

# HIGHWAY 427 EXPANSION

DCR # 3

## E.4 New Construction



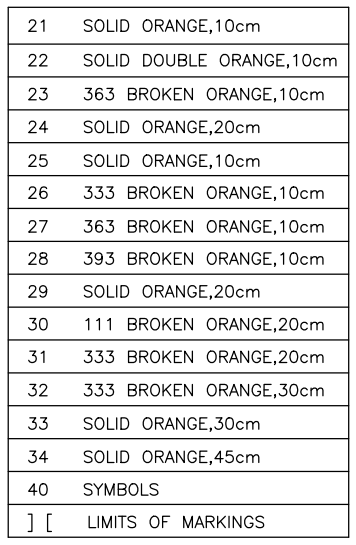
August 2, 2018





## PAVEMENT MARKING (DETOUR ORANGE)

## PAVEMENT MARKING (DETOUR ORANGE)



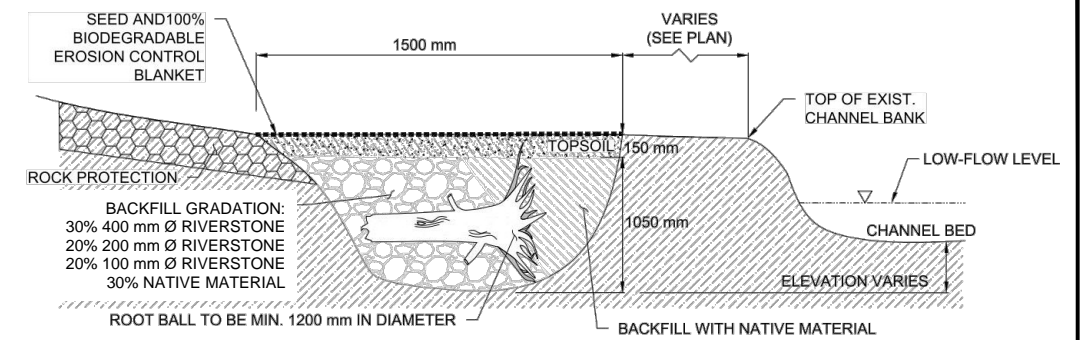
NO. OF LANES / TRAFFIC FLOW

HWY 427 EXPANSION							
SUPPLEMENTAL LEGEND							
HIGHWAY 427 MAINLINE							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	1A	GEN	000	DWG	0010	B



