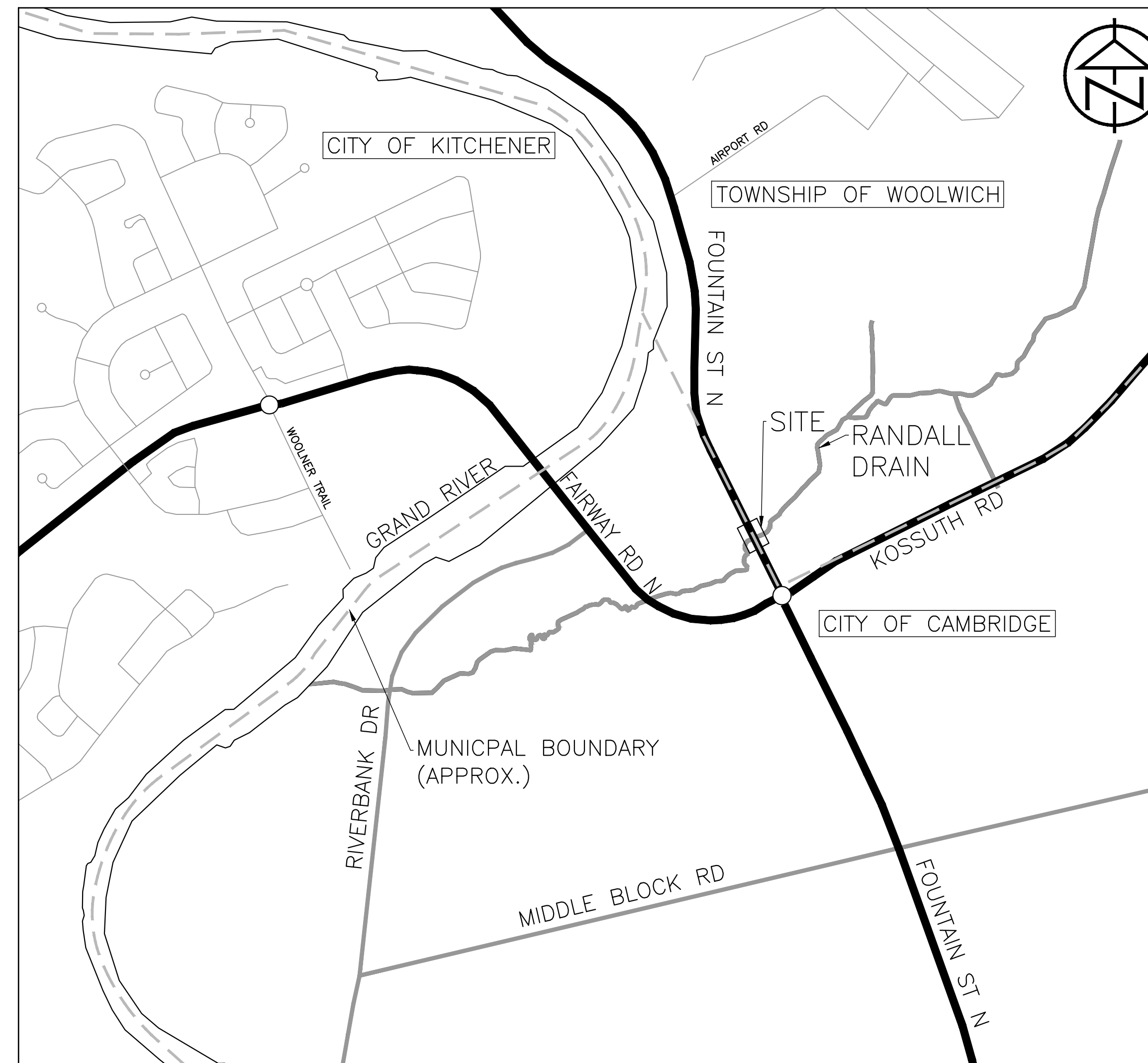


RANDALL DRAIN CULVERT REPLACEMENT FOUNTAIN STREET NORTH

TOWNSHIP OF WOOLWICH
CONTRACT No. 2025-04
ISSUED FOR CONSTRUCTION
AUGUST 2025

ISSUED FOR CONSTRUCTION
AUGUST 2025
TATHAM PROJECT 124185



INDEX

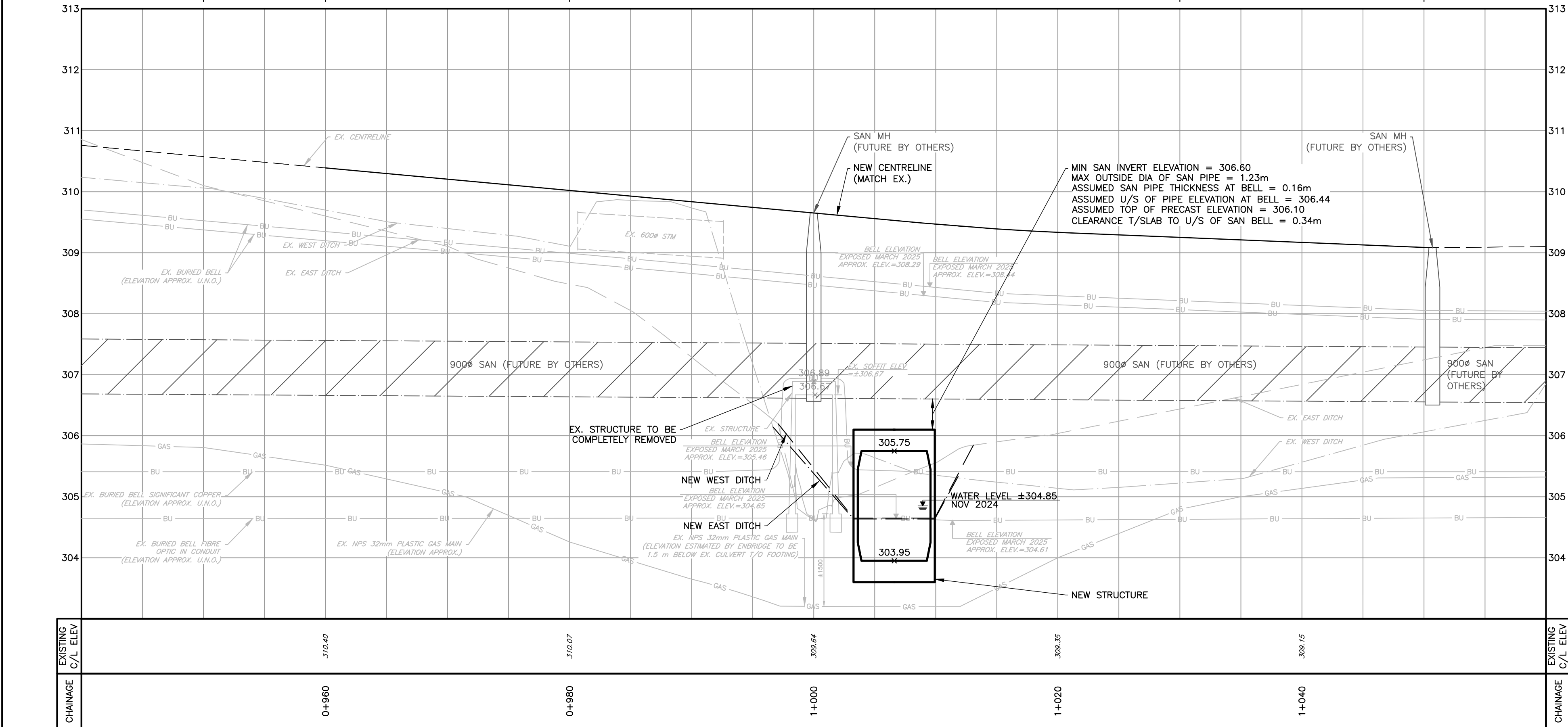
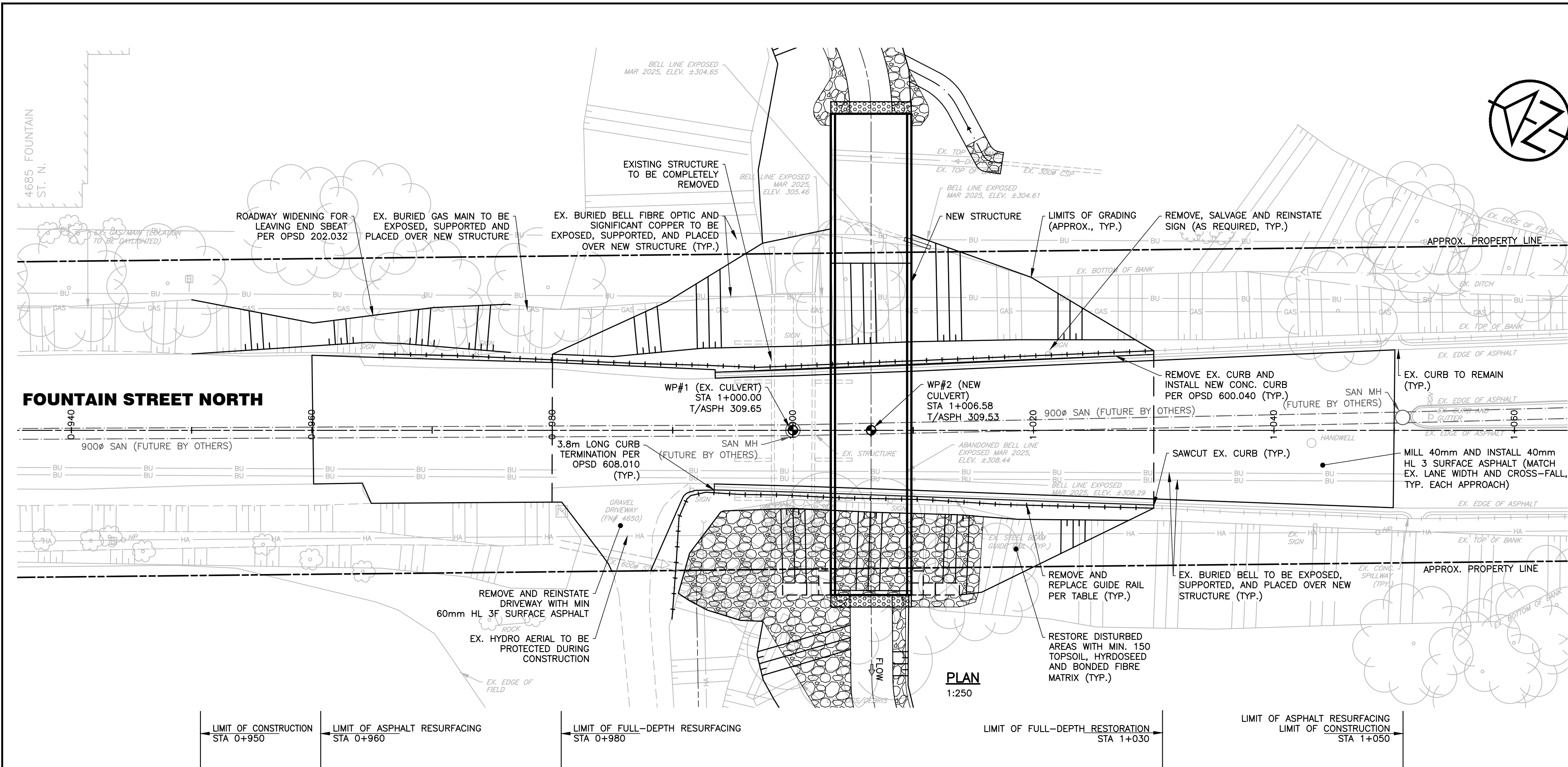
Dwg. No.	Description
1	PLAN AND PROFILE FOUNTAIN STREET NORTH
2	GENERAL ARRANGEMENT
3	ENVIRONMENTAL PROTECTION PLAN
4	PLAN AND PROFILE RANDALL DRAIN
5	STRUCTURAL DETAILS
6	PRECAST RIGID FRAME BOX CULVERT



