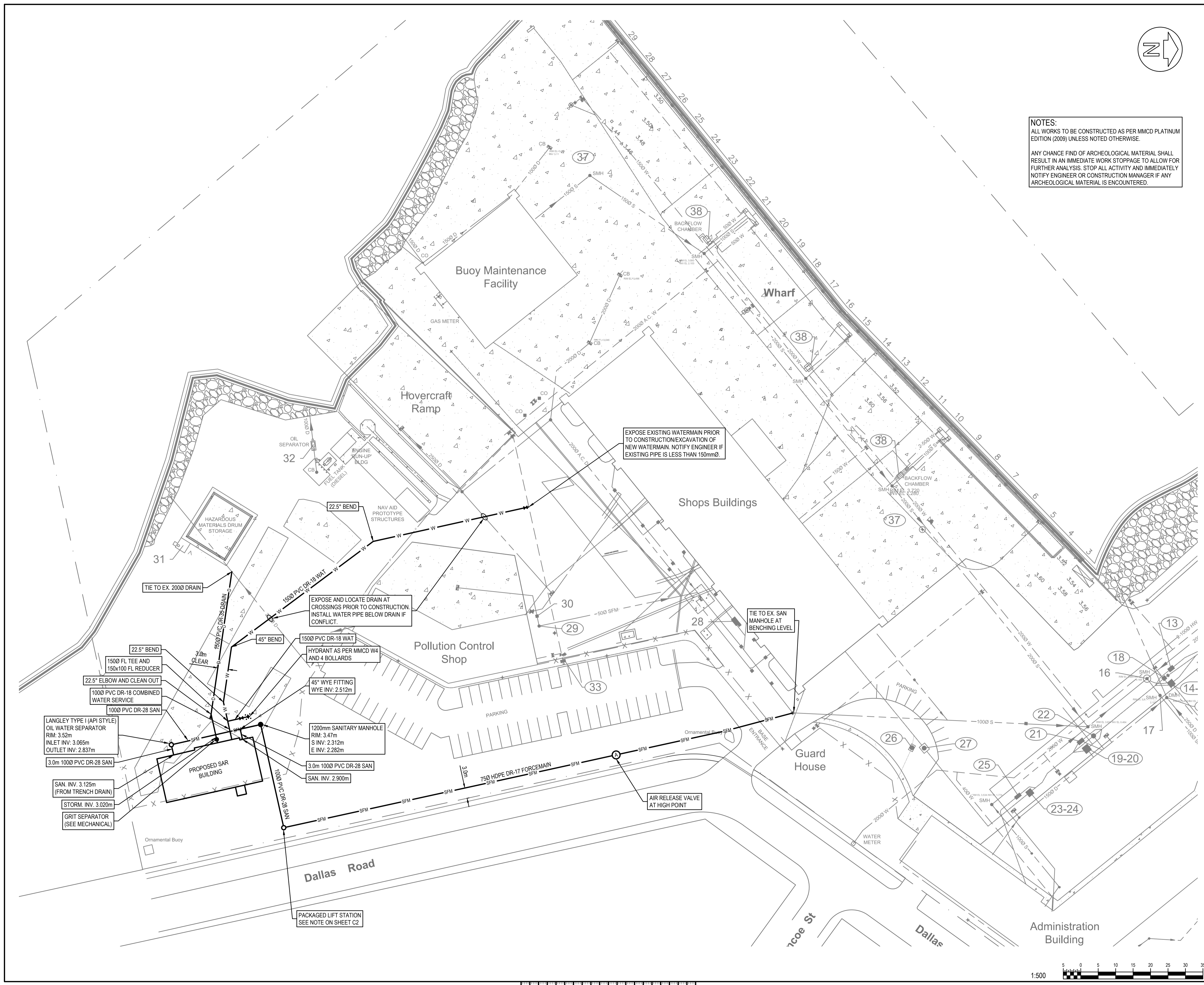




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**NOTES:**  
 ALL WORKS TO BE CONSTRUCTED AS PER MMCD PLATINUM EDITION (2009) UNLESS NOTED OTHERWISE.  
 ANY CHANCE FIND OF ARCHEOLOGICAL MATERIAL SHALL RESULT IN AN IMMEDIATE WORK STOPPAGE TO ALLOW FOR FURTHER ANALYSIS. STOP ALL ACTIVITY AND IMMEDIATELY NOTIFY ENGINEER OR CONSTRUCTION MANAGER IF ANY ARCHEOLOGICAL MATERIAL IS ENCOUNTERED.



