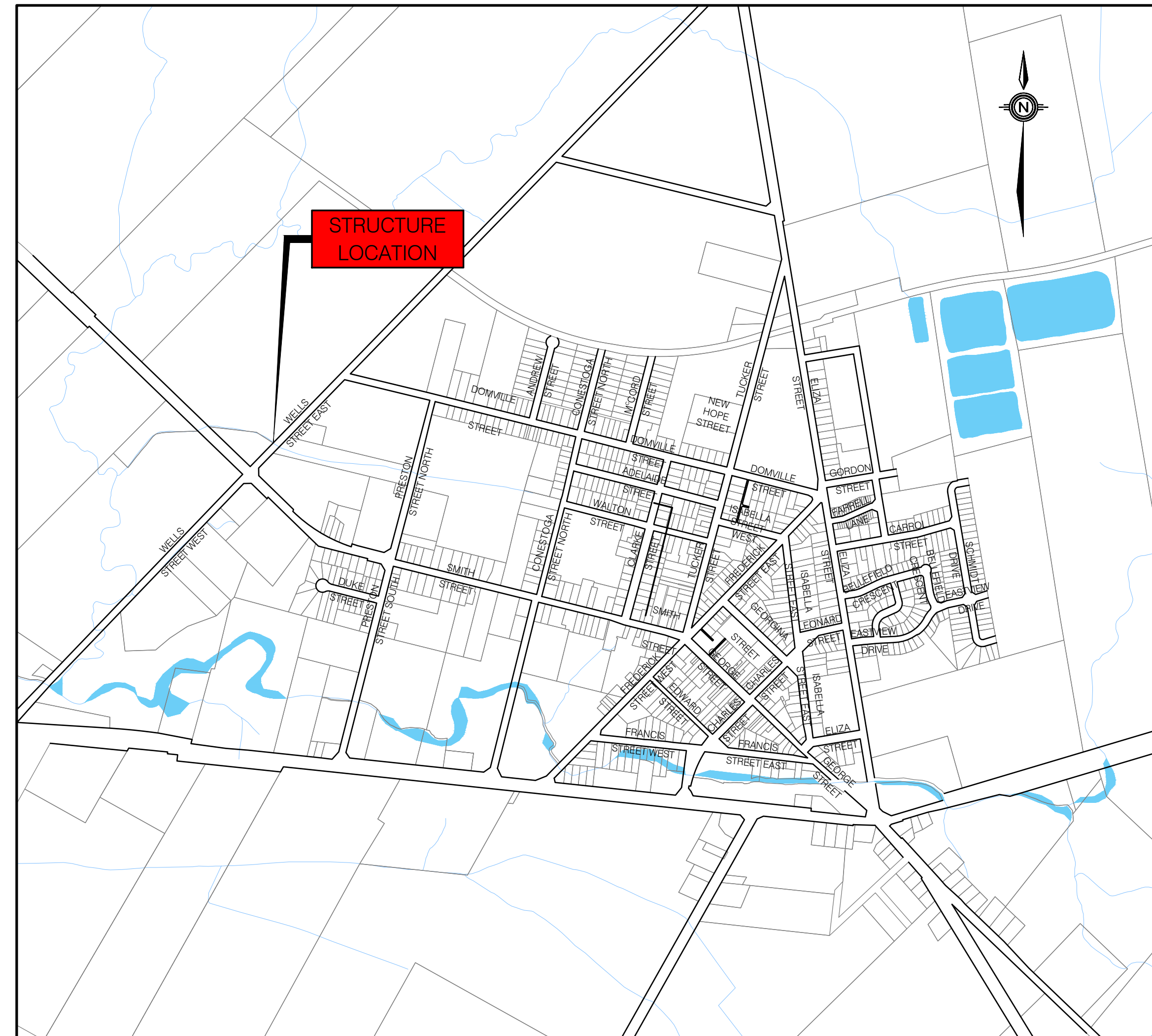


TOWNSHIP OF WELLINGTON NORTH



CONTRACT FOR REPLACEMENT OF **WELLS STREET CULVERT** ARTHUR

CONTRACT No. RFT 2024-012



