

BENCH MARKS

FIRE HYDRANT ON DIMAR DRIVE BETWEEN
MUN. #4 & #8 - TOP OF OPERATING NUT

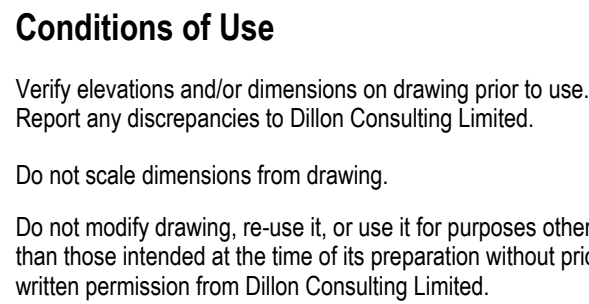
1. THE OWNER AND DILLON CONSULTING LIMITED DO NOT GUARANTEE THE ACCURACY OF THE UTILITIES SHOWN ON THE DRAWINGS. OTHER UTILITIES MAY BE PRESENT OR THE UTILITIES SHOWN MAY DIFFER IN SIZE OR LOCATION FROM THOSE SHOWN. THE CONTRACTOR SHALL NOTE THAT SERVICES FROM THE MAIN LINES ARE NOT SHOWN. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR OBTAINING UTILITIES FROM ALL COMPANIES AND TO REPAIR ANY DAMAGE IT MAY CAUSE TO THESE UTILITIES OR TO OTHER THIRD PARTIES. THE CONTRACTOR AGREES TO INDEMNIFY THE OWNER AND DILLON CONSULTING LIMITED AGAINST ANY CLAIMS WHICH MAY ARISE FROM THE CONTRACTOR'S ACTIONS.

2. ALL WORKS TO BE CONSTRUCTED TO A TOLERANCE OF 5mm±.
3. ALL DIMENSIONS AND RADII ARE TO CONSTRUCTION BASELINE OR EDGE OF PAVEMENT.
4. CHAINAGES SHOWN REFER TO CONSTRUCTION BASELINE.
5. SEWER BEDDING TO BE CLASS 'B' (EXCEPT CLASS 'A' TO FIRST PIPE JOINT OUTSIDE OF MANHOLE FOR RIGID PIPE).
6. BACKFILL OF SEWER AND UTILITY TRENCHES SHALL BE IN ACCORDANCE WITH TRENCH BACKFILL DETAILS AND "SPECIFICATION FOR THE USE OF GRANULAR 'B', TYPE 1 AGGREGATE".
7. ALL WATERMAINS AND SEWERS SHALL HAVE A MINIMUM OUTSIDE EDGE OF PIPE/OUTSIDE EDGE OF PIPE SEPARATION OF 2.50m.

9. ALL WATERMAINS AND SERVICES TO HAVE A MINIMUM OF 1.50m OF COVER.
10. ALL CURB STOPS TO BE LOCATED ON PROPERTY LINES. CURB STOPS MUST BE LEAD FREE.
11. WATER SERVICE TO BE 25mm COPPER.

12. ALL SANITARY SEWERS TO BE PVC DR-35 UNLESS SHOWN OTHERWISE.
13. ALL SANITARY PDCs TO BE INSTALLED AT A MINIMUM OF 2.0%.
14. ALL SANITARY MANHOLES TO HAVE CRETEX INFLOW DISH TO BE INSTALLED UNDER THE COVER, WITH NEOPRENE GASKET AND DIFFUSER VALVE.

15. SANITARY SEWERS TO BE AIR TESTED AS PER TOWN OF KINGSVILLE REQUIREMENTS.



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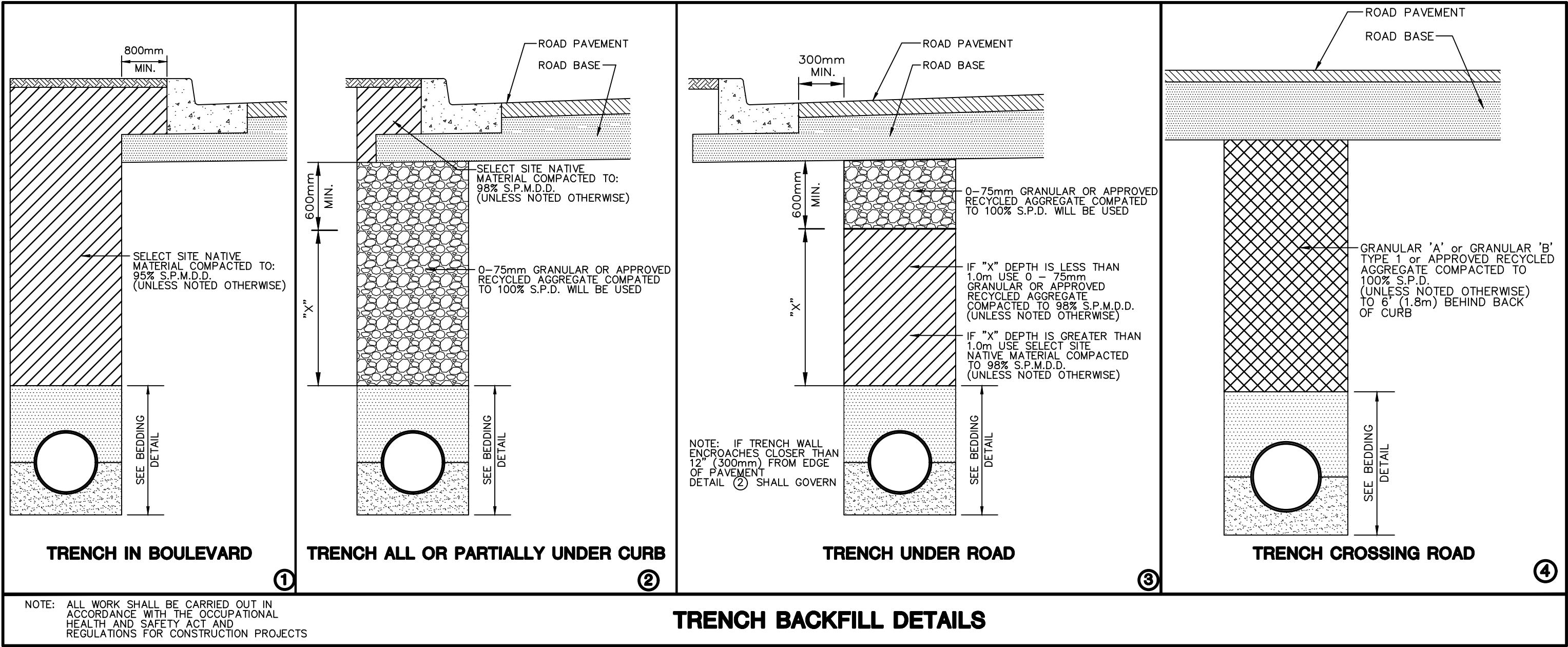
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PROJECT NO.
20-3554

