



Ministry of
Transportation
and Infrastructure

PROJECT NO. 13253-0001

FRASER VALLEY HIGHWAY 1 CORRIDOR IMPROVEMENT PROGRAM

HIGHWAY 1 – ADVANCED WORKS

FISHTRAP CREEK ENVIRONMENTAL REHABILITATION



REFER TO TENDER DRAWING PACKAGE APPROVAL FORM

ENGINEERING DIRECTOR _____

REGIONAL EXECUTIVE DIRECTOR _____

DATE

DATE

DRAWING NUMBER REV

R1-1099-000



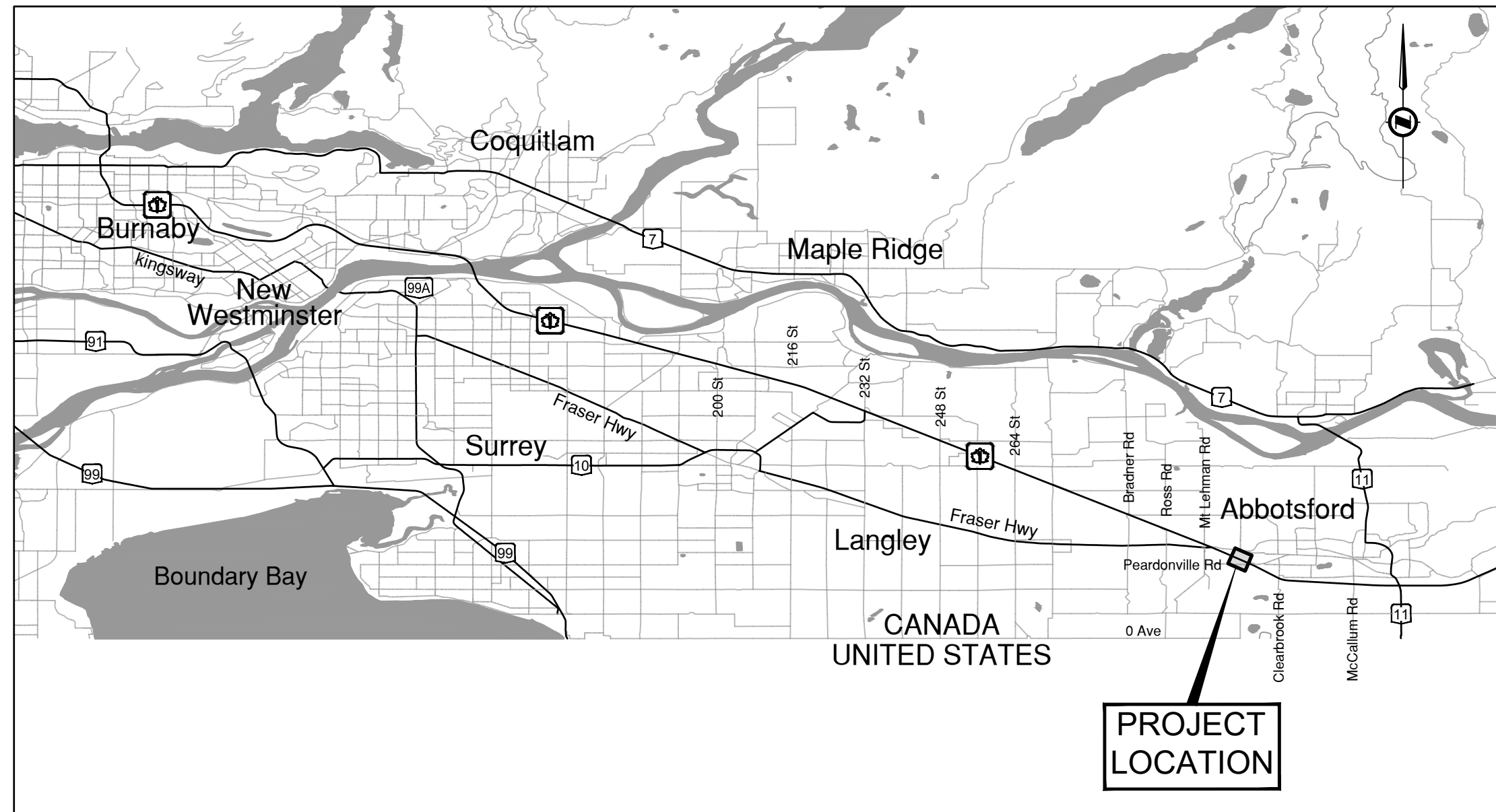
Ministry of
Transportation
and Infrastructure

PROJECT NO. 13253-0001

FRASER VALLEY HIGHWAY 1 CORRIDOR IMPROVEMENT PROGRAM

HIGHWAY 1 – ADVANCED WORKS

FISHTRAP CREEK ENVIRONMENTAL REHABILITATION



LOCATION MAP
N.T.S.