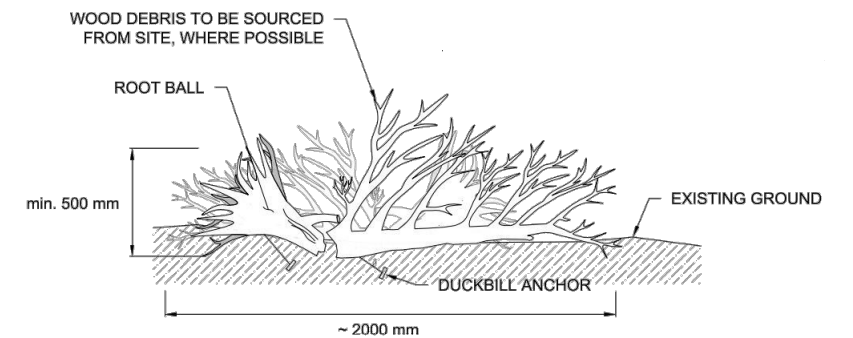






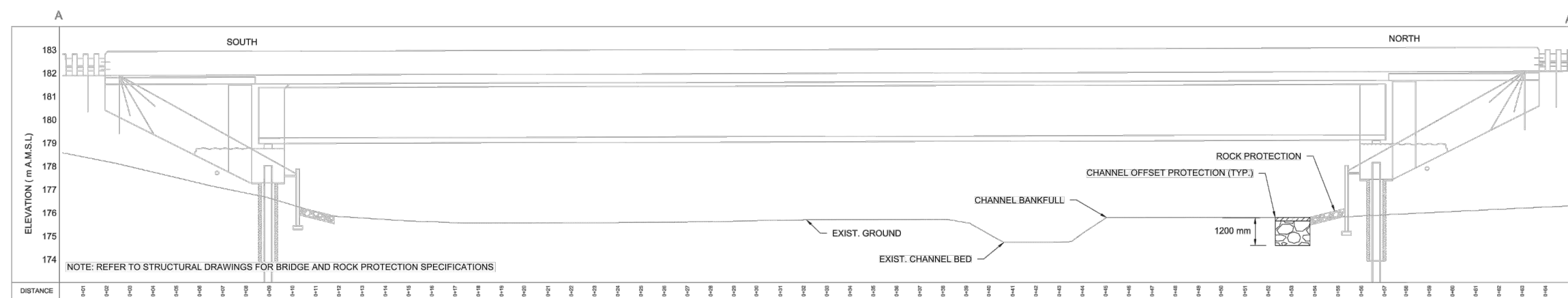
- NOTES**
1. CHANNEL OFFSET PROTECTION TO BE INSTALLED TO A DEPTH OF 1200 mm BELOW BANKFULL CHANNEL ELEVATION.
  2. ROOT WAD LOGS TO BE APPROXIMATELY 1200 mm IN LENGTH WITH A MIN. 1200 mm DIAMETER ROOT BALL AND MIN. 200 mm DIAMETER TRUNK.
  3. ROOT WADS TO BE BUTTED UP TO OR OVERLAPPING ONE ANOTHER.
  4. LOGS TO BE SOURCED ON SITE IF POSSIBLE.
  5. BACKFILL WITH COMPACTED NATIVE MATERIAL AND RIVERSTONE MIX.

CHANNEL OFFSET PROTECTION  
N.T.S



- NOTES**
1. WOODPILE TO BE COMPRISED OF 4 TO 5 CEDAR TREES. TREES TO BE SOURCED ON-SITE, WHERE POSSIBLE.
  2. TREES SHOULD INTERLACE WITH ONE ANOTHER TO FORM A PALLET SHAPE.
  3. TREE ROOT BALL TO BE A MINIMUM OF 500 mm IN DIAMETER. TREE TO BE APPROXIMATELY 2000 mm IN LENGTH.
  4. ROOT WADS AND TRUNKS TO BE SECURED IN PLACE USING DUCKBILL ANCHORS. THE ANCHORS SHOULD BE ORIENTED AWAY FROM THE DIRECTION OF FLOW.

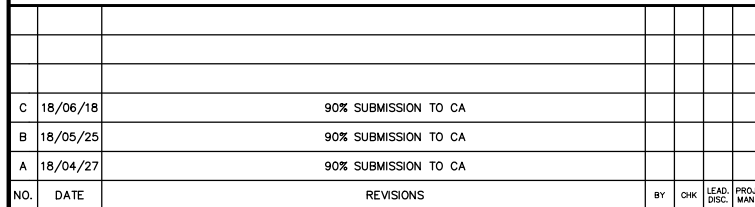
PALLET TYPE WOOD PILE  
N.T.S



CROSS SECTION A-A  
N.T.S

[illegible]





A horizontal scale bar with markings at 5m, 0, and 10m. The segment between 0 and 10m is solid black, while the segment between 5m and 0 is dashed. Below the bar is the text "Metres HORIZONTAL".

CONSULTANT	DESIGNED	MICHAEL ETINGEN		
	DRAWN	MICHAEL ETINGEN		
	CHECKED	JONATHAN MOHACSI		
	APPROVED LEAD ENGINEER	JONATHAN MOHACSI		
	APPROVED PROJ. MANAGER	PETER BAMFORTH		
		NAME (PRINT)	INIT.	DATE