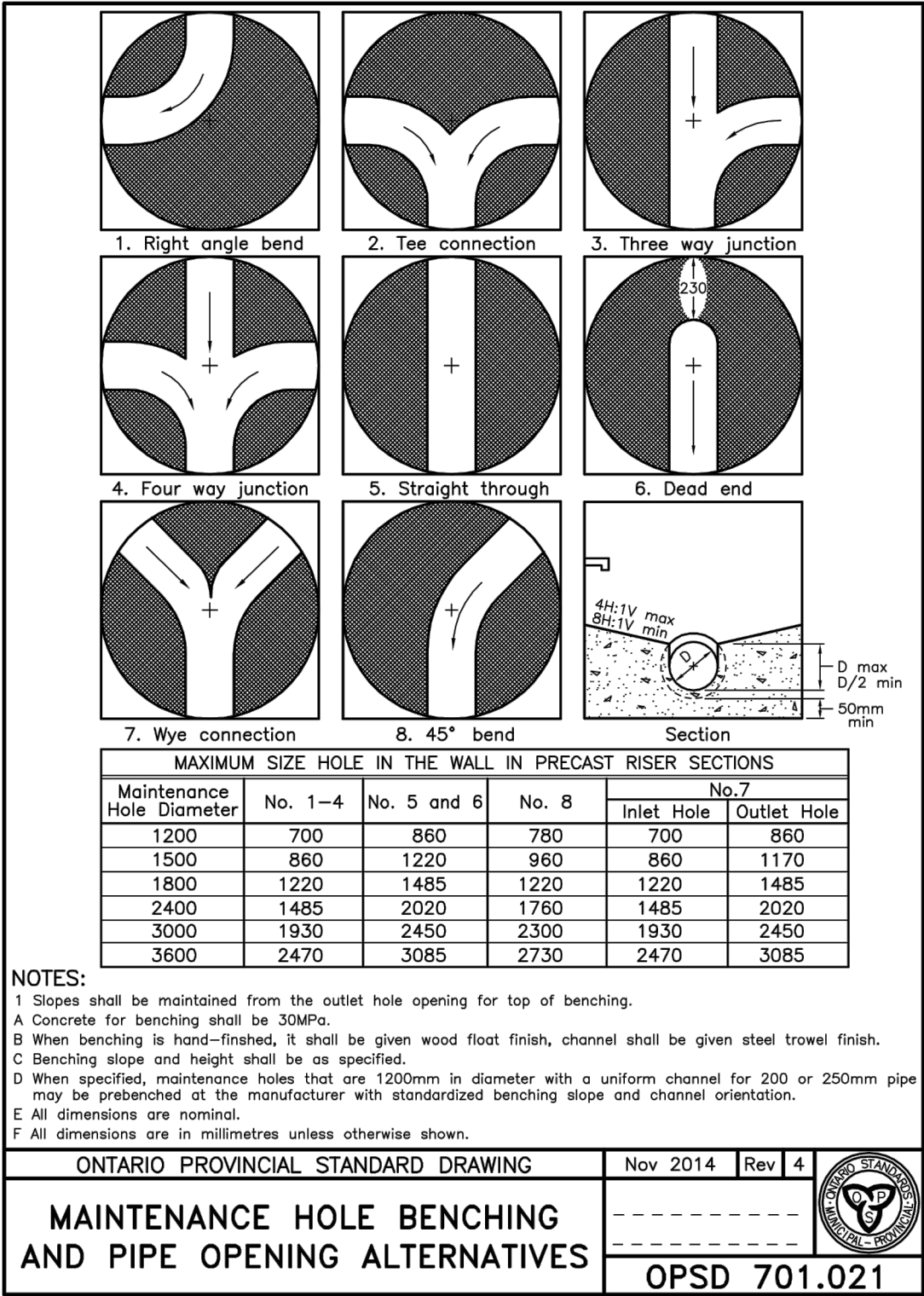
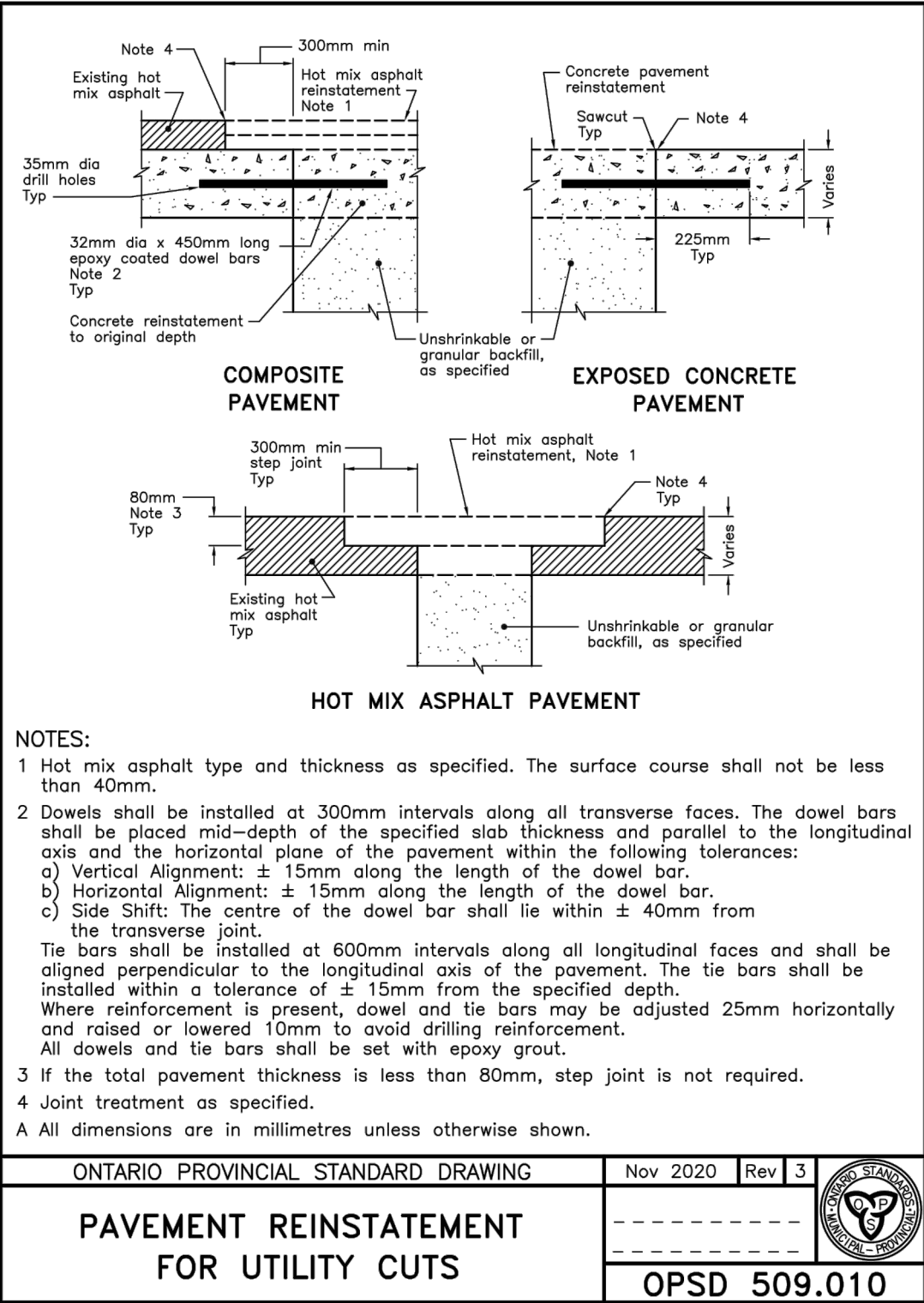
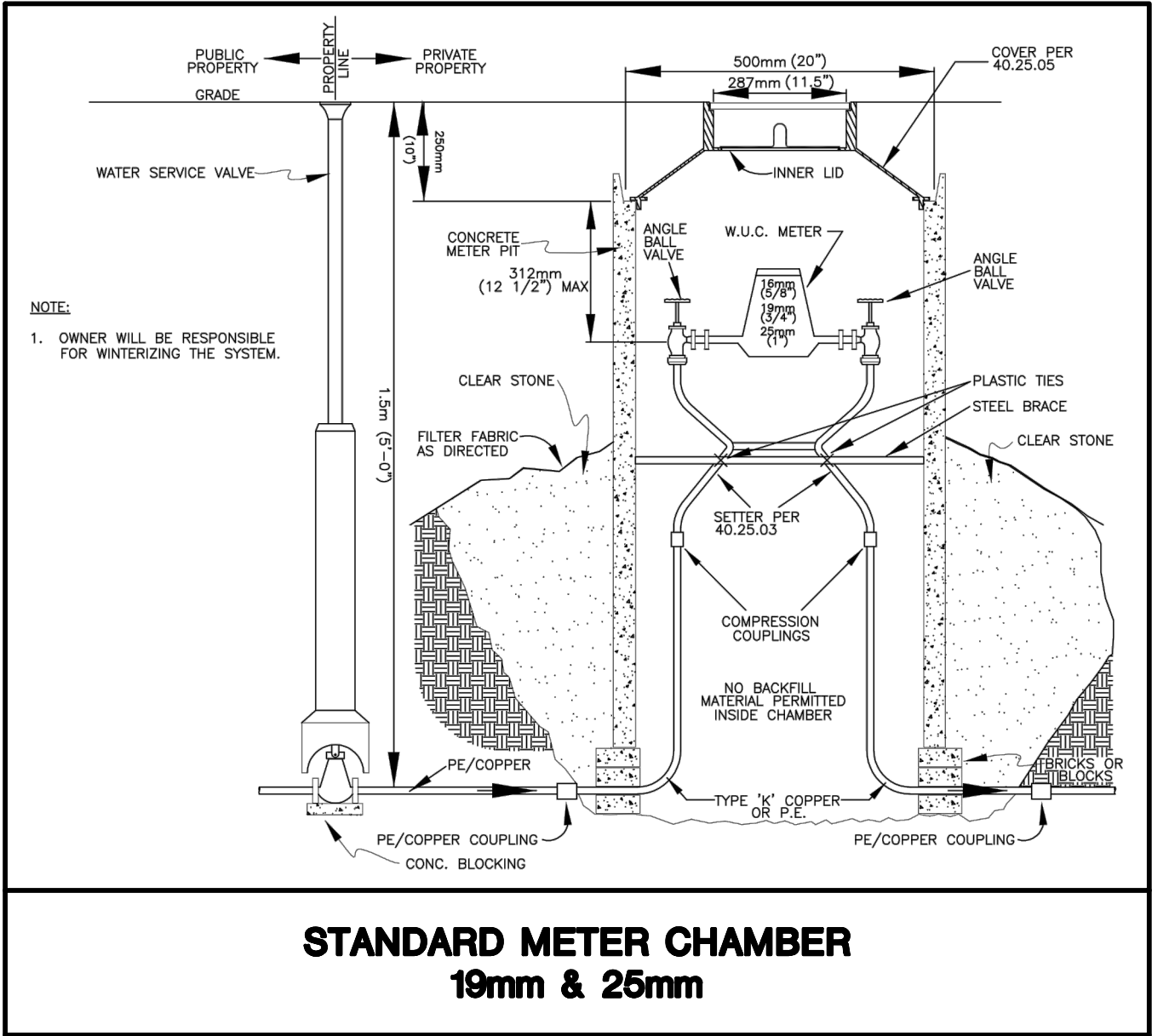
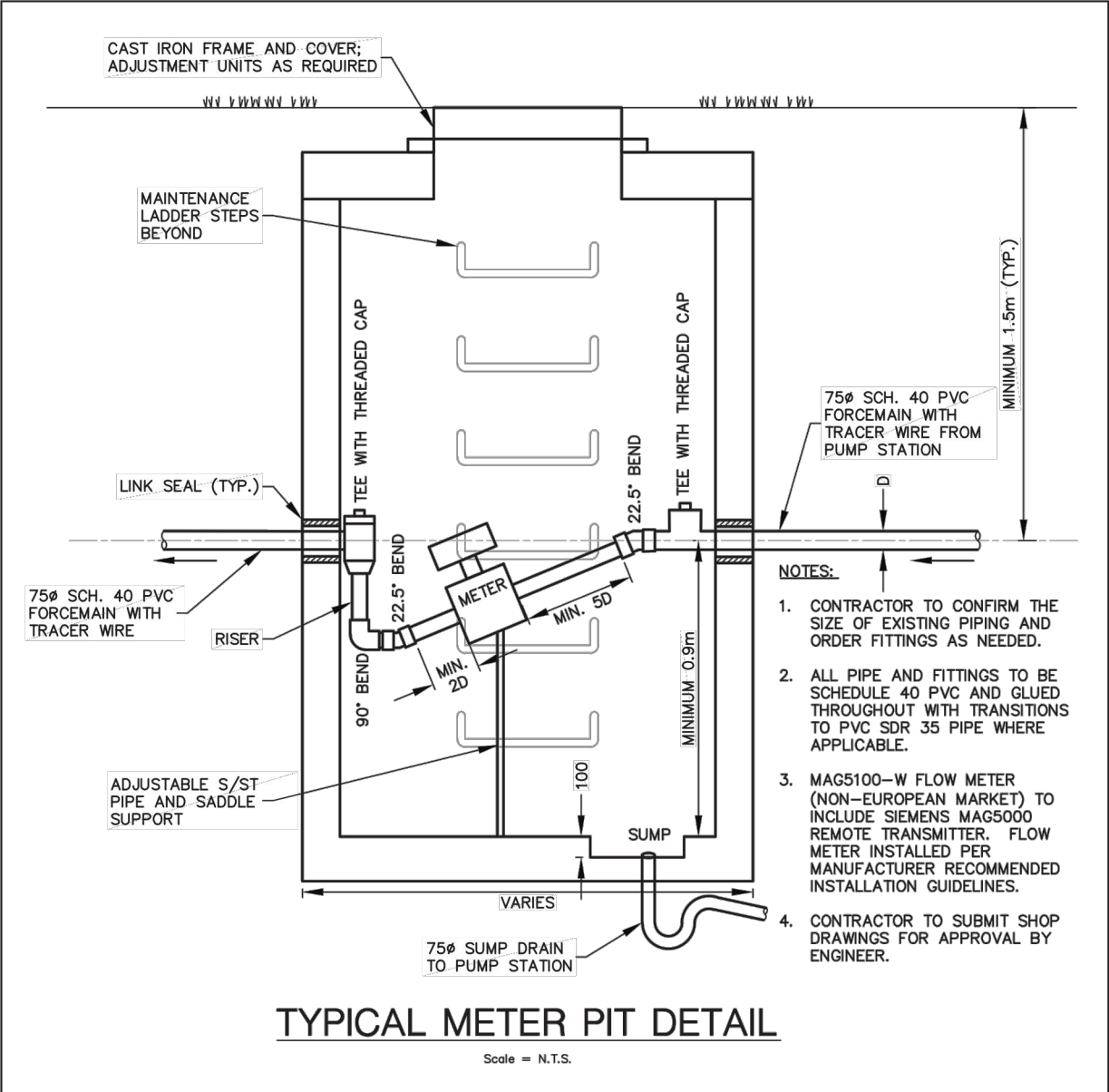
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DILLON CONSULTING LIMITED 3200 DEZEL DRIVE, SUITE 608 WINDSOR, ONTARIO, N8W 5K3. PHONE (519) 948-5000. FAX (519) 948-5054