L2000 - HIGHWAY 1 EASTBOUND
STA. P.O.T. 2042+27.808 - STA. P.O.T. 2042+92.145

0.064 km

LANDMARK KILOMETRE INVENTORY SEGMENT 0520 (EASTBOUND)
km 10.84 TO km 10.90

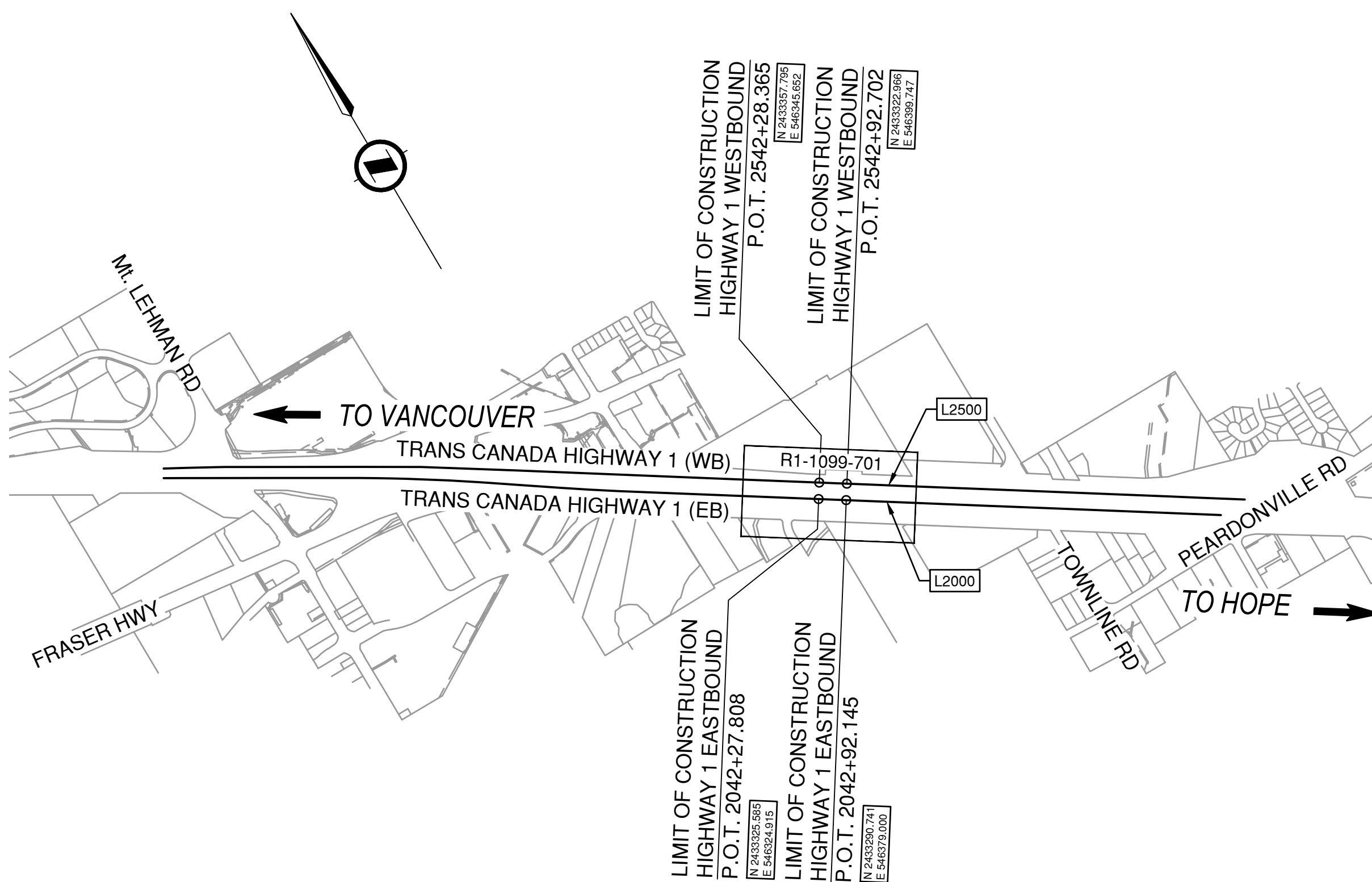
L2500 - HIGHWAY 1 WESTBOUND
STA. P.O.T. 2542+28.365 - STA. P.O.T. 2542+92.702

0.064 km

LANDMARK KILOMETRE INVENTORY SEGMENT 0521 (WESTBOUND)
km 7.80 TO km 7.74

DRAWING INDEX

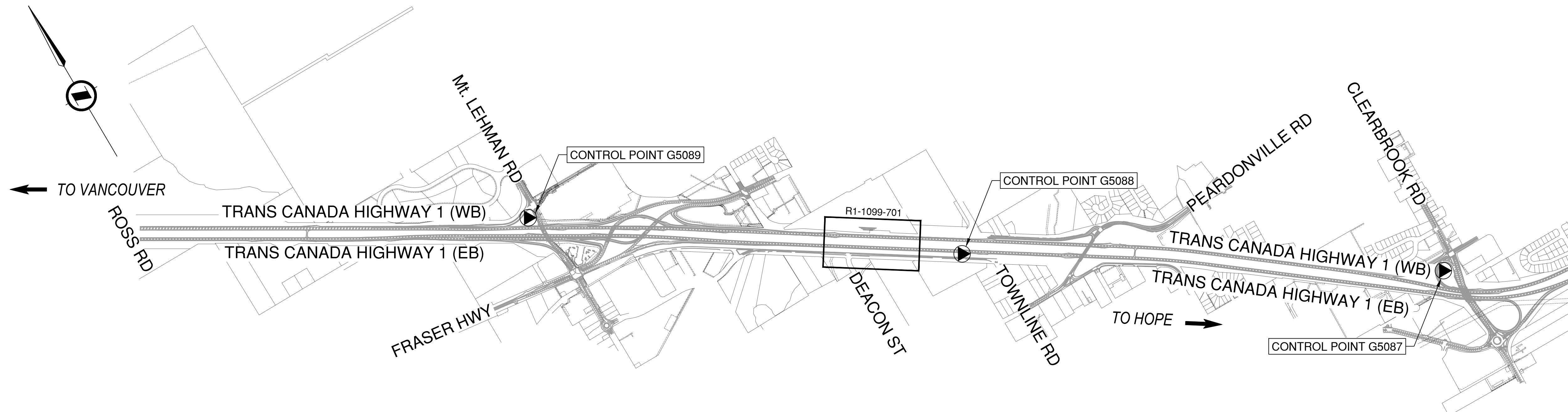
R1-1099-000	COVER SHEET
R1-1099-001	LOCATION MAP / KEY PLAN / DRAWING INDEX
R1-1099-002	SURVEY CONTROL
R1-1099-003	LEGEND
R1-1099-701	DRAINAGE
R1-1099-711 to 712	PROFILES
R1-1099-721	TYPICAL SECTIONS
R1-1099-751	MISCELLANEOUS DETAILS - SETTLEMENT MONITORING
R1-1099-752 to 753	MISCELLANEOUS DETAILS - DRAINAGE



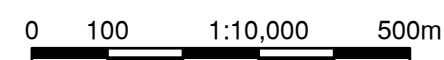
KEY PLAN
0 100 1:10,000 500m

BRITISH COLUMBIA MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SOUTH COAST REGION HIGHWAY DESIGN AND GEOMATICS ENGINEERING	
LOCATION MAP / KEY PLAN / DRAWING INDEX HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION	
ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1008163 	DESIGNED: H. ZHANG DATE: 2024-01-24 QUALITY CONTROL: S. BIDULKA DATE: 2024-01-24 QUALITY ASSURANCE: P. TSANG DATE: 2024-01-24 DRAWN: H. YIN DATE: 2024-01-24
FILE NUMBER 2021-2305-00	PROJECT NUMBER 13253-0001 REG 1 DRAWING NUMBER R1-1099-001 REV

PLOT DATE: 2024/01/24 G:\2021-2305-00\civil\model\MoTI_Prelod_Gop-Culvrs_Working_Drawings_DrawingProduction\000_CoverKeyPlanLegend\Contract_1\R1-1099-001.dwg



CONTROL POINT LOCATIONS



SURVEY CONTROL TABLE

Date: 2021/01/19		Origin: GCM 956441								
Project: Highway 1 - 264th St to No3 Rd - SEGMENT 2			Tack Point: G5087			ACSF: 0.999621				
Horizontal Datum: UTM Z10 NAD 83 CSRS						Latitude: 49° 2' 20.34440"				
Vertical Datum: CGG2013a geoid using CGVD2013 datum						Longitude: -122° 20' 17.29475"				
Point ID	Local		Orthometric Height	UTM		Ellipsoidal Height	C.S.F.	Class	Type	
	Northing	Easting		Northing	Easting					
G5087	2432000.512	548372.356	62.024	5432000.512	548372.356	43.104	0.999622	Project	Rebar	
G5088	2433092.626	546658.564	57.990	5433092.212	546659.214	39.085	0.999621	Project	Rebar	
G5089	2434153.518	545158.360	97.286	5434152.702	545159.578	78.392	0.999613	Project	Rebar	

ALL LOCAL COORDINATES ARE DERIVED BY FIRST SCALING FROM THE TACK POINT AND THEN REMOVING THE 3000000 DIGIT FROM THE NORTHING

NOTES:

- * THE CGG2013a GEOID USES THE CGVD2013 VERTICAL DATUM AND THE HT2_0 GEOID USES THE CGVD28 VERTICAL DATUM.
- * CORRIDOR CONTROL CAN BE DERIVED FROM ROBUST NETWORK ADJUSTMENTS USING SOURCES SUCH AS MASCOT, ACTIVE, AND/OR PPP FOR VALID ABSOLUTE ACCURACIES.
- * PROJECT CONTROL ORIGINATES FROM A CORRIDOR POINT AND CLOSES TO A NETWORK CONFINED WITHIN THE SPECIFIC PROJECT TO PROVIDE SURVEY GRADE RELATIVE ACCURACIES.
- * "NAME" STATIC BRASS CAP MONUMENTS-YEAR. "G" STATIC TAG #-YEAR. "K" MULTI EPOCH RTK, "P" CLOSED TOTAL STATION TRAVERSE.

PLOT DATE: 2024/04/09 09:04:2021-2305-00\civil\model\MoTI_Prelod_Cop-Culvrs_Working_Drawings_DrawingProduction\000_CoverKeyPlanLegend\Contract 1\R1-1099-002.dwg

SCALE AS SHOWN		CAD FILENAME: R1-1099-002 FILE NUMBER: 2021-2305-00 PLOT DATE: 2024-01-24																																																																					
SURVEY CONTROL HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION		ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1000163																																																																					
<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>REVISIONS</th> <th>NAME</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		REV	DATE	REVISIONS	NAME																																									<table border="1"> <tr> <td>DESIGNED</td> <td>H. ZHANG</td> <td>DATE</td> <td>2024-01-24</td> </tr> <tr> <td>QUALITY CONTROL</td> <td>S. BIDULKA</td> <td>DATE</td> <td>2024-01-24</td> </tr> <tr> <td>QUALITY ASSURANCE</td> <td>P. TSANG</td> <td>DATE</td> <td>2024-01-24</td> </tr> <tr> <td>DRAWN</td> <td>H. YIN</td> <td>DATE</td> <td>2024-01-24</td> </tr> <tr> <td>PROJECT NUMBER</td> <td>13253-0001</td> <td>REG</td> <td>1</td> </tr> <tr> <td>DRAWING NUMBER</td> <td>R1-1099-002</td> <td>REV</td> <td> </td> </tr> </table>		DESIGNED	H. ZHANG	DATE	2024-01-24	QUALITY CONTROL	S. BIDULKA	DATE	2024-01-24	QUALITY ASSURANCE	P. TSANG	DATE	2024-01-24	DRAWN	H. YIN	DATE	2024-01-24	PROJECT NUMBER	13253-0001	REG	1	DRAWING NUMBER	R1-1099-002	REV	
REV	DATE	REVISIONS	NAME																																																																				
DESIGNED	H. ZHANG	DATE	2024-01-24																																																																				
QUALITY CONTROL	S. BIDULKA	DATE	2024-01-24																																																																				
QUALITY ASSURANCE	P. TSANG	DATE	2024-01-24																																																																				
DRAWN	H. YIN	DATE	2024-01-24																																																																				
PROJECT NUMBER	13253-0001	REG	1																																																																				
DRAWING NUMBER	R1-1099-002	REV																																																																					

LEGEND

EXISTING SYMBOLS

SURVEY

SPOT ELEVATION	+
BENCHMARK	×
REFERENCE POINT	▲
DETAIL HUB	△
STANDARD IRON PIN	● OIP
CONCRETE POST MONUMENT	● MON
CONTROL MONUMENT	▲
ROCK POST MONUMENT	● MON
STANDARD BRASS CAP MONUMENT	● MON
LEAD PLUG	■
TEST HOLE	⊕ TH
TEST PIT	⊗
WOODEN POST	⊗
ALUMINUM POST	◆
ANGLE IRON POST	▲
WITNESS POST	⊗ WT
DOMINION IRON POST	■
NON-STD. ROUND IRON POST	●
NON-STD. SQUARE IRON POST	■
MONITOR POINT	▲ MC

DRAINAGE & UTILITIES

MANHOLE	●
SANITARY/STORM CLEANOUT MANHOLE	● MH Clean
POWER MANHOLE	● MH Power
SANITARY SEWER MANHOLE	● MH San
STORM SEWER MANHOLE	● MH Storm
TELEPHONE MANHOLE	● MH Tel
UNKNOWN MANHOLE	● MH Unk
VAULT MANHOLE	● MH Vault
WATER MANHOLE	● MH Water
MH/CB DRYWELL	● MH/CB Drywell
CB LAWN	● CB Lawn
CATCH BASIN	■
CATCH BASIN MANHOLE	■
ASPHALT SPILLWAY	■
DRAINAGE GRATE	■
CULVERT	— CI
CULVERT INLET	— CI
CULVERT OUTLET	— CO
CULVERT KINK	—
RIPRAP	■

EXISTING LINE TYPES

MAN-MADE FEATURES

CONCRETE ROAD BARRIER	—
BROKEN WHITE LINE	—
SOLID WHITE LINE	—
SOLID YELLOW LINE	—
DOUBLE YELLOW LINE	—
CENTRELINE	—
ROAD SHOULDER	—
PAVEMENT EDGE	—
ASPHALT CURB	—
GRAVEL ROAD	—
SIDEWALK	—
FENCE	—
GARDEN, LAWNS, VEGETATION	—
HEDGE, BUSH LINE & TREE LINE	—
RETAINING WALL	—
CN TRACK BED	—

TOPOGRAPHY

BOTTOM OF BANK	—
TOP OF BANK	—

BOUNDARIES

EASEMENT	—
GAZETTE BOUNDARY	—
PARCEL BOUNDARY	—
QUARTER SECTION LINE	—
SECTION LINE & DISTRICT LOT BOUNDARY	—

HYDROLOGY

EDGE OF WATER	—
DITCH CENTER / DRAINAGE	—
EDGE OF DITCH	—
CENTER OF CREEK	—
STORM SEWER, MANHOLE & FLOW ARROW	—

UTILITIES

SANITARY SEWER, MANHOLE & FLOW ARROW	—
UNDERGROUND DRAIN PIPE	—
WATER MAIN	—
UNDERGROUND ELECTRICAL	—
GAS MAIN	—
UNDERGROUND MISCELLANEOUS	—
UNDERGROUND TELEPHONE	—
FIBRE OPTIC	—
OIL	—
COMMUNICATIONS AERIAL	—

