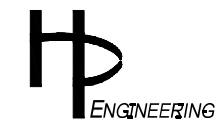
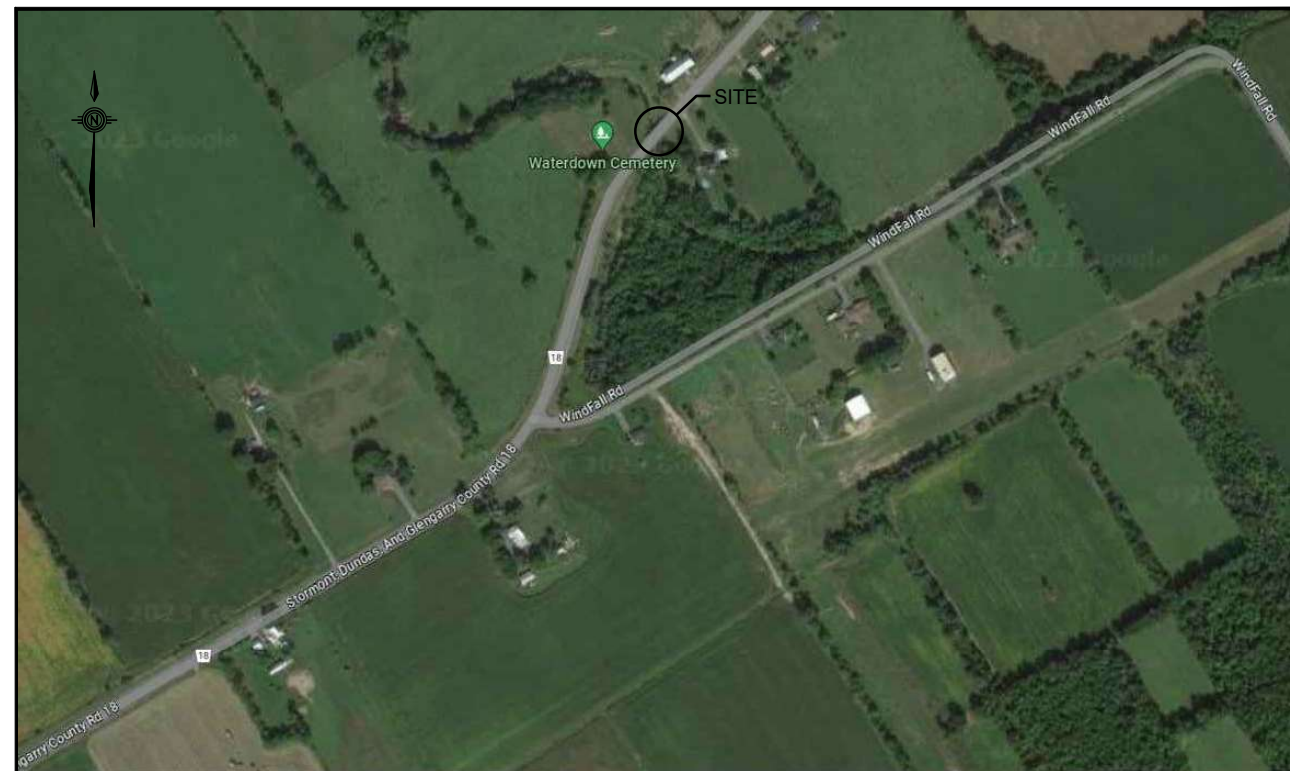


ISSUED FOR TENDER
(NOVEMBER 4, 2024)