PLANNED BY: MARCOVECCHIO LTD. PROJECT NO. 2020-001. DRAWN BY: MARCOVECCHIO LTD. DATE: FEB 16 2021. CHECKED BY: MARCOVECCHIO LTD. DATE: FEB 16 2021. APPROVED BY: MARCOVECCHIO LTD. DATE: FEB 16 2021. PLOTTED BY: MARCOVECCHIO LTD. DATE: FEB 16 2021.



OPS DETAILS	
509.010	PAVEMENT REINSTATEMENT FOR UTILITY CUTS
701.021	MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES
802.010	FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION
802.030	RIGID PIPE BEDDING, COVER, AND BACKFILL - TYPE 1 OR 2 SOIL - EARTH EXCAVATION
1006.010	SEWER SERVICE CONNECTIONS FOR RIGID MAIN PIPE SEWER
1006.020	SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN PIPE SEWER
1104.020	WATER SERVICE CONNECTION - 32, 38 AND 50mm DIAMETER SIZES



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

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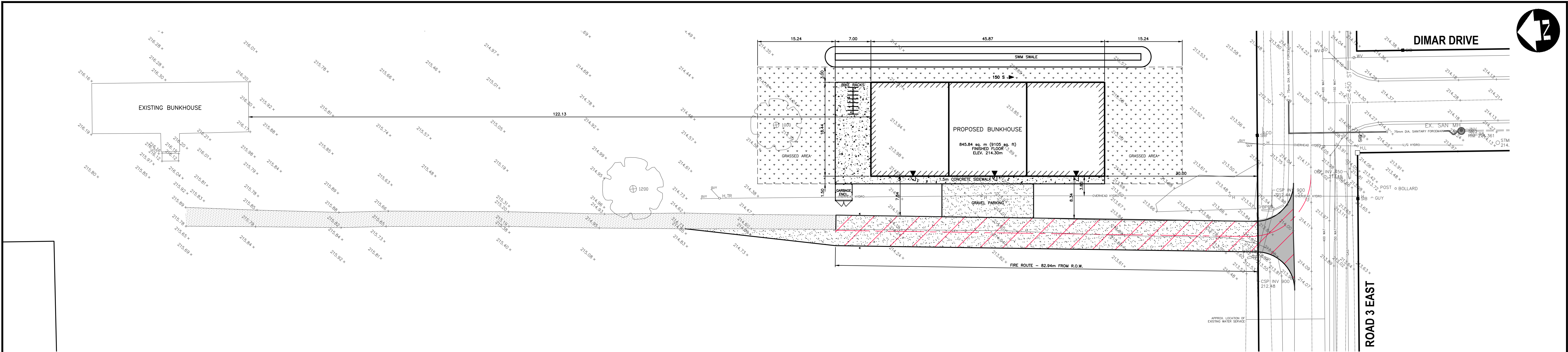
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DATE	Feb-16-2021		
SCALE	N.T.S.		
1	MUNICIPAL REVIEW	FEB 12/21	RM,DAM
No.	ISSUED FOR		
	DATE	BY	