ENVIRONMENTAL

CLASS A / AO WATERCOURSES	—
---------------------------	---

PROPOSED SYMBOLS

AERIAL UTILITIES

POWER GUY POLE	—
TELEPHONE GUY POLE	—
POWER / TELEPHONE GUY POLE	—
DEADMAN	—
ANCHOR GUY WIRE	—
HIGH TENSION POLE	—
HIGH TENSION TOWER	—
POWER POLE	—
TELEPHONE POLE	—
POWER / TELEPHONE POLE	—
POWER POLE WITH TRANSFORMER	—
POWER / TELEPHONE WITH TRANSFORMER	—
PEDESTAL (TELUS)	—
TELEPHONE BOOTH	—

DETAIL

GATE POST	—
GUARD POST	—
FLAG POLE	—
DELINEATOR POST	—
MAILBOX	—
POST MOUNTED DELINEATOR (YELLOW)	—
POST MOUNTED DELINEATOR (WHITE)	—
TOP MOUNTED BI-DIRECTIONAL REFLECTOR	—
TOP OR SIDE MOUNTED MONO-DIRECTIONAL YELLOW REFLECTOR	—
TOP OR SIDE MOUNTED MONO-DIRECTIONAL WHITE REFLECTOR	—
RAISED PAVEMENT MARKERS (WHITE AND YELLOW)	—

ROAD SIGNS

ONE-POST SIGN	—
TWO-POST SIGN	—
BREAKAWAY STEEL	—
STD. DAVIT POLE - TYPE 3	—
STD. COMBINATION POLE - TYPE 1	—
HEAVY DUTY DAVIT POLE - TYPE 6	—
H.D. COMBINATION POLE - TYPE 7	—
HEAVY POLE - TYPE H	—
H. COMBINATION POLE - TYPE H	—
CANTILEVER STRUCTURE	—
SIGN BRIDGE STRUCTURE	—

GEOTECHNICAL

SETTLEMENT GAUGE	—
DEEP SETTLEMENT GAUGE	—
INCLINOMETER	—
PIEZOMETER	—
SETTLEMENT PIN	—

DRAINAGE & UTILITIES

MANHOLE	●
SANITARY/STORM CLEANOUT MANHOLE	● MH Clean
POWER MANHOLE	● MH Power
SANITARY SEWER MANHOLE	● MH San
STORM SEWER MANHOLE	● MH Storm
TELEPHONE MANHOLE	● MH Tel
UNKNOWN MANHOLE	● MH Unk
VAULT MANHOLE	● MH Vault
WATER MANHOLE	● MH Water
MH/CB DRYWELL	● MH/CB Drywell
CATCH BASIN (SINGLE)	■
CATCH BASIN (TWIN)	■
LAWN BASIN	■
RIPRAP SPILLWAY C/W DRAINAGE BARRIER	■
DRAINAGE BARRIER	—
CLEANOUT	—
STORM WATER TREATMENT DEVICE	—
CULVERT INLET / OUTLET C/W RIPRAP	—
CULVERT HEADWALL C/W TRASH RACK	—
RIPRAP	■

UNDERGROUND

BREATHER VENT PIPE	—
FILLER CAP	—
FUEL / GAS PUMP	—
FUEL TANK	—
SEPTIC TANK	—
UNDERGROUND MARKER	—
IRRIGATION JUNCTION BOX	—
IRRIGATION SPRINKLER HEAD	—
UNDERGROUND TRANSFORMER	—

ELECTRICAL

JUNCTION BOX	—
UTILITY POLE	—
ELECTRICAL OUTLET	—
LAMP STANDARD	—
KIOSK	—
TRAFFIC SIGNAL	—
TRAFFIC COUNTER	—
TRAFFIC SIGNAL CONTROL BOX	—

METERS

VALVE	—
SERVICE VALVE	—
GAS VALVE	—
WATER VALVE	—
WATER METER	—
FIRE HYDRANT	—
STANDPIPE WATER BLOWOFF	—
AIR RELEASE VALVE	—

PROPOSED LINE TYPES

FEATURES

ROAD CENTRELINE	—
PAVEMENT EDGE	—
GRAVEL SHOULDER	—
ASPHALT CURB	—
CURB AND GUTTER	—
CONCRETE ROADSIDE BARRIER	—
RETAINING WALL	—
SOLID WHITE LINE	—
SOLID YELLOW LINE	—
BROKEN WHITE LINE	—
DECELERATION OR ACCELERATION LANE	—
CUT / FILL LINE	—
SAWCUT LINE	—
CLEARING & GRUBBING	—
CLEARING	—
BERM	—
SOUNDWALL	—
FENCE	—
BICYCLIST SIDEWALK FENCE ON CONCRETE BARRIER	—
FENCE REMOVAL	—
LIMIT OF OVERBURDEN REMOVAL	—

UTILITIES

DITCH	—
EDGE OF DITCH	—
CULVERT	—
SUBDRAIN	—
SWALE	—
BIOSWALE	—
FILTER STRIP	—
STORM SEWER, MANHOLE & FLOW ARROW	—
SANITARY SEWER, MANHOLE & FLOW ARROW	—
WATER MAIN	—
GAS MAIN	—
UTILITY ABANDONED	—

BOUNDARIES

RIGHT OF WAY BOUNDARY	—
LICENSE TO CONSTRUCT	—

PLOT DATE: 2024/01/24 0:\2021-2305-000\civil\model\MoTI_Prelod_Gop_Culverts_Working_Drawings_DrawingProduction\000_CoverKeyPlanLegend\Contract_1\R1-1099-003.dwg



MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY DESIGN AND GEOMATICS ENGINEERING

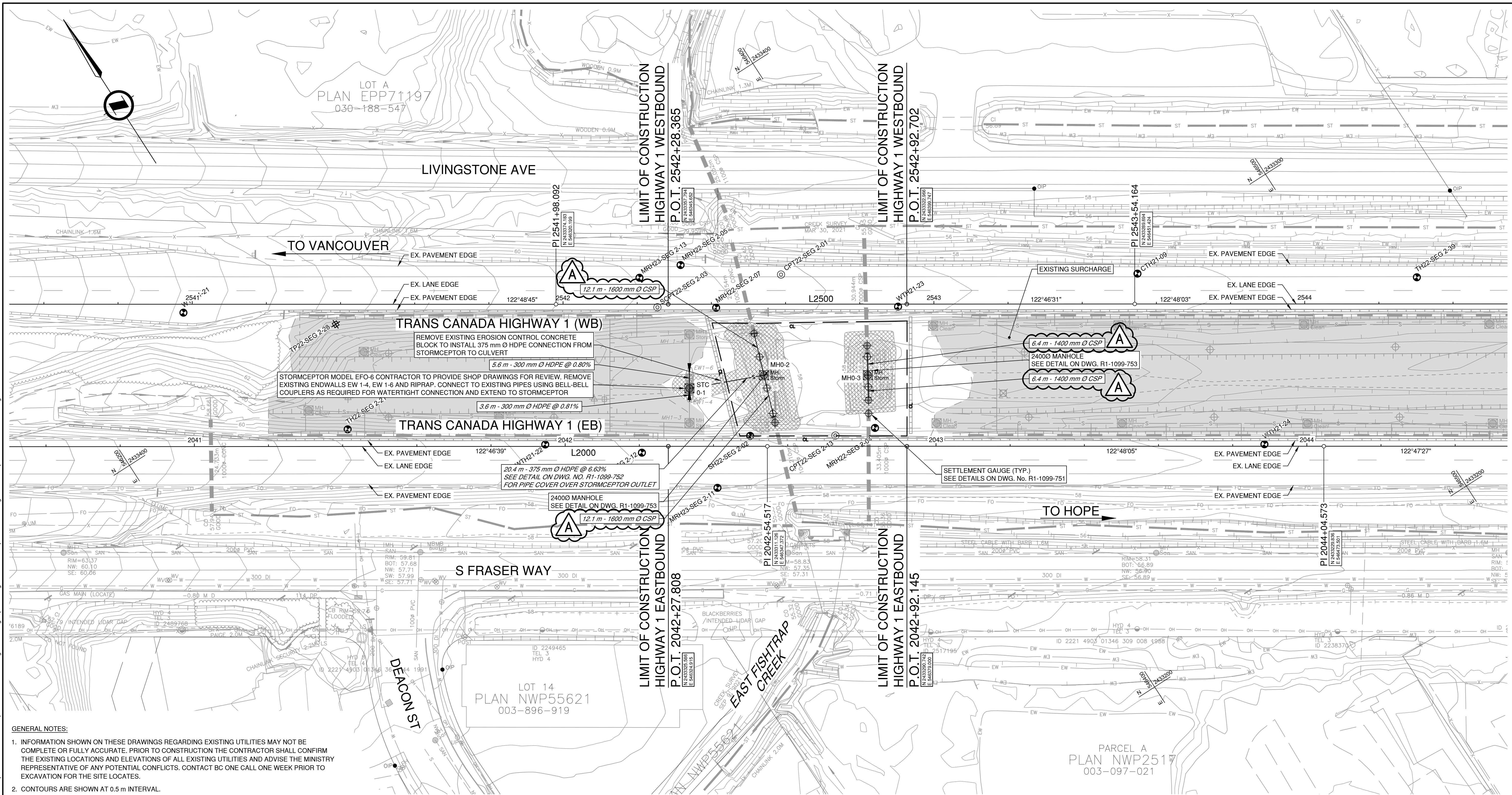
SCALE	N.T.S.		
CAD FILENAME	R1-1099-003		
FILE NUMBER	2021-2305-00		
PLOT DATE	2024-01-24		
REV	DATE	REVISIONS	NAME

LEGEND
HIGHWAY 1 - ADVANCED WORKS
FISHTRAP CREEK ENVIRONMENTAL REHABILITATION

DESIGNED	D. OWOLABI	DATE	2024-01-24
QUALITY CONTROL	E. FINNEY	DATE	2024-01-24
QUALITY ASSURANCE	J. FITZGERALD	DATE	2024-01-24
DRAWN	A. SHEWAN	DATE	2024-01-24
PROJECT NUMBER	13253-0001	REG	1
DRAWING NUMBER	R1-1099-003	REV	

ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT TO PRACTICE #006165
S. D. BIDULKA
#29477
ENGINEER

PLOT DATE: 2024/04/09 G:\2021-2305-00\civil\model\W01_Prelod_Cop-Culverts_Working_Drawings_DrawingProduction\700_DrainageUtilities\R1-1099-701.dwg

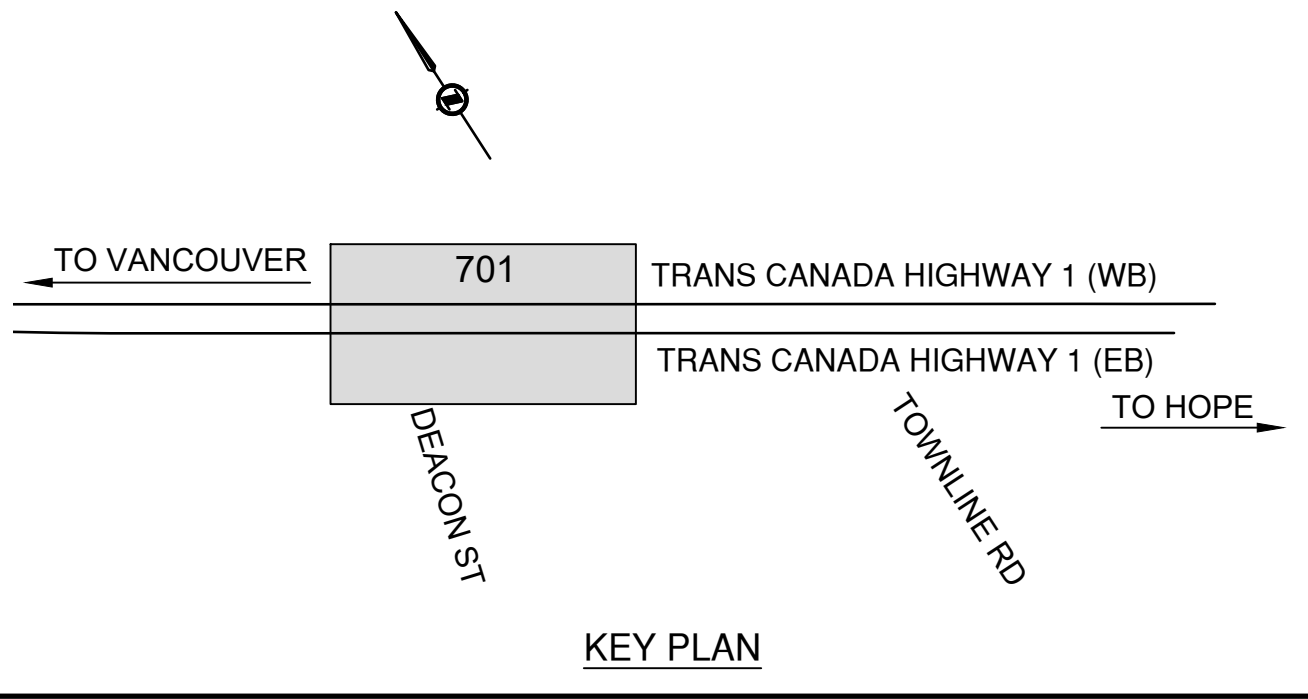


- GENERAL NOTES:**
- INFORMATION SHOWN ON THESE DRAWINGS REGARDING EXISTING UTILITIES MAY NOT BE COMPLETE OR FULLY ACCURATE. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONFIRM THE EXISTING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AND ADVISE THE MINISTRY REPRESENTATIVE OF ANY POTENTIAL CONFLICTS. CONTACT BC ONE CALL ONE WEEK PRIOR TO EXCAVATION FOR THE SITE LOCATES.
 - CONTOURS ARE SHOWN AT 0.5 m INTERVAL.

CLEARING TOTAL THIS SHEET
0.1501 ha

- LEGEND**
- EXISTING SURCHARGE
 - GRANULAR BACKFILL OVER PIPES/CULVERTS
SEE DRAWING R1-1099-752 FOR DETAILS

- FOR SURVEY CONTROL
SEE DWG. No. R1-1099-002
- FOR PROFILES
SEE DWG. No. R1-1099-711 & 712
- FOR TYPICAL SECTIONS
SEE DWG. No. R1-1099-721



Associated Engineering

SCALE 0 5 1:500 25m

CAD FILENAME R1-1099-701
FILE NUMBER 2021-2305-00
PLOT DATE 2024-01-30

REV	DATE	REVISIONS	NAME
A	2024-01-30	REVISE C.S.P. PIPE	E. FINNEY

BRITISH COLUMBIA MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY DESIGN AND GEOMATICS ENGINEERING

DRAINAGE
HIGHWAY 1 - ADVANCED WORKS
FISHTRAP CREEK ENVIRONMENTAL REHABILITATION
STA. 2042+27.808 TO STA. 2042+92.145 / STA. 2542+28.365 TO STA. 2542+92.702

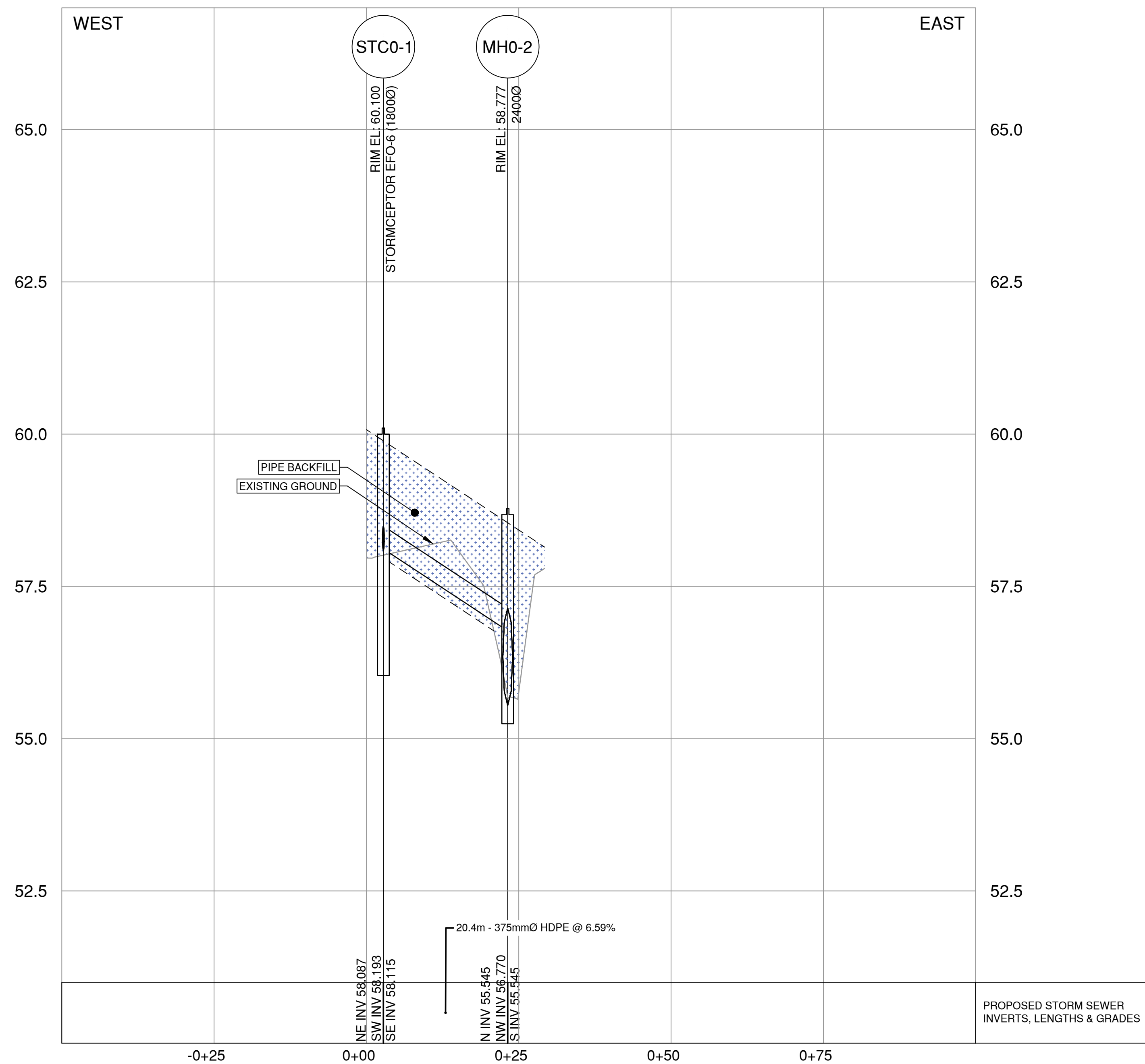
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT TO PRACTICE 1000163

DESIGNED D. QWOLABI / H. ZHANG DATE 2024-01-30
QUALITY CONTROL E. FINNEY / S. BIDULKA DATE 2024-01-30
QUALITY ASSURANCE J. FITZGERALD / P. TSANG DATE 2024-01-30
DRAWN A. SHEWAN / H. YIN DATE 2024-01-30

PROJECT NUMBER	REG	DRAWING NUMBER	REV
13253-0001	1	R1-1099-701	A

2024-04-10

PLOT DATE: 2024/04/09 0:12:2305-000\civil\model\NoTL_Prelod_Cop-Culverts_Working_Drawings_DrawingProduction\700_DrainageUtilities\R1-1099-711-712.dwg



