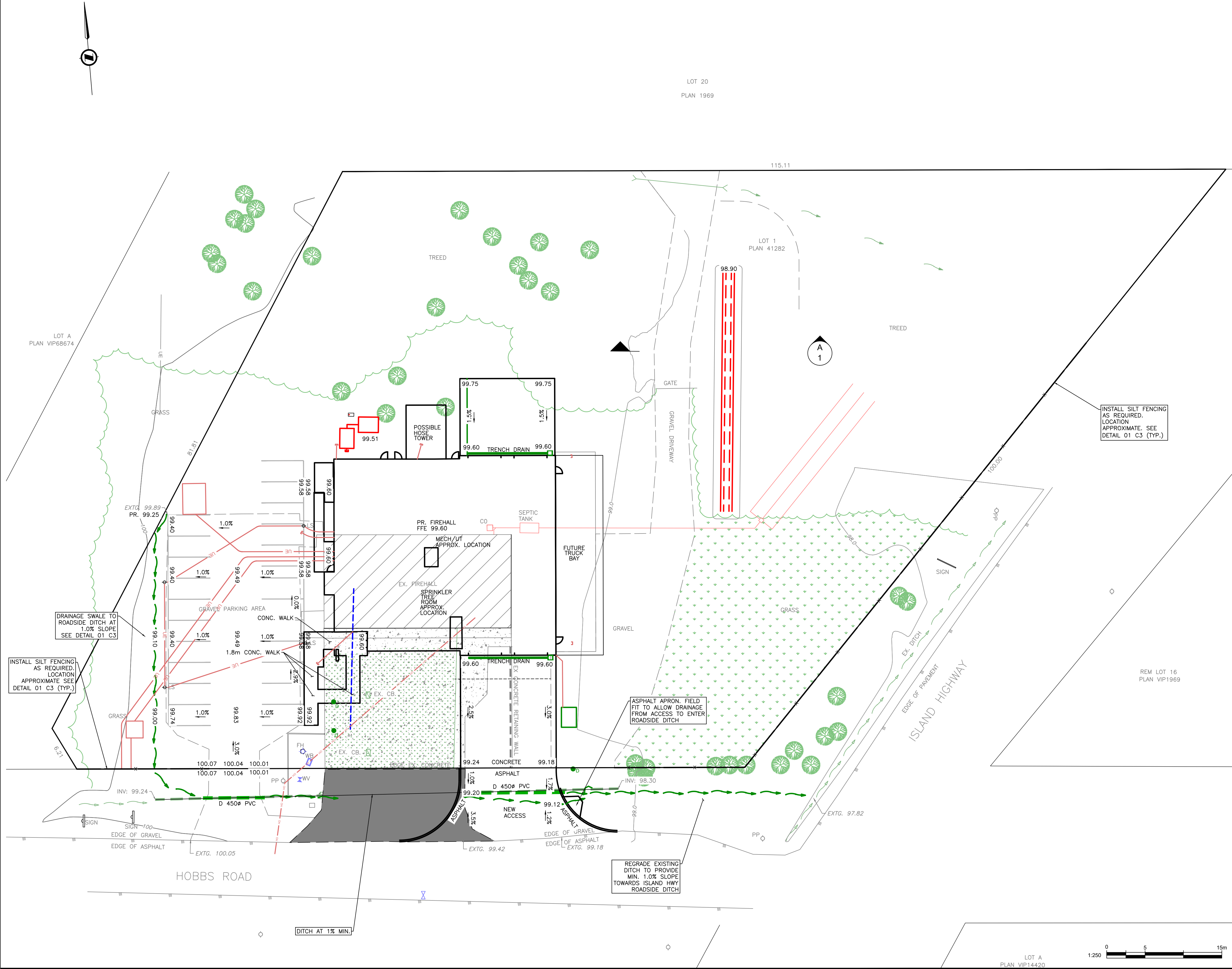




N:\Data\SURVEY PROJECTS\89638-Dashwood Fire Hall\07 - Engineering\02 - Drawings & Sketches (Eng)\89638 Eng Base.dwg Plot Date: July 22, 2022



GENERAL NOTES  
- SEE GENERAL NOTES ON DWG 89638 01-C1

EROSION AND SEDIMENT CONTROL  
- SEE NOTE ON SHEET 89638 C3.

MUN. FILE ---

CLIENT  
PRAXIS ARCHITECTS INC.