Sandy Shantz
Mayor

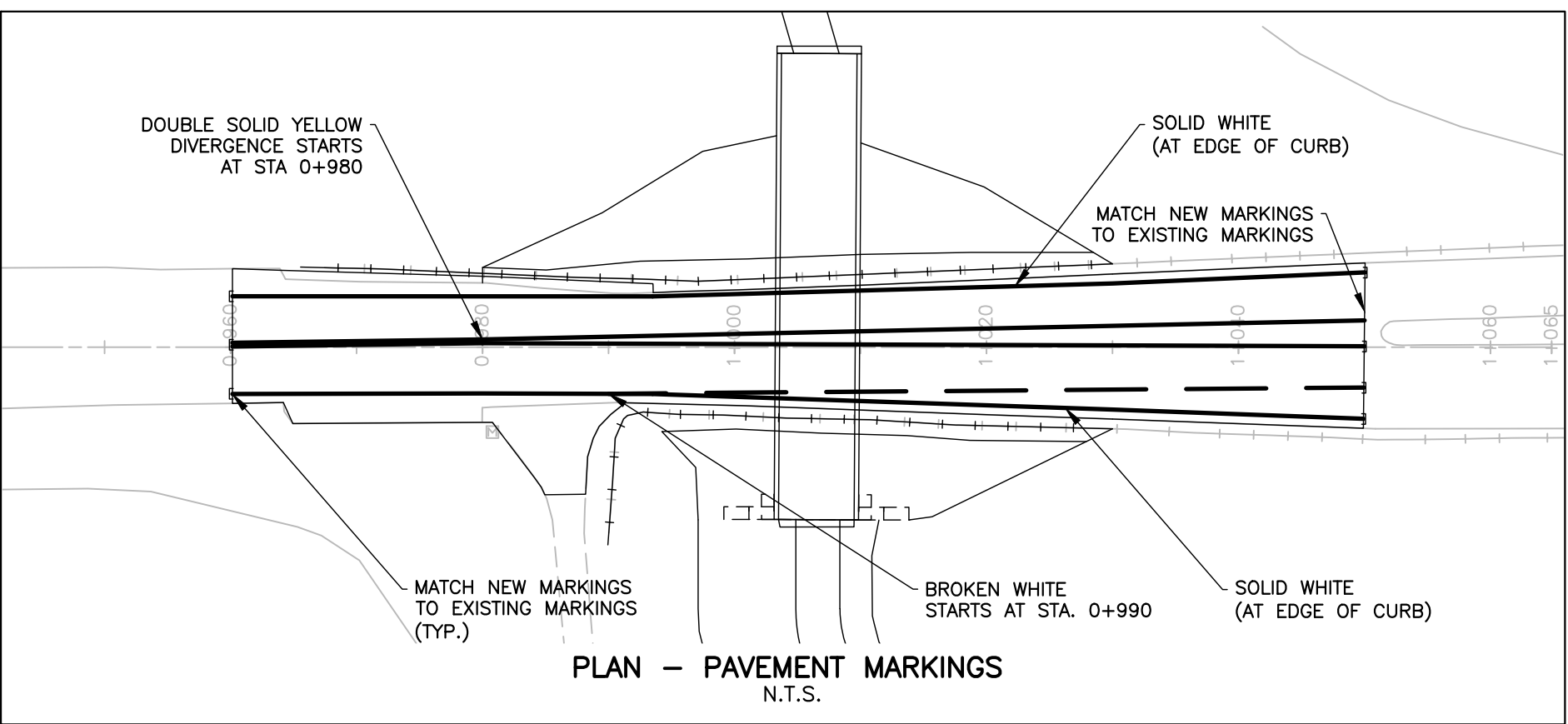
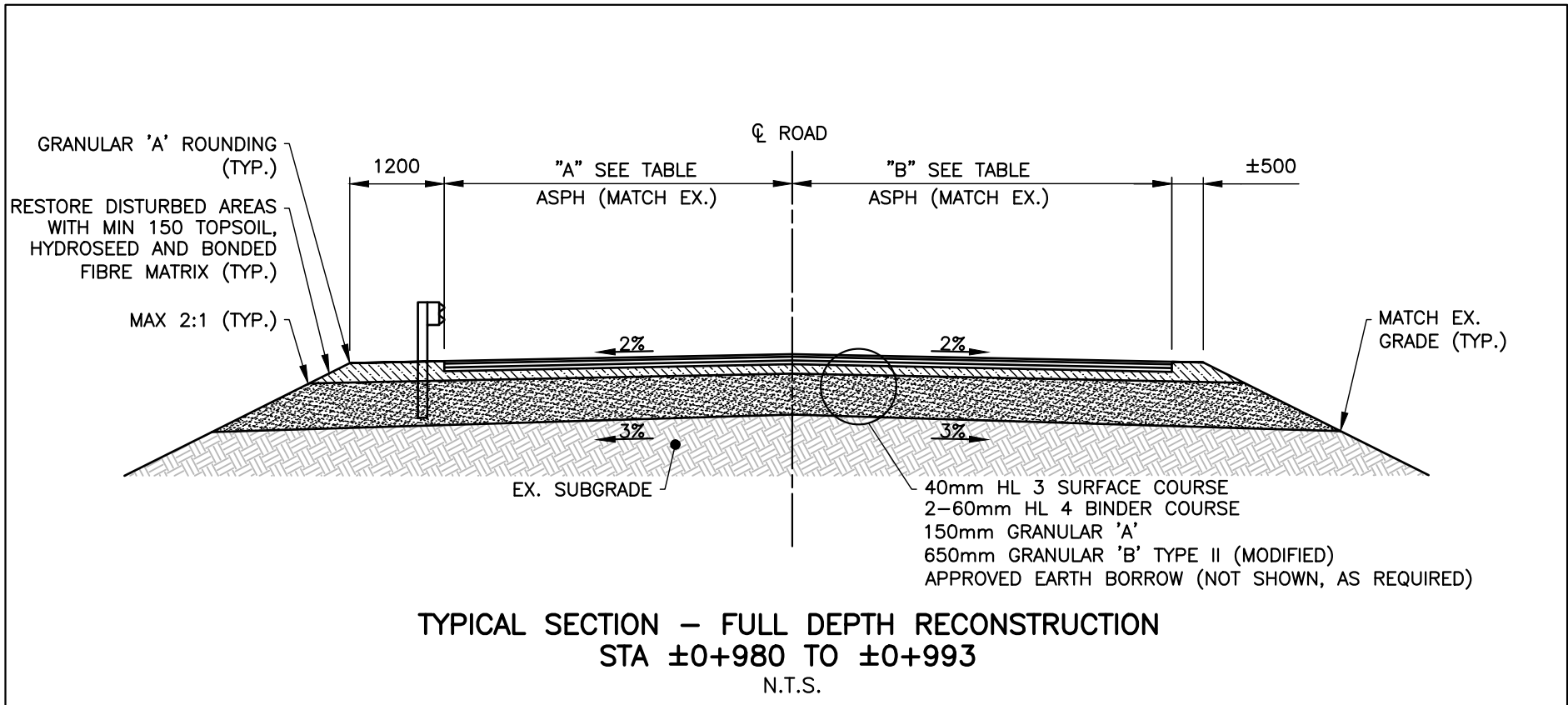
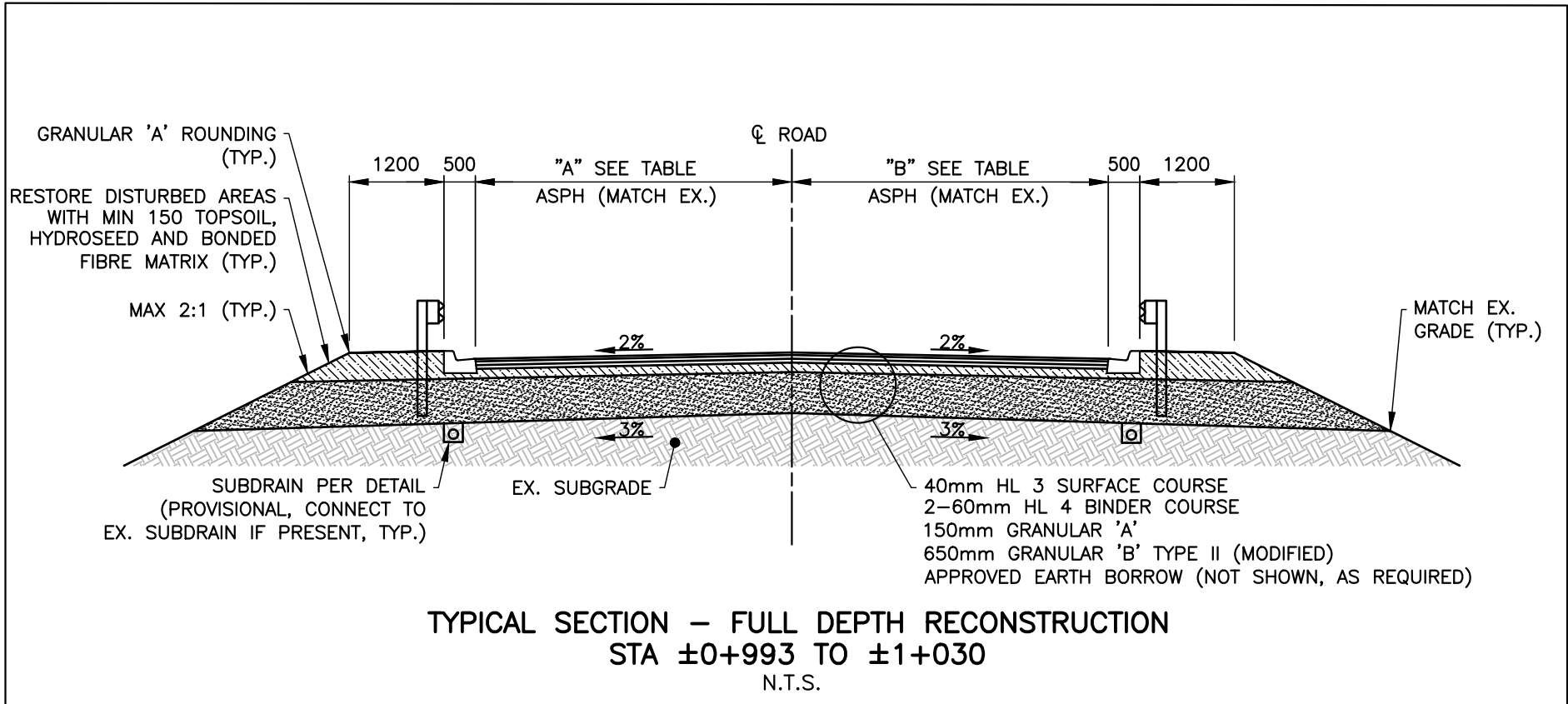
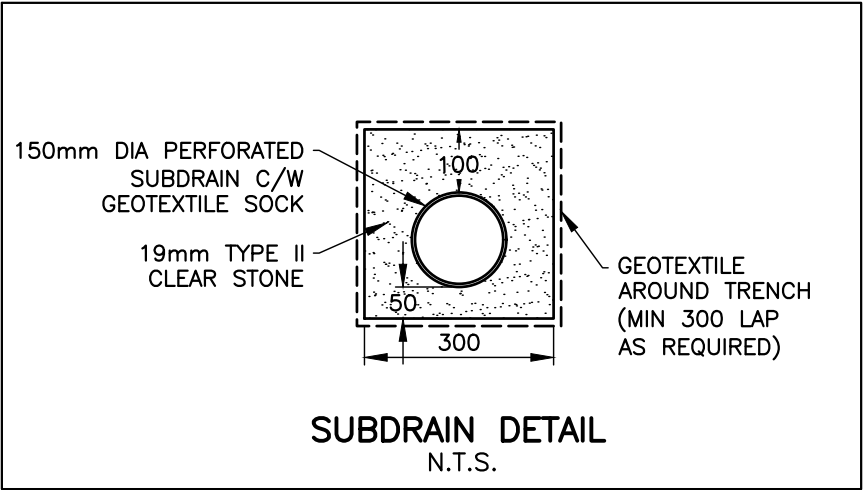
Jared Puppe, C.E.T.
Director of Infrastructure Services





GUIDE RAIL WORKS:		
LOCATION	REMOVALS	NEW CONSTRUCTION
EAST GUIDE RAIL	- EX. SBEAT (±15.24m)	- SBEAT PER OPSD 922.186, FLARED AT 50:1 (14.288m)
	- EX. SINGLE RAIL SBGR (±49.53m)	- SINGLE RAIL SBGR PER OPSD 912.185 & 912.188 (49.53m)
WEST GUIDE RAIL	- EX. HAZARD SIGN, POST AND SNOW PLOW SIGN	- TRANSITION RAIL PER OPSD 912.124 (2.858m)
		- END TREATMENT DELINEATION PER OPSD 984.202

ASPHALT WIDTH TABLE		
STA	"A" (mm)	"B" (mm)
±1+030	±5804	±5708
±0+993.1	±4265	±4463
±0+992.9	±5015	±4963
±0+980	±5850	±5800



DISCLAIMER AND COPYRIGHT

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TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF TATHAM ENGINEERING LIMITED.

BENCHMARKS

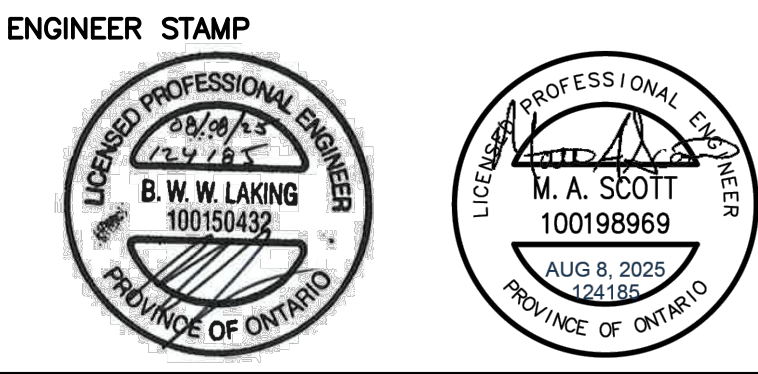
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NAIL IN ASPHALT SHOULDER APPROXIMATELY 5m NORTH OF END OF GUIDE RAIL, EAST SIDE OF ROAD.