**STORMCEPTOR
STC0-1 TO MH0-2**

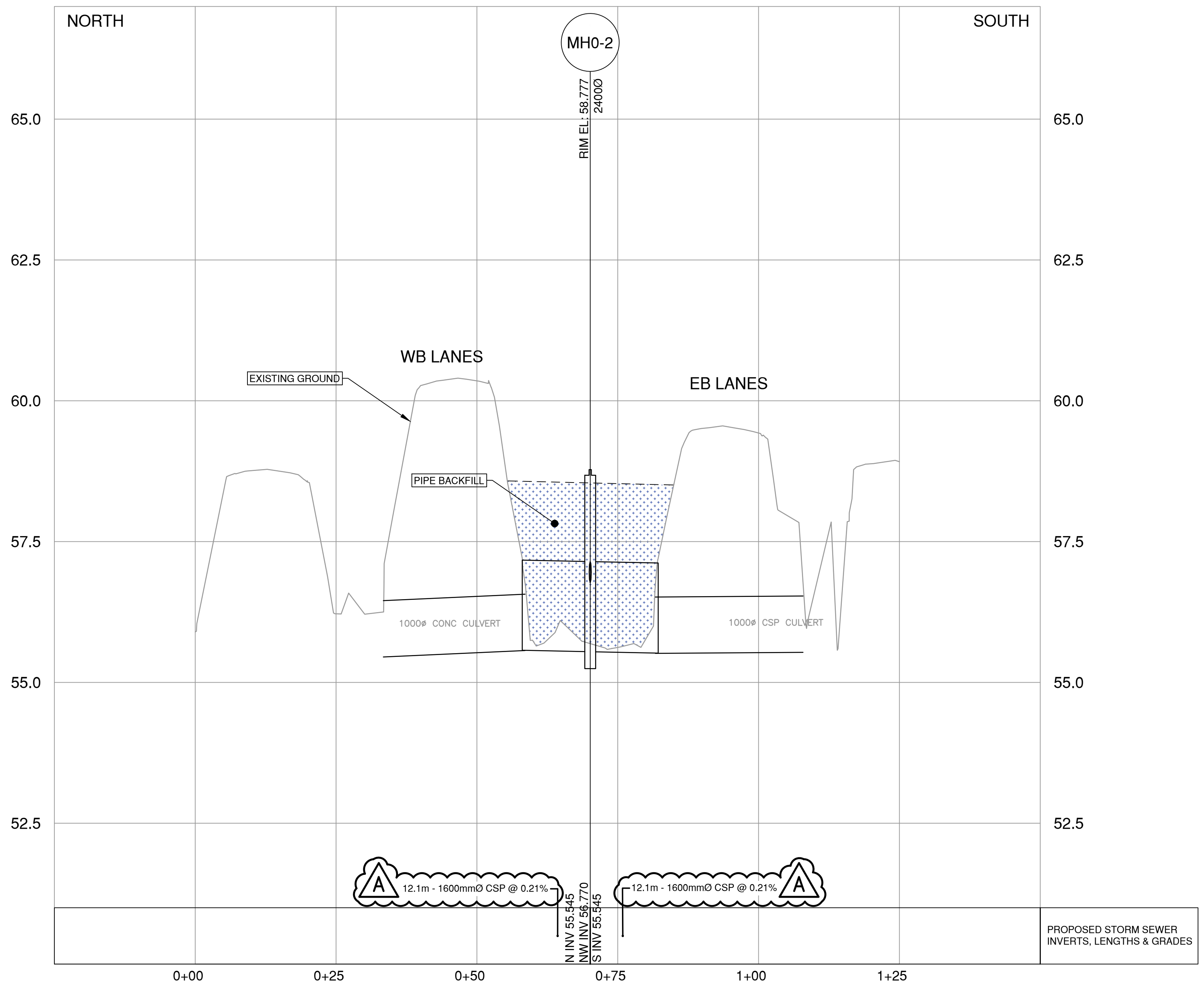
PROPOSED STORM SEWER
INVERTS, LENGTHS & GRADES

- FOR SURVEY CONTROL
SEE DWG. No. R1-1099-002
- FOR PLAN / DRAINAGE
SEE DWG. No. R1-1099-701
- FOR TYPICAL SECTIONS
SEE DWG. No. R1-1099-721
- FOR TYPICAL DETAILS
SEE DWG. No. R1-1099-751 to 753

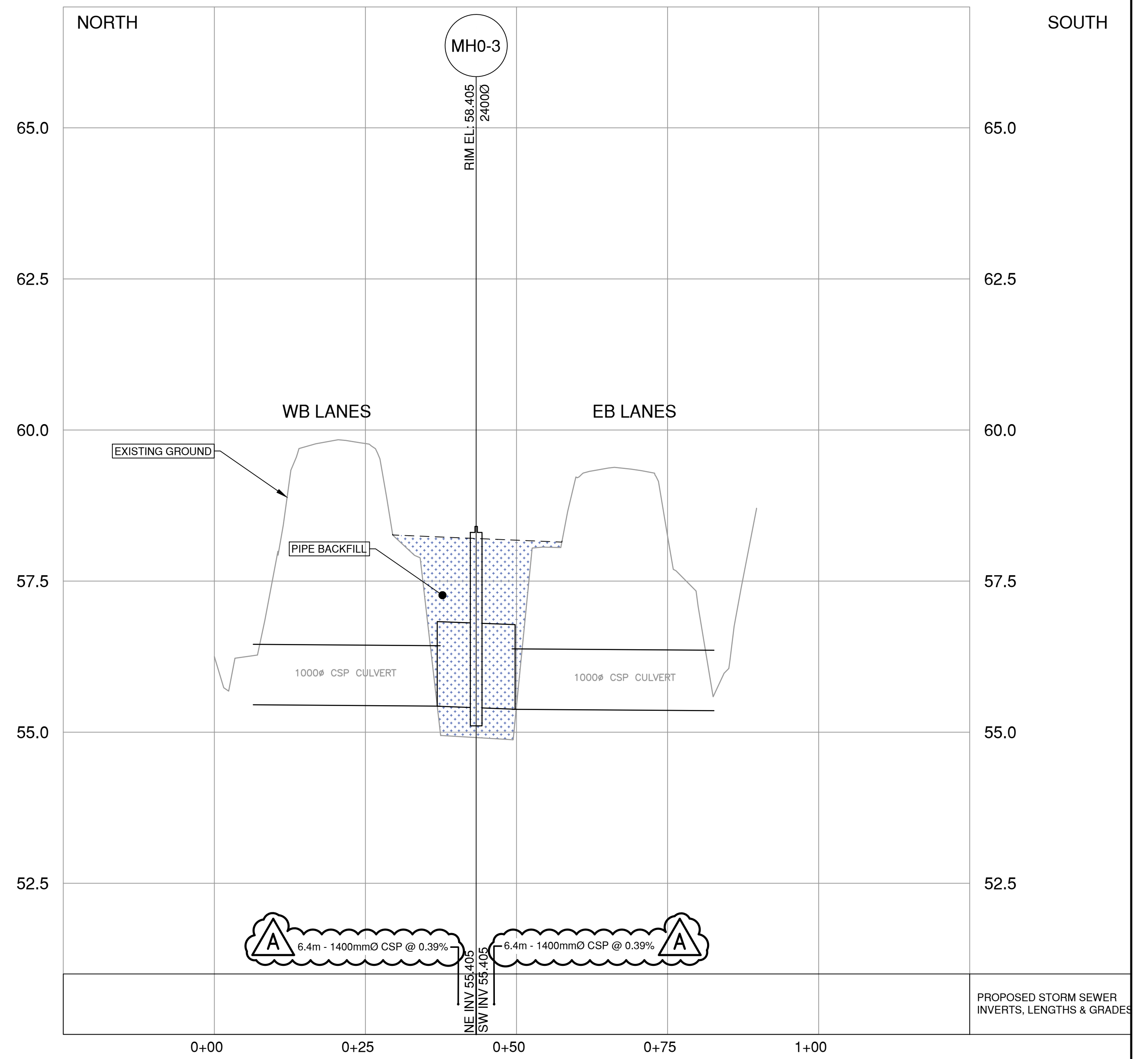
		CAD FILENAME: R1-1099-711	
SCALE: 0 5 H 1:500 25m		FILE NUMBER: 2021-2305-00	
0 0.5 V 1:50 2.5m		PLOT DATE: 2024-01-24	
REV	DATE	REVISIONS	NAME

		MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SOUTH COAST REGION HIGHWAY DESIGN AND GEOMATICS ENGINEERING	
STORM SEWER PROFILE			
HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION STORMCEPTOR (STC0-1 TO MH0-1)			
ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1000163		DESIGNED: D. OWOLABI DATE: 2024-01-24	
QUALITY ASSURANCE: J. FITZGERALD DATE: 2024-01-24		DRAWN: A. SHEWAN DATE: 2024-01-24	
PROJECT NUMBER 13253-0001	REG 1	DRAWING NUMBER R1-1099-711	REV

PLOT DATE: 2024/04/09 0:23:05-00\civil\model\NoTL_Prelod_Cop-Culverts_Working_Drawings_DrawingProduction\700_DrainageUtilities\R1-1099-711-712.dwg