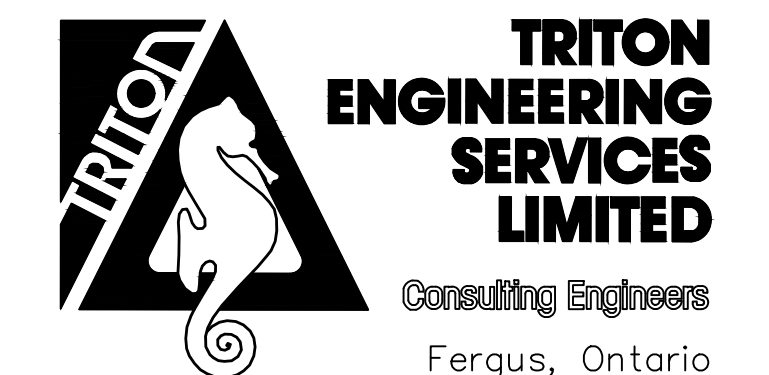
ARTHUR
KEY PLAN

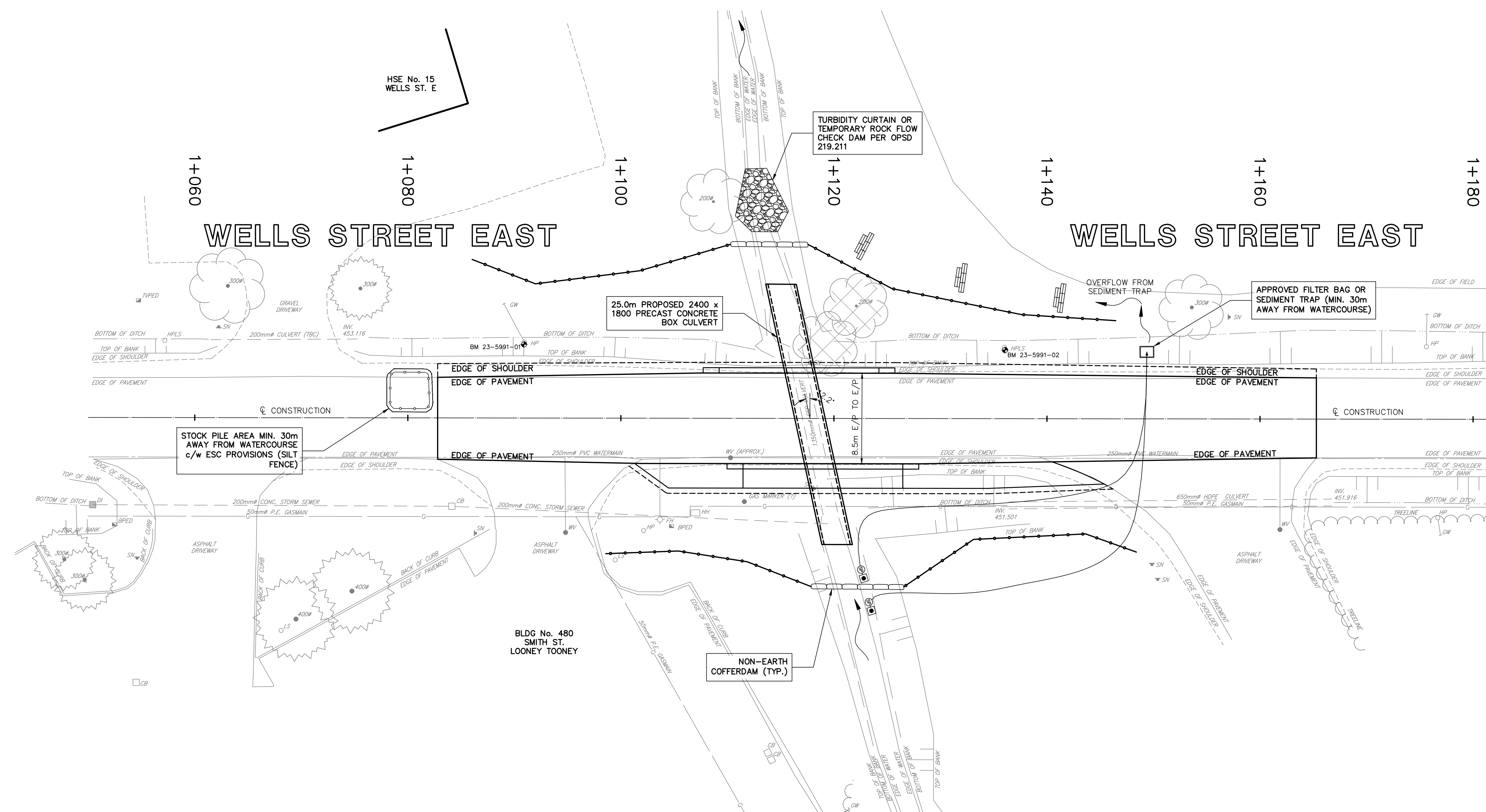
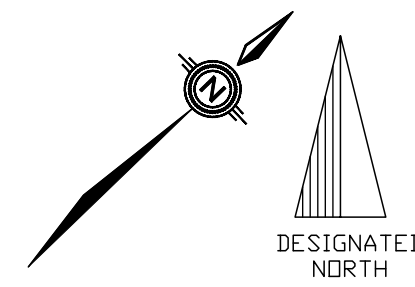
LIST OF DRAWINGS