Revision/	Description/Description	Date/Date
5		
4	ISSUED FOR TENDER	2018/12/14
3	100% DESIGN REVIEW	2018/10/30
2	90% DESIGN REVIEW	2018/09/24
1	80% DESIGN REVIEW	2018/07/27
0	SCHEMATIC REVIEW	2018/05/27

Client/client

**FISHERIES AND OCEANS,  
 REAL PROPERTY,  
 SAFETY AND SECURITY**  
 VANCOUVER, BC  
 200-401 BURRARD ST.

Project title/Titre du projet  
**VICTORIA, BC  
 25 HURON STREET**

**VICTORIA SAR STATION**

Consultant Signature Only

Designed by/Concept par  
 AS

Drawn by/Dessiné par  
 CD/SG

PWGC Project Manager/Administrateur de Projets TPSGC  
 RANDY BURGIN

Regional Manager, Architectural and Engineering Services  
 Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing title/Titre du dessin

**SITE PLAN**

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**RECOMMENDED RESTRAINED LENGTHS OF PIPE**

PIPE: \_\_\_\_\_ PVC, AWWA C900, DR 18  
 DEPTH OF BURY: \_\_\_\_\_ ONE METRE  
 MAXIMUM PRESSURE: \_\_\_\_\_ 1035kPa (150 psi, includes surge allowance)  
 SAFETY FACTOR: \_\_\_\_\_ 2:1

$L$  = LENGTH OF RESTRAINED PIPE (in metres)