Sunbrite Bunkhouse Servicing
Town of Kingsville

PROJECT NO.
20-3554

MISCELLANEOUS DETAILS

2



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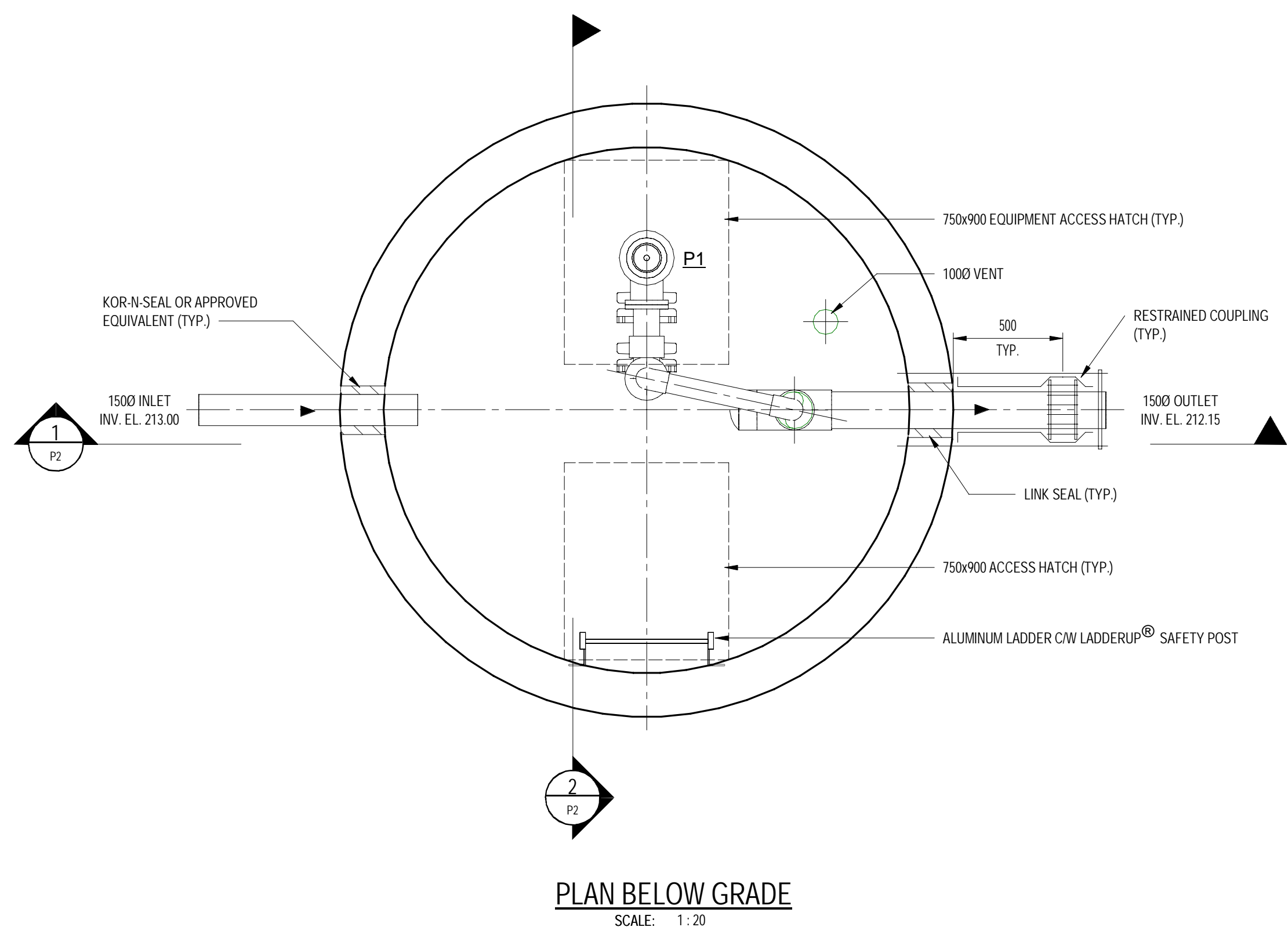
Sunbrite Bunkhouse Servicing
Town of Kingsville

SITE PLAN

PROJECT NO.
20-3554

SHEET NO.

3



1. USE SCHEDULE 40, TYPE 1, GRADE 1, PVC CONFORMING TO ASTM D 1784. PIPE SHALL CONFORM, TO CSA B137.3
2. FITTINGS:
 - VALVES, ELBOWS, FLANGES AND TEES SHALL BE PVC SCHEDULE 80, SOCKET (FOR SOLVENT WELDING) TO ASTM D 2467.
 - PVC SCHEDULE 80 TO ASTM D 2464 FOR THREADED FITTINGS, UNIONS AND OTHER EQUIPMENT CONNECTIONS.
 - THREADED MAKE ADAPTORS SHALL NOT BE USED.
3. JOINTS:
 - IF BURIED, USE BELL AND SPIGOT JOINTS. BELL AND SPIGOT PIPE SHALL BE CLASS 150.
 - INDOOR, SOCKET SOLVENT JOINTS FOR PIPE AND FITTINGS TO ASTM D 2564.