- 00 - COVERSHEET
- 01 - EROSION & SEDIMENT CONTROL PLAN & DEWATERING PLAN
- 02 - PLAN & PROFILE

ISSUED FOR APPROVALS
ISSUED FOR TENDER
ISSUED FOR CONSTRUCTION
AS RECORDED

— JULY 2024
— AUGUST 2024
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- LEGEND:**
- HEAVY DUTY SILT FENCE (OPSD 219.130)
 - STRAW BALE FLOW CHECK (OPSD 219.180)
 - PUMP
 - PUMP INLET
 - PUMP OUTLET
 - CLEAR AND GRUB

DEWATERING – SUGGESTED SEQUENCE OF ACTIVITIES:

1. INSTALL SILT FENCE, STRAW BALE CHECK DAMS AND ANY OTHER EROSION CONTROL MEASURES WHICH MAY BE REQUIRED.
2. INSTALL COFFERDAMS AS REQUIRED TO ISOLATE THE AREA AROUND THE PROPOSED CULVERT.
3. DEWATER THE WORKING AREA SIMULTANEOUSLY.
4. REMOVE EXISTING CSP CULVERT. A MINIMUM 2-WEEKS PRIOR TO REMOVAL OF THE EXISTING STRUCTURE, THE CONTRACTOR SHALL SUBMIT A DEMOLITION PLAN DETAILING HOW THE WATERCOURSE WILL BE PROTECTED FROM DEBRIS, DUST, AND SLURRY.
5. EXCAVATE AS REQUIRED IN ORDER TO INSTALL GRANULAR BEDDING, PROPOSED CONCRETE BOX CULVERT, AND WATERPROOFING.
6. PLACE GRANULAR SUBSTRATE AND GRADED RIVERSTONE AS REQUIRED TO RESTORE WATERCOURSE STREAMBED WITHIN WORK AREA.
7. PLACE BACKFILL AROUND PROPOSED CONCRETE BOX CULVERT AS REQUIRED TO FACILITATE REMOVAL OF COFFERDAMS. PLACE ROCK PROTECTION.
8. REMOVE COFFERDAMS.
9. COMPLETE REMAINING WORKS.
10. RESTORE THE SITE TO EXISTING OR BETTER CONDITION, COMPLETE WITH THE INSTALLATION AND MAINTENANCE OF SILT FENCE AND STRAW BALE CHECK DAMS UNTIL VEGETATION HAS REESTABLISHED.

NOTE:

THIS DEWATERING PLAN IS CONCEPTUAL ONLY; THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE CONTRACT ADMINISTRATOR AND GRCA FOR APPROVAL PRIOR TO CONSTRUCTION.

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE PROTECTION OF UTILITIES, SERVICES, ROADWAYS ETC. DURING CONSTRUCTION OPERATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, RELOCATION AND CONTINUOUS MONITORING OF TEMPORARY FLOW PASSAGE AND DEWATERING OPERATIONS TO PERMIT THE FLOW OF WATER THROUGH OR AROUND THE WORK ZONE SUCH THAT THE WORK IS EXECUTED IN THE DRY. THE LIMITS OF COFFERDAMS SHALL BE DETERMINED BY THE CONTRACTOR.
3. EXISTING FILL AND SURFICIAL ORGANIC MATERIALS SHALL BE SUBEXCAVATED TO NATIVE SOIL AND REPLACED WITH GRANULAR B TYPE III.
4. NO GRANULAR BEDDING SHALL BE PLACED UNTIL THE DEPTH OF EXCAVATION AND THE SUBGRADE HAVE BEEN APPROVED BY THE CONTRACT ADMINISTRATOR'S GEOTECHNICAL ENGINEER.

