

LOCATION MAP  
N.T.S.

**GENERAL NOTES:**


1. THE MINISTRY OF TRANSPORTATION & INFRASTRUCTURE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION APPLY TO THIS PROJECT.
2. RIPRAP CONSTRUCTION SHALL CONFORM TO STANDARD SPEC. SECTION 205.
3. RIPRAP SHALL BE CLASS 500 kg.
4. NON WOVEN GEOTEXTILE FILTER FABRIC TO BE NILEX 4553 OR APPROVED ALTERNATE.
5. PROTECTION OF THE ENVIRONMENT WILL BE CARRIED OUT IN ACCORDANCE WITH STANDARD SPEC. SECTION 165.
6. LOCATIONS OF HABITAT ENHANCEMENT WORKS ARE APPROXIMATE. ACTUAL LOCATIONS MAY BE FIELD FIT BY HABITAT RESTORATION SPECIALIST.
7. DISTURBED OVERBANK TO BE REVEGETATED WITH NATIVE SPECIES AS PER STANDARD SPEC. 165.
8. MATERIAL EXCAVATED FROM OVERBANK AND GRAVEL BAR TO BE REUSED AS COMPACTED FILL AS PER STANDARD SPEC. SECTION 201.37. ANY EXCESS MATERIAL TO BE REMOVED AND DISPOSED OFFSITE OR AS DIRECTED BY THE MINISTRY REPRESENTATIVE.

**HYDROTECHNICAL NOTES**

1. DRAINAGE AREA = 250 km<sup>2</sup>
2. MAXIMUM INSTANTANEOUS  $Q_{200}$  = 370m<sup>3</sup>/s
3. AVERAGE SURVEY STREAM SLOPE = 0.005m/m
4. AVERAGE CHANNEL WIDTH AT BANKFULL DISCHARGE = 22m