**WEST FISHTRAP CREEK
CULVERT EXTENSION**

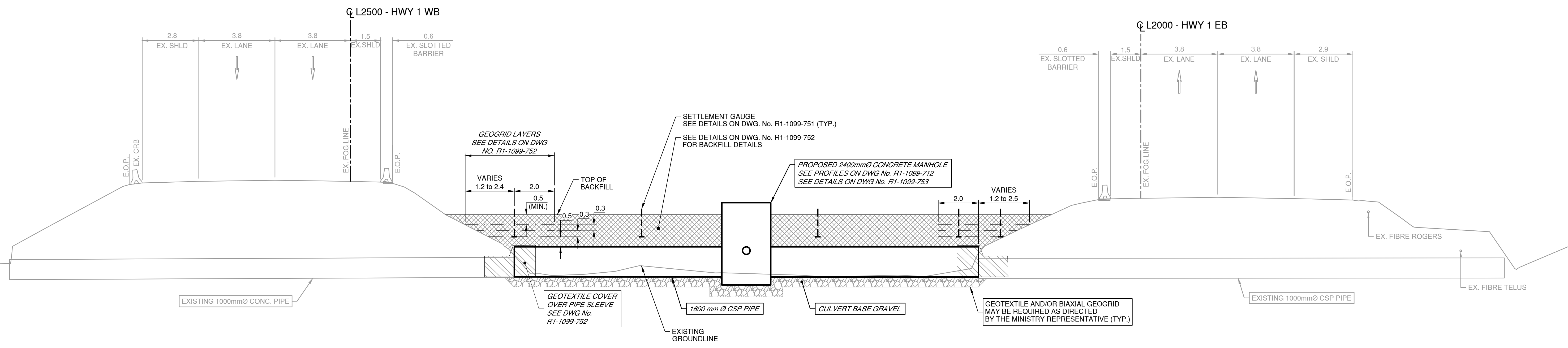


**EAST FISHTRAP CREEK
CULVERT EXTENSION**

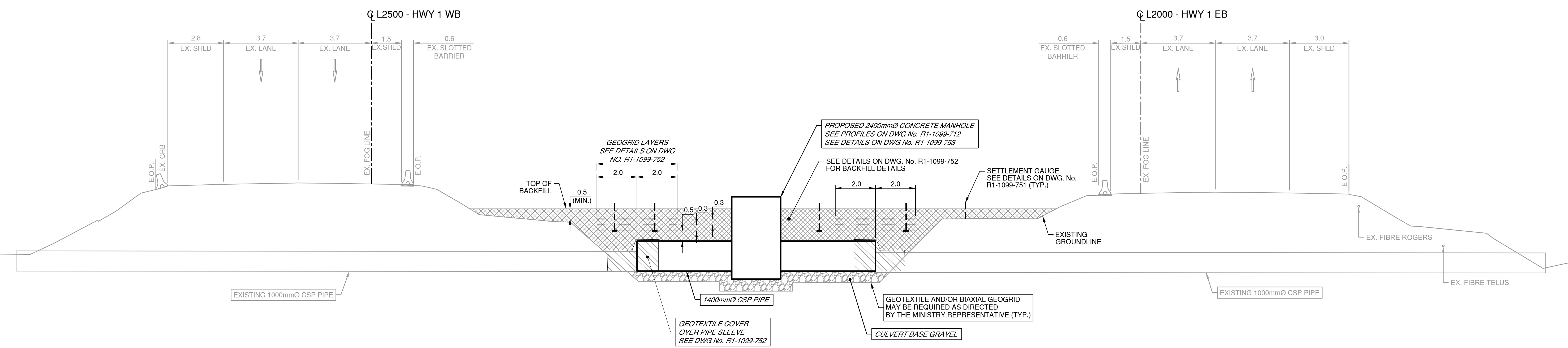
- FOR SURVEY CONTROL
SEE DWG. No. R1-1099-002
- FOR PLAN / DRAINAGE
SEE DWG. No. R1-1099-701
- FOR TYPICAL SECTIONS
SEE DWG. No. R1-1099-721
- FOR TYPICAL DETAILS
SEE DWG. No. R1-1099-751 to 753

Associated Engineering		BRITISH COLUMBIA		MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SOUTH COAST REGION HIGHWAY DESIGN AND GEOMATICS ENGINEERING																																																	
SCALE $\frac{0}{0} \frac{5}{0.5} \frac{H}{V} \frac{1:500}{1:50} \frac{25m}{2.5m}$		CAD FILENAME: R1-1099-712 FILE NUMBER: 2021-2305-00 PLOT DATE: 2024-01-30		CULVERT PROFILES HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION EAST & WEST CULVERT EXTENSIONS																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>REVISIONS</th> <th>NAME</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2024-01-30</td> <td>REVISE C.S.P. PIPE</td> <td>E. FINNEY</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REV	DATE	REVISIONS	NAME	A	2024-01-30	REVISE C.S.P. PIPE	E. FINNEY																	ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1000163		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>D. OWOLABI</td> <td>DATE</td> <td>2024-01-30</td> </tr> <tr> <td>QUALITY CONTROL</td> <td>E. FINNEY</td> <td>DATE</td> <td>2024-01-30</td> </tr> <tr> <td>QUALITY ASSURANCE</td> <td>J. FITZGERALD</td> <td>DATE</td> <td>2024-01-30</td> </tr> <tr> <td>DRAWN</td> <td>A. SHEWAN</td> <td>DATE</td> <td>2024-01-30</td> </tr> <tr> <td>PROJECT NUMBER</td> <td>13253-0001</td> <td>REG</td> <td>1</td> </tr> <tr> <td>DRAWING NUMBER</td> <td>R1-1099-712</td> <td>REV</td> <td>A</td> </tr> </table>		DESIGNED	D. OWOLABI	DATE	2024-01-30	QUALITY CONTROL	E. FINNEY	DATE	2024-01-30	QUALITY ASSURANCE	J. FITZGERALD	DATE	2024-01-30	DRAWN	A. SHEWAN	DATE	2024-01-30	PROJECT NUMBER	13253-0001	REG	1	DRAWING NUMBER	R1-1099-712	REV	A
REV	DATE	REVISIONS	NAME																																																		
A	2024-01-30	REVISE C.S.P. PIPE	E. FINNEY																																																		
DESIGNED	D. OWOLABI	DATE	2024-01-30																																																		
QUALITY CONTROL	E. FINNEY	DATE	2024-01-30																																																		
QUALITY ASSURANCE	J. FITZGERALD	DATE	2024-01-30																																																		
DRAWN	A. SHEWAN	DATE	2024-01-30																																																		
PROJECT NUMBER	13253-0001	REG	1																																																		
DRAWING NUMBER	R1-1099-712	REV	A																																																		

PLOT DATE: 2024/04/09 0:12:21-2305-000.civil.model\MoTI_Preload_Cop-Culverts_Working_Drawings_DrawingProduction\700_DrainageUtilities\R1-1099-721.dwg




L2000 / L2500 - TRANS CANADA HIGHWAY 1
SECTION SHOWN AT STA. 2042+58.093 (SKEWED)
(WEST FISHTRAP CULVERT)



L2000 / L2500 - TRANS CANADA HIGHWAY 1
SECTION SHOWN AT STA. 2042+81.830 (SKEWED)
(EAST FISHTRAP CULVERT)

- NOTES:**
- ALL DIMENSIONS SHOWN IN METRES UNLESS OTHERWISE NOTED.
 - GRANULAR TRENCH BACKFILL AS PER MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE STANDARDS AND SPECIFICATIONS.

- FOR SURVEY CONTROL
SEE DWG. No. R1-1099-002
- FOR PLAN/DRAINAGE
SEE DWG. No. R1-1099-701
- FOR PROFILES/DRAINAGE
SEE DWG. No. R1-1099-711 & 712




Associated Engineering

SCALE 0 1 1:100 5m


CAD FILENAME: R1-1099-721
FILE NUMBER: 2021-2305-00
PLOT DATE: 2024-01-24

REV	DATE	REVISIONS	NAME



BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY DESIGN AND GEOMATICS ENGINEERING



TYPICAL SECTIONS
HIGHWAY 1 - ADVANCED WORKS
FISHTRAP CREEK ENVIRONMENTAL REHABILITATION

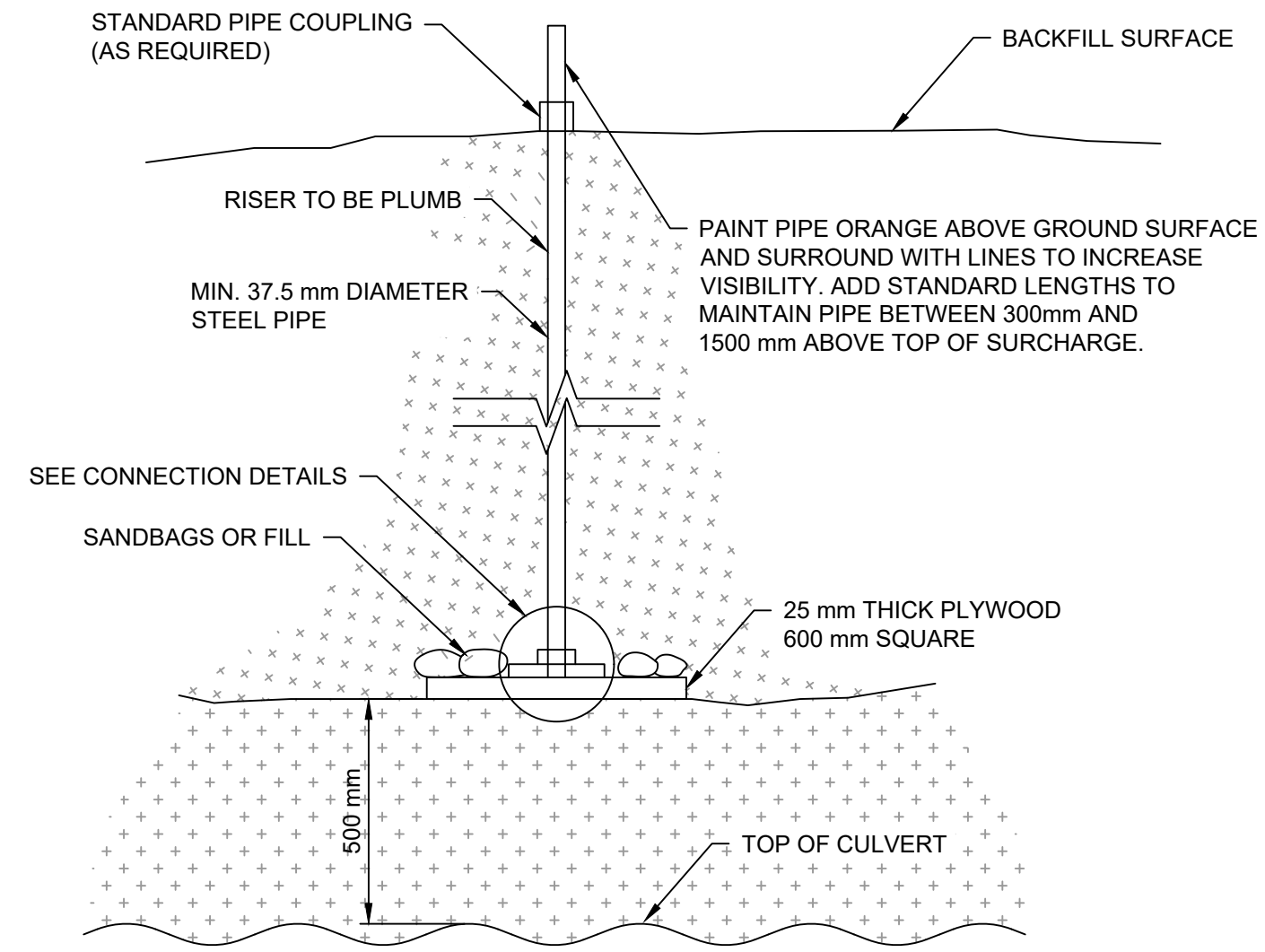
SHEET 1 of 1

DESIGNED	D. OWOLABI / D. MA	DATE	2024-01-24
QUALITY CONTROL	E. FINNEY	DATE	2024-01-24
QUALITY ASSURANCE	J. FITZGERALD	DATE	2024-01-24
DRAWN	A. SHEWAN	DATE	2024-01-24
PROJECT NUMBER	13253-0001	REG	1
DRAWING NUMBER	R1-1099-721	REV	