EROSION CONTROL – CULVERT REPLACEMENT:

1. ALL WORK SHALL BE DONE IN THE DRY. WORK TO BE COMPLETED ONLY DURING FORECASTED PERIOD OF DRY WEATHER.
2. IN-WATER WORKS SHALL TAKE PLACE BETWEEN JULY 1 AND SEPTEMBER 15 UNLESS OTHERWISE APPROVED BY ALL APPLICABLE REGULATORY AUTHORITIES.
3. DEWATERING OF THE SITE SHALL BE ACHIEVED BY THE INSTALLATION OF COFFERDAMS TO ISOLATE THE WORKING AREA, AND THE PLACEMENT OF FLOW DIVERSION AND/OR CONVENTIONAL SUMP PUMPS WHERE REQUIRED. A MINIMUM 2-WEEKS PRIOR TO COMMENCING THE PROPOSED WORKS, THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN, DETAILING SPECIFIC METHODOLOGY, TO BE REVIEWED AND APPROVED BY THE CONTRACT ADMINISTRATOR AND APPLICABLE CONSERVATION AUTHORITY. ANY DEVIATION FROM PLAN IS TO BE REVIEWED AND APPROVED BY THE CONTRACT ADMINISTRATOR AND APPLICABLE CONSERVATION AUTHORITY.
4. PUMPS SHALL BE DISCHARGED INTO A 'FILTER BAG' OR 'SEDIMENT BOX' TO PREVENT DELETERIOUS MATERIAL FROM ENTERING THE WATERCOURSE. THE CONTRACTOR SHALL PROVIDE A STAND-BY PUMP CAPABLE OF DEWATERING FOR USE IN CASE THE FLOW IN THE WATERCOURSE INCREASES BEYOND THE CAPACITY OF THE PUMPING SYSTEM. PUMPS ARE TO BE EQUIPPED WITH FISH SCREENS WITH OPENING NO LARGER THAN 2.54mm.
5. COFFERDAMS AND TEMPORARY FLOW PASSAGE SHALL BE DESIGNED BY THE CONTRACTOR AND SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW AND APPROVAL. A MINIMUM OF 2-WEEKS PRIOR TO COMMENCING THE PROPOSED WORKS, ANY DEVIATION FROM PLAN IS TO BE REVIEWED AND APPROVED BY THE CONTRACT ADMINISTRATOR.
6. ALL DISTURBED AREAS INCLUDING BANKS ABOVE WATER LEVEL, WHICH ARE NOT DESIGNATED FOR ROCK PROTECTION, SHALL BE REGRADED, TOPSOILED AND SEEDING AS SOON AS POSSIBLE. ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR GREATER SHALL INCLUDE A BIODEGRADABLE EROSION CONTROL BLANKET.
7. ALL EROSION CONTROL MEASURES (SILT FENCE, SEDIMENT CURTAIN ETC.) SHALL BE CHECKED DAILY DURING ON-SITE WORK AND BE MAINTAINED IN GOOD STATE SO THAT THEY ARE FUNCTIONING PROPERLY.
8. NO MACHINERY SHALL CROSS THE WATERCOURSE AT ANY TIME. ANY MACHINERY THAT IS REQUIRED ON THE OTHER SIDE OF THE WATERCOURSE SHALL BE HAULED BY FLOAT OR DRIVEN AROUND ON THE ROADS. MACHINERY, VEHICLES, EQUIPMENT, PUMPS, ETC., SHALL NOT BE REFUELED WITHIN 30 METRES OF THE WATERCOURSE. MACHINERY SHALL NOT BE CLEANED WITHIN 30 METRES OF THE WATERCOURSE.
9. ALL WASTE MATERIAL FROM CONSTRUCTION SHALL BE STORED A MINIMUM OF 30 METRES AWAY FROM AND ABOVE THE HIGH WATERMARK. THE CONTRACTOR SHALL INSTALL SILT FENCE AROUND ANY STOCK-PILED MATERIAL, AS REQUIRED, TO PREVENT ANY MATERIAL FROM ENTERING THE WATERCOURSE.
10. FOR TYPICAL CHECK DAMS REFER TO OPSD 219.180 AND OPSD 219.211.
11. FOR SILT FENCE DETAIL REFER TO OPSD 219.130.
12. SEED MIX TO BE 'RURAL ONTARIO ROADSIDE NATIVE SEED MIXTURE 8145'.