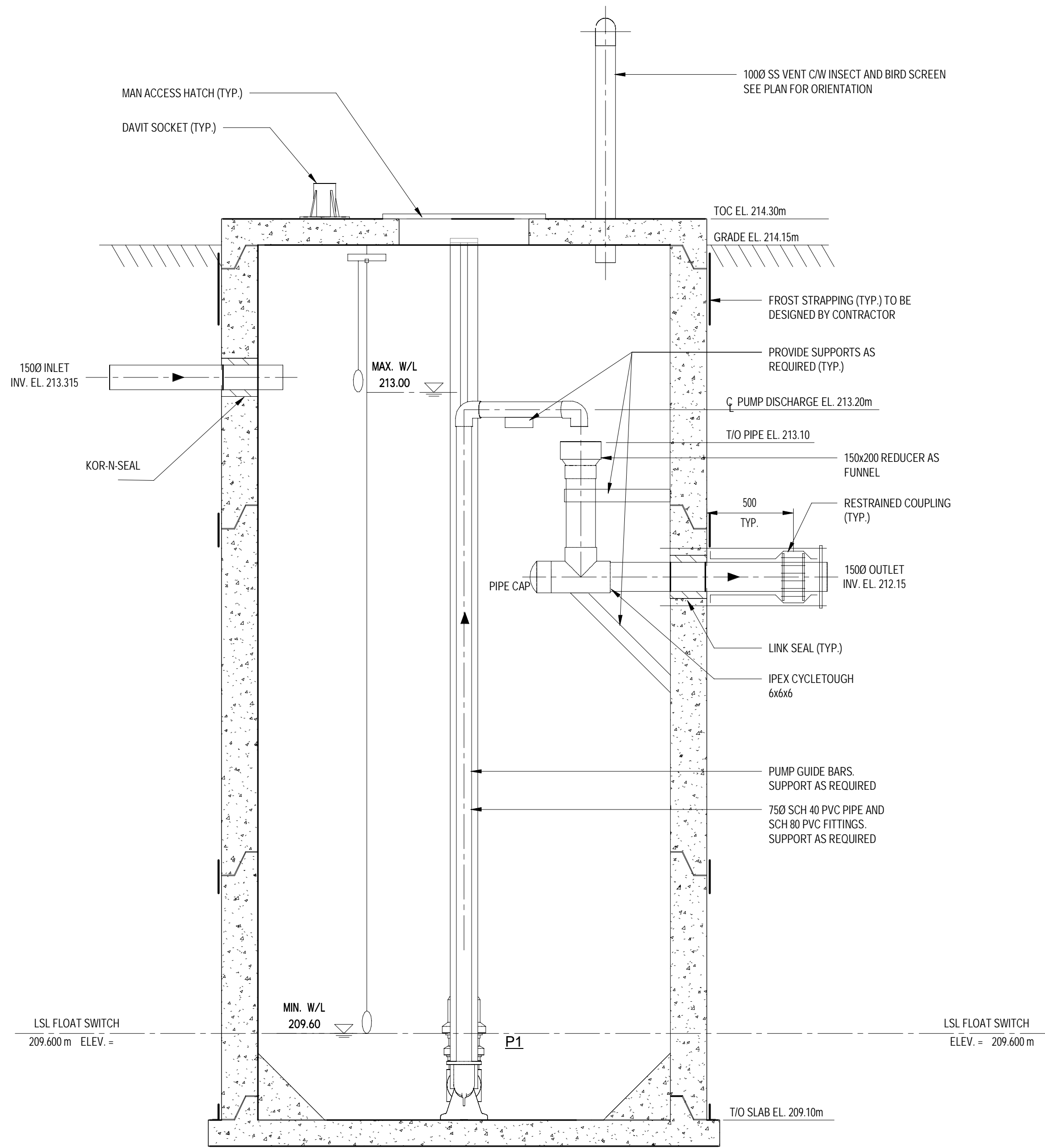
1. WHEN CALCULATING THRUST RESTRAINTS USE THE FOLLOWING DESIGN CRITERIA:
 - HYDROSTATIC TEST PRESSURE 700KPA (100PSI).
 - FOR PVC PIPE REFER TO AWWA C900, UN1-BELL AND PIPE SUPPLIERS MANUALS.
 - DEPTH OF BURY IS AT A MINIMUM OF 1.7M.
 - STAINLESS STEEL RODS SHALL BE A MINIMUM OF 20MM IN DIAMETER.
 - TREND TYPE SHALL BE TYPE 3 AS PER AWWA C150 TRENCH CONDITIONS (PIPE BEDDED IN 100MM MINIMUM LOOSE SOIL. BACKFILL LIGHTLY CONSOLIDATED TO TOP OF PIPE).
 - JOINTS SHALL BE DESIGNED FOR THE SAME DESIGN TEST AND SURGE PRESSURE RATING AS THE PIPELINE.
 - FACTOR OF SAFETY SHALL BE 2:1.
 - SOIL TYPE SHALL BE CL AS PER 'UNIFIED SOILS CLASSIFICATION SYSTEMS. ASTM STANDARD D248.'

1. PUMP LIFTING DAVITS TO BE A TOP MOUNT (CENTRE) SERIES 2200 MANUFACTURED BY EASILY MOVED EQUIPMENT (EME).
2. PUMP LIFTING DAVIT BASES SHALL BE LOW PROFILE 8" HIGH. DAVIT BASES SHALL BE INSTALLED AFTER THE PUMP HAS BEEN INSTALLED IN THE WET WELL.