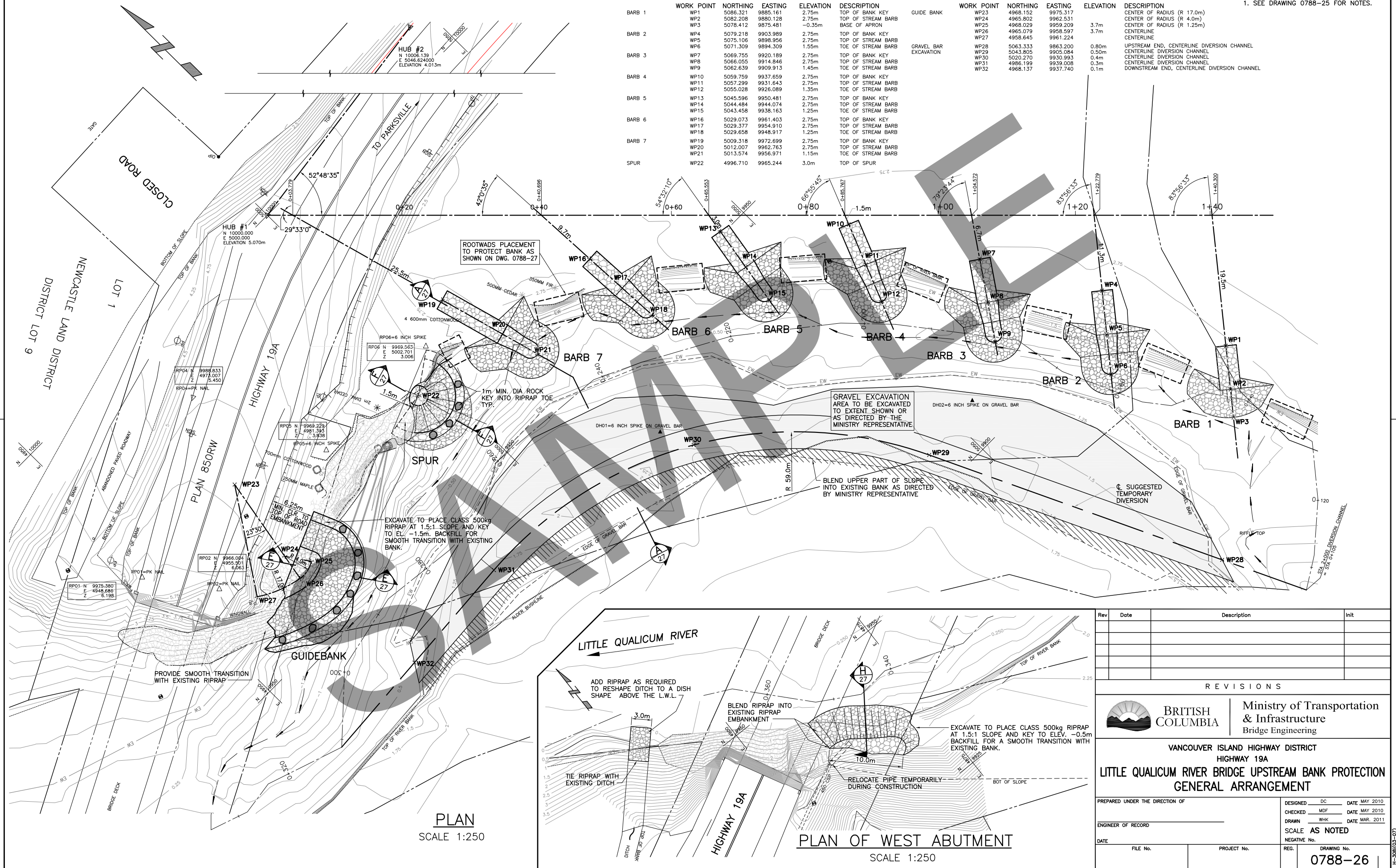
**NOTES:**

1. SURVEY BY: PARK CITY ENGINEERING LTD. SEPT. 2008  
MOT SOUTH COAST REGION AUG. 2010
2. DATUM: GEODETIC

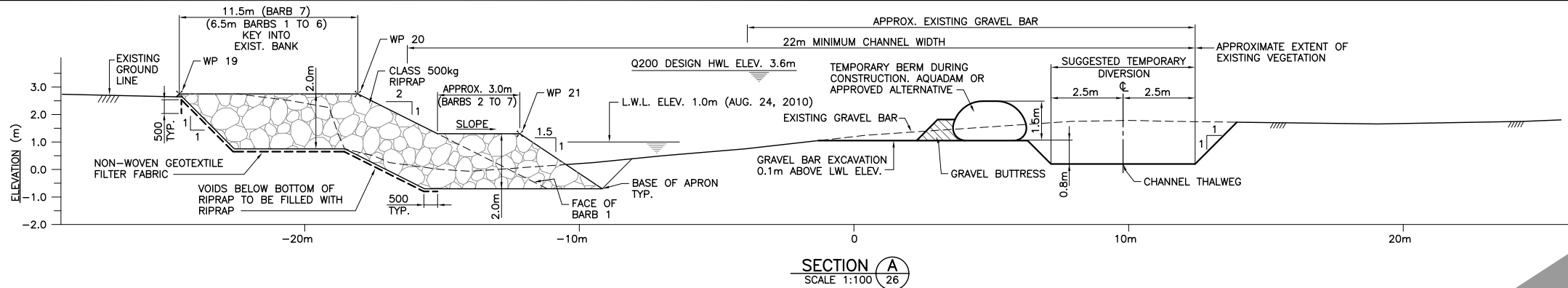
Rev	Date	Description	Init
REVISIONS			
 <b>BRITISH COLUMBIA</b>			
<b>Ministry of Transportation &amp; Infrastructure</b> Bridge Engineering			
<b>VANCOUVER ISLAND HIGHWAY DISTRICT</b> <b>HIGHWAY 19A</b> <b>LITTLE QUALICUM RIVER BRIDGE UPSTREAM BANK PROTECTION</b> <b>SITE PLAN</b>			
PREPARED UNDER THE DIRECTION OF		DESIGNED DC DATE MAY 2010	
		CHECKED MDF DATE MAY 2010	
ENGINEER OF RECORD		DRAWN WHK DATE NOV. 2010	
DATE		SCALE AS NOTED	
FILE No.		NEGATIVE No.	
PROJECT No.		REG.	
		DRAWING No.	0788-25