ADDITIONAL ENVIRONMENTAL MEASURES TO BE ADHERED TO:

1. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO COMMENCEMENT OF WORKS AND MAINTAINED DURING THE WORK PHASE, TO PREVENT THE ENTRY OF SEDIMENT INTO THE WATER OR THE MOVEMENT OF RE-SUSPENDED SEDIMENT.
2. ALL DISTURBED WORK AREAS SHALL BE STABILIZED AND RE-VEGETATED AS REQUIRED UPON THE COMPLETION OF WORK AND RESTORED TO A PRE-DISTURBED STATE OR BETTER.
3. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED AND RE-VEGETATED.
4. EXISTING STREAM FLOWS SHALL BE MAINTAINED DOWNSTREAM OF THE DE-WATERED WORK AREA, WITHOUT INTERRUPTION, DURING ALL STAGES OF WORK. THERE SHOULD BE NO INCREASE IN UPSTREAM WATER LEVELS OF THE DE-WATERED WORK AREA.
5. SILT OR DEBRIS THAT HAS ACCUMULATED AROUND THE TEMPORARY COFFERDAMS SHALL BE REMOVED PRIOR TO THEIR REMOVAL.
6. ENSURE THAT MACHINERY ARRIVES ON SITE IN A CLEAN, WASHED CONDITION AND IS MAINTAINED FREE OF FLUID LEAKS.
7. WASH, REFUEL AND SERVICE MACHINERY AND STORE FUEL AND OTHER MATERIAL FOR THE MACHINERY AWAY FROM THE WATERCOURSE TO PREVENT ANY DELETERIOUS SUBSTANCE FROM ENTERING THE WATERCOURSE.
8. KEEP AN EMERGENCY SPILL KIT ON-SITE IN CASE OF FLUID LEAKS OR SPILLS FROM MACHINERY.
9. CONCRETE LEACHATE IS ALKALINE AND HIGHLY TOXIC TO FISH AND AQUATIC LIFE AND MEASURES MUST BE TAKEN TO PREVENT ANY INCIDENCE OF CONCRETE OR CONCRETE LEACHATE FROM ENTERING THE WATERCOURSE.

DISCLAIMERS:
 1. ALL EXISTING ELEVATIONS & DIMENSIONS TO BE CONFIRMED ON SITE. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION AGAINST DAMAGE.

No	DATE	REVISION	INITIAL
2	AUG 2024	ISSUED FOR TENDER	P.F.Z.
1	JULY 2024	ISSUED FOR GRCA APPROVAL	P.F.Z.