**NEW CONSTRUCTION  
LANGSTAFF ROAD  
STA. 9+450 TO STA. 9+790**

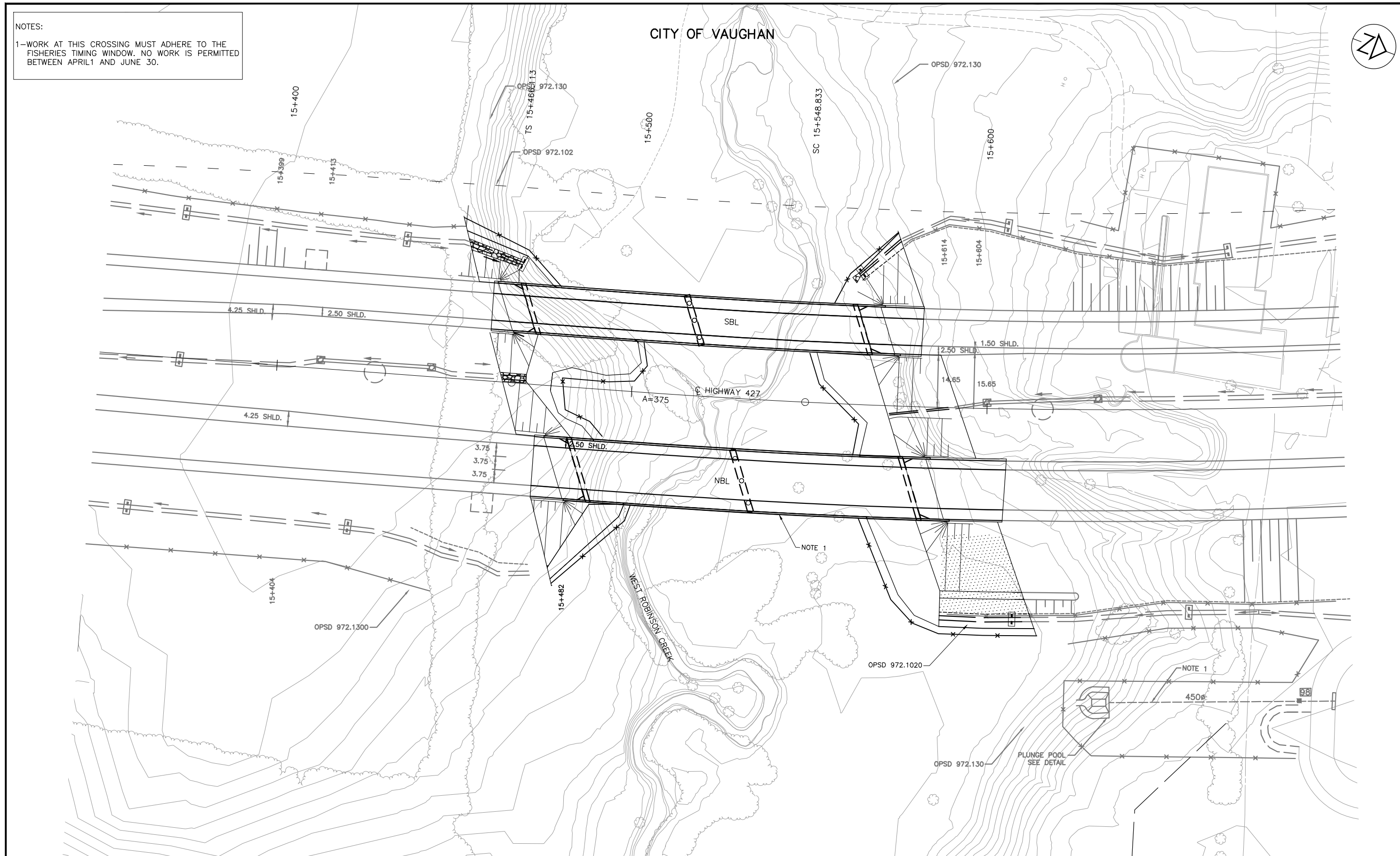
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	4A	HWY	000	DWG	0011	C