UNITED COUNTIES OF STORMONT DUNDAS AND GLENGARRY



Benjamin De Haan, P. Eng.
Director of Transportation Services

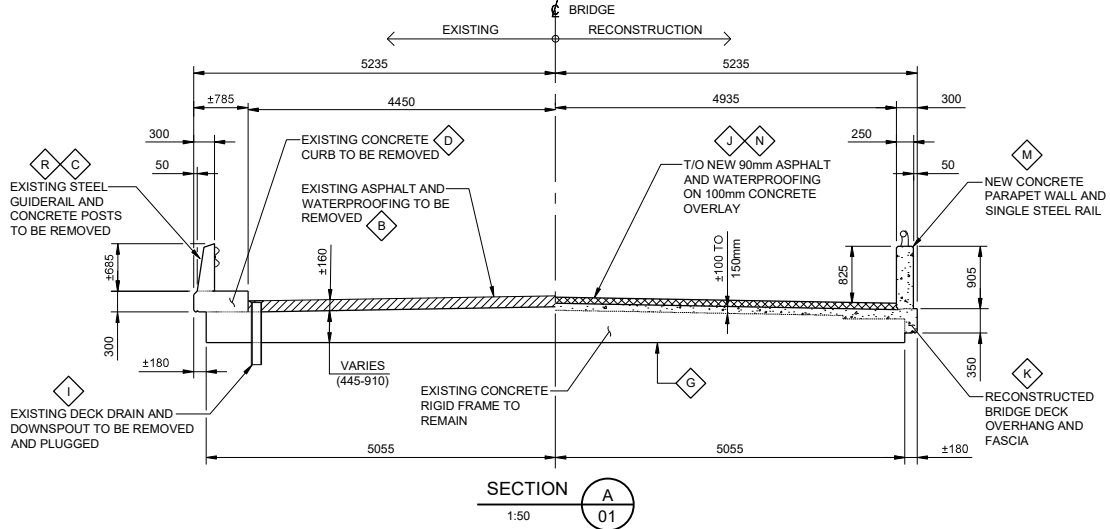
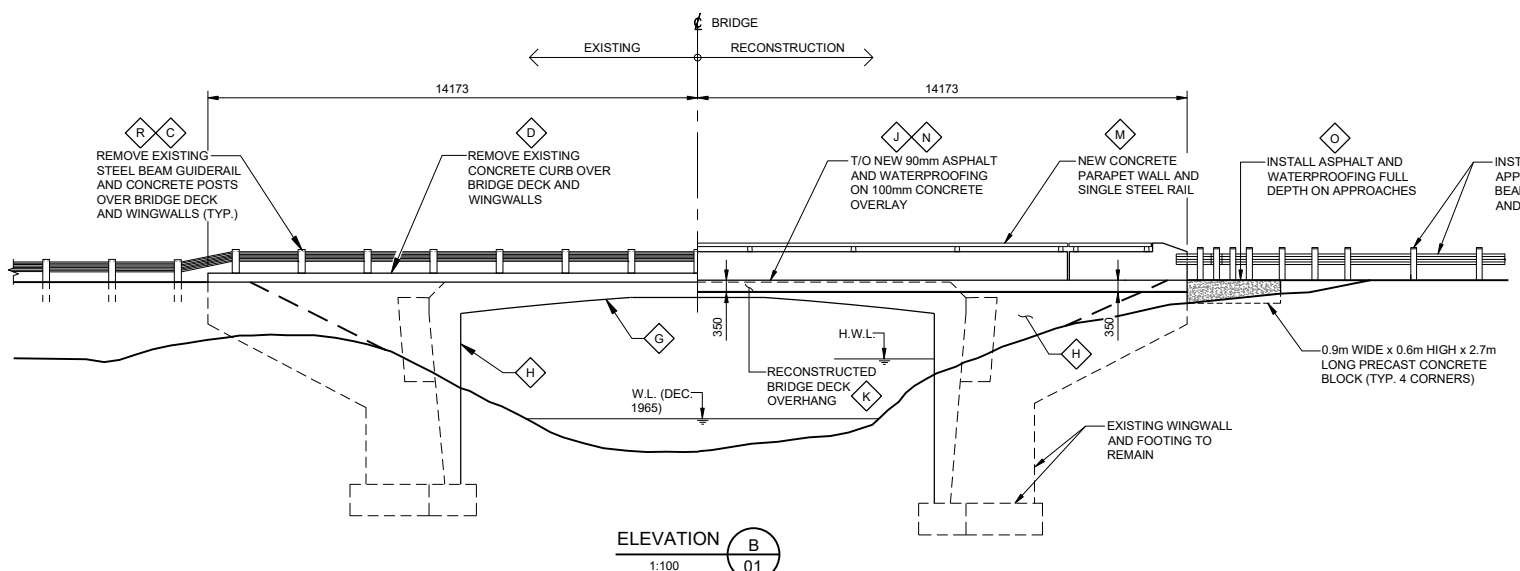
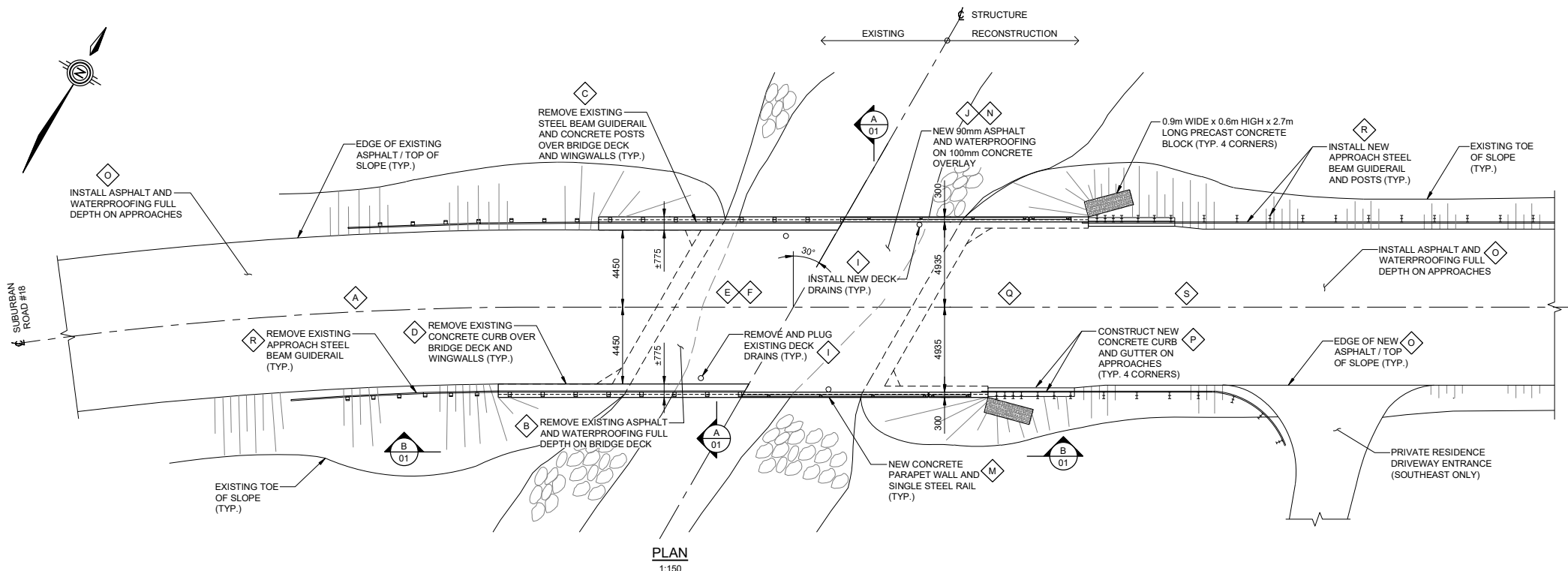