**CULVERT REPLACEMENT
 WELLS ST. EAST
 (ARTHUR)**

**TOWNSHIP OF WELLINGTON NORTH
 7490 SIDEROAD 7 WEST
 KENILWORTH, ONTARIO N0G 2E0**

**EROSION & SEDIMENT CONTROL PLAN
 & DEWATERING PLAN**

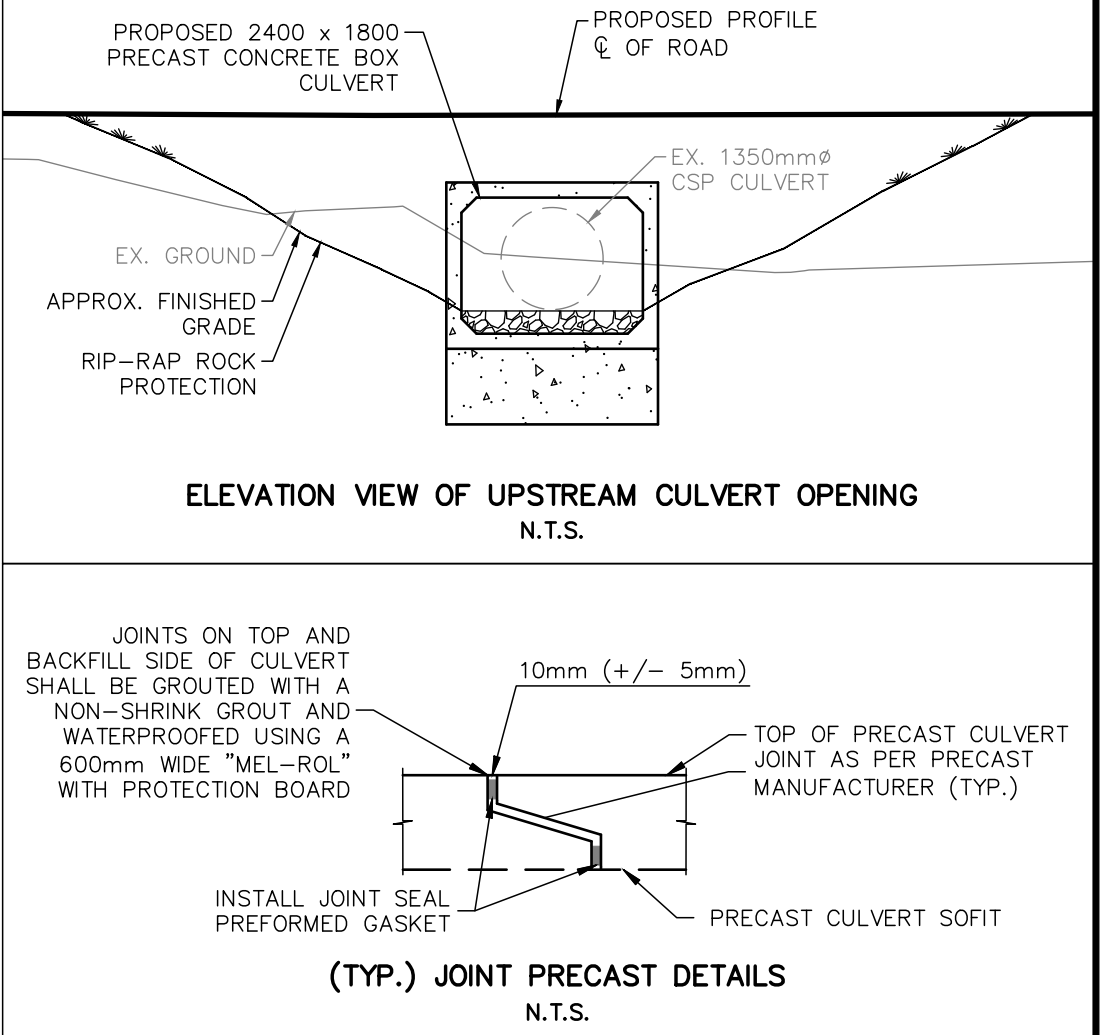