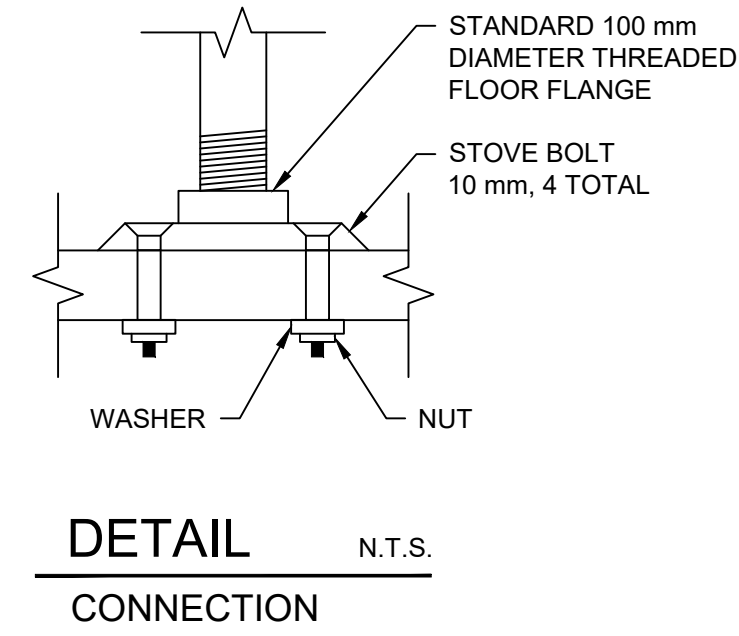
ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1000163

THURBER ENGINEERING LTD. PERMIT TO PRACTICE 1003319

PLOT DATE: 2024/04/09 0:20:21-2305-00\civ\moder\MoTL_Preload_Gap-Culverts_Working_Drawings\DrawingProduction\700_DrainageUtilities\R1-1099-751.dwg





DETAIL N.T.S.
TYPICAL SURFACE SETTLEMENT GAUGE OVER CULVERT



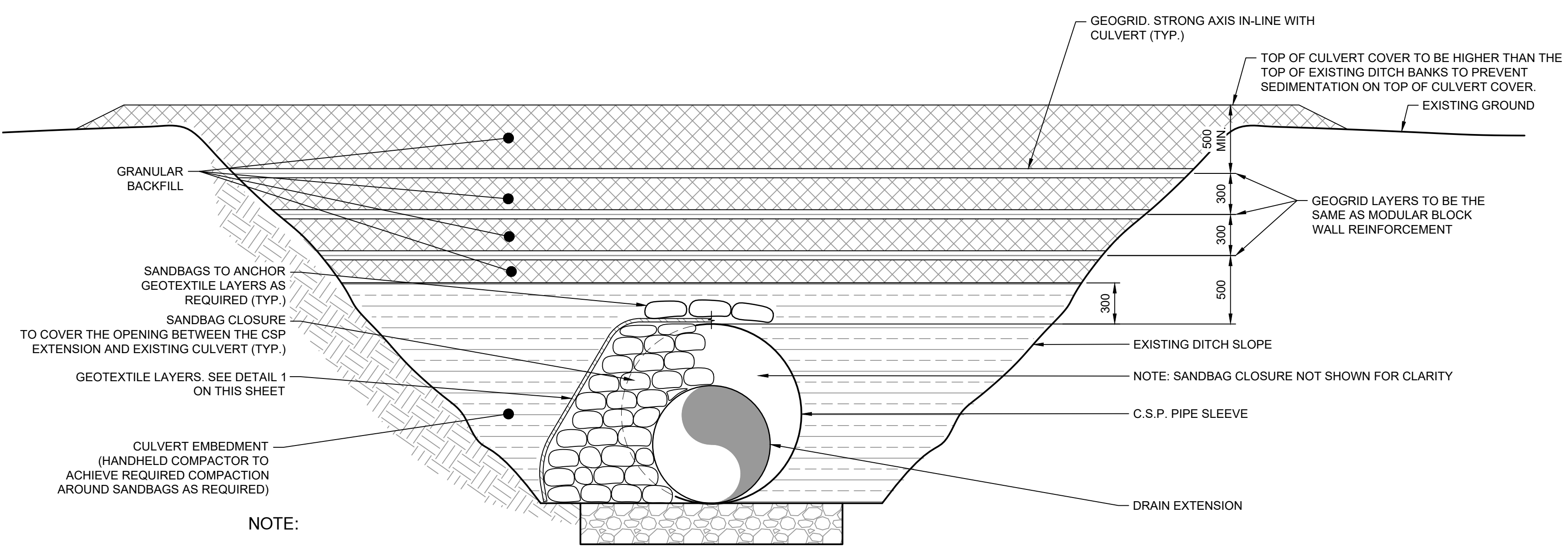
DETAIL N.T.S.
CONNECTION

GENERAL NOTES:

- ALL DIMENSIONS SHOWN IN MILLIMETRES UNLESS OTHERWISE NOTED.
- REFER TO DRAWINGS R1-1099-701 FOR LOCATION OF SETTLEMENT GAUGES.

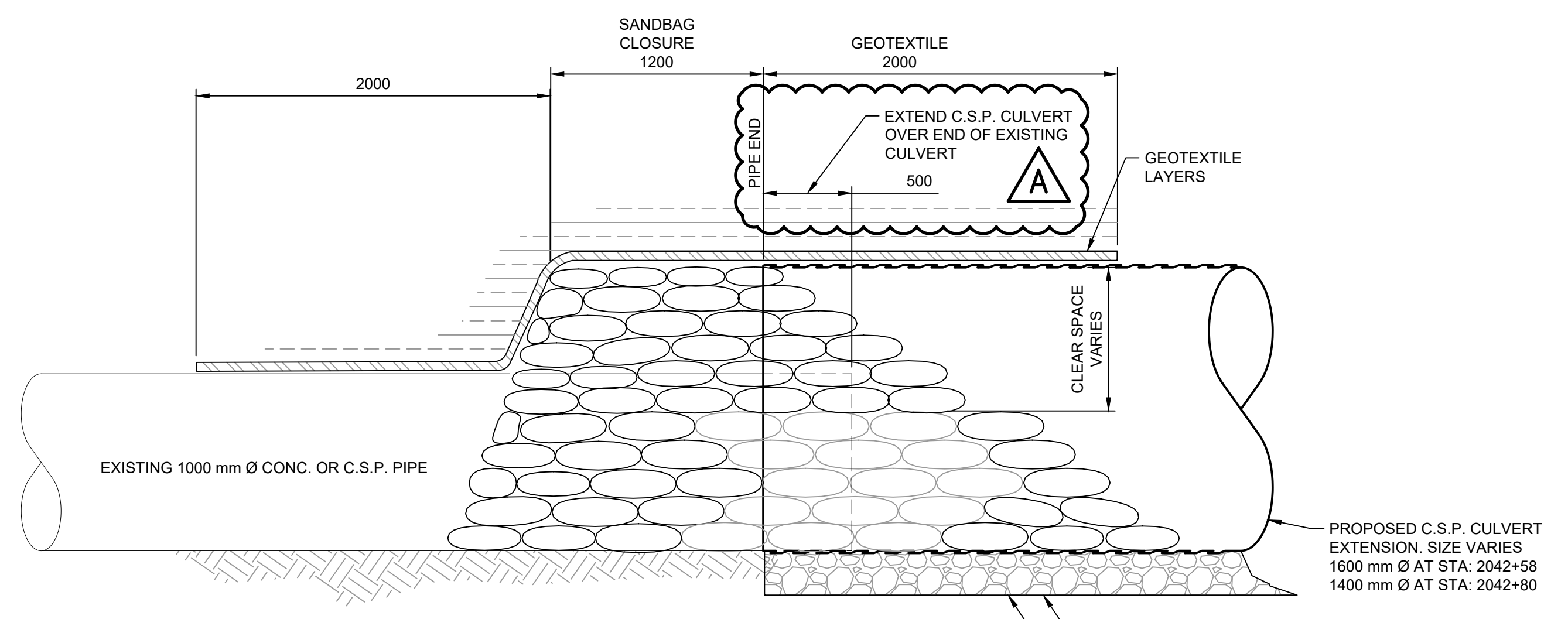
 Associated Engineering		 BRITISH COLUMBIA		MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SOUTH COAST REGION HIGHWAY DESIGN AND GEOMATICS ENGINEERING	
SCALE AS SHOWN		CAD FILENAME R1-1099-751		MISCELLANEOUS DETAILS - SETTLEMENT GAUGES HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION SHEET 1 of 1	
		FILE NUMBER 2021-2305-00			
		PLOT DATE 2024-01-24			
REV	DATE	REVISIONS	NAME		
				THURBER ENGINEERING LTD. PERMIT TO PRACTICE 1001319	
				DESIGNED D. MA DATE 2024-01-24 QUALITY CONTROL S. BIDJILKA DATE 2024-01-24 QUALITY ASSURANCE P. TSANG DATE 2024-01-24 DRAWN A. SHEWAN DATE 2024-01-24	
				PROJECT NUMBER 13253-0001	REG 1
				DRAWING NUMBER R1-1099-751	REV

PLOT DATE: 2024/04/09 09:01:2305-000\civil\model\MoTI_Prelod_Cop-Culverts_Working_Drawings_DrawingProduction\700_DrainageUtilities\R1-1099-752-753.dwg