PROJECT  
230 HOBBS ROAD  
DASHWOOD FIRE HALL  
GRADING PLAN

89638 01 C2

MUN. DWG NUM ---

SHEET 2 OF 3

LEGAL DESCRIPTION	LOT 1, DISTRICT LOT 80, NEWCASTLE DISTRICT, PLAN 41282	ISSUED						LEGEND					
		6	ISSUED FOR TENDER	2022 07 22		BK	LAMP STANDARD	LS	CLEANOUT		DITCH		
		5	ISSUED FOR BUILDING PERMIT APPLICATION	2022 05 20		BK	POLE(Hydro, Tel.)	PP	CATCHBASIN		METER		
PROJECT DATUM		4	ISSUED FOR 90% DESIGN	2021 01 13		BK	U/G WIRING	UE	MANHOLE		FLUSH VALVE		
		3	ISSUED FOR 60% DESIGN	2021 08 26		BK	GAS	G	SERVICE RISER		VALVE		
		2	ISSUED FOR COORDINATION	2021 08 18		BK	WATER	W	MOUNTABLE CURB	MC	REDUCER		
		1	ISSUED FOR COORDINATION	2021 05 20		BK	SEWER	S	NON-MOUNT. CURB	NMC	HYDRANT		
		NO.	DESCRIPTION	YYYY MM DD	DE	DA	CK	DRAIN	D	EDGE ASPHALT		AIR VALVE	



J.E. ANDERSON  
& ASSOCIATES  
SURVEYORS - ENGINEERS

VICTORIA NANAIMO PARKSVILLE CAMPBELL RIVER

#1A-3411 SHENTON ROAD, NANAIMO, BC. V9T 2H1

PHONE: 250-758-4631 EMAIL: nanaimo@jeanderson.com WEB: www.jeanderson.com

JURISDICTION  
REGIONAL DISTRICT OF NANAIMO

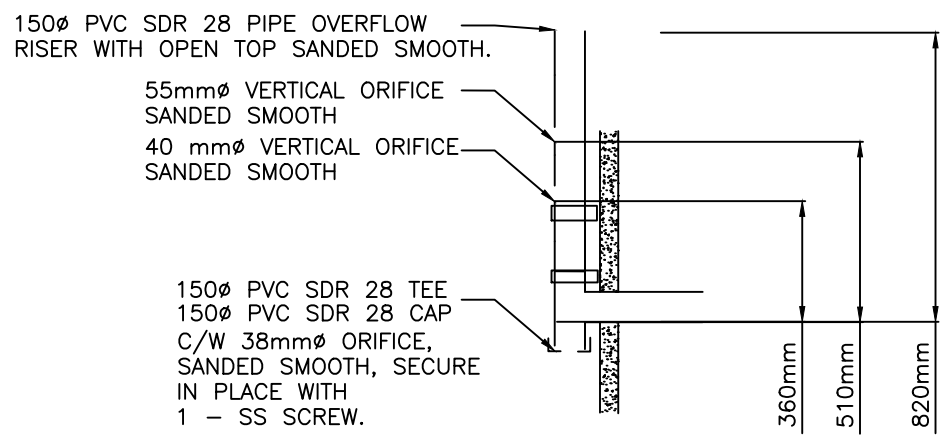
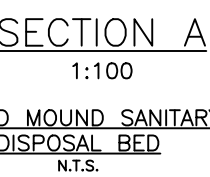
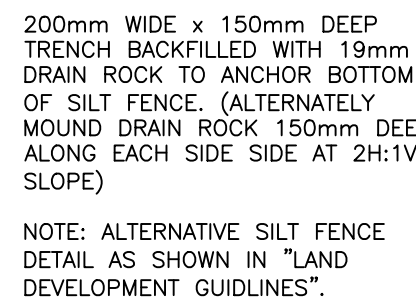


ENGINEERS SEAL



- A. PERFORM WORK IN DRY TIMES WHEN POSSIBLE.
- B. CONTRACTOR TO ADDRESS EROSION AND SEDIMENT AT SOURCE AND CONTAIN WITHIN SITE LIMITS.
- C. MEASURES TO BE CONTROLLED DURING CONSTRUCTION AND AMENDED TO SUIT CONDITIONS.
- D. INSTALL SILT FENCE WHERE REQUIRED.
- E. DO NOT REMOVE VEGETATION AND TOPSOIL WHERE POSSIBLE.
- F. DO NOT COMPACT THE SOIL AND MINIMIZE STRIPPING AS THIS WILL INCREASE SILT PRODUCTION.