LIST OF DRAWINGS

- COVER SHEET.
- 01. GENERAL ARRANGEMENT.
- 02. TRAFFIC MANAGEMENT STAGING - DETAILS 1.
- 2A. TRAFFIC MANAGEMENT STAGING - DETAILS 2.
- 03. ROADWAY REMOVALS AND RECONSTRUCTION.
- 04. PAVEMENT MARKINGS.
- 05. STRUCTURE REMOVALS.
- 06. STRUCTURE RECONSTRUCTION - DIMENSIONAL.
- 07. STRUCTURE RECONSTRUCTION - REINFORCEMENT.
- 08. MISCELLANEOUS DETAILS.
- 09. CONCRETE PARAPET WALL.
- 10. SINGLE STEEL RAILING FOR PARAPET WALL.

LUNENBURG BRIDGE REHABILITATION

CONTRACT No. 2025-18-469



GENERAL NOTES:

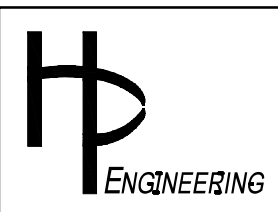
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
- CLASS OF CONCRETE: EXPOSURE CLASS C-1 (35MPa WITH AIR ENTRAINMENT). CONCRETE FOR THE OVERLAY SHALL HAVE 100% VIRGIN POLYPROPYLENE FIBRILLATED TO THE MIX DESIGN. ADD MINIMUM 1kg TO 1 CUBIC METRE OF CONCRETE AT THE TIME CONCRETE IS BATCHED.
- DESIGN LOADING: CHBDC 2006, CAN/CSA-S6-19.
- REINFORCING STEEL SHALL BE GRADE 400. PREFIX 'G' DENOTES HOT DIPPED GALVANIZED REINFORCING STEEL.
- CLEAR COVER TO REINFORCING STEEL SHALL BE 70 ± 20mm UNLESS NOTED OTHERWISE.
- BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWINGS SS12-1 AND SS12-2, UNLESS INDICATED OTHERWISE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DETAILS AND ELEVATIONS OF THE EXISTING STRUCTURE THAT ARE RELEVANT TO THE WORK SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR AND THE PROPOSED ADJUSTMENT OF THE WORK REQUIRED TO MATCH THE EXISTING STRUCTURE SHALL BE SUBMITTED FOR APPROVAL.
- THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWER AND OTHER UNDERGROUND AND OVER GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- ALL AREAS AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE FULLY REINSTATED TO PRE-CONSTRUCTION OR BETTER CONDITIONS TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR INCLUDING REINSTATEMENT OF ALL VEGETATION, PATHWAYS, FENCES, AREAS USED FOR SITE ACCESS, SITE STORAGE, ETC.
- THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ESTABLISHING HIS OWN SITE ACCESS TO COMPLETE THE WORK. ALL COSTS FOR SITE ACCESS SHALL BE INCLUDED IN THE CONTRACTOR'S TOTAL TENDER PRICE, UNDER THE APPROPRIATE TENDER ITEMS.
- ALL EXPOSED CONCRETE EDGES (NEW CONCRETE) SHALL HAVE A 25mm CHAMFER.
- ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO PROVINCIAL STANDARDS. ALL MATERIAL SUPPLIED SHALL BE FROM MTO DESIGNATED SOURCES, WHERE APPLICABLE.
- ALL ENVIRONMENTAL PROTECTION SYSTEMS SHALL BE FULLY EFFECTIVE IN PREVENTING CONTAMINATION OF THE WATERWAY AND ENVIRONMENT. THE CONTRACTOR SHALL OBTAIN APPROVAL FOR ENVIRONMENTAL PROTECTION SCHEMES FROM ALL AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR'S PRICE FOR THE WORK SHALL INCLUDE ALL LABOUR, EQUIPMENT, MATERIAL AND TRANSPORTATION NECESSARY TO COMPLETE THE WORK, INCLUDING ANY AND ALL INCIDENTAL WORK WHETHER OR NOT EXPLICITLY DETAILED ON THE CONTRACT DRAWINGS BUT REQUIRED FOR PROPER PERFORMANCE AND COMPLETION OF THE WORKS AS PER THE DRAWINGS AND SPECIFICATIONS.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH BOOK 7 OF THE ONTARIO TRAFFIC MANUAL. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR SAFETY OF PEDESTRIAN AND VEHICULAR TRAFFIC, HIS WORKERS AND THE GENERAL PUBLIC AT ALL TIMES DURING CONSTRUCTION. THE SCOPE OF WORK ON THIS DRAWING IS PROVIDED FOR GENERAL INFORMATION ONLY AND SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR AS DEPICTING THE EXACT SEQUENCE OF WORK.