1. SEE DRAWING 0788-25 FOR NOTES.

	WORK POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION		WORK POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	1. SEE
BARB 1	WP1	5086.321	9885.161	2.75m	TOP OF BANK KEY	GUIDE BANK	WP23	4968.152	9975.317		CENTER OF RADIUS (R 17.0m)	
	WP2	5082.208	9880.128	2.75m	TOP OF STREAM BARB		WP24	4965.802	9962.531		CENTER OF RADIUS (R 4.0m)	
	WP3	5078.412	9875.481	-0.35m	BASE OF APRON		WP25	4968.029	9959.209	3.7m	CENTER OF RADIUS (R 1.25m)	
BARB 2	WP4	5079.218	9903.989	2.75m	TOP OF BANK KEY	GRAVEL BAR EXCAVATION	WP26	4965.079	9958.597	3.7m	CENTERLINE	
	WP5	5075.106	9898.956	2.75m	TOP OF STREAM BARB		WP27	4958.645	9961.224		CENTERLINE	
	WP6	5071.309	9894.309	1.55m	TOE OF STREAM BARB		WP28	5063.333	9863.200	0.80m	UPSTREAM END, CENTERLINE DIVERSION CHANNEL	
BARB 3	WP7	5069.755	9920.189	2.75m	TOP OF BANK KEY		WP29	5043.805	9905.084	0.50m	CENTERLINE DIVERSION CHANNEL	
	WP8	5065.055	9914.846	2.75m	TOP OF STREAM BARB		WP30	5020.270	9930.993	0.4m	CENTERLINE DIVERSION CHANNEL	
	WP9	5062.639	9909.913	1.45m	TOE OF STREAM BARB		WP31	4986.199	9939.008	0.3m	CENTERLINE DIVERSION CHANNEL	
BARB 4	WP10	5059.759	9937.659	2.75m	TOP OF BANK KEY		WP32	4986.137	9937.740	0.1m	DOWNSTREAM END, CENTERLINE DIVERSION CHANNEL	
	WP11	5057.299	9931.643	2.75m	TOP OF STREAM BARB							
	WP12	5055.028	9926.089	1.35m	TOE OF STREAM BARB							
BARB 5	WP13	5045.596	9950.481	2.75m	TOP OF BANK KEY							
	WP14	5044.484	9944.074	2.75m	TOP OF STREAM BARB							
	WP15	5043.458	9938.163	1.25m	TOE OF STREAM BARB							
BARB 6	WP16	5029.073	9961.403	2.75m	TOP OF BANK KEY							
	WP17	5029.377	9954.910	2.75m	TOP OF STREAM BARB							
	WP18	5029.658	9948.917	1.25m	TOE OF STREAM BARB							
BARB 7	WP19	5009.318	9972.699	2.75m	TOP OF BANK KEY							
	WP20	5012.007	9962.763	2.75m	TOP OF STREAM BARB							
	WP21	5013.574	9956.971	1.15m	TOE OF STREAM BARB							
SPUR	WP22	4996.710	9965.244	3.0m	TOP OF SPUR							