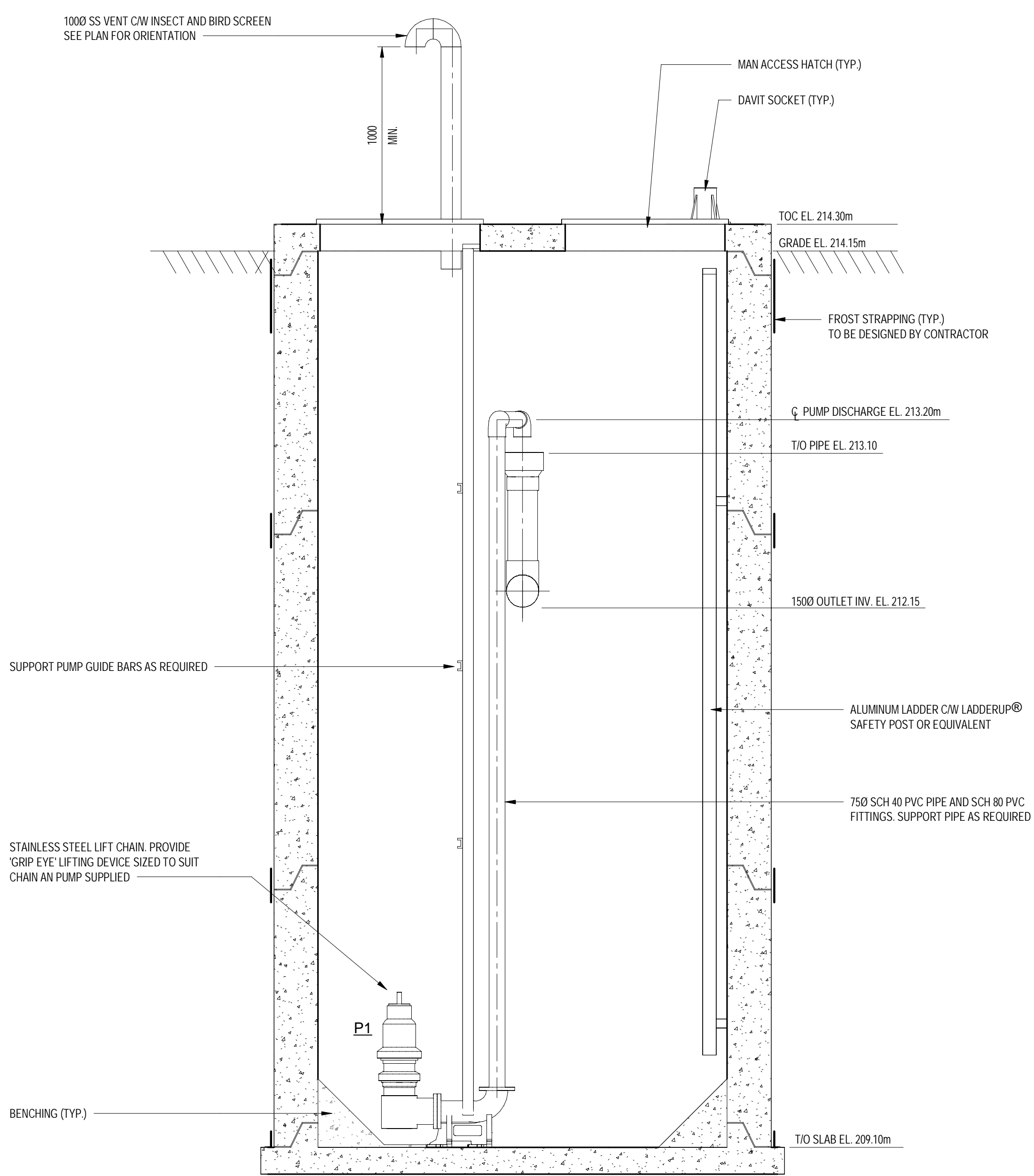
2. ALL HARDWARE SHALL BE STAINLESS STEEL.
3. HATCHES SHALL BE SUPPLIED BY MSU WITH SAFETY GRATING. OPENINGS AS SHOWN ARE CLEAR OPENINGS.
4. ALL CHAMBER SIZES PROVIDED INCLUDING FOR THE PUMP STATION ARE TO BE CLEAR INTERNAL DIMENSIONS. REFER TO CIVIL SITE DRAWINGS FOR SETTING OUT DATA.
5. ALL EXCAVATIONS TO BE COMPLETELY DEWATERED DURING CONSTRUCTION TO PREVENT BUOYANT UPLIFT FORCES ON THE STRUCTURE. KEEP EXCAVATIONS DEWATERED TO A MINIMUM OF 300mm BELOW THE LOWEST PART OF THE EXCAVATION.
6. THE FOUNDING SOILS SHALL BE VERIFIED THAT THEY MEET THE FINDINGS OF THE GEOTECHNICAL REPORT PROVIDED WITHIN THE CONTRACT DOCUMENTS. ALL VERIFICATIONS MUST BE CARRIED OUT BY A LICENSED PROFESSIONAL ENGINEER. PRIOR TO PLACING ANY WORKING PADS OR CONCRETE.
7. THE BASE OF THE EXCAVATIONS FOR EACH CHAMBER SHALL BE PROTECTED BY PLACING A WORKING PAD OR MAT WITHIN 4 HOURS OF EXCAVATION.
8. ALL STRUCTURES SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER (ONTARIO) AND SHALL BE DESIGNED TO RESIST ALL FORCES SUCH AS: FROST HEAVE, SURCHARGING AT SURFACE (10kPa), (TOP SLAB 14.8kPa) BUOYANT UPLIFT FORCE (WATER AT LEVEL GRADE) AND SOILS FORCES PER THE GEOTECHNICAL REPORT. MINIMUM FACTOR OF SAFETY FOR BUOYANT UPLIFT SHALL BE 1.5. FRICTION BETWEEN SOIL AND STRUCTURE SHALL NOT BE USED IN CALCULATION OF BUOYANT UPLIFT RESTRAINT. SUBMIT SHOP DRAWINGS SEALED BY A P.ENG REGISTERED IN THE PROVINCE OF ONTARIO.
9. UNLESS NOTED OTHERWISE, ALL BACKFILL TO BE GRANULAR & COMPACTED TO 98% SPD PLACED IN MAXIMUM OF 300mm LAYERS WITH A MAXIMUM OF 600mm DIFFERENCE IN ELEVATION ON OPPOSING SIDES OF THE STRUCTURE.
10. RESTRAINED PIPE JOINTS ARE REQUIRED AT ALL FITTINGS AND VALVES. SUBMIT DESIGN CALCULATIONS AND RESTRAINT DETAILS TO THE ENGINEER PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
11. ACCESS AND PUMP HATCHES SHALL BE LOCKED AND HAVE 316 SS HARDWARE.
12. CONTRACTOR TO CORE OPENINGS FOR ELECTRICAL AND CONTROL CABLES TO SUIT.
15. ALL CHAMBER SIZES PROVIDED INCLUDING FOR THE PUMP STATION, ARE TO BE CLEAR INTERNAL DIMENSIONS. REFER TO CIVIL SITE DRAWINGS FOR SETTING OUT DATA.

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									<div>DRAWN</div> <div>SMZ</div>		<div>CHECKED BY</div> <div>TC</div>	<div>PUMP STATION PLANS AND NOTES</div>		<div>SHEET NO.</div> <div>P1</div>	
									<div>DATE</div> <div>FEBRUARY 2021</div>						
									<div>SCALE</div> <div>1 : 20</div>						
						<div>No.</div>			<div>ISSUED FOR</div>	<div>DATE</div>	<div>BY</div>				