GENERAL SCOPE OF WORK:

- A** MOBILIZE TO SITE, IMPLEMENT TRAFFIC MANAGEMENT / TRAFFIC STAGING, AND ENVIRONMENTAL PROTECTION SYSTEMS
- B** REMOVE ASPHALT AND WATERPROOFING FULL DEPTH OVER BRIDGE DECK
- C** REMOVE STEEL BEAM GUIDERAIL AND CONCRETE POSTS OVER BRIDGE DECK AND WINGWALLS
- D** REMOVE CONCRETE CURB OVER DECK AND WINGWALLS INCLUDING UPPER SECTIONS OF WINGWALL AND ADDITIONAL REMOVALS ALONG EDGE SECTIONS OF DECK
- E** SCARIFY CONCRETE DECK 25mm / HAND CHIP CONCRETE DECK 25mm
- F** CARRY OUT ADDITIONAL TYPE 'A' PARTIAL DEPTH CONCRETE REMOVALS ON DECK AFTER SCARIFYING
- G** CARRY OUT PARTIAL DEPTH CONCRETE REMOVALS AND REPAIRS ON UNDERSIDE OF DECK
- H** CARRY OUT PARTIAL DEPTH CONCRETE REMOVALS AND REPAIRS ON ABUTMENT WALLS AND WINGWALLS
- I** REMOVE AND PLUG EXISTING DECK DRAINS, SUPPLY AND INSTALL NEW DECK DRAINS COMPLETE WITH DOWNSPOUTS
- J** PLACE CONCRETE OVERLAY OVER BRIDGE DECK INCLUDING FILLING OF ADDITIONAL TYPE 'A' REMOVAL AREAS
- K** RECONSTRUCT DECK OVERHANG AND FASCIA / EDGE DAM OVER BRIDGE DECK
- L** RECONSTRUCT UPPER SECTIONS OF WINGWALLS
- M** CONSTRUCT NEW CONCRETE PARAPET WALLS INCLUDING NEW SINGLE STEEL RAILING
- N** PLACE WATERPROOFING AND HOT MIX ASPHALT OVER BRIDGE DECK
- O** REMOVE AND REPLACE ASPHALT FULL DEPTH ON APPROACHES INCLUDING RE-GRADING AND PROOF ROLLING OF GRANULAR ROADWAY BASE
- P** CONSTRUCT NEW CONCRETE CURB AND GUTTER ON APPROACHES INCLUDING GUTTER OUTLETS
- Q** PLACE NEW PAVEMENT MARKINGS ON ASPHALT WEARING SURFACES
- R** REMOVE AND REPLACE APPROACH STEEL BEAM GUIDERAIL INCLUDING INSTALLATION OF NEW END TREATMENT
- S** REMOVE TRAFFIC MANAGEMENT / TRAFFIC STAGING, AND ENVIRONMENTAL PROTECTION SYSTEMS AND DEMOBILIZE FROM SITE