1. EROSION AND SEDIMENT CONTROL FOR THIS PROJECT WILL BE AS OUTLINED IN THE FISHERIES AND OCEANS CANADA AND MINISTRY OF WATER, LANDS, AND AIR PROTECTION HANDBOOK ENTITLED "LAND DEVELOPMENT GUIDELINES FOR THE PROTECTION OF AQUATIC HABITAT, SEPTEMBER 1993" AND "ENVIRONMENTAL BEST MANAGEMENT PRACTICES FOR URBAN AND RURAL LAND DEVELOPMENT IN BRITISH COLUMBIA, JUNE 2004".
2. THE CONSULTANT ASSUMES NO RESPONSIBILITY FOR DAMAGES RESULTING FROM IMPROPER EROSION AND SEDIMENT CONTROL MEASURES UNDERTAKEN BY THE CONTRACTOR.
3. ANY DIRECTION GIVEN BY THE ENGINEER TO THE CONTRACTOR FOR EROSION AND SEDIMENT CONTROL AND NOT FOLLOWED BY THE CONTRACTOR IS TO BE REPORTED TO THE NOID AND REGIONAL DISTRICT IMMEDIATELY.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT NO MUD, SOIL, SILT, OR ANY OTHER SUBSTANCES ARE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY. THE CONTRACTOR IS TO CLEAN ANY SUCH MATERIAL IMMEDIATELY, I.E. STREETS ARE TO BE CLEANED AFTER WORK STOPPAGE EACH DAY.
5. STRIP AND GRUB ONLY THOSE AREAS NECESSARY FOR THE CURRENT CONSTRUCTION. STAGE CONSTRUCTION OPERATIONS TO LIMIT DISTURBANCE AND DO NOT STRIP ANY AREA UNTIL REQUIRED.
6. SILT FENCING IS TO BE INSTALLED AROUND ALL STOCK/SPOIL PILES, OR PILES ARE TO BE OTHERWISE COVERED TO LIMIT EROSION AND SEDIMENT GENERATION.



STORM WATER MANAGEMENT:

DRAINAGE CALCULATIONS:

ASSUME NO FLOWS/NEGLECTIBLE FLOWS FROM PERIMETER DRAINS. PERIMETER DRAINS ARE TO BYPASS THE DETENTION TANK SYSTEM.

ASSUME THAT ROOF AREAS AND HARD SURFACE DRIVEWAYS THAT FLOW TO DETENTION ARE 1243 SQUARE METRES.

RAINFALL INTENSITIES BASED ON NANAIMO IDF CURVES (UPDATED MAY 2020).

USING SCS METHOD AND HYDROCAD TO CALCULATE PRE AND POST CONDITIONS  
SAMPLE CALCULATIONS:

FOR 2 YEAR RETURN STORM, 1243 SQ. M. HARD SURFACE TO DETENTION.

Q PRE = 1.9 L/s  
Q POST = 1.8 L/s

FOR 5 YEAR RETURN STORM, 1243 SQ. M. HARD SURFACE TO DETENTION.  
Q PRE = 3.4 L/s  
Q POST= 3.4 L/s

FOR 100 YEAR RETURN STORM, 1243 SQ. M. HARD SURFACE TO DETENTION  
Q PRE = 8.4 L/s  
Q POST= 8.4 L/s

DANS 1000 IGAL HOLDING TANK C/W BAFFLE CONSTRUCTED FOR H2O DYNAMIC LOADING (TANK A TOP). REQUIREMENT FOR H2O LOADING CAN BE RELAXED IF IT WILL NEVER BE SUBJECT TO VEH LOADING.  
INSIDE DIMENSIONS APPROXIMATELY 2370 LONG, 1730 WIDE, 1260 HIGH. APPROXIMATELY 110mm THICK WALLS.


INSTALL 7.0m WIDE X 14.0m LENGTH X 1.35m DEEP OF DRAIN ROCK (132 m<sup>3</sup> OF DRAIN ROCK)  
SHOWN ON 89638 01-C1.

MAINTENANCE BY THE LOT OWNER MUST INCLUDE THE FOLLOWING:

- MAINTAIN GRATE, INLETS, AND ALL OUTLETS FREE OF DEBRIS AT ALL TIMES. CHECK OUTLETS EVERY 10 MONTHS FOR THE FALL PERIOD, AND DURING HEAVY RAINFALLS.
- ENSURE SATISFACTORY OPERATION DURING HEAVY RAINFALLS.
- CONFIRM OVERTLOW ROUTES FROM SUMP GRATE ARE KEPT CLEAR AT ALL TIMES, PARTICULARLY DURING RAIN.
- DO NOT ENTER TANK WITHOUT PROPER EQUIPMENT AND TRAINING AS THE AIR MAY BE DANGEROUS TO BREATHE. USE CONFINED SPACE ENTRY PROCEDURES.
- CLEAN FLOATING DEBRIS OUT OF TANK AT EVERY INSPECTION, AND CLEAN SUMP WHENEVER THE SUMP SEDIMENT IS OVER 50mm.
- REPAIR/REPLACE SYSTEM WHENEVER SYSTEM BECOMES NON FUNCTIONAL.



NOTE: ELEVATIONS ARE RELATIVE TO AN INVERT OUT OF 0.00m



VICTORIA      NANAIMO      PARKSVILLE      CAMPBELL RIVER

#1A-3411 SHENTON ROAD, NANAIMO, BC. V9T 2H1



ENGINEERING SEAL

230 HOBBS ROAD  
DASHWOOD FIRE HALL  
DETAILS AND EROSION AND SEDIMENT CONTROL PLAN

89638 01 C3

MUN. DWG NUM --- SHEET 3 OF 3