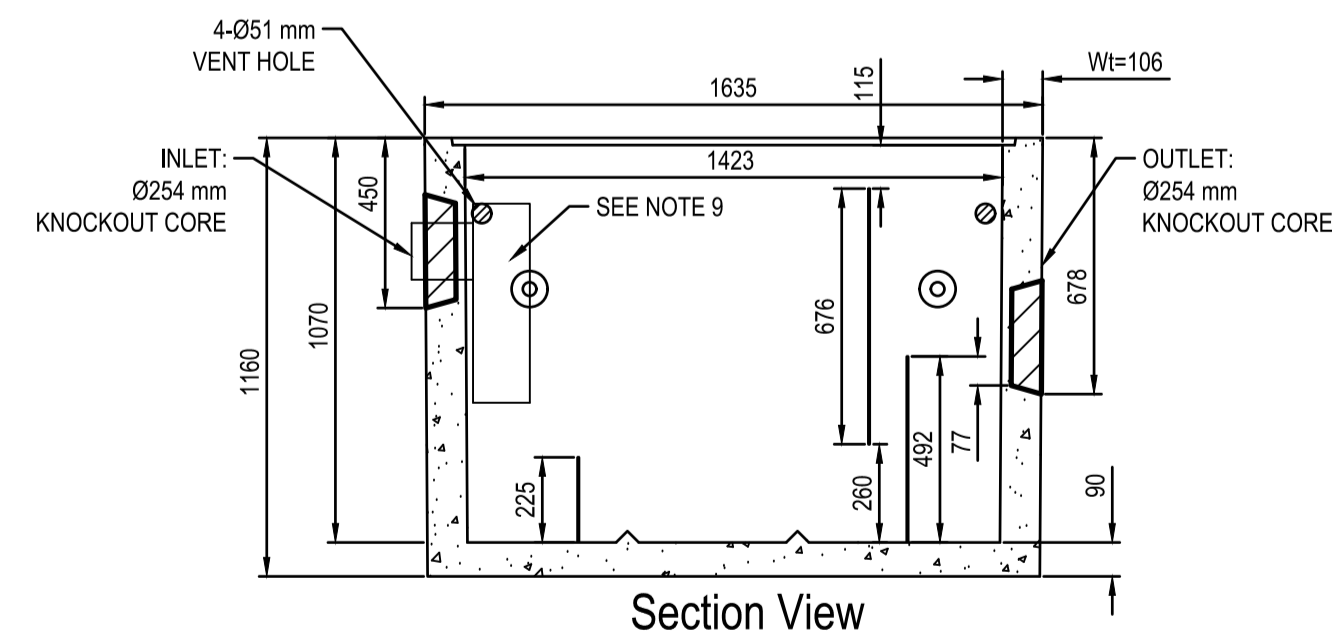
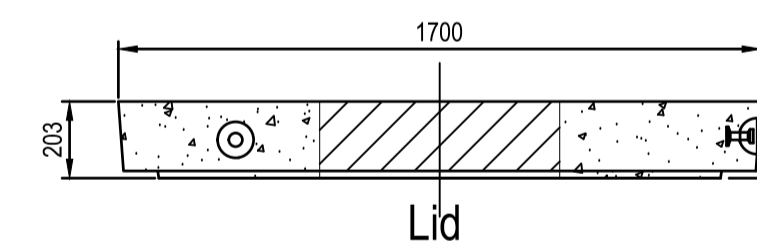
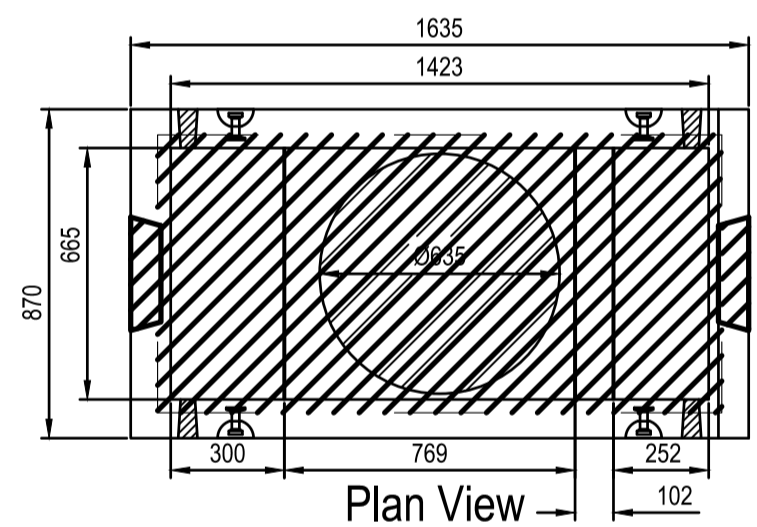
NOMINAL PIPE SIZE (mm)	SILT/SAND				WET CLAY				HARD PAN						
	ELBOWS		VALVE TEE END		ELBOWS		VALVE TEE END		ELBOWS		VALVE TEE END				
	11'	22'	45'	90'	11'	22'	45'	90'	11'	22'	45'	90'			
100	0.3	0.3	1.8	4.3	12.8	0.3	0.9	1.8	4.6	12.5	0.3	0.6	1.5	3.4	10.4
150	0.6	1.2	2.4	5.8	17.7	0.6	1.2	2.7	6.4	18.9	0.6	0.9	1.8	4.6	14.6
200	0.6	1.5	3.0	7.6	23.5	0.9	1.8	3.7	8.5	24.7	0.6	1.2	2.4	6.1	19.2
250	0.9	1.8	3.7	9.1	28.0	0.9	2.1	4.3	10.4	29.6	0.9	1.5	3.1	7.0	22.9
300	0.9	2.1	4.3	10.7	32.9	1.2	2.4	4.9	12.2	34.7	0.9	1.5	3.7	8.2	26.8

$L$  = RESTRAINED LENGTH FOR BRANCH OUTLET OF DROP IN TEES (in metres)