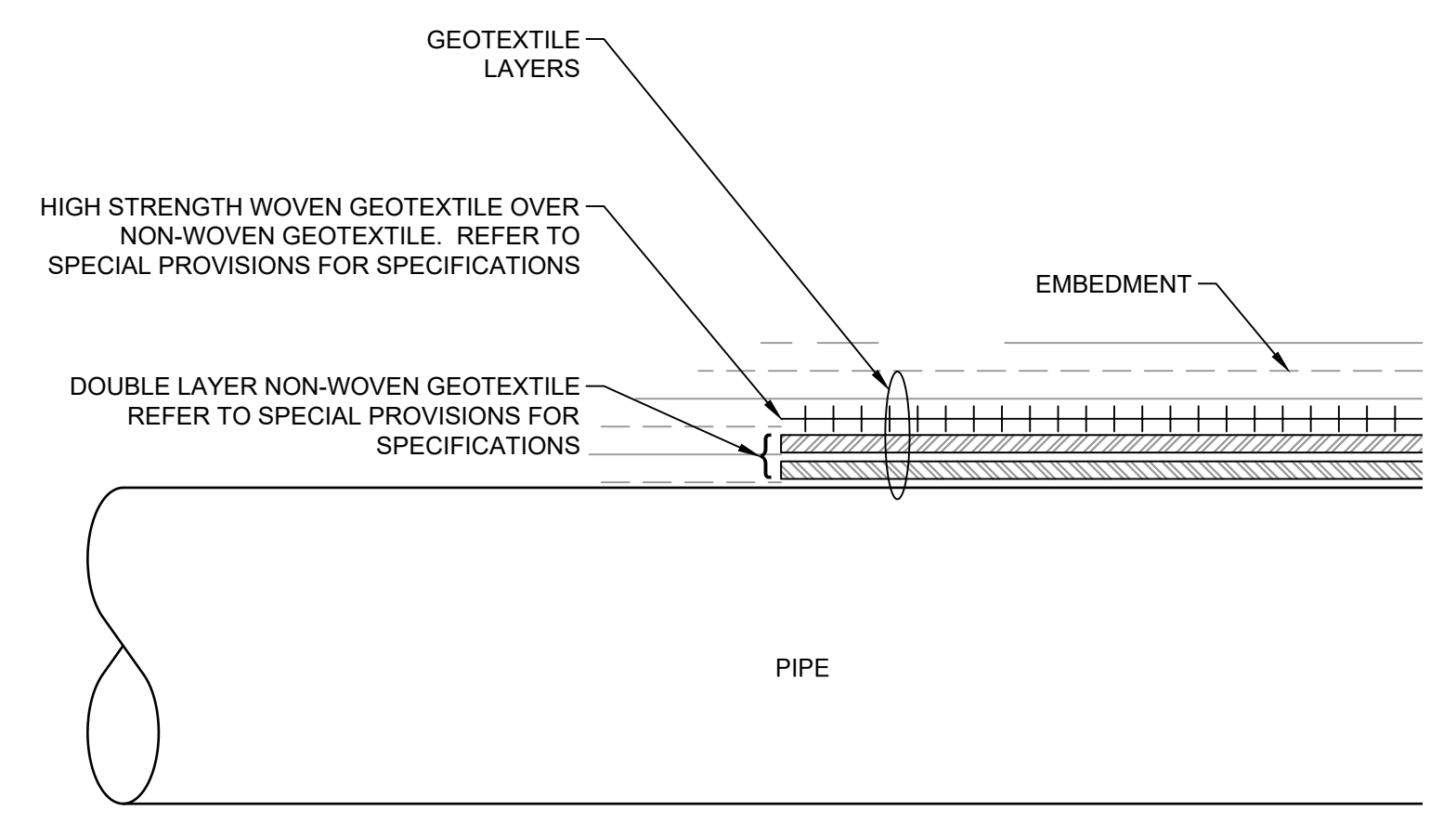
NOTE:
TYPICAL AT EACH END OF CULVERT EXTENSION

DETAIL
GEOTEXTILE COVER OVER PIPE END TREATMENT
N.T.S.

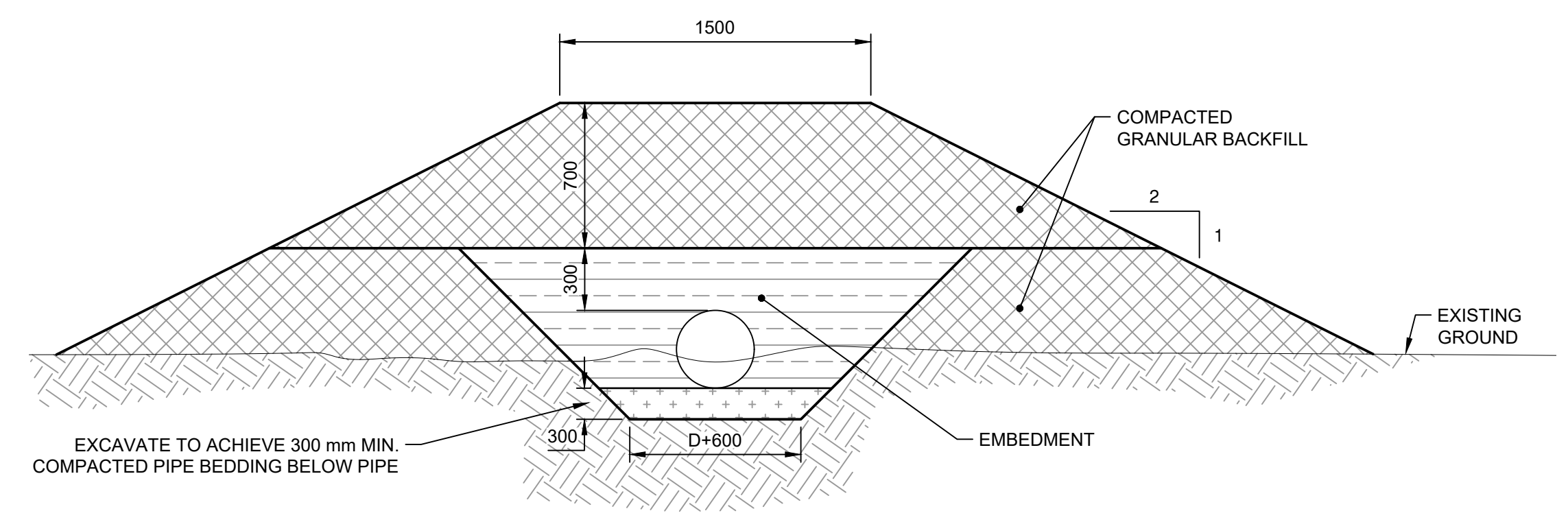


NOTE:
TYPICAL AT EACH END OF CULVERT EXTENSION

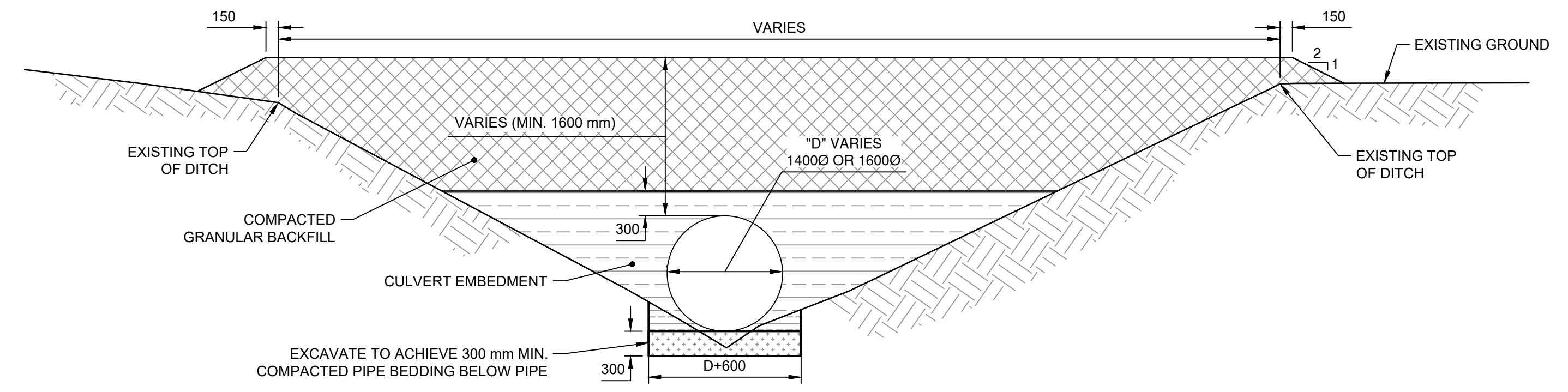
DETAIL
FISHTRAP CREEK GEOTEXTILE COVER OVER PIPE SLEEVE
N.T.S.



1 **DETAIL**
GEOTEXTILE LAYERS
N.T.S.



DETAIL
PIPE COVER OVER STORMCEPTOR OUTLET
N.T.S.



DETAIL
CULVERT BACKFILL
N.T.S.

NOTES:
1. ALL DIMENSIONS SHOWN IN MILLIMETRES UNLESS OTHERWISE NOTED.

SCALE AS SHOWN		CAD FILENAME R1-1099-752 FILE NUMBER 2021-2305-00 PLOT DATE 2024-01-30	
MISCELLANEOUS DETAILS - DRAINAGE HIGHWAY 1 - ADVANCED WORKS FISHTRAP CREEK ENVIRONMENTAL REHABILITATION SHEET 1 of 2			
DESIGNED D. OWOLABI / D. MA DATE 2024-01-30 QUALITY CONTROL E. FINNEY DATE 2024-01-30 QUALITY ASSURANCE J. FITZGERALD DATE 2024-01-30 DRAWN A. SHEWAN DATE 2024-01-30	PROJECT NUMBER 13253-0001 REG 1 DRAWING NUMBER R1-1099-752 REV A	ASSOCIATED ENGINEERING (B.C.) LTD. PERMIT TO PRACTICE 1000163 THURBER ENGINEERING LTD. PERMIT TO PRACTICE 1000319	SHEET 1 of 2