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CUT CROSS IN SOUTHEAST CORNER OF HEADWALL (K. SMART ASSOCIATES RANDALL DRAINAGE WORKS 1997)

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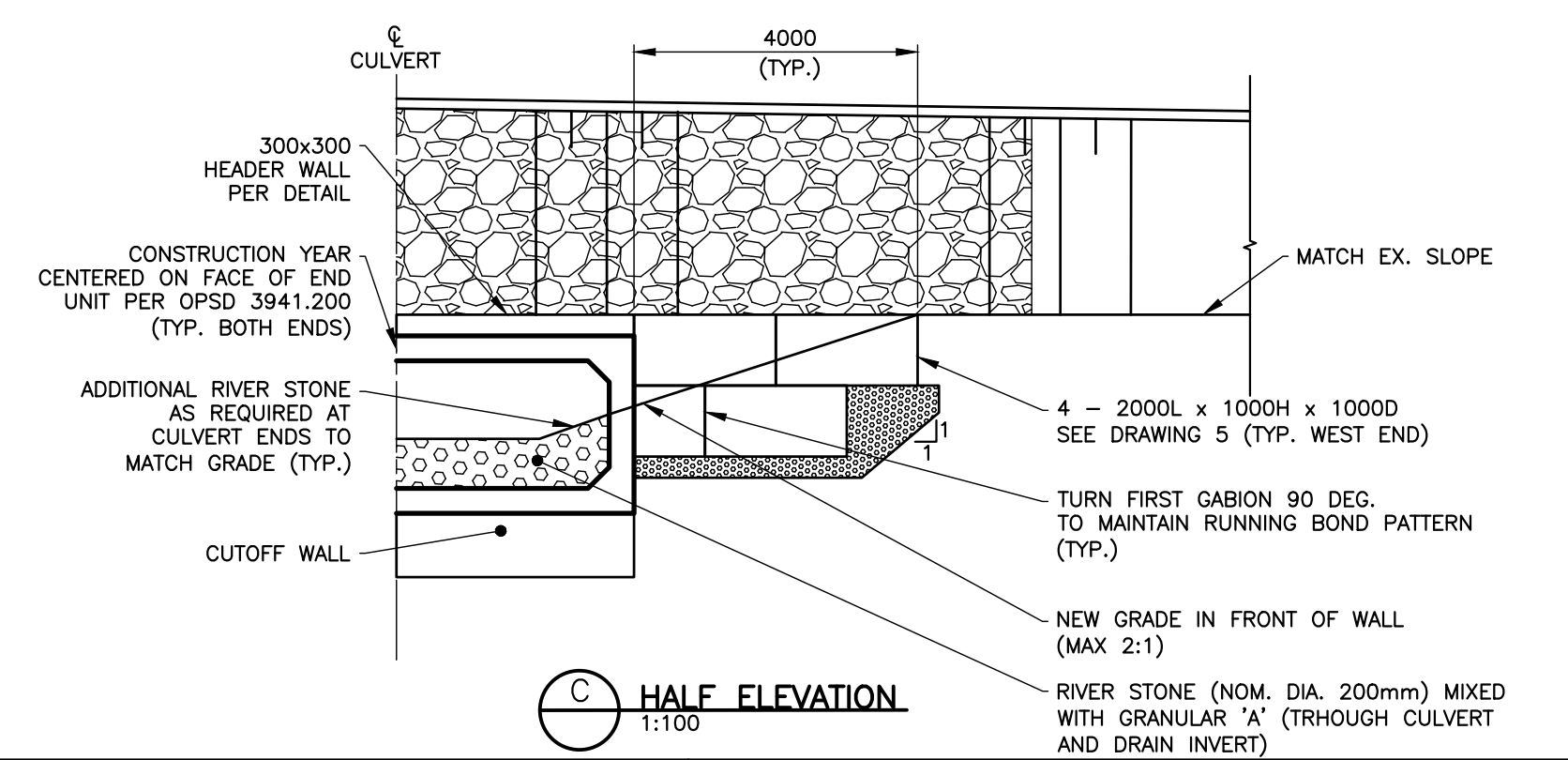
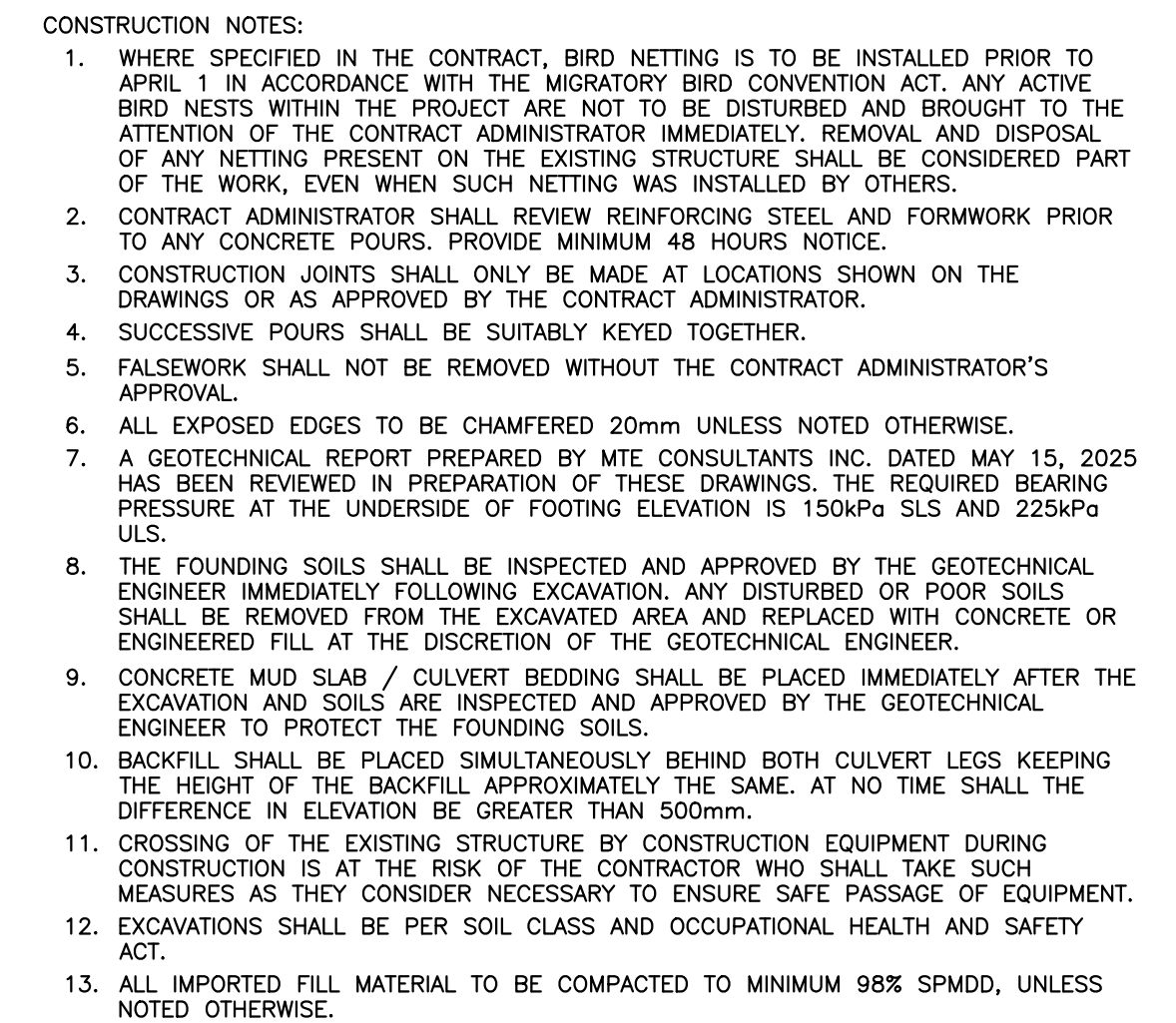
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**RANDALL DRAIN CULVERT REPLACEMENT
FOUNTAIN STREET NORTH
TOWNSHIP OF WOOLWICH
CONTRACT No. 2025-04**

**PLAN AND PROFILE
FOUNTAIN STREET NORTH
STA. 0+940 TO STA. 1+060**

TATHAM ENGINEERING		DWG: 1
DESIGN: M.S.	FILE: 124185	
DRAWN: N.B./A.J.B.	DATE: JAN 2025	
CHECK: M.S.	SCALE: HORZ. 1:250 VERT. 1:50	



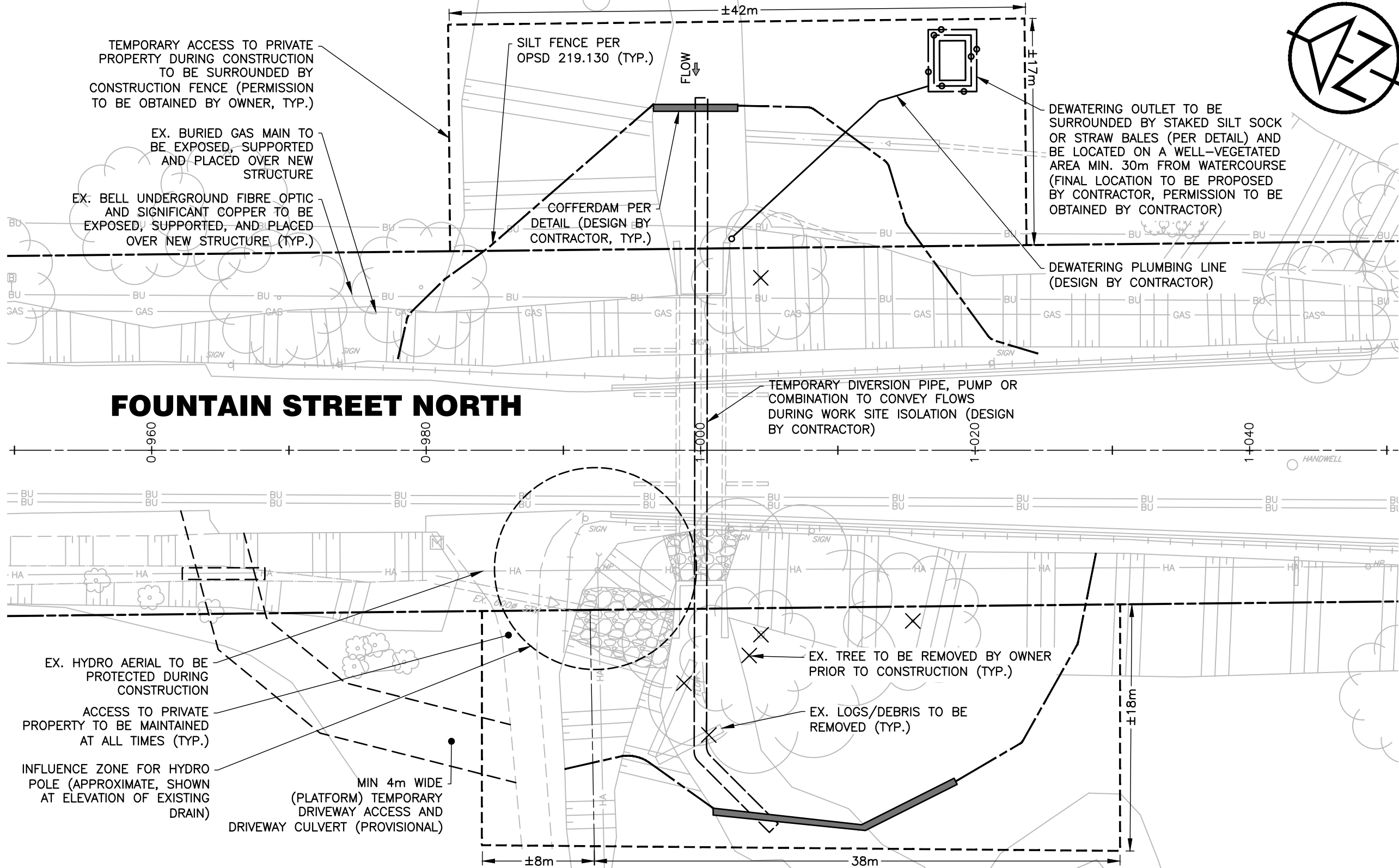
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						DESIGN: M.S.	FILE: 124185	DWG:																		
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						CHECK: M.S.	SCALE: AS NOTED																			

SUGGESTED SEQUENCE OF CONSTRUCTION:

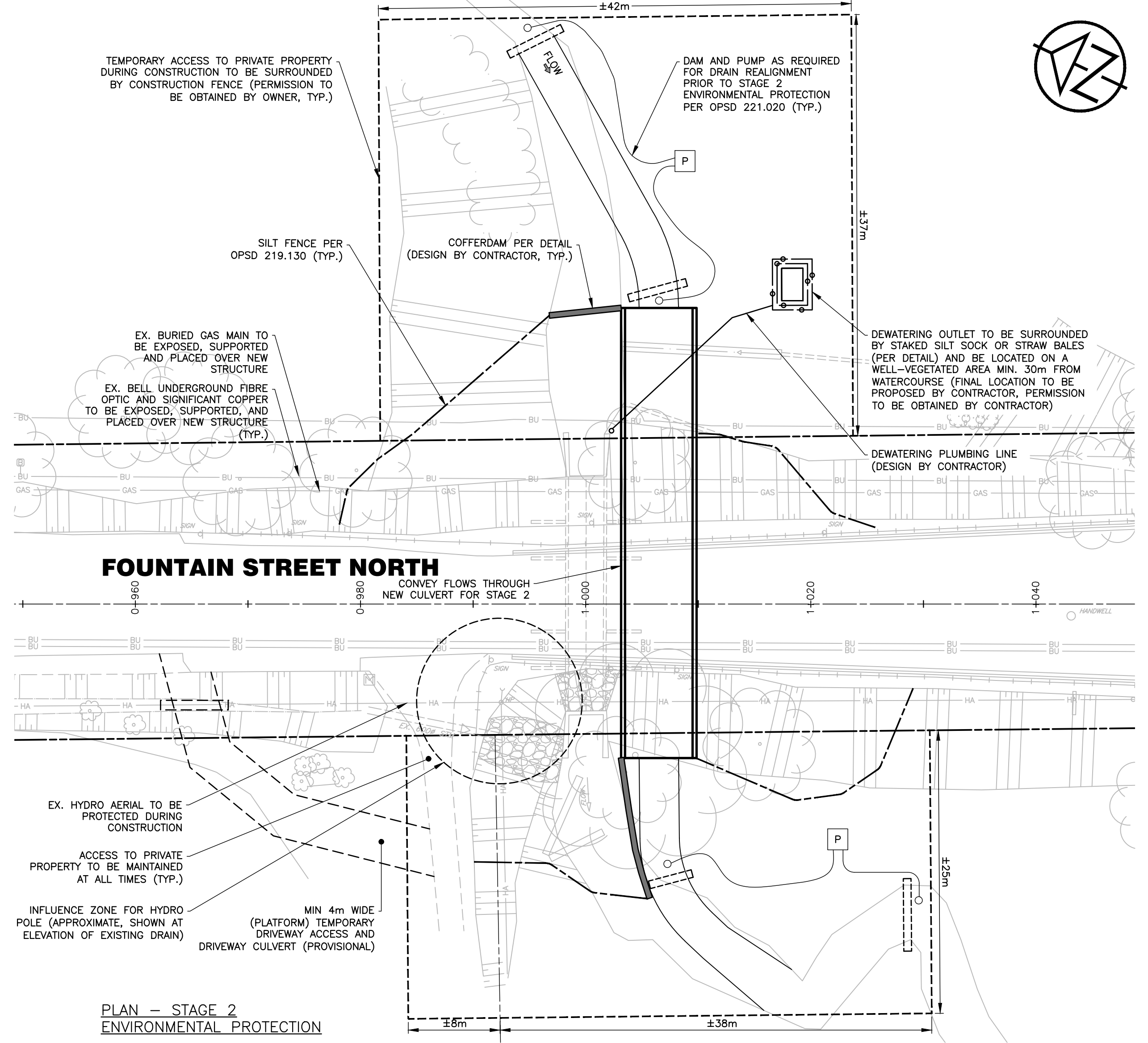
1. INSTALL STAGE 1 EROSION AND SEDIMENT CONTROLS AND ENVIRONMENTAL PROTECTION MEASURES.
2. INSTALL TEMPORARY WORKSITE ISOLATION AND DIVERSION. COMPLETE FISH RESCUE.
3. COMPLETE SURFACE FEATURE REMOVALS, EXCAVATE AND INSTALL NEW CULVERT.
4. COMPLETE DRAIN REALIGNMENT WITHIN ISOLATED AREA.
5. COMPLETE DRAIN REALIGNMENT USING DAM AND PUMP AS REQUIRED
6. BACKFILL AND DIVERT DRAIN THROUGH NEW CULVERT.
7. MODIFY EROSION AND SEDIMENT CONTROLS FOR STAGE 2.
8. INSTALL TEMPORARY WORKSITE ISOLATION AND COMPLETE FISH RESCUE.
9. COMPLETE REMOVALS OF EXISTING CULVERT AS NOTED.
10. BACKFILL AND RESTORE ROAD, CURB, GUIDE RAIL AND ASPHALT.
11. COMPLETE SITE RESTORATION.
12. REMOVE EROSION AND SEDIMENT CONTROLS UPON STABILIZATION OF RESTORED AREAS.