SOIL (SILT/SAND)	S = LENGTH OF PIPE ON EACH SIDE OF TEE (in metres)			
NOMINAL TEE SIZE	S = 6.1	S = 3.0	S=1.5	S=0.3
100x100	FIRST JOINT	FIRST JOINT	0.3	6.4
150x150	FIRST JOINT	FIRST JOINT	3.4	9.8
200x200	FIRST JOINT	FIRST JOINT	7.0	13.4
250x250	FIRST JOINT	1.5	9.8	16.2
300x300	FIRST JOINT	4.6	12.8	19.5

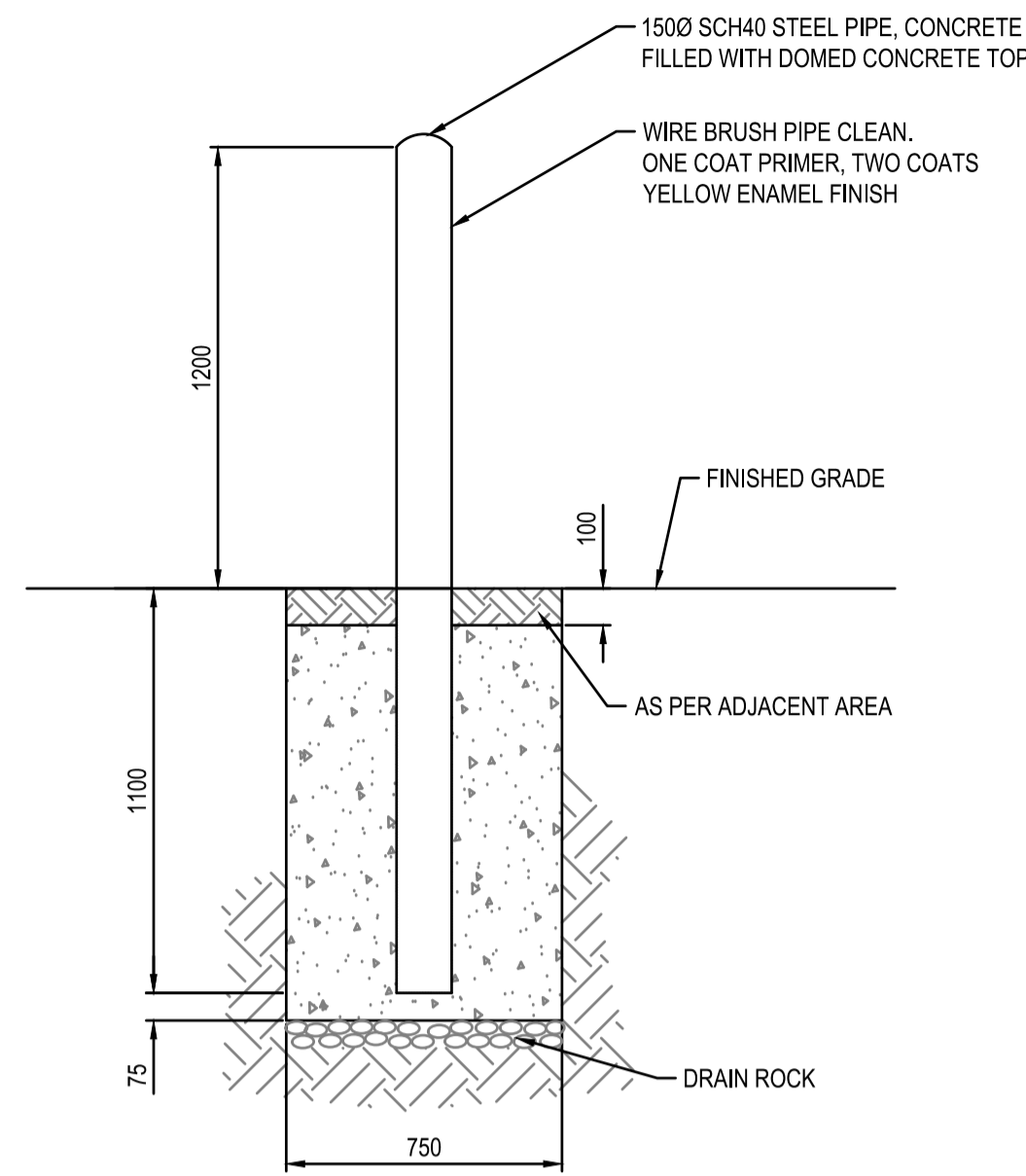
- THIS STANDARD TO BE USED IN CONJUNCTION WITH STANDARD DRAWING 1.9
- WHEN DEPTH OF SOIL COVER IS LESS THAN 0.6M VALUES FOR "L" MUST BE INCREASED BY 30%.
- WHEN DEPTH OF SOIL COVER IS LESS THAN HALF PIPE O.D. VALUES FOR "L" MUST BE INCREASED BY 100%.
- WHEN PIPE IS PARTIALLY OR FULLY EXPOSED, ALL JOINTS MUST BE RESTRAINED.
- WHEN IN DOUBT AS TO SOIL TYPE, DEPTH OR CONFIGURATION USE NEXT LONGEST VALUE OF L.