SECTION 1
SCALE: 1:20



SECTION 2
SCALE: 1:20

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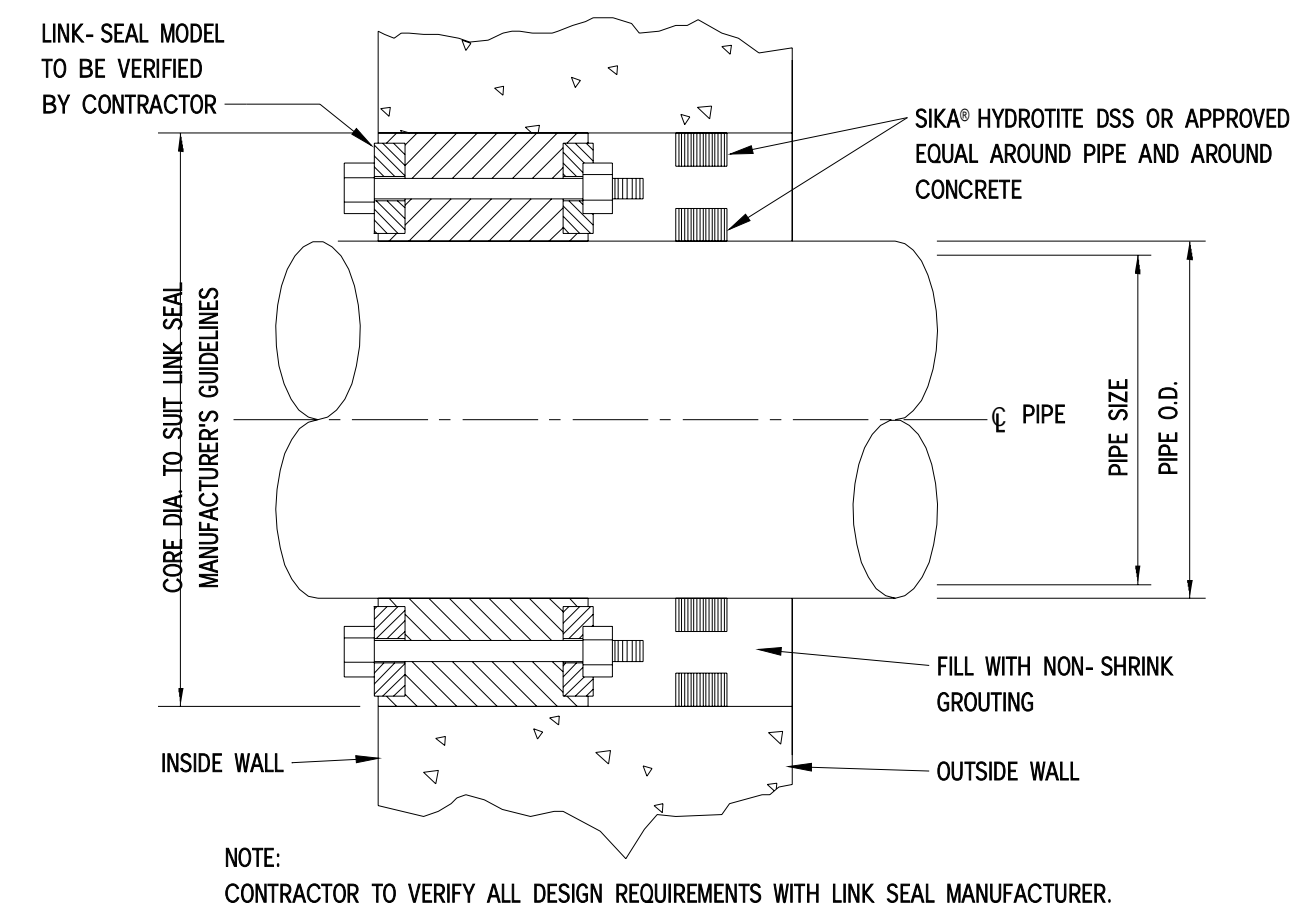
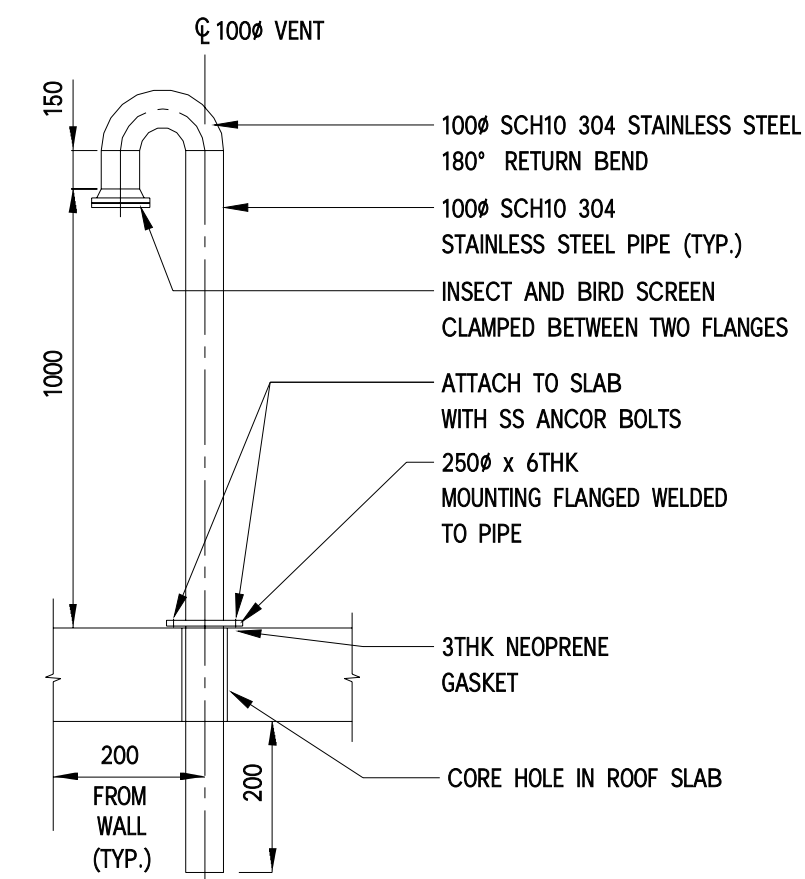
SHEET NO.

P2

PUMP STATION SECTIONS



1. LADDER FABRICATED FROM 304 STAINLESS STEEL (ALL SURFACES IN CONTACT WITH CONCRETE SHALL BE COATED WITH BITUMINOUS PAINT)
2. RUNGS SHALL HAVE NO SLIP SURFACE.
3. DESIGN LOADS SHALL BE PER INDUSTRIAL ESTABLISHMENTS REGULATION 851.
4. PROVIDE LADDER UP SAFETY POST OR EQUIVALENT.



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<p style="text-align: center;">Sunbrite Bunhouse Servicing Town of Kingsville</p>	<p>PROJECT NO. 20-3554</p>
<p style="text-align: center;">MISCELLANEOUS DETAILS</p>	<p>SHEET NO. P3</p>