STRUCTURE REMOVAL NOTES:

1. THE EXISTING CULVERT IS TO BE REMOVED IN ITS ENTIRETY ABOVE THE FOOTINGS. THERE ARE NO KNOWN DRAWINGS OF THE EXISTING STRUCTURE. THE SIZE AND DEPTH OF FOOTINGS IS UNKNOWN. FOOTINGS ARE TO BE ABANDONED IN PLACE UNLESS THEY CONFLICT WITH THE PROPOSED WORKS, IN WHICH CASE REMOVAL WILL BE PAID ON A CUBIC METRE BASIS.
2. A TEMPORARY PROTECTION SYSTEM FOR THE EXISTING CULVERT SHALL BE SUPPLIED AND DESIGNED BY THE CONTRACTOR IF CONSTRUCTION OF THE NEW CULVERT WILL BE COMPLETED PRIOR TO REMOVAL OF THE EXISTING CULVERT.
3. INFLUENCE ZONE FOR HYDRO POLE IS A 1.5m RADIUS AROUND THE BASE OF THE POLE, AND EXTENDING AT A 1:1 SLOPE DOWN FROM THE RADIUS. DISTURBANCE WITHIN THE INFLUENCE ZONE REQUIRES TEMPORARY SHORING OR POLE HOLD PER GRANDBRIDGE ENERGY AND ENOVA POWER GUIDELINES.
4. COMPLETE DRAIN REALIGNMENT WITHIN ISOLATED AREA.
5. REMOVAL OF THE EXISTING CULVERT WILL REQUIRE DISTURBANCE TO THE INFLUENCE ZONE FOR THE EXISTING HYDRO POLE SOUTH OF DRIVEWAY #4650. THE CONTRACTOR SHALL COORDINATE WITH GRANDBRIDGE ENERGY AND ENOVA POWER FOR ANY SHORING OR TEMPORARY POLE HOLDS REQUIRED. BACKFILL AND DIVERT DRAIN THROUGH NEW CULVERT.
6. OVERHEAD HYDRO LINES CANNOT BE ISOLATED OR RELOCATED PRIOR TO OR DURING CONSTRUCTION AND SHALL REMAIN LIVE AT ALL TIMES. INSTALL TEMPORARY WORKSITE ISOLATION AND COMPLETE FISH RESCUE.



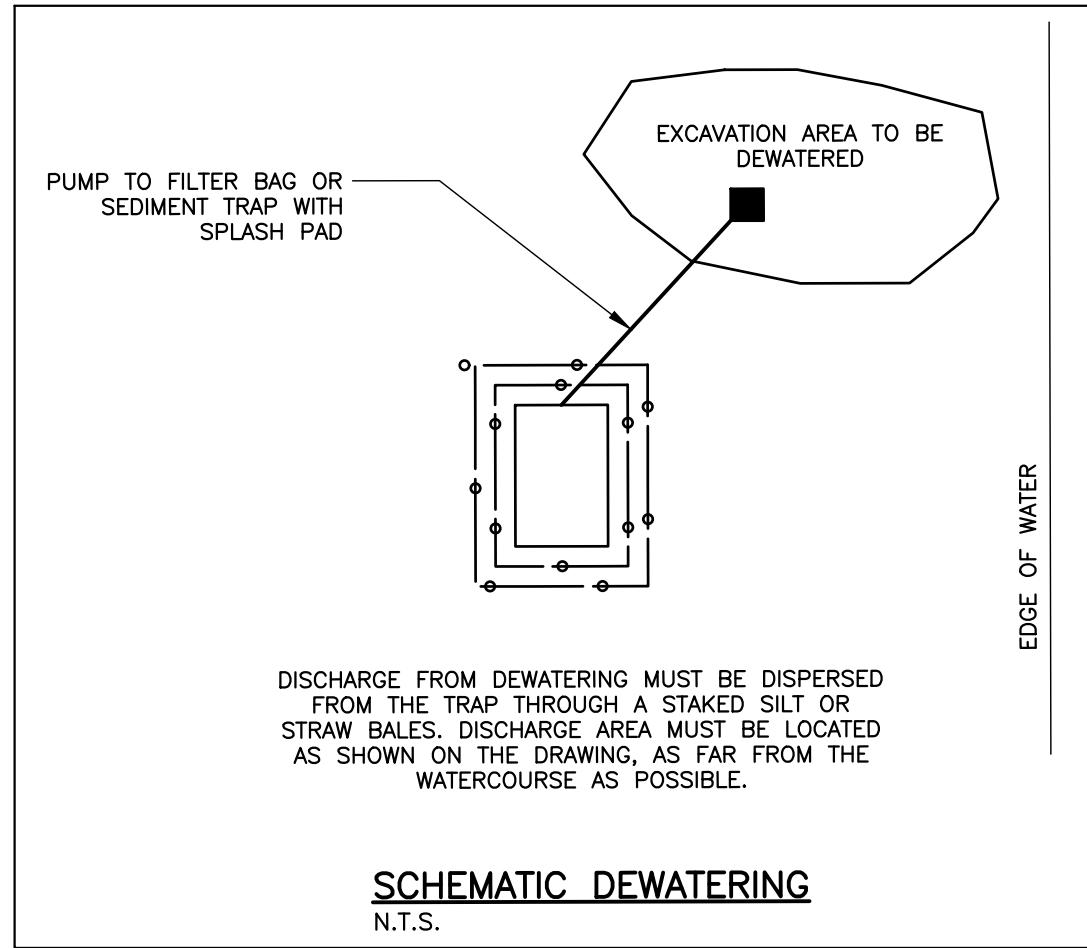
PLAN - STAGE 1
ENVIRONMENTAL PROTECTION



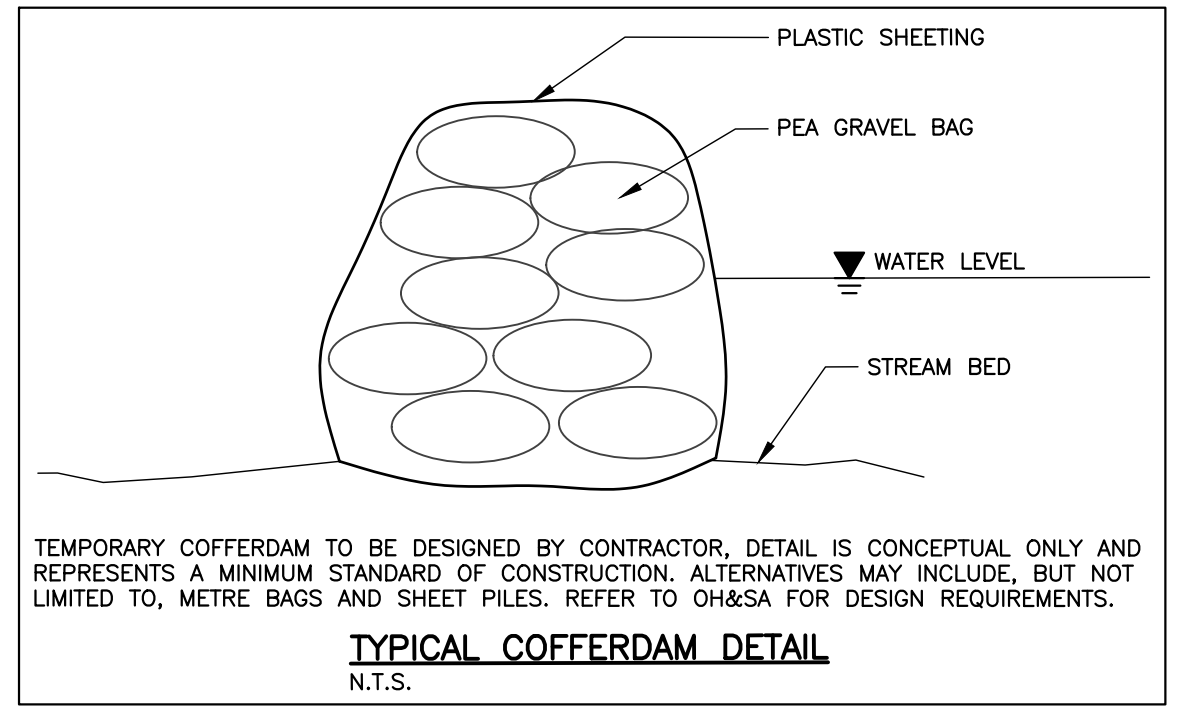
PLAN - STAGE 2
ENVIRONMENTAL PROTECTION

ENVIRONMENTAL REQUIREMENTS:

1. ANY DEWATERING OPERATIONS REQUIRED TO COMPLETE THE WORK IN THE DRY ARE NOT TO EXCEED 50,000 LITRES PER DAY WITHOUT A MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP) PERMIT TO TAKE WATER OR COMPLETION OF AN ENVIRONMENTAL ACTIVITY AND SECTOR REGISTRY (AS APPLICABLE).
2. THE CONTRACTOR IS RESPONSIBLE FOR PREPARATION, COST AND SUBMISSION OF ALL REPORTS, PLANS AND APPLICATIONS REQUIRED TO SECURE A PERMIT TO TAKE WATER (CATEGORY 1, 2 OR 3) OR ENVIRONMENTAL ACTIVITY AND SECTOR REGISTRY (AS APPLICABLE) FROM THE MECP FOR DEWATERING OPERATIONS WHICH EXCEED 50,000 LITRES PER DAY.
3. ESTIMATED 2 YEAR FLOW = 0.94m³/s.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF TEMPORARY WORKSITE ISOLATION, DIVERSION AND DEWATERING SYSTEMS. DIVERSION AND WORK SITE ISOLATION DETAILS IN THE DRAWING SET ARE FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR SHALL PROVIDE SUBMISSIONS OF ALL RELEVANT DETAILS FOR THESE WORKS TO THE CONTRACT ADMINISTRATOR FOR REVIEW. ALTERNATIVE SCHEMATICS ARE SUBJECT TO REVIEW BY REGULATORY AGENCIES AND ANY DELAYS FROM SUCH REVIEWS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL MATERIAL AND EQUIPMENT USED FOR THE PURPOSE OF OR GENERATED DURING COMPLETION OF THE WORKS SHALL BE OPERATED, STORED AND REMOVED FROM SITE IN A MANNER THAT PREVENTS ANY DELETERIOUS SUBSTANCE. (EG. PETROLEUM PRODUCTS, SILT, DEBRIS, ETC.) FROM ENTERING THE WATERCOURSE.
6. ANY STOCKPILED MATERIALS SHALL BE STORED AND STABILIZED A MINIMUM OF 30 METRES AWAY FROM AND ABOVE THE HIGH-WATER MARK. STOCKPILES OF ERODABLE MATERIAL SHALL BE SURROUNDED WITH SILT FENCE PER TYPE NOTED ON PLAN OR EQUIVALENT WITHIN 48 HOURS OF STOCKPILING UNLESS THEY ARE TO BE USED/DISPOSED OF WITHIN 14 DAYS.
7. IN WATER WORK IS TO OCCUR BETWEEN JULY 15 AND MARCH 14 (INCLUSIVE).
8. ALL DISTURBED AREAS SHALL BE STABILIZED AND RE-VEGETATED AS REQUIRED UPON COMPLETION OF WORK AND RESTORED TO A PRE-DISTURBED STATE OR BETTER, INCLUDING RE-INSTATEMENT AND RE-STABILIZATION OF THE WATERCOURSE.
9. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO COMMENCEMENT OF WORK, AND MAINTAINED THROUGHOUT CONSTRUCTION, TO PREVENT ENTRY OF SEDIMENT INTO THE WATERCOURSE OR THE MOVEMENT OF RE-SUSPENDED SEDIMENT.
10. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
11. NO WORK IS PERMITTED IN THE WATERCOURSE AND NO MATERIAL SHALL BE RELEASED INTO THE WATERCOURSE. WORK IS TO BE COMPLETED IN THE DRY.
12. NO MACHINERY SHALL CROSS THE WATERCOURSE AT ANY TIME. MACHINERY THAT IS REQUIRED ON THE OPPOSITE SIDE OF THE WATERCOURSE WHILE THE STRUCTURE IS BEING REPLACED SHALL BE DRIVEN AROUND THE STRUCTURE ITSELF, HAULED BY FLOAT, OR DRIVEN AROUND ON ROADS.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY TEMPORARY PROTECTION MEASURES OR DEBRIS CONTAINMENT SYSTEMS NECESSARY TO PREVENT ANY CONCRETE, RUBBLE, DEMOLITION DEBRIS, OR DUST FROM ENTERING THE WATERCOURSE. SUCH MATERIAL SHALL BE REMOVED FROM TEMPORARY PROTECTION MEASURES REGULARLY AND AT THE END OF EACH DAY.
14. THE SEDIMENT AND EROSION CONTROL MEASURES MAY BE SUBJECT TO CHANGE OR MODIFICATIONS AS A RESULT OF SITE DEVELOPMENT OR CHANGES ON-SITE. REVIEW AGENCIES ARE TO BE NOTIFIED ON ANY SUCH CHANGE.
15. ADDITIONAL MATERIALS INCLUDING, BUT NOT LIMITED TO, PUMPS, GEOTEXTILE, SILT FENCE AND CLEAR STONE SHALL BE KEPT ON-SITE FOR REPAIRS TO PROPOSED SEDIMENT AND EROSION CONTROL FEATURES.
16. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE EVALUATED ON A WEEKLY BASIS AS WELL AS BEFORE AND AFTER ANY FORECAST PRECIPITATION EVENT. ANY REPAIRS REQUIRED ARE TO BE RECTIFIED IMMEDIATELY.
17. SEDIMENT LADEN WATERS ARE TO BE TREATED PRIOR TO DISCHARGING INTO THE WATERCOURSE.
18. MACHINERY, VEHICLES, EQUIPMENT, AND PUMPS SHALL NOT BE REFUELED OR CLEANED WITHIN 30 METRES OF THE WATERCOURSE.
19. ALL MACHINERY SHALL BE MAINTAINED FREE OF FLUID LEAKS AND SHALL ARRIVE ON-SITE IN A CLEAN AND WASHED CONDITION.
20. AN EMERGENCY SPILL KIT SHALL BE KEPT ON SITE AT ALL TIMES. THE CONTRACTOR SHALL COMPLY WITH ALL MECP REQUIREMENTS AND SHALL REPORT SPILLS TO THE SPILLS ACTION CENTRE (1-800-268-6060). A SPILL RESPONSE PLAN IS TO BE KEPT ON SITE AT ALL TIMES.
21. MEASURES SHALL BE TAKEN TO PREVENT CONCRETE LEACHATE FROM ENTERING THE WATERCOURSE. ALL CEMENTITIOUS PRODUCTS INCLUDING CONCRETE, GROUT, AND MORTAR SHALL BE COMPLETELY ISOLATED FROM PRECIPITATION AND WATERCOURSE FLOW FOR A MINIMUM OF 48 HOURS (OR UNTIL SIGNIFICANTLY CURED) TO ALLOW THE PH TO REACH NEUTRAL LEVELS. CONTAINMENT FACILITIES SHALL BE PROVIDED AT THE SITE FOR WASH DOWN OF CONCRETE TRUCKS, PUMPS, EQUIPMENT, AND TOOLS AS REQUIRED.
22. SMALL MESH SEINE TO BE USED TO EXCLUDE FISH FROM THE PROJECT AREA. ALL FISH STRANDED WITHIN THE PROJECT AREA DURING CONSTRUCTION SHALL BE RELOCATED BY A QUALIFIED BIOLOGIST.
23. THE CONTRACTOR SHALL MONITOR THE WEEKLY WEATHER FORECAST ON A DAILY BASIS AND PREPARE THE SITE ADEQUATELY FOR CONDITIONS THAT MAY CAUSE WATER LEVELS TO RISE.
24. ALL GRADES WITHIN THE REGULATORY FLOOD PLAIN ARE TO BE MAINTAINED OR MATCHED UNLESS OTHERWISE APPROVED.
25. ENGINEERED CHANGES TO ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS AND MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT AND EROSION ON SITE. UPDATES SHALL BE COMPLETED BASED ON DIRECTION FROM THE CONTRACT ADMINISTRATOR THROUGHOUT THE CONSTRUCTION PROCESS.
26. ALL DISTURBED AREAS LEFT INACTIVE FOR 30 DAYS ARE TO BE STABILIZED WITH AN APPROPRIATE SEED MIXTURE PER OPSS.MUNI 804 APPLIED AT A MINIMUM RATE OF 25kg/ha.