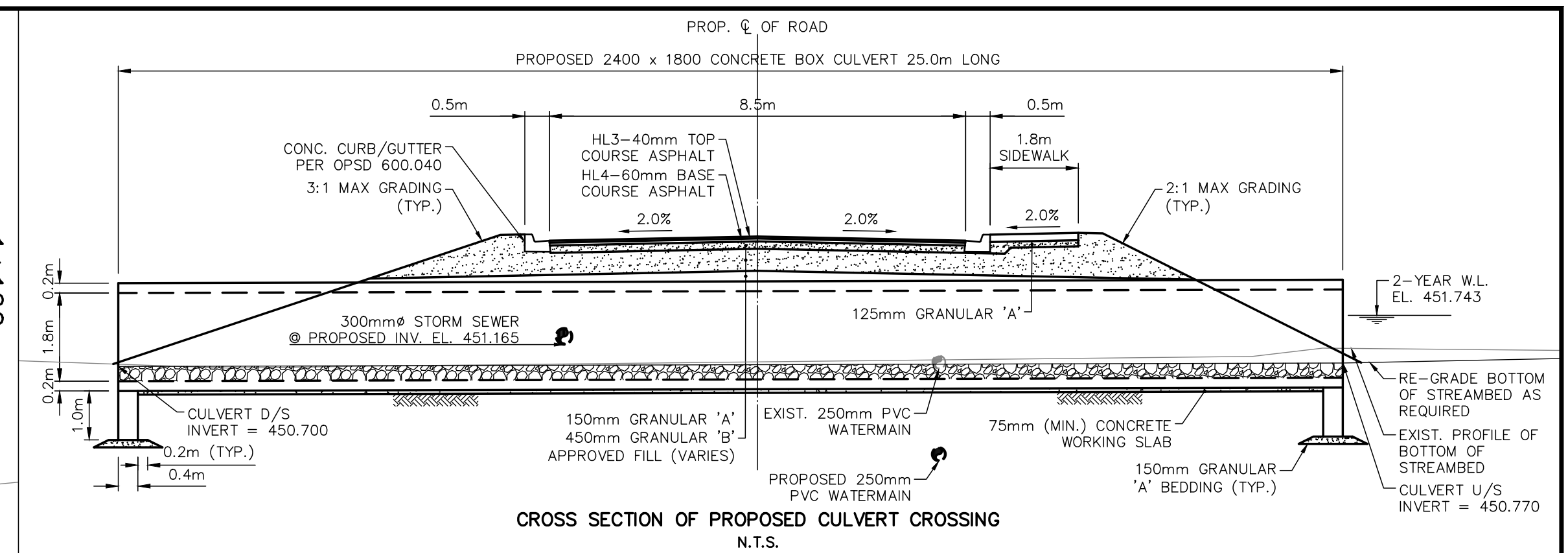
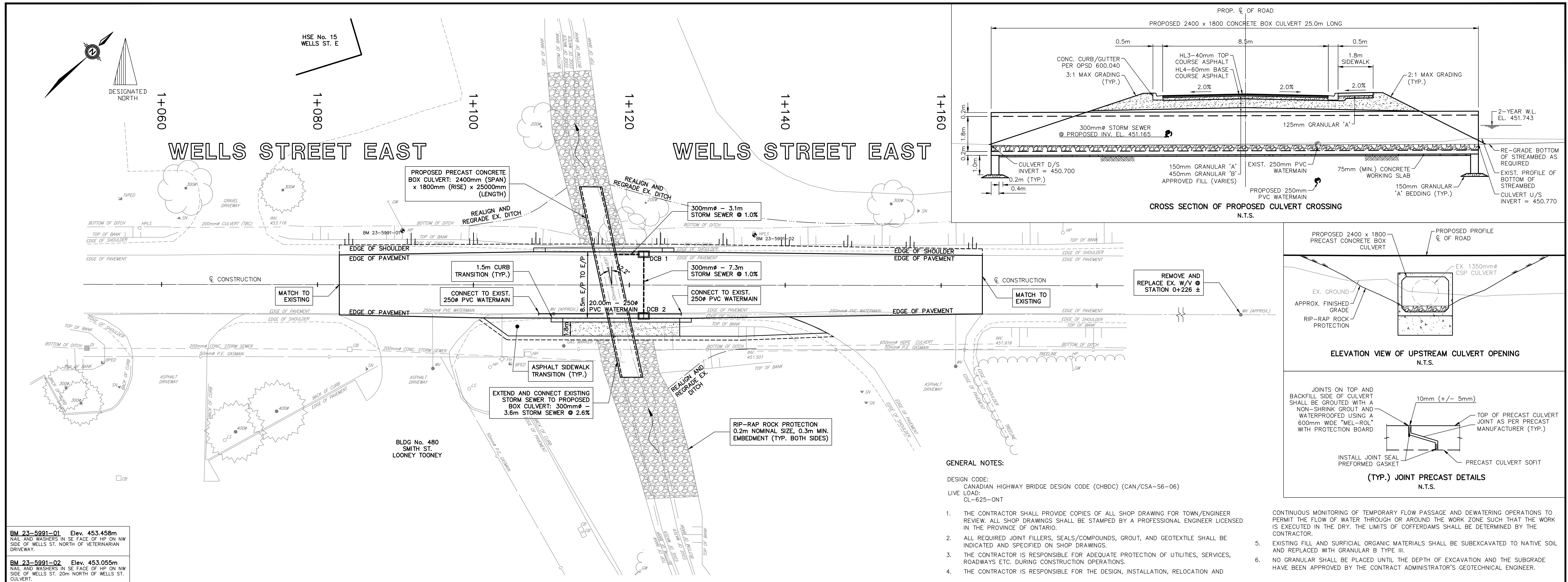
CONTRACT No.	5991-24
PROJECT No.	M5991
DRAWN BY:	A.v.R.
CHECKED BY:	J.S.K.
APPROVED BY:	P.F.Z.
DATE:	APRIL 2024



