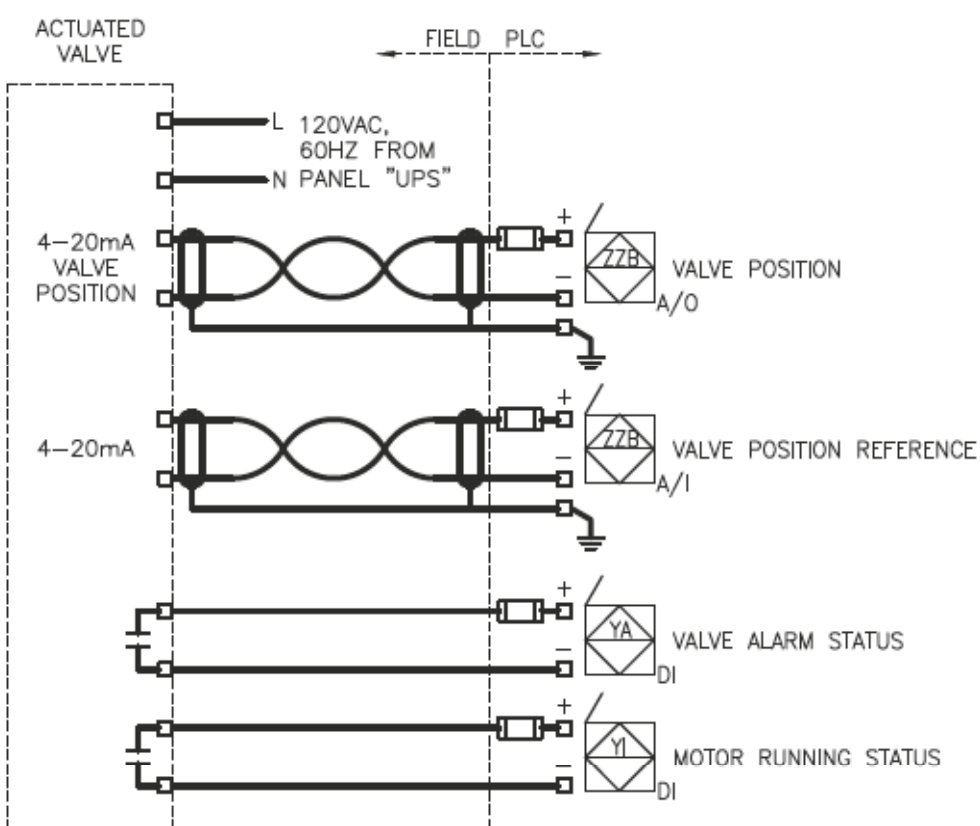
PROCESS ROOM EXHAUST FAN (EF-1)



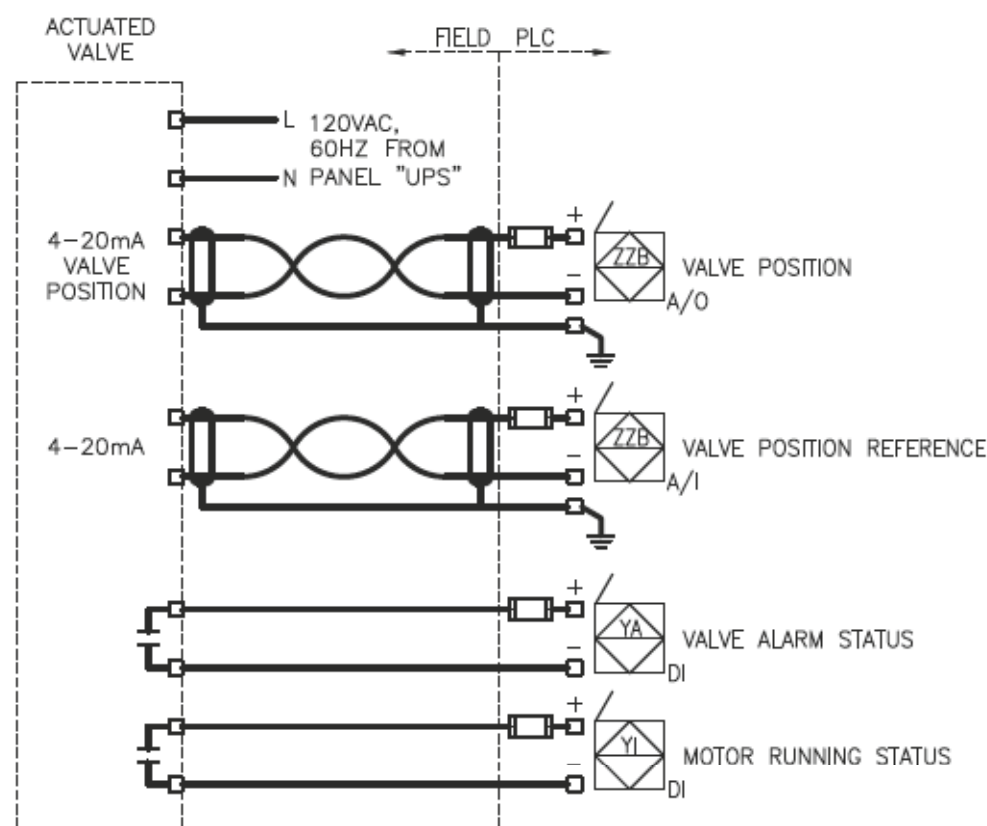
BUILDING DIFFERENTIAL PRESSURE (DPG-101)



HYDROGEN SULPHIDE (H2S) GAS DETECTOR (H2S-103)



CHAMBER 1 ISOLATION VALVE (MOD-101)



CHAMBER 2 ISOLATION VALVE (MOD-102)

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**RM OF ROCKWOOD  
SMI WASTEWATER TRASH  
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PWSSC Project Manager  
JASON FREZZA

Administrateur de Projets TPSGC  
TITRE DU DESSIN  
**ELECTRICAL PROCESS DIAGRAM**

Project no./No. du projet  
**R.118541**

Drawing no./No. du dessin  
**E07**  
OF 7

Revision no.  
**1**