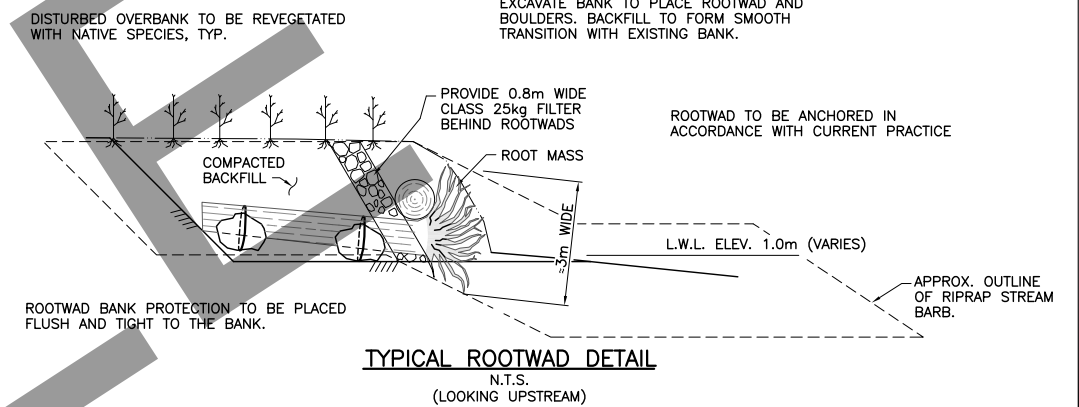
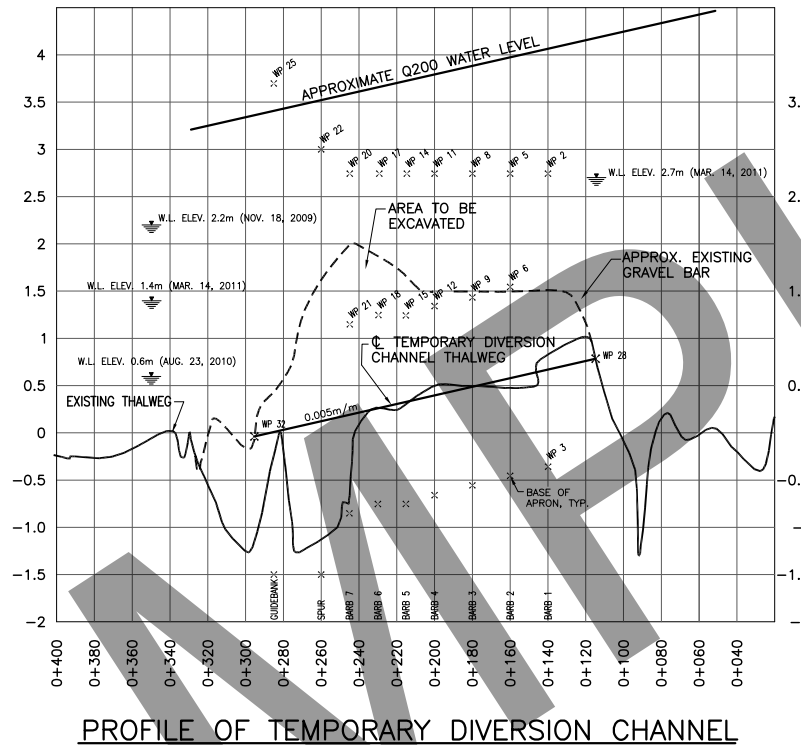