SCALE:
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 V: 1:50 V: 1:100
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 UNLESS OTHERWISE SHOWN

DRAWING NUMBER
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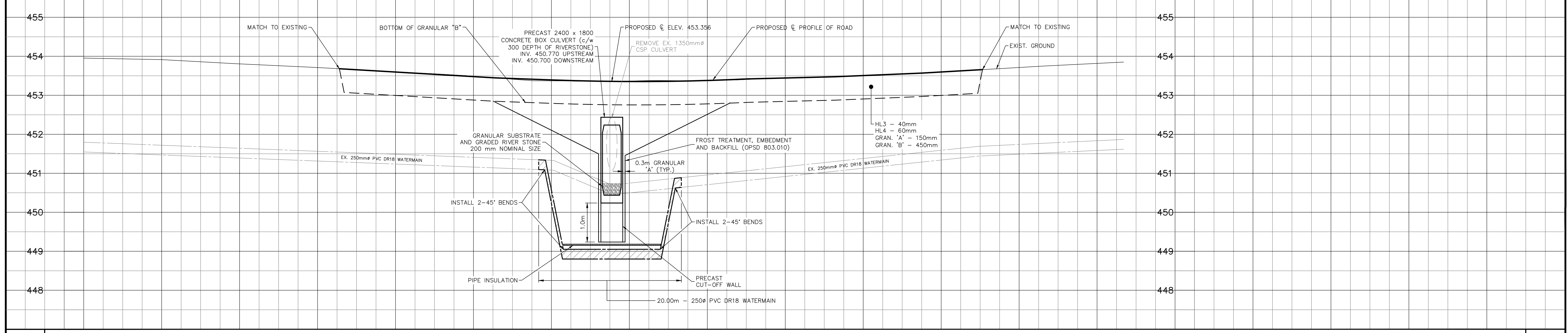
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- GENERAL NOTES:**
- DESIGN CODE:
CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) (CAN/CSA-56-06)
- LIVE LOAD:
CL-625-ONT
- THE CONTRACTOR SHALL PROVIDE COPIES OF ALL SHOP DRAWING FOR TOWN/ENGINEER REVIEW. ALL SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
 - ALL REQUIRED JOINT FILLERS, SEALS/COMPOUNDS, GROUT, AND GEOTEXTILE SHALL BE INDICATED AND SPECIFIED ON SHOP DRAWINGS.
 - THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE PROTECTION OF UTILITIES, SERVICES, ROADWAYS ETC. DURING CONSTRUCTION OPERATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, RELOCATION AND

BM 23-5991-01 Elev. 453.458m
NAIL AND WASHERS IN SE FACE OF RIP ON NW SIDE OF WELLS ST. NORTH OF VETERINARIAN DRIVEWAY.

BM 23-5991-02 Elev. 453.055m
NAIL AND WASHERS IN SE FACE OF RIP ON NW SIDE OF WELLS ST. 20m NORTH OF WELLS ST. CULVERT.



STA	1+060	1+080	1+100	1+120	1+140	1+160	1+180	STA
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2	AUG 2024	ISSUED FOR TENDER	P.F.Z.
1	JULY 2024	ISSUED FOR GRCA APPROVAL	P.F.Z.

CULVERT REPLACEMENT
WELLS STREET
(ARTHUR)

TOWNSHIP OF WELLINGTON NORTH
7490 SIDEROAD 7 WEST
KENILWORTH, ONTARIO N0G 2E0

PLAN AND PROFILE
STA. 1+050 TO STA 1+180

CONTRACT No.	5991-24
PROJECT No.	M5991
DRAWN BY:	A.v.R.
CHECKED BY:	J.S.K.
APPROVED BY:	P.F.Z.
DATE:	APRIL 2024



SCALE:
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V: 1:50 V: 1:100
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UNLESS OTHERWISE SHOWN

DRAWING NUMBER **02**