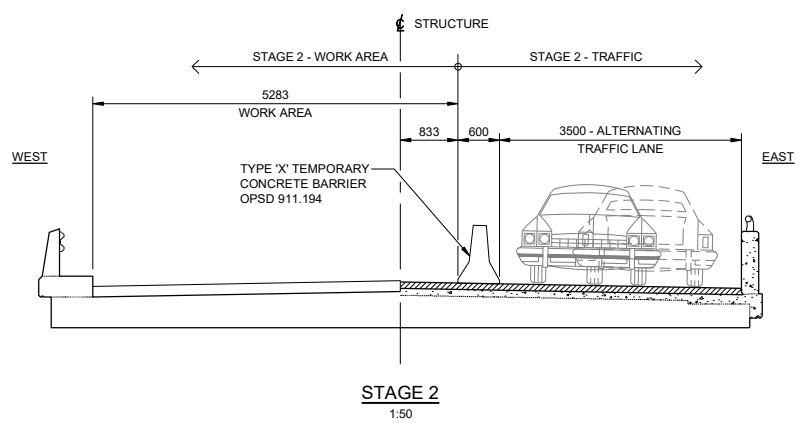
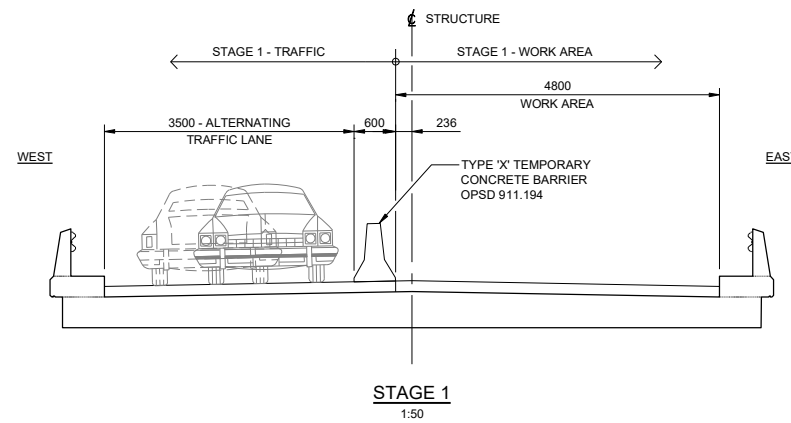
APPLICABLE STANDARD DRAWINGS

- SS110-56 PARAPET WALL WITH RAILING - PL2.
- SS110-21 RAILING FOR BARRIER/PARAPET WALL.
- OPSD 3390.100 DECK, DRIP CHANNEL.
- OPSD 3370.101 DECK WATERPROOFING HOT APPLIED ASPHALT MEMBRANE AT ACTIVE CRACKS GREATER THAN 2mm WIDE AND CONSTRUCTION JOINTS.
- OPSD 3370.100 DECK WATERPROOFING HOT APPLIED ASPHALT MEMBRANE.
- OPSD 3340.100 DECK DRAINS WITH DOWNSPOUT.
- WITH PROTECTION BOARD DETAILS.
- OPSD 912.430 GUIDE RAIL SYSTEM, STEEL BEAM STRUCTURE CONNECTION.
- OPSD 912.235 GUIDE RAIL SYSTEM, STEEL BEAM, LEAVING END TREATMENT, INSTALLATION.
- OPSD 912.186 GUIDE RAIL SYSTEM, STEEL BEAM, TYPE M20 - ADJACENT TO 2H:1V SLOPE INSTALLATION - RAIL AT SHOULDER.
- OPSD 912.185 GUIDE RAIL SYSTEM, STEEL BEAM, TYPE M20, INSTALLATION.
- OPSD 912.130 GUIDE RAIL SYSTEM, STEEL BEAM, STEEL POST WITH OFFSET BLOCK ASSEMBLY, INSTALLATION - SINGLE RAIL.
- OPSD 912.124 GUIDE RAIL SYSTEM, STEEL BEAM, TYPE M TRANSITIONAL RAIL, COMPONENT.
- OPSD 608.010 METHOD OF TERMINATION FOR CONCRETE CURB & GUTTER.
- OPSD 600.040 CONCRETE BARRIER CURB WITH STANDARD GUTTER.