SCHEMATIC DEWATERING
N.T.S.



TYPICAL COFFERDAM DETAIL
N.T.S.

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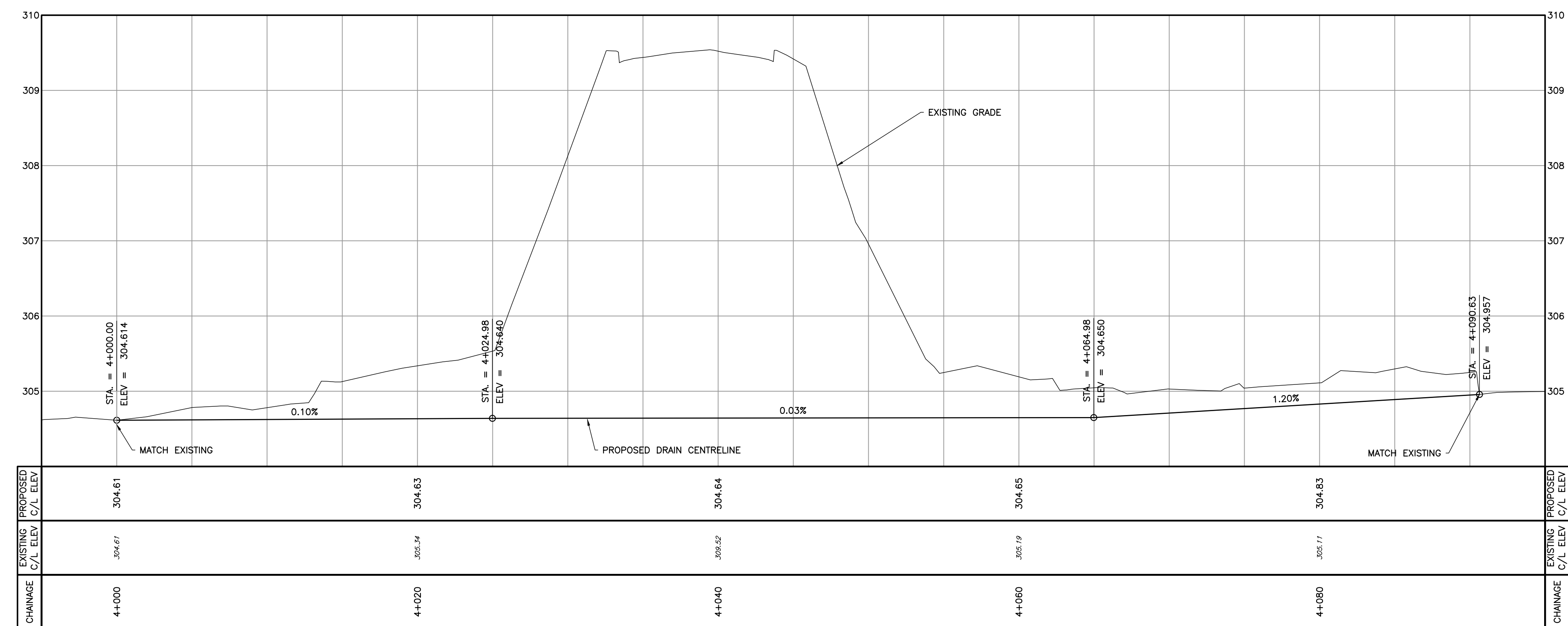
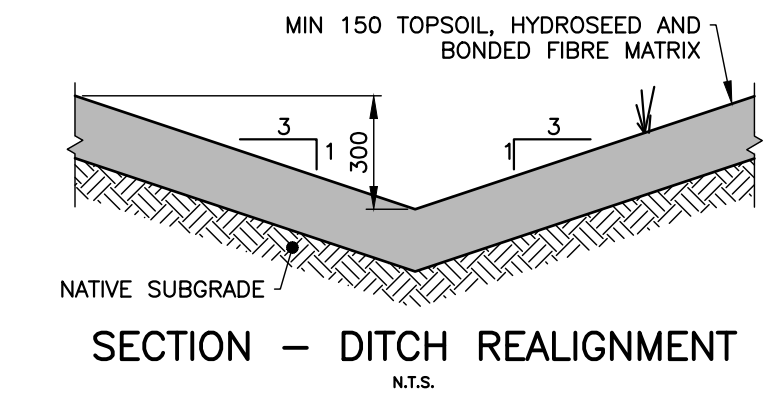
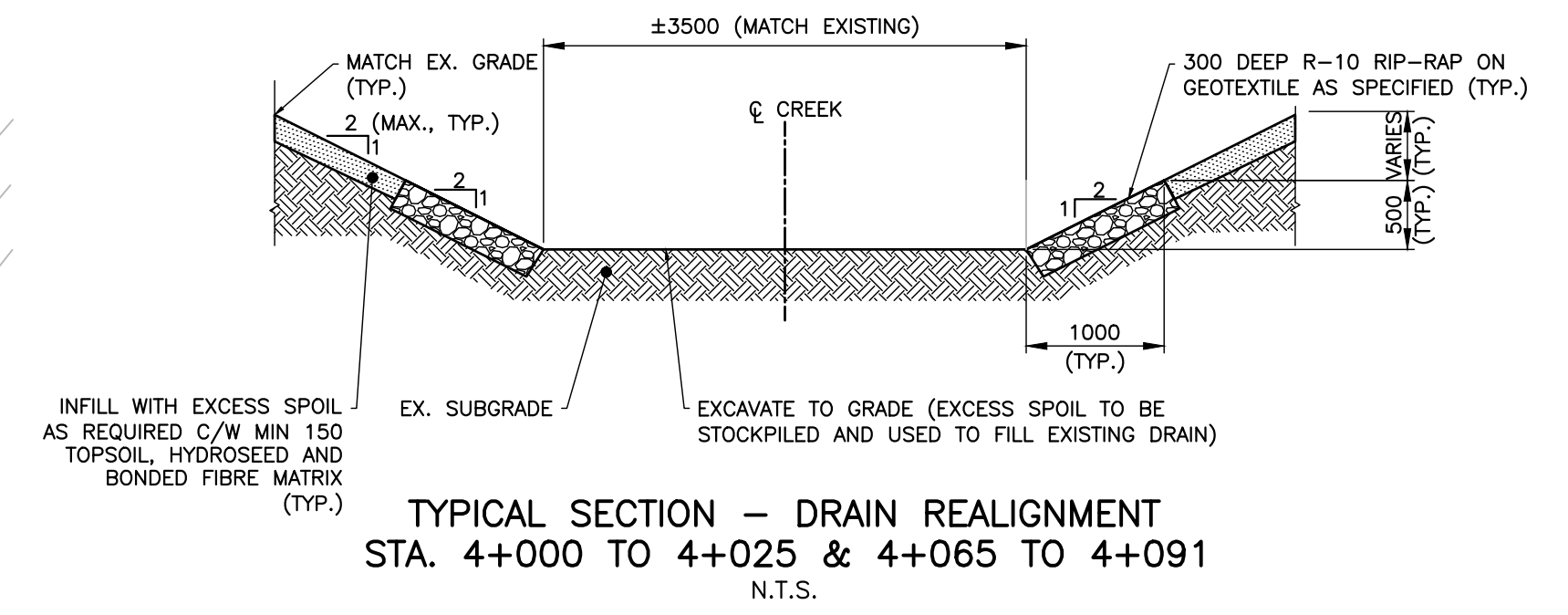
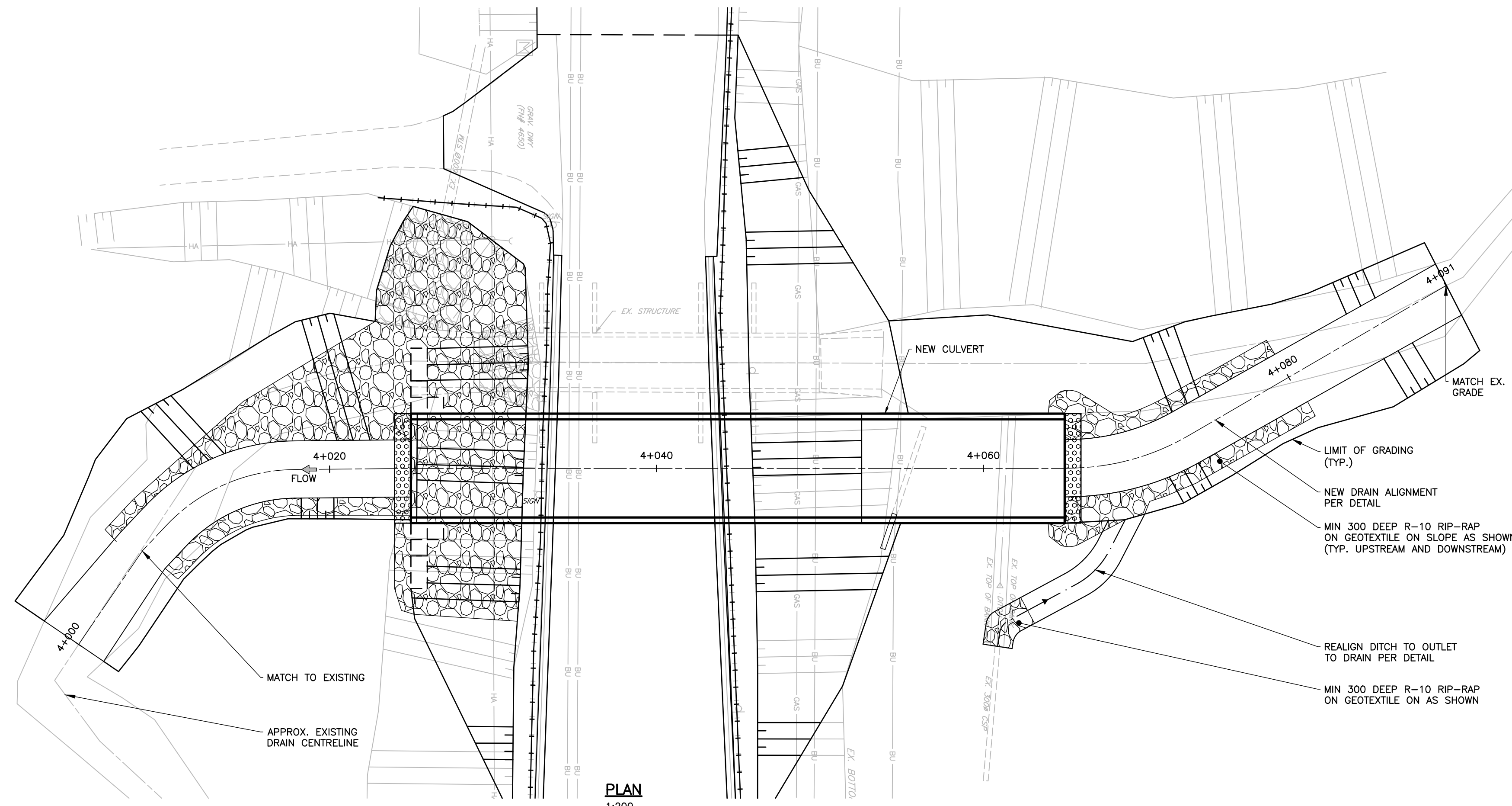
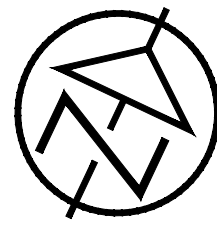