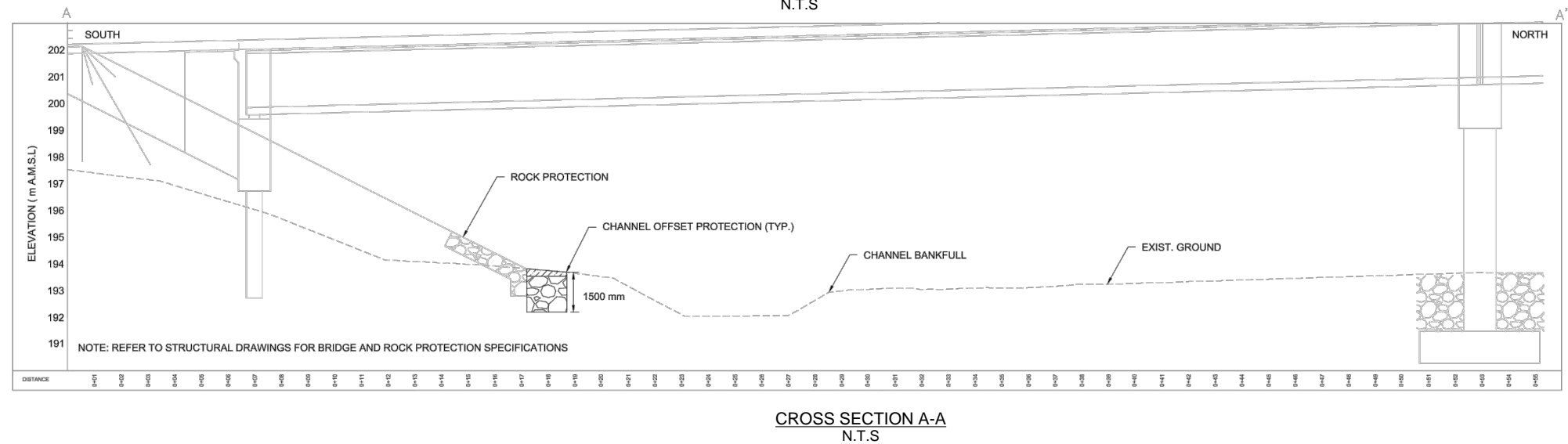
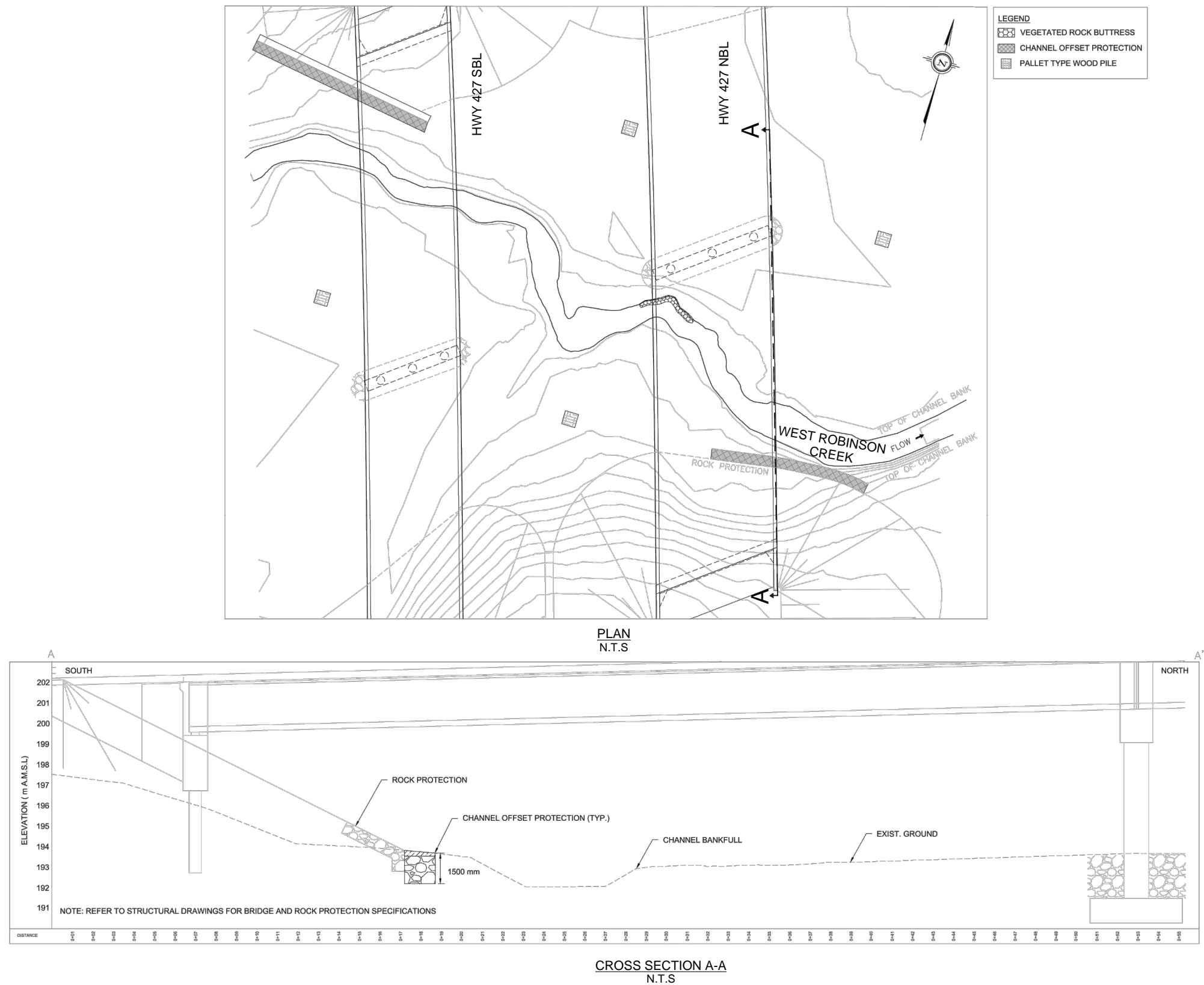
[illegible]