**THRUST RESTRAINT LENGTH**



- Notes:
- Type 1 Oil Interceptor [API Style] manufactured for AASHTO HS20 live loading as shown.
  - Unit dimensions are 1.42 x 0.67 x 1.1 m.
  - Reinforced concrete lid manufactured for AASHTO HS20 live loading.
  - Unit c/w Ø254 mm knockout cores for inlet/outlet flow as shown.
  - Unit risers available in heights: 200, 300, 450 etc. to 1050 mm maximum.
  - Unit c/w Ø635 mm opening for access as shown.
  - Unit to have 4-Ø51 mm vent holes as shown.
  - Oil interceptor c/w 12 gauge galvanized baffles as shown.
  - PVC required by design, installed by others in field.
  - Design can be modified for specific sites, please contact LCG sales office.
  - Unit has a maximum 595 liter [0.595 m³] capacity.
  - Unit c/w 5T lifting inserts as shown.
  - Unit c/w ladder rungs as required.
  - Approximate mass:
    - Lid: 625 kg.
    - Chamber: 1,600 kg.
  - Minimum rebar yield strength: 414 MPa.
  - Minimum concrete strength: 35 MPa.
  - All dimensions are in millimeters.

**OIL WATER SEPARATOR**  
NTS



**BOLLARD DETAIL**

1:20

**NOTE:**  
LIFT STATION SHALL ACCOMMODATE THE FOLLOWING SPECIFICATIONS:

- PEAK INLET FLOW: 75L/min
- FINISHED GROUND ELEVATION AT LIFT STATION: APPROX. 3.50m
- GRAVITY SEWER INLET: 100mmØ PVC DR-28, INVERT: 1.67m
- FORCEMAIN: 75mmØ HDPE DR-17
- MINIMUM VELOCITY THROUGH FORCEMAIN: 0.9m/s
- LENGTH OF FORCEMAIN: 150m
- FORCEMAIN HIGH POINT: 4.10m, APPROX. 90m FROM LIFT STATION
- DUPLEX PUMP SYSTEM REQUIRED WITH EACH PUMP MOUNTED TO LIFT OUT RAIL SYSTEM
- PUMPS SHALL ALTERNATE BETWEEN DUTY AND BACKUP
- PUMPS SHALL OPERATE AUTOMATICALLY BASED ON LEVEL OF EFFLUENT
- SENSORS TO BE INCLUDED FOR PUMP OFF LEVEL, PUMP ON LEVEL, AND HIGH WATER LEVEL
- VISUAL AND AUDIBLE ALARM REQUIRED FOR HIGH WATER LEVEL
- CONTROLS SHALL BE PLACED IN BUILDING

SHOP DRAWINGS TO BE PROVIDED FOR APPROVAL.



PROJECT: 181-07195-00

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**DETAILS**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
F1700-164129	C2	4
	2 OF 2	