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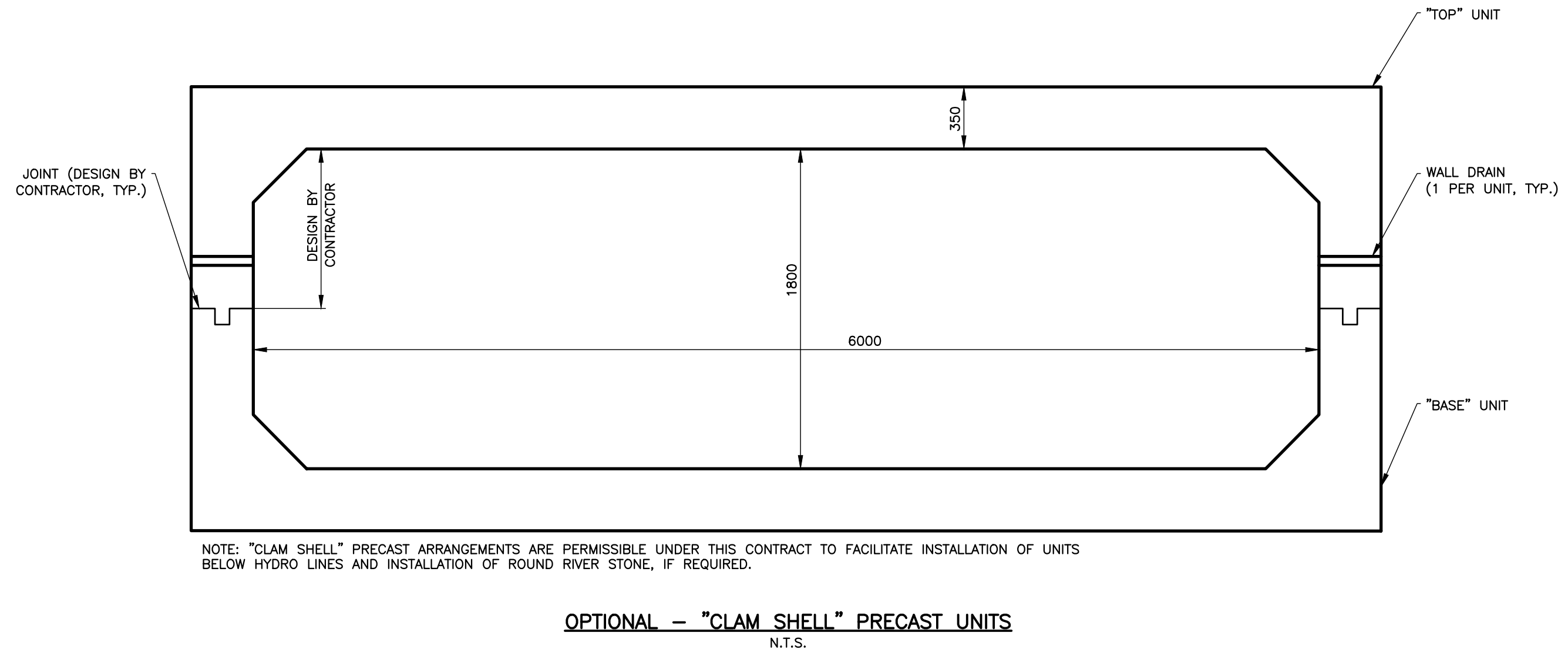
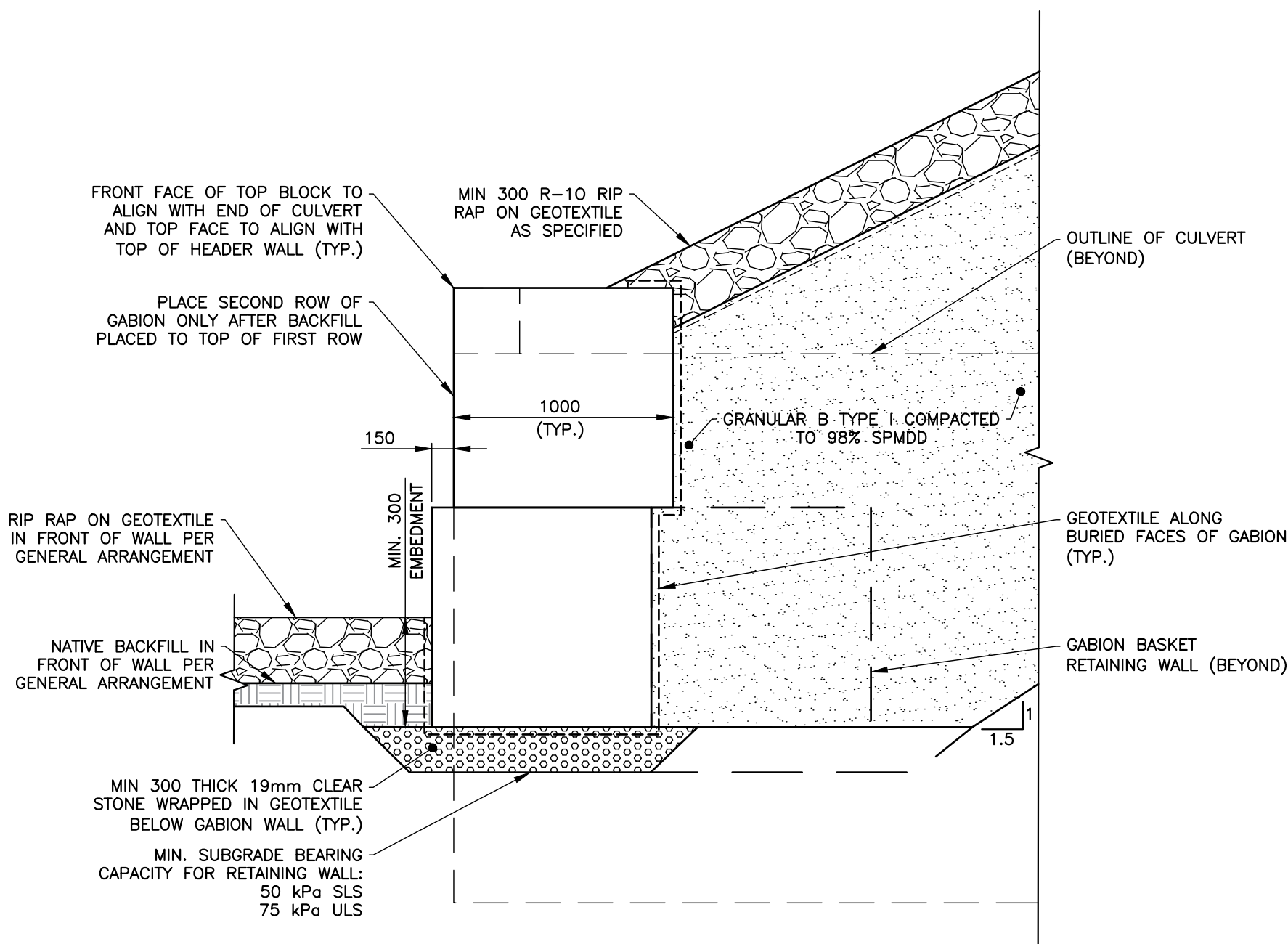
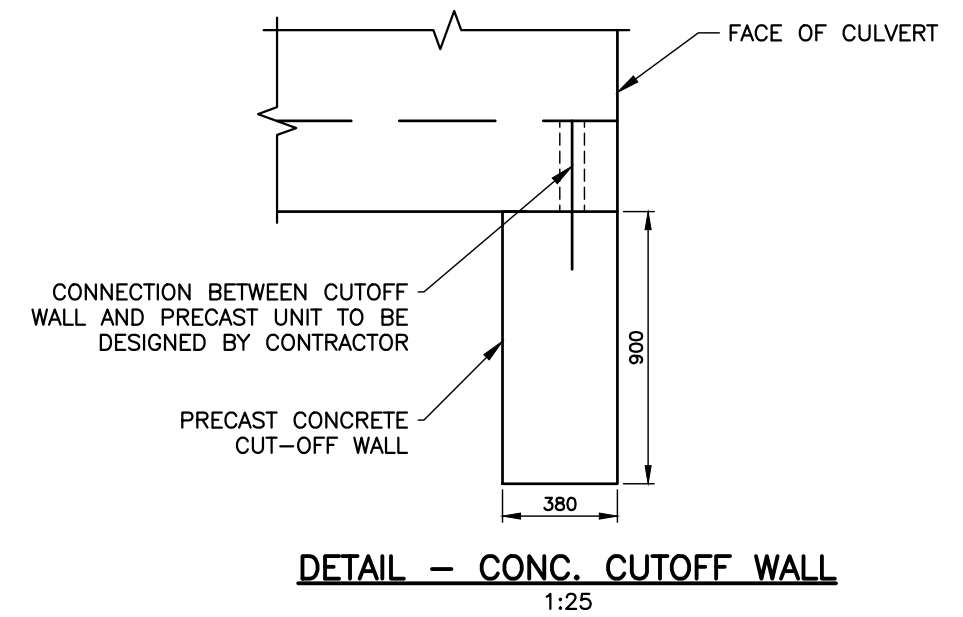
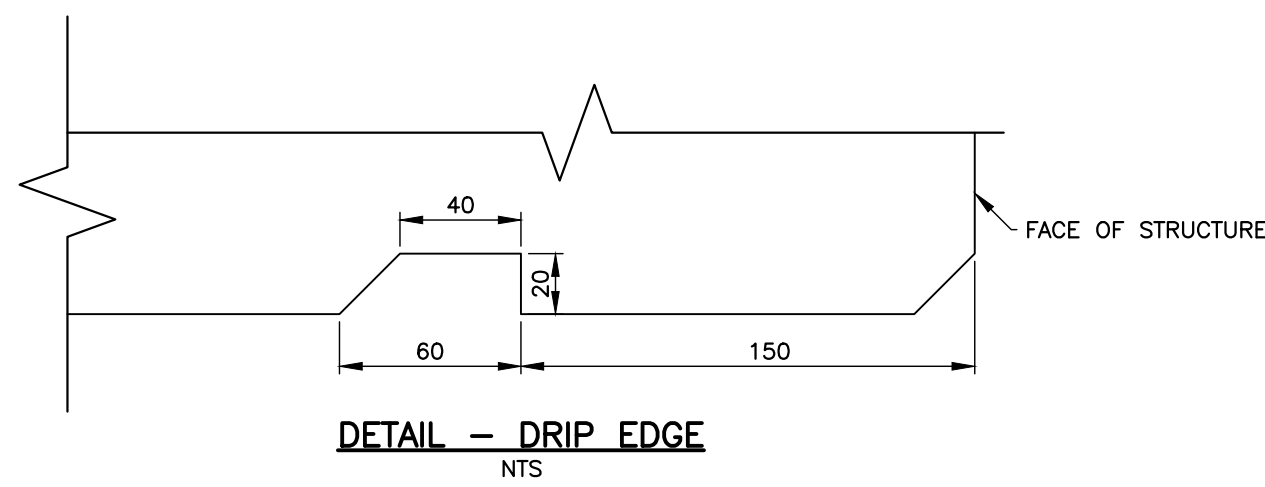
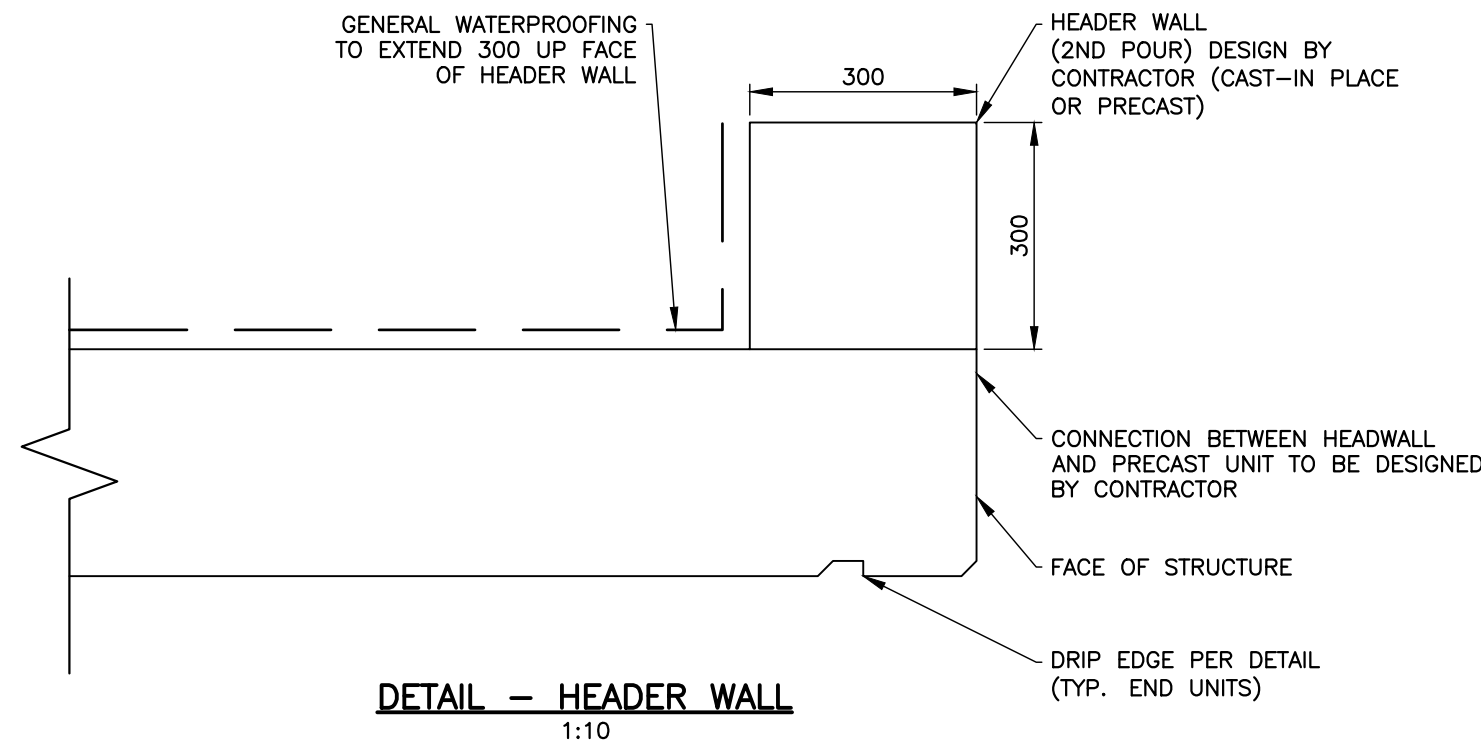
ENVIRONMENTAL
PROTECTION PLAN