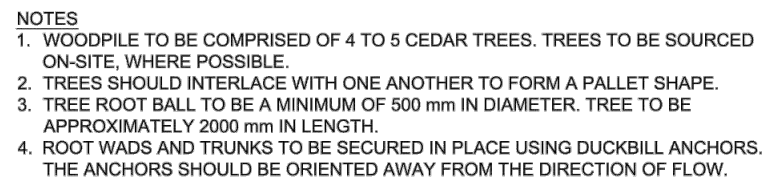


1-WORK AT THIS CROSSING MUST ADHERE TO THE FISHERIES TIMING WINDOW. NO WORK IS PERMITTED BETWEEN APRIL1 AND JUNE 30.

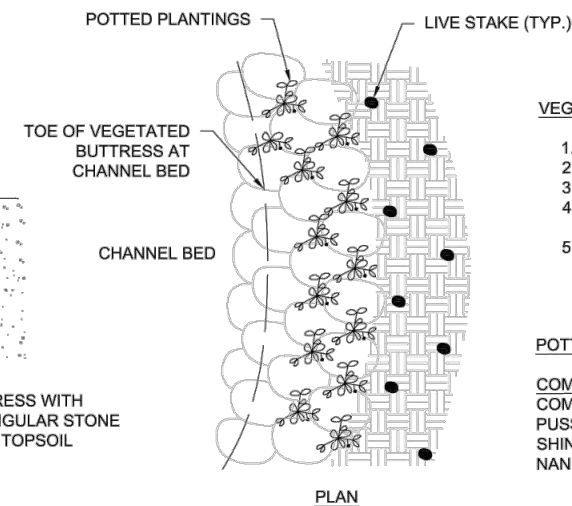
[illegible]

[illegible]