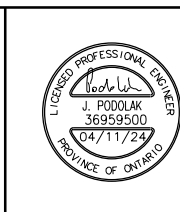
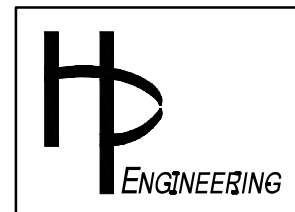
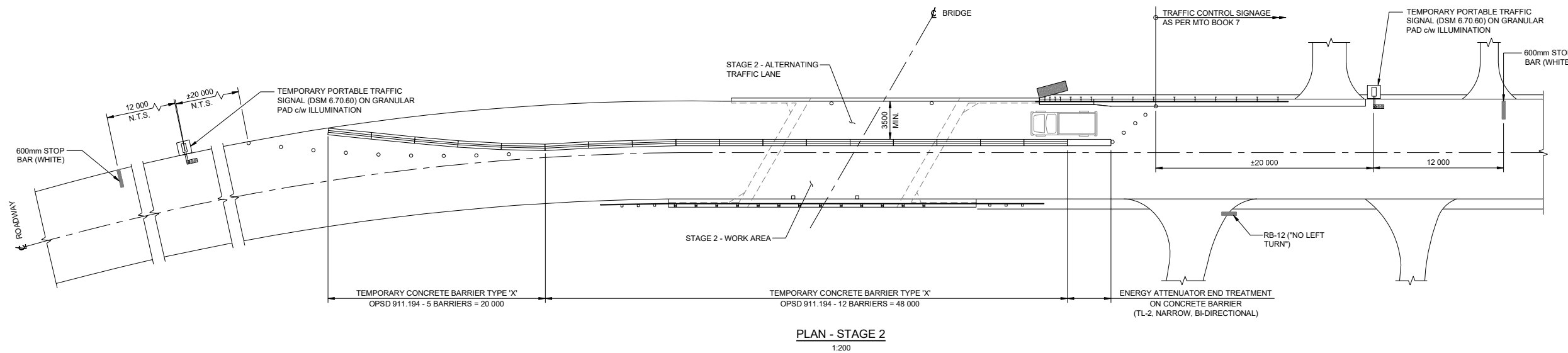
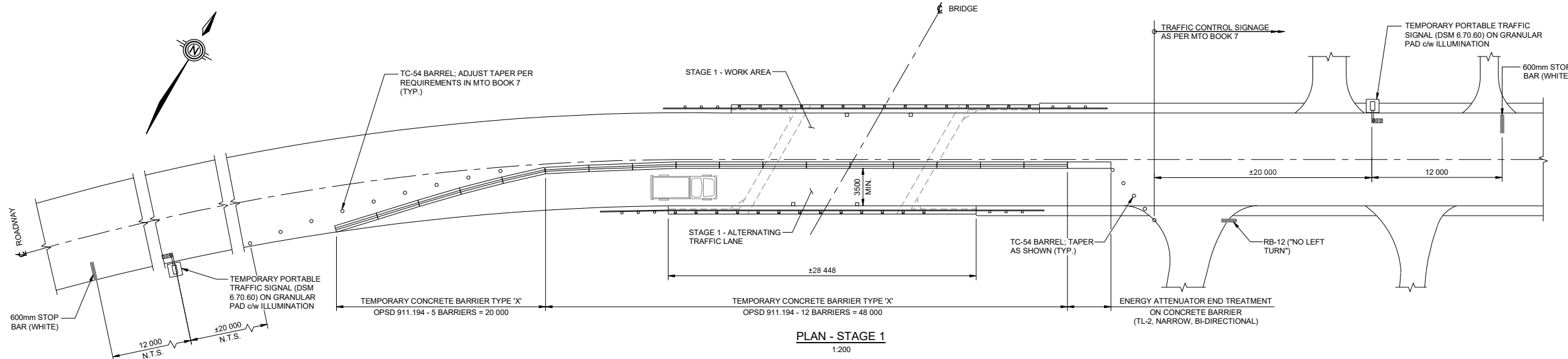
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| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 |

| CLIENT | | DATE: NOVEMBER 2024 | |
|---|--|--------------------------|----------------|
| UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | | Drawn | Chk. T.D. |
| PROJECT TITLE | | Scale: | AS SHOWN |
| LUNENBURG BRIDGE REHABILITATION LUNENBURG - UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | | Des. | T.D. Chk. J.P. |
| DRAWING TITLE | | CONTRACT NO. 2025-18-469 | |
| GENERAL ARRANGEMENT | | SHEET 2 OF 11 | |
| | | DWG. NO. 01 | |



STAGING NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER APPLICABLE CONTRACT DRAWINGS.
2. ALL TRAFFIC CONTROL OPERATIONS SHALL BE CARRIED OUT TO THE MINIMUM STANDARDS AS OUTLINED IN BOOK 7 OF THE ONTARIO TRAFFIC MANUAL.
3. REINSTATE ALL AREAS DISTURBED BY THE WORK TO ORIGINAL OR BETTER CONDITIONS.
4. TEMPORARY PAVEMENT MARKING WHERE APPLICABLE TO BE MECHANICALLY OBLITERATED PRIOR TO STAGE CHANGES AND REOPENING OF BRIDGE TO TWO WAY TRAFFIC.
5. INSTALL SADDLE MOUNT MARKERS AT 8m SPACING ALONG TEMPORARY CONCRETE BARRIER.
6. CONTRACTOR SHALL COVER ALL EXISTING SPEED LIMIT SIGNS ON APPROACHES AND INSTALL TC-36 (50km/h) ADVISORY SIGNS DURING CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION AND DETOUR SIGNAGE FOR THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A TRAFFIC MANAGEMENT PLAN INCLUDING DRAWINGS SHOWING ALL CONSTRUCTION AND DETOUR SIGNS AND DEVICES TO THE CONTRACT ADMINISTRATOR TWO (2) WEEKS PRIOR TO STARTING WORK.
8. THE CONTRACTOR SHALL INSPECT ALL TRAFFIC CONTROL AND DETOUR SCHEMES AND ENSURE PROPER INSTALLATIONS ARE MAINTAINED FOR THE DURATION OF THE CONTRACT. INSPECTIONS SHALL BE PERFORMED PER BOOK 7 BUT NO LESS THAN ONCE PER DAY. THE CONTRACTOR SHALL MAINTAIN A DAILY LOG OF INSPECTIONS AND MAKE THE LOG AVAILABLE TO THE CONTRACT ADMINISTRATOR.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DAILY RELOCATION OF TEMPORARY BARRIER OR OTHER TRAFFIC APPURTENANCES TO ALLOW CONSTRUCTION ACCESS AS REQUIRED.
10. LANE CLOSURES SHALL REMAIN IN EFFECT AT ALL TIMES UNTIL ALL WORK HAS BEEN COMPLETED INCLUDING INSTALLATION OF GUIDERAIL ON THE APPROACHES. AFTER COMPLETION OF THE WORK OVER THE STRUCTURE, THE CONTRACTOR IS PERMITTED TO REMOVE THE TEMPORARY CONCRETE BARRIERS IN ORDER TO FACILITATE THE INSTALLATION OF THE APPROACH STEEL BEAM GUIDERAIL AND TO COMPLETE APPROACH ROADWAY REMOVALS AND RECONSTRUCTION, PROVIDED THE SINGLE LANE CLOSURE IS MAINTAINED IN EFFECT AT ALL TIMES. LANE CLOSURES SHALL BE AS PER BOOK 7 OF THE OTM. ALL ASSOCIATED COSTS (ADDITIONAL TRAFFIC CONTROL, REPEATED MOBILIZATIONS INCLUDING SUB-CONTRACTORS, ETC.) SHALL BE INCLUDED IN THE CONTRACTOR'S TENDER PRICE UNDER THE TRAFFIC CONTROL ITEM.