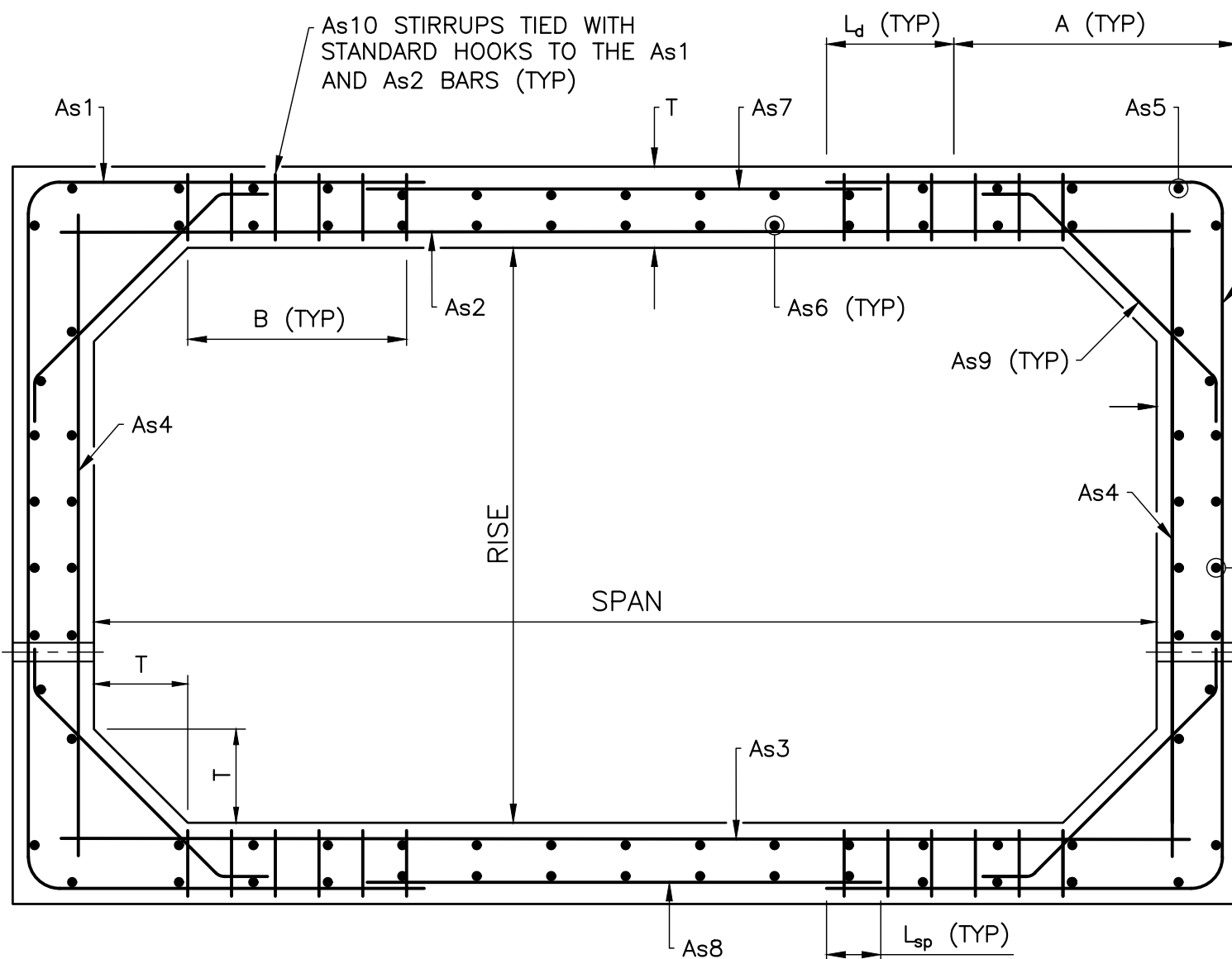
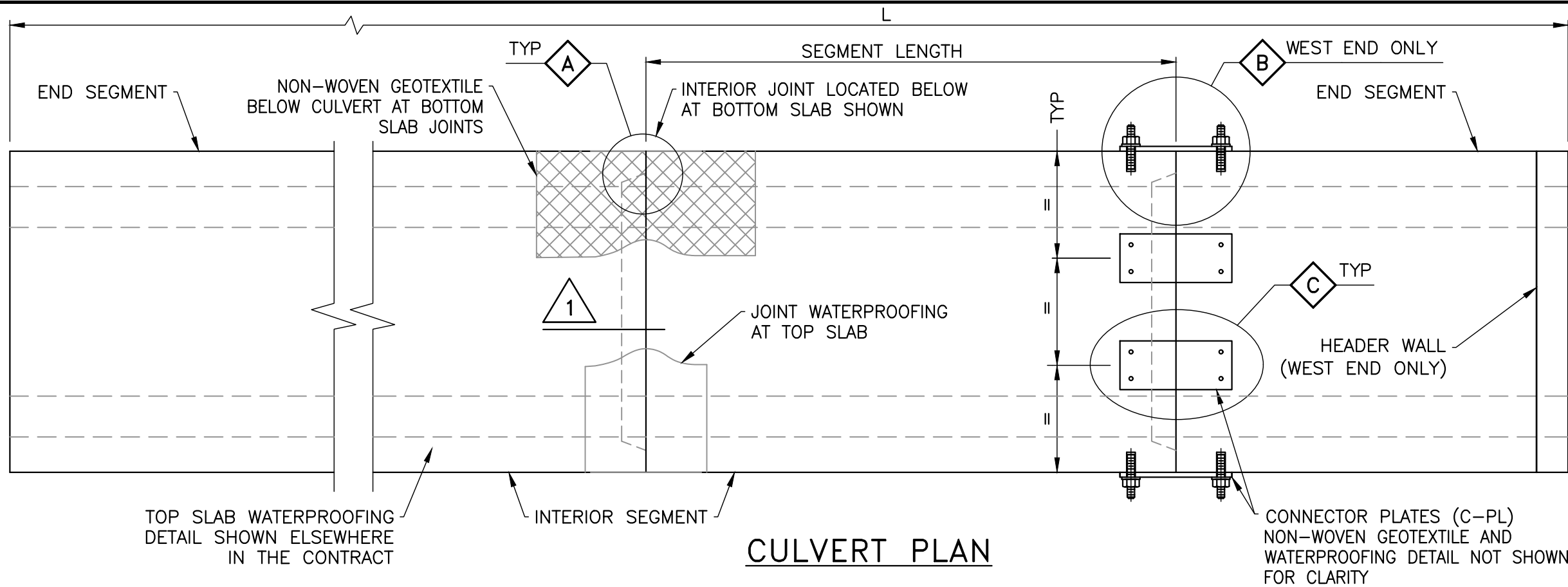
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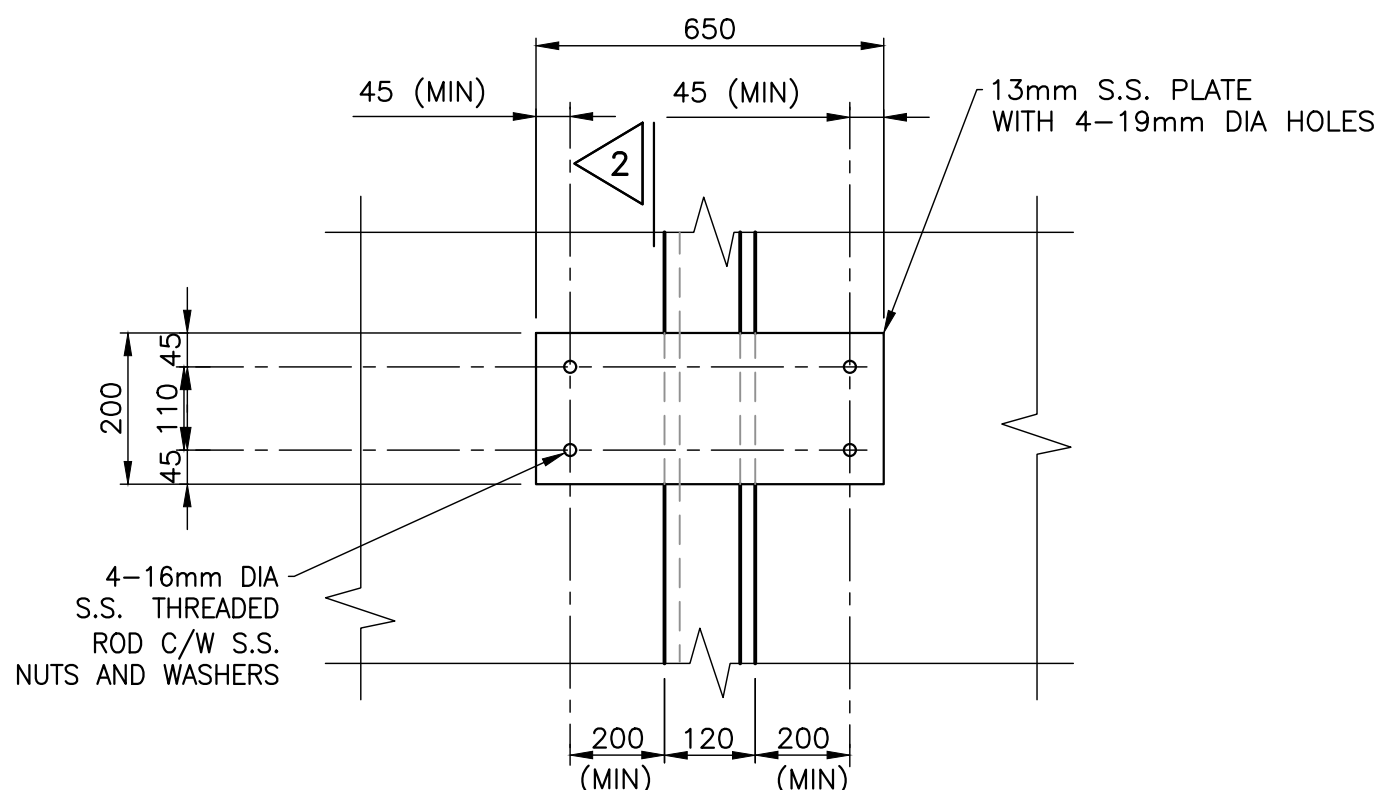
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			1.	ISSUED FOR APPROVAL	DEC 2024					
			2.	ISSUED FOR REVIEW	JAN 2025					
			3.	REVISED GEOMETRY PER REGION	MAR 2025					
			4.	ISSUED FOR TENDER	MAY 2025		STRUCTURAL DETAILS	DESIGN: M.S.	FILE: 124185	DWG:
			5.	ISSUED FOR CONSTRUCTION	AUG 2025			DRAWN: N.B./A.J.B.	DATE: JAN 2025	5
							CHECK: M.S.	SCALE: 1:250		