PALLET TYPE WOOD PILE  
N.T.S



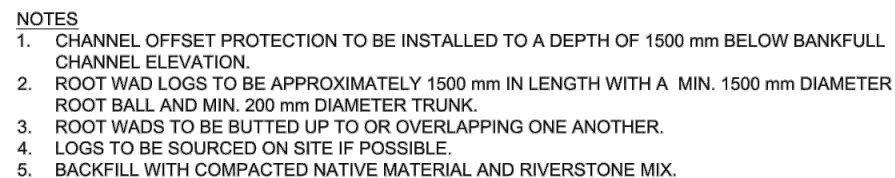
VEGETATED ROCK BUTTRESS  
N.T.S

### VEGETATED ROCK BUTTRESS CONSTRUCTION NOTES

1. VEGETATED ROCK BUTTRESS TO BE INSTALLED IN LIFTS.
2. TOE STONES TO BE EMBEDDED INTO CHANNEL BED.
3. INSTALL PLANTS 1 m O/C IN EACH LAYER.
4. Laterally stagger each successive layer of plants to avoid vertical stacking.
5. PLANTING SPECIES PLACEMENT SHOULD BE RANDOM.

#### POTTED PLANTINGS SPECIES AND QUANTITIES

COMMON NAME	SPECIES	QUANTITY	CONDITION
COMMON WINTERBERRY	<i>Illex verticillata</i>	5	1 m ht. POTTED
PUSSY WILLOW	<i>Salix discolor</i>	5	1 m ht. POTTED
SHINING WILLOW	<i>Salix lucida</i>	5	1 m ht. POTTED
NANNYBERRY	<i>Viburnum lentago</i>	5	1 m ht. POTTED



CHANNEL OFFSET PROTECTION  
N.T.S



COMMON NAME	SPECIES	SIZE
RED OSIER DOGWOOD	<i>Cornus stolonifera</i>	1 m
PUSSY WILLOW	<i>Salix discolor</i>	1 m
SANDBAR WILLOW	<i>Salix exigua</i>	1 m