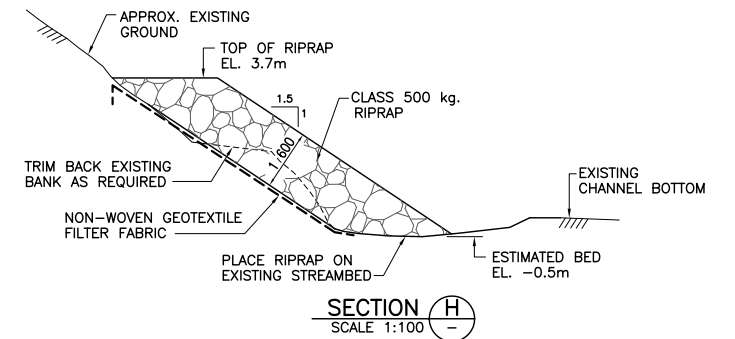
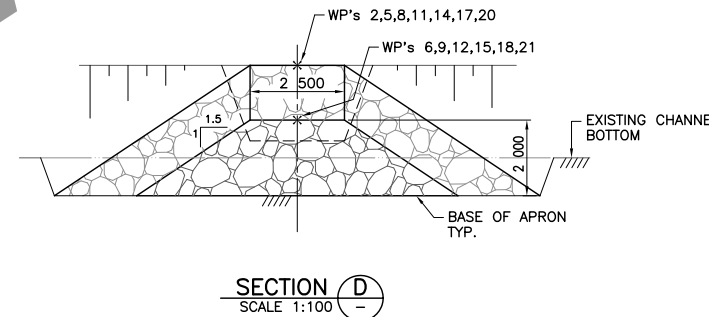
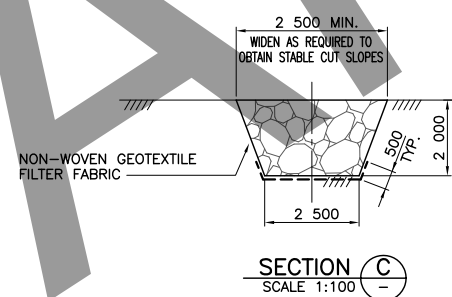
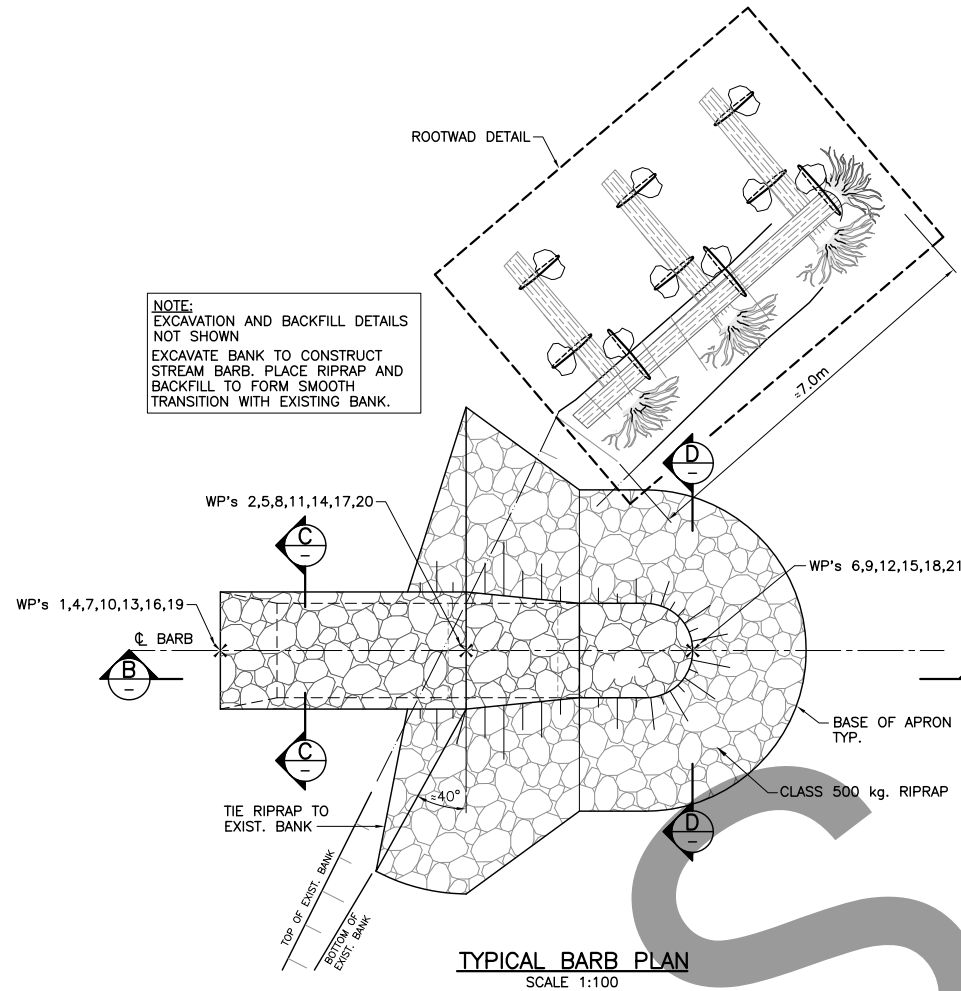


#### NOTES FOR LWD INSTALLATION

1. USE LWD PIECES WITH STEM DIAMETER 0.5m OR GREATER AND STEM LENGTH 2m OR GREATER
2. ANCHOR BOULDERS SHALL HAVE A MIN. DIAMETER OF 1.0m AND MIN. MASS OF 1500kg.
3. MINIMUM 2 ANCHOR BOULDERS PER STEM.
4. ALL CABLE SHOULD BE TIGHT WITH LESS THAN 1.0m BETWEEN ANCHOR AND LWD PIECE.