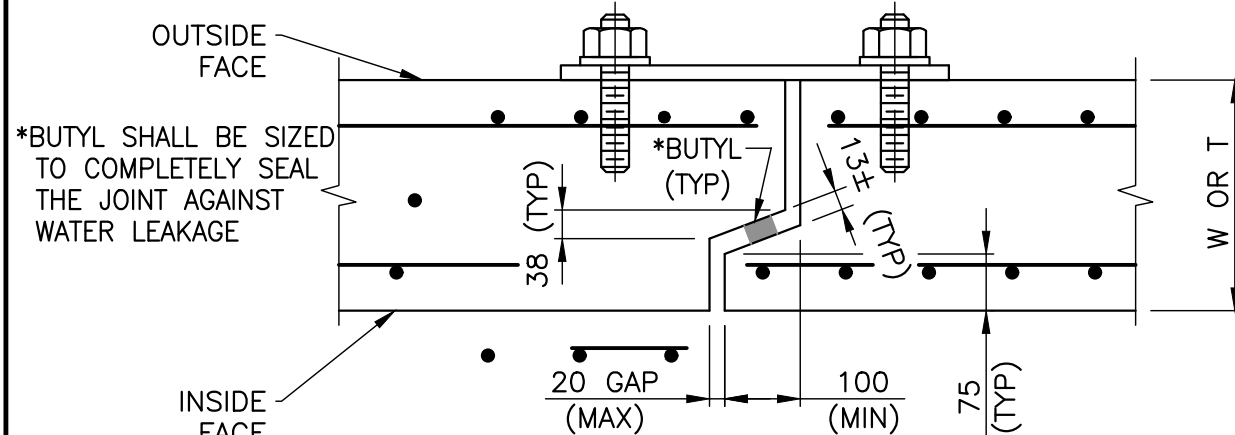


TYPICAL CULVERT SECTION

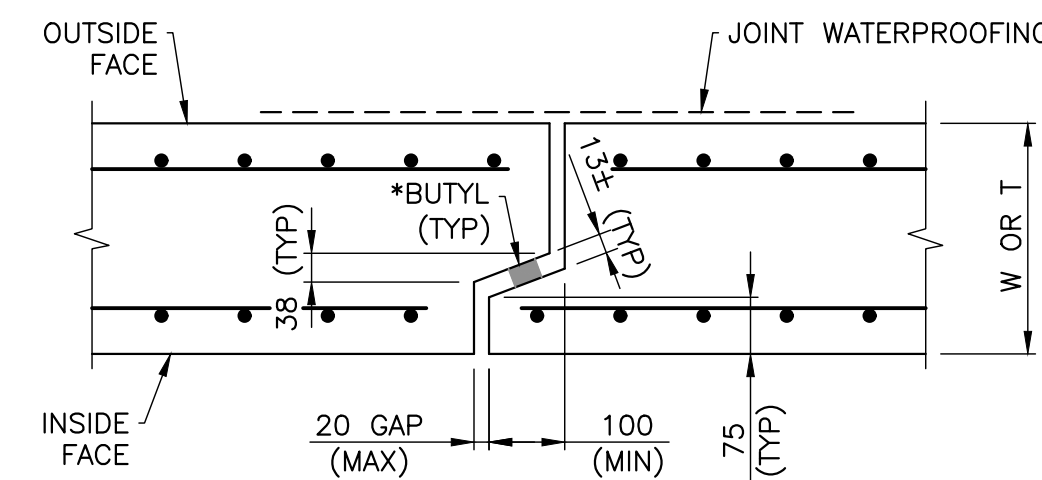


CONNECTOR PLATE

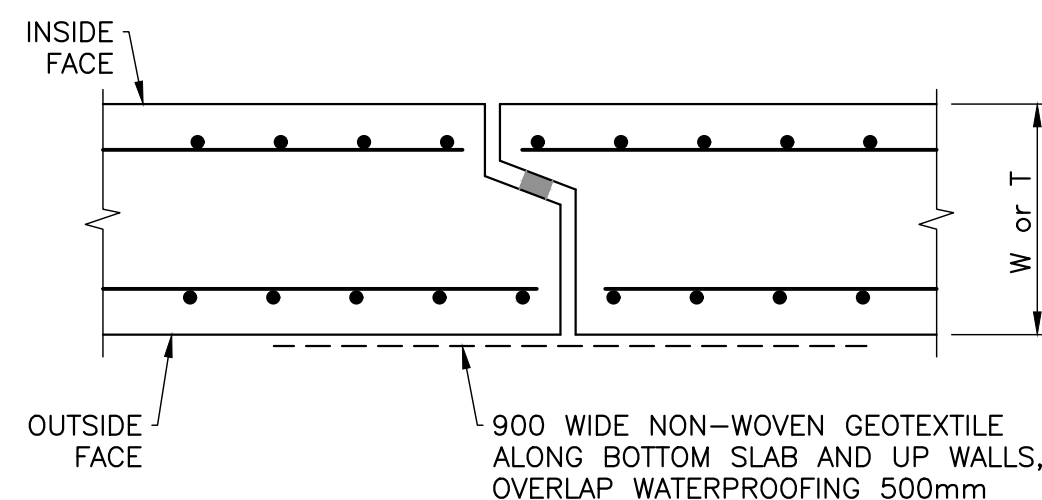
(*WATERPROOFING DETAIL SHOWN ELSEWHERE IN THE CONTRACT)



JOINT DETAIL WITH CONNECTOR PLATE AT TOP SLAB AND WALLS (TYP)



INTERIOR JOINT DETAIL FOR TOP SLAB AND TOP PART OF WALLS

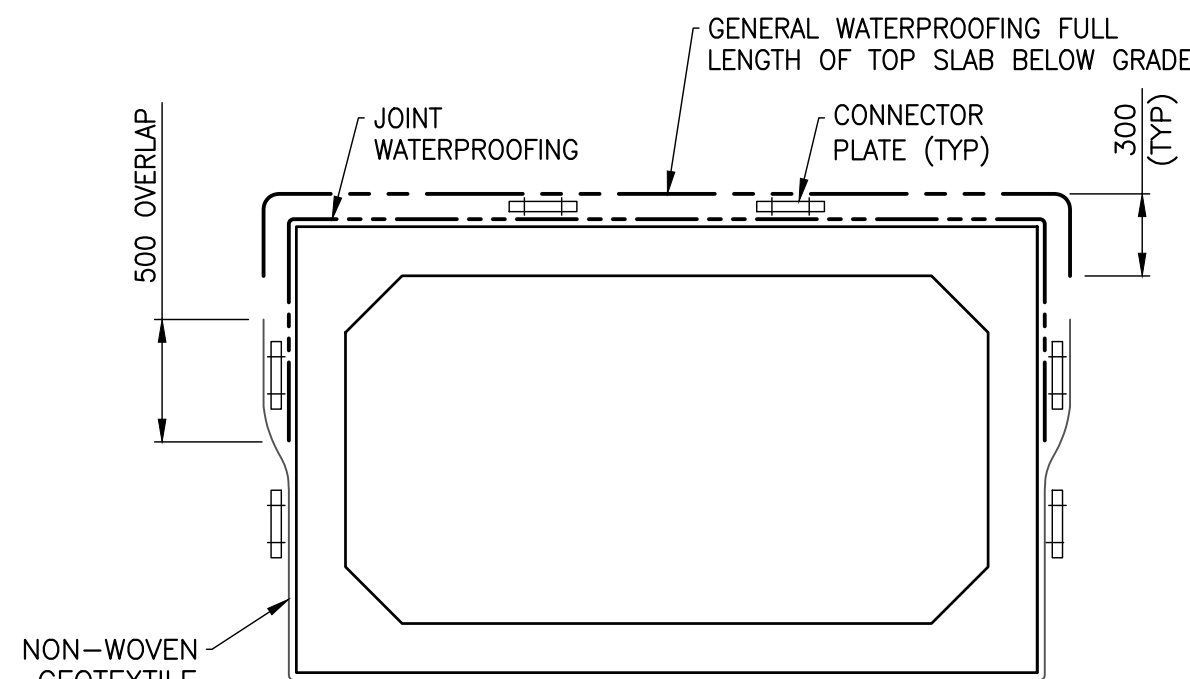


BOTTOM SLAB AND LOWER PART OF WALLS AT ALL JOINT LOCATIONS

TABLE 1

TABLE OF DIMENSIONS (mm)	
CULVERT LENGTH, L	40000
SPAN	6000
RISE	1800
SLAB THICKNESS, T	350
WALL THICKNESS, W	D.B.C.
INFLECTION POINT, A	D.B.C.
STIRRUP LENGTH OF NEED, B	D.B.C.
NO OF JOINTS FROM EACH END REQUIRING C-PL	ALL JOINTS WITHIN 4m OF WEST END (D.B.C.)
NO OF C-PL AT TOP SLAB PER JOINT	2
NO OF C-PL AT SIDE WALLS PER JOINT	2 PER WALL

D.B.C. = DESIGN BY CONTRACTOR



CULVERT SCHEMATIC

NOTES:

- CULVERT SCHEMATIC SHOWN TO ILLUSTRATE SEQUENCE OF INSTALLATION OF GEOTEXTILE, CONNECTOR PLATES AND WATERPROOFING ONLY. CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE CONSTRUCTION STEPS REQUIRED FOR CULVERT INSTALLATION.
- SEQUENCE SHALL BE:
 - PLACE GEOTEXTILE UNDER THE BOTTOM SLAB, CENTRED ABOUT JOINT, AND WRAPPING UP THE WALLS
 - INSTALL BOTTOM CONNECTOR PLATES (WHERE APPLICABLE) OVER GEOTEXTILE
 - APPLY JOINT WATERPROOFING ALONG THE TOP SLAB TO THE UPPER PART OF THE WALLS (IF DISTRIBUTION SLAB EXISTS, JOINT WATERPROOFING NEED ONLY EXTEND 500mm FROM EACH CORNER ALONG TOP SLAB)
 - INSTALL CONNECTOR PLATES (WHERE APPLICABLE) ON THE UPPER PART OF WALLS AND TOP SLAB
 - INSTALL REMAINING GEOTEXTILE, OVERLAPPING WATERPROOFING BY 500mm
 - PLACE CONCRETE DISTRIBUTION SLAB (IF APPLICABLE)
 - INSTALL GENERAL WATERPROOFING ALONG TOP SURFACE AND DOWN WALLS.
- PAYMENT FOR JOINT WATERPROOFING AND GENERAL WATERPROOFING PER CONTRACT SPECIFICATIONS

TABLE 2

TABLE OF REINFORCEMENT					
LOC	MARK	MAX SIZE	'DEFAULT' LAYOUT		DETAILS**
			AREA OF STEEL (mm ² /m)	400W	
OUTER CAGE	As1	SEE*			
	As7	15M	600 FOR T=300 700 FOR T=350 800 FOR T=400 900 FOR T=450	500W OR 485 MPa WWR	STRAIGHT
	As8	15M			STRAIGHT
INNER CAGE	As2	SEE*			STRAIGHT
	As3	SEE*			STRAIGHT
	As4	15M	600 FOR W=300 700 FOR W=350		STRAIGHT
TEMP. STEEL	As5	15M	500		STRAIGHT
	As6	15M	500		STRAIGHT
HAUNCH	As9	15M	660		15M @ 300mm 45° 180° OR 45° 180°
STIRRUP	As10				SEE GENERAL NOTES

NOTES:

- *MAXIMUM REBAR SIZES FOR As1, As2 and As3 SHALL NOT EXCEED 15M FOR As < 2500mm², 20M FOR As 2501 TO 6000mm² AND 25M FOR As > 6000mm².
- **REINFORCING BAR SPACING SHALL NOT EXCEED 300mm FOR 10M BARS AND LARGER, FOR BARS SMALLER THAN 10M MAX SPACING SHALL BE 250mm.

GENERAL NOTES:

- ALL AUXILIARY ITEMS ARE CONSIDERED PART OF THE CULVERT SUPPLY AND INSTALLATION. REFER TO CONTRACT SPECIFICATIONS.
- MINIMUM CONCRETE STRENGTH AT 28 DAYS, 45 MPa.
- CLEAR COVER TO REINFORCING STEEL SHALL BE 50±10mm UNLESS OTHERWISE NOTED.
- REINFORCING STEEL SHALL BE GRADE 400W OR 500W UNLESS OTHERWISE SPECIFIED.
- WWR REINFORCEMENT SHALL BE IN ACCORDANCE WITH ASTM A1064 AND HAVE A MINIMUM YIELD STRENGTH OF 485 MPa, UNLESS OTHERWISE SPECIFIED.
- WHERE STIRRUPS ARE INDICATED AS BEING REQUIRED OVER THE LENGTH B (FROM TABLE 1), THE MAXIMUM SPACING IN THE SPAN DIRECTION SHALL NOT EXCEED 0.5 "t" (WHERE "t" IS FROM TABLE 1), AND THE SPACING IN THE LONGITUDINAL DIRECTION SHALL NOT EXCEED "t". THE AREA OF STIRRUP REINFORCEMENT OVER THE LENGTH OF B AND ALONG THE ENTIRE SEGMENT LENGTH SHALL NOT BE LESS THAN 830mm²/m² FOR 485 MPa STIRRUPS, AND NOT LESS THAN 1000mm²/m² FOR 400 MPa STIRRUPS. STIRRUPS SIZES SHALL BE D5 TO D8 DEFORMED WIRES PER ASTM A1064 OR BARS OF EQUIVALENT DIAMETERS.
- BAR DEVELOPMENT L_d SHALL NOT BE LESS THAN:

BAR DIAMETER	L _d
15M	500mm
20M	600mm
25M	900mm
- ALL SPLICES SHALL BE CLASS B. THE SPLICE LENGTH SHALL BE, L_{sp} = 1.3 x L_d
- ALTERNATIVE LAYOUTS OF REINFORCEMENT ARE ACCEPTABLE. CONTRACTOR TO ENSURE THAT THE AREA OF STEEL PROVIDED SHALL BE CHOSEN FROM THE MAXIMUM AREAS OF STEEL SPECIFIED ON THE "REINFORCEMENT LAYOUT OPTIONS".
- STAINLESS STEEL PLATE SHALL BE ASTM A240/240M TYPE 304. THREADED STAINLESS STEEL ROD SHALL BE ASTM F593, TYPE 316 AND STAINLESS STEEL NUTS SHALL BE AS PER ASTM F594.
- CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF LIFTING ANCHORS.
- LIFTING AND HANDLING LOADS ARE NOT CONSIDERED IN THE DESIGN. CONTRACTOR TO ENSURE THAT CULVERT UNITS ARE NOT ADVERSELY LOADED DURING SHIPPING AND INSTALLATION DUE TO LIFTING AND HANDLING.
- FOR HEADWALL, WINGWALL, APRON, OR CUT-OFF WALL DETAILS REFER TO OTHER DRAWINGS OF THE CONTRACT.
- NORMAL WATER LEVEL FOR DRAIN SETTING CAN BE FOUND ELSEWHERE IN CONTRACT.
- MAXIMUM SEGMENT LENGTH=3.0m. MINIMUM INTERIOR SEGMENT LENGTH=1.5m. MINIMUM END SEGMENT LENGTH=1.8m, BUT NOT < 90% OF INTERIOR SEGMENT.
- LEGEND: C-PL - CONNECTOR PLATES
LONGITUDINAL DIRECTION - DIRECTION ALONG THE LENGTH OF THE CULVERT

CONSTRUCTION NOTES:

- BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH SIDES OF CULVERT KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 500mm.
- SUPPORTS FOR REINFORCING STEEL SHALL BE AS PER OPD 3329.101 AND OPD 3329.100 ON FORMED SURFACES. ON NON-FORMED SURFACES, CONCRETE BLOCKS (MIN. 20MPa) SHALL BE USED.

APPLICABLE STANDARD DRAWINGS:

OPSD 3941.200 FIGURES IN CONCRETE SITE NUMBER AND DATE LAYOUT
OPSD 803.010 BACKFILL AND COVER FOR CONCRETE CULVERTS

MODIFIED	
STANDARD DRAWING DECEMBER 2020	SS114-4
PRECAST RIGID FRAME BOX CULVERT	

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BENCHMARKS

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ENGINEER STAMP



**RANDALL DRAIN CULVERT REPLACEMENT
FOUNTAIN STREET NORTH
TOWNSHIP OF WOOLWICH
CONTRACT No. 2025-04**

PRECAST RIGID FRAME BOX CULVERT



DESIGN: M.S.	FILE: 124185	DWG: 6
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