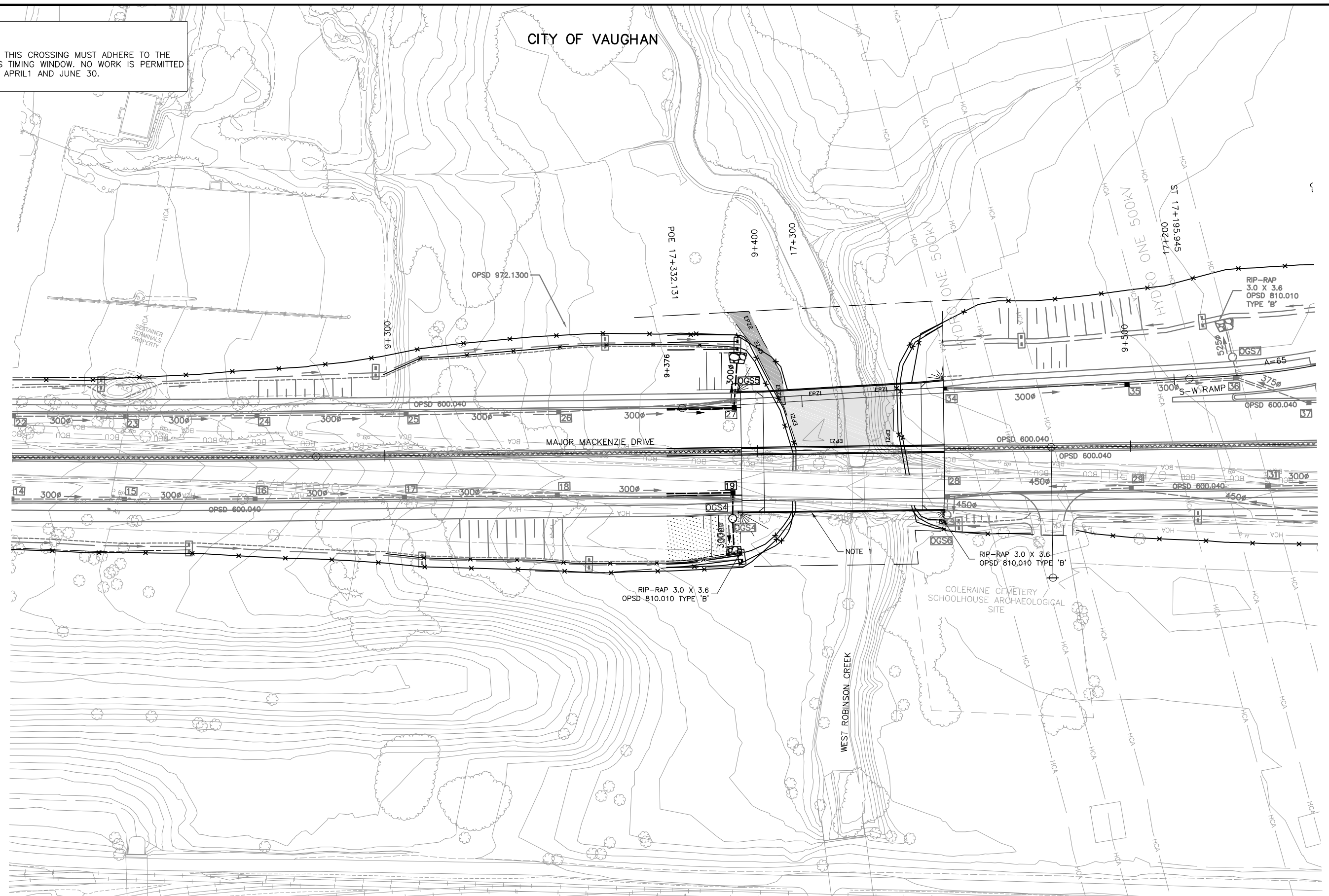

- NOTES
1. QUANTITY TO BE DETERMINED BASED ON AREA OF DISTURBANCE TO BE RESTORED
2. LIVE STAKES ARE TO BE INSTALLED AT A DENSITY OF 3 STAKES PER SQUARE METRE.
3. LIVE STAKES SHOULD BE PRE-SOAKED (SUBMERGED IN WATER) FOR AT LEAST 24 HOURS AFTER HARVESTING AND IMMEDIATELY BEFORE INSTALLATION.
4. LIVE STAKES SHOULD NOT BE STORED FOR A PERIOD LONGER THAN 2 DAYS, UNLESS THEY ARE BEING SOAKED.
5. THE CONTRACTOR SHALL PROTECT PLANT MATERIALS FROM DRYING FROM THE TIME OF HARVEST UNTIL INSTALLED.
6. LIVE STAKES ARE TO BE A MINIMUM OF 25 mm IN DIAMETER AND CUT TO A LENGTH OF 1000 mm.
7. CUT ANGLE AT THE BOTTOM OF THE STAKE AND FLAT ON THE TOP.
8. TRIM ALL SIDE BRANCHES WHILE TAKING CARE NOT TO DAMAGE THE BARK.
9. INSTALL STAKES WITH BUDS POINTING UPWARDS AND THICKER STEM IN THE BED.
10. LIVE STAKES SHOULD BE INSTALLED USING A LARGE RUBBER Mallet.
11. 80% OF THE STAKE IS TO BE BELOW SURFACE.
12. TAMP THE LIVE STAKE INTO THE GROUND AT RIGHT ANGLE TO THE SURFACE.
13. IN COMPACT SOIL A PILOT HOLE SHOULD BE USED TO LIMIT DAMAGE TO THE STAKES.
14. IF USING A PILOT HOLE REPACK SOIL AROUND THE LIVE STAKE.
15. LIVE STAKES SHOULD STAND FIRM FROM THE SOIL FOLLOWING INSTALLATION.
16. ALL STAKES NOT PLANTED TO THE SPECIFICATIONS ABOVE WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LIVE STAKE  
N.T.S.

[illegible]



1-WORK AT THIS CROSSING MUST ADHERE TO THE FISHERIES TIMING WINDOW. NO WORK IS PERMITTED BETWEEN APRIL1 AND JUNE 30.

[illegible]