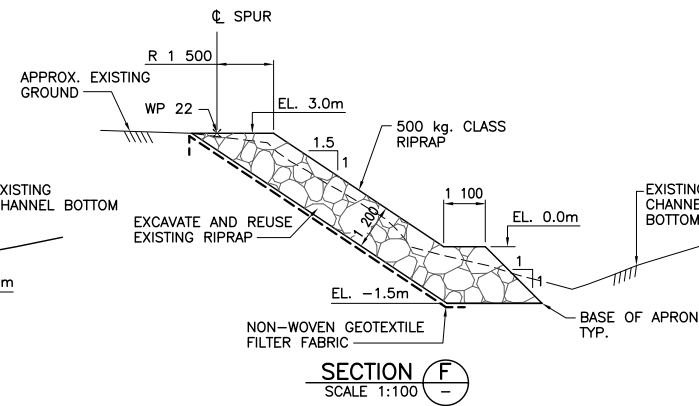
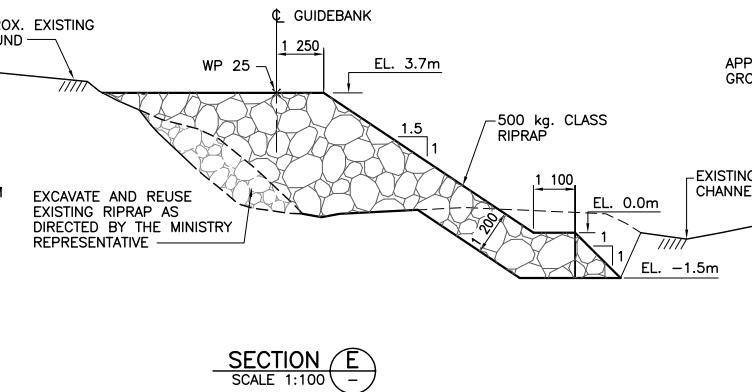
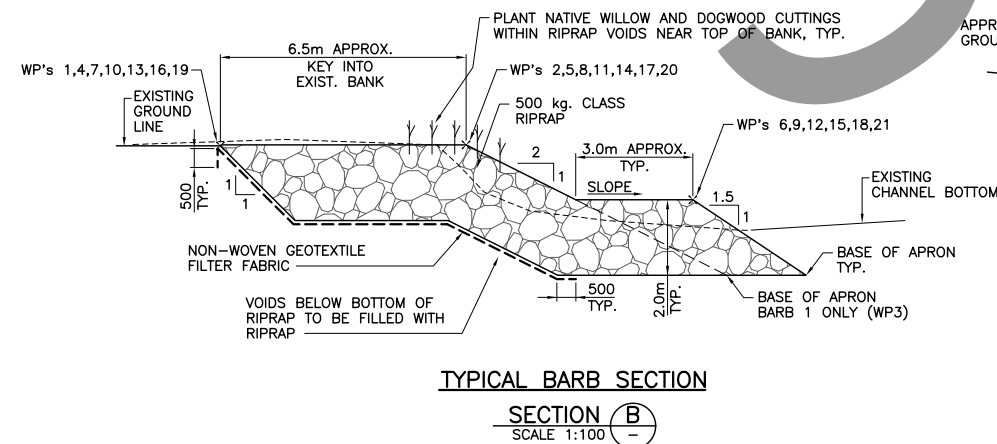


NOTE:  
EXCAVATION AND BACKFILL DETAILS NOT SHOWN  
EXCAVATE BANK TO CONSTRUCT STREAM BARB. PLACE RIPRAP AND BACKFILL TO FORM SMOOTH TRANSITION WITH EXISTING BANK.



#### NOTES

1. SEE DRAWING 0788-25 FOR NOTES.



Rev	Date	Description	Init

#### REVISIONS



Ministry of Transportation  
& Infrastructure  
Bridge Engineering

#### VANCOUVER ISLAND HIGHWAY DISTRICT HIGHWAY 19A LITTLE QUALICUM RIVER BRIDGE UPSTREAM BANK PROTECTION TYPICAL SECTIONS & DETAILS

PREPARED UNDER THE DIRECTION OF	DESIGNED DC DATE MAY 2010
ENGINEER OF RECORD	CHECKED MGF DATE MAY 2010
DATE	DRAWN WHK DATE MAR 2011
FILE No.	SCALE AS NOTED
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REG.	DRAWING No.
	0788-27

CANCEL PRINTS BEARING PREVIOUS LETTER