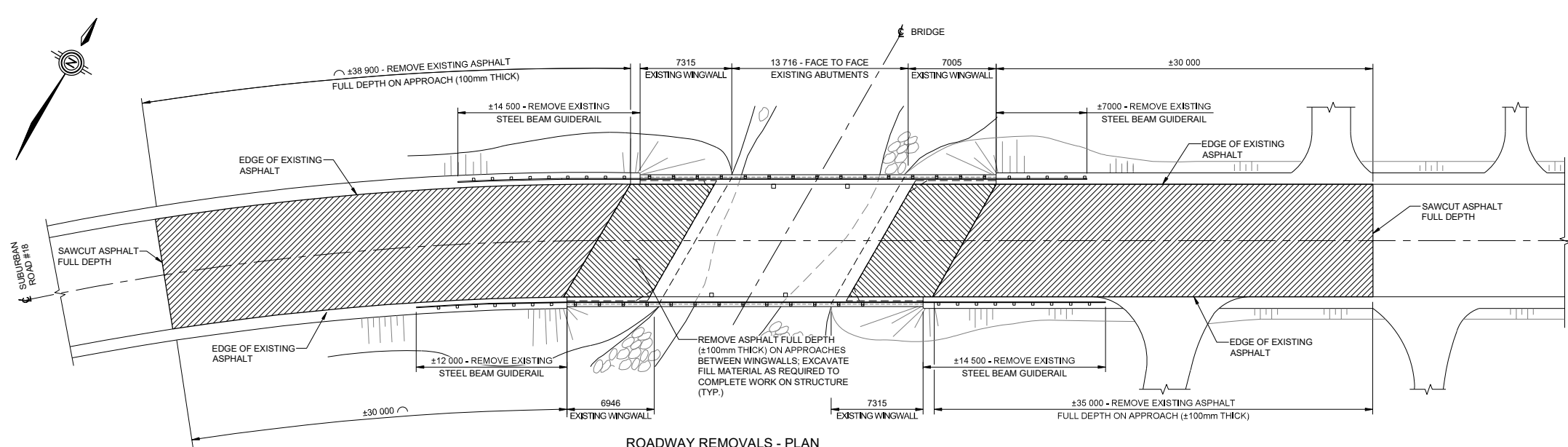
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| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 |

CLIENT
UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY

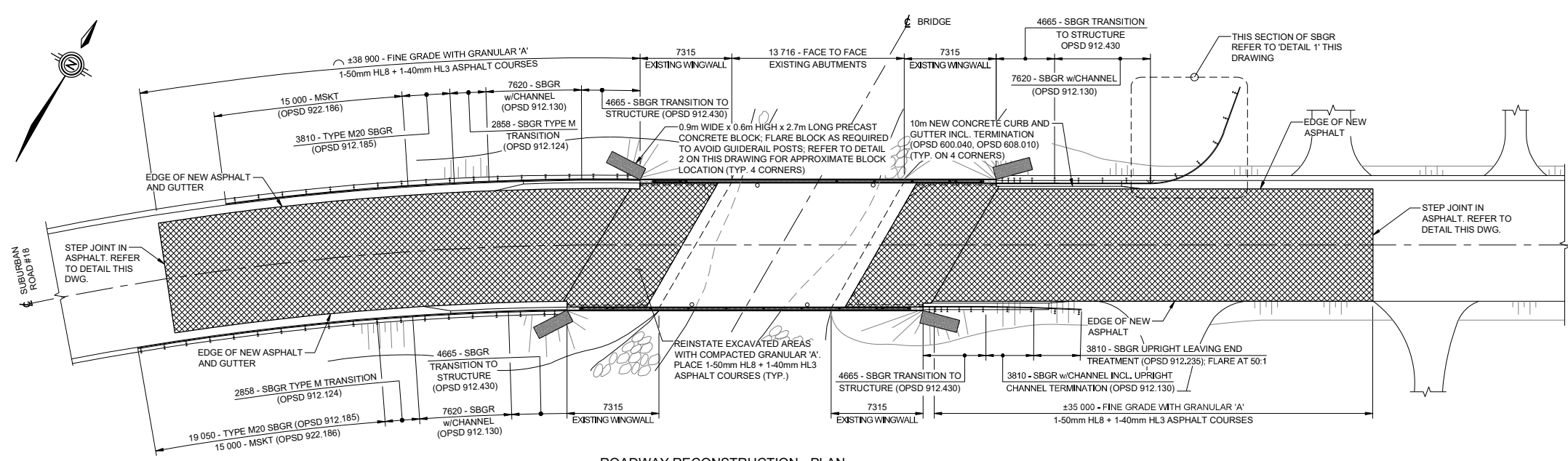
PROJECT TITLE
LUNENBURG BRIDGE REHABILITATION
LUNENBURG - UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY

DRAWING TITLE
TRAFFIC MANAGEMENT
STAGING - DETAILS 1

| |
|--------------------------|
| DATE: NOVEMBER 2024 |
| Drawn: M.I.B. Chk. T.D. |
| Scale: AS SHOWN |
| Des. T.D. Chk. J.P. |
| CONTRACT NO. 2025-18-469 |
| SHEET 3 OF 11 |
| DWG. NO. 02 |

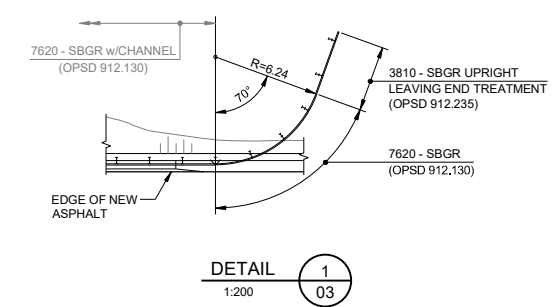


ROADWAY REMOVALS - PLAN
1:200

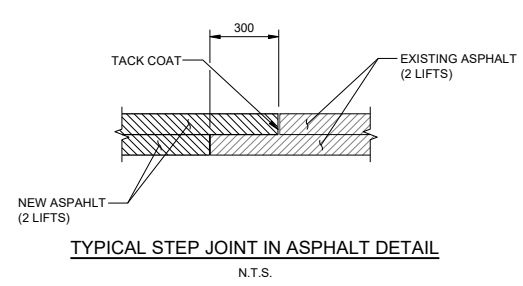


ROADWAY RECONSTRUCTION - PLAN
1:200

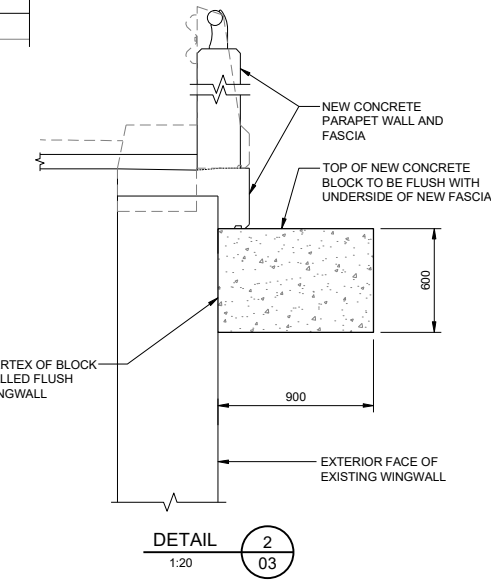
- NOTES:**
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
 2. INSTALLATION OF PRECAST CONCRETE BLOCKS INCLUDES ALL EXCAVATIONS AS REQUIRED. PRECAST CONCRETE BLOCKS SHALL BE PLACED ON A MINIMUM 150mm LAYER OF GRANULAR 'A' AND BACKFILLED WITH GRANULAR 'A' (ALL GRANULAR 'A' SHALL BE COMPACTED TO 95% SPDD). PRECAST CONCRETE BLOCKS SHALL BE WRAPPED (ON THE FILL SIDE) WITH A NON-WOVEN GEOTEXTILE.
 3. PRECAST CONCRETE BLOCKS SHALL BE 900mm WIDE x 600mm HIGH x 2700mm LONG 'FULL SIZE ANCHOR TOP BLOCKS' AS MANUFACTURED BY ANCHOR CONCRETE, OR APPROVED EQUIVALENT.
 4. ALL ASPHALT PLACED ON THIS CONTRACT SHALL BE PLACED WITH THE USE OF A MATERIAL TRANSFER VEHICLE.



DETAIL 1
1:200



TYPICAL STEP JOINT IN ASPHALT DETAIL
N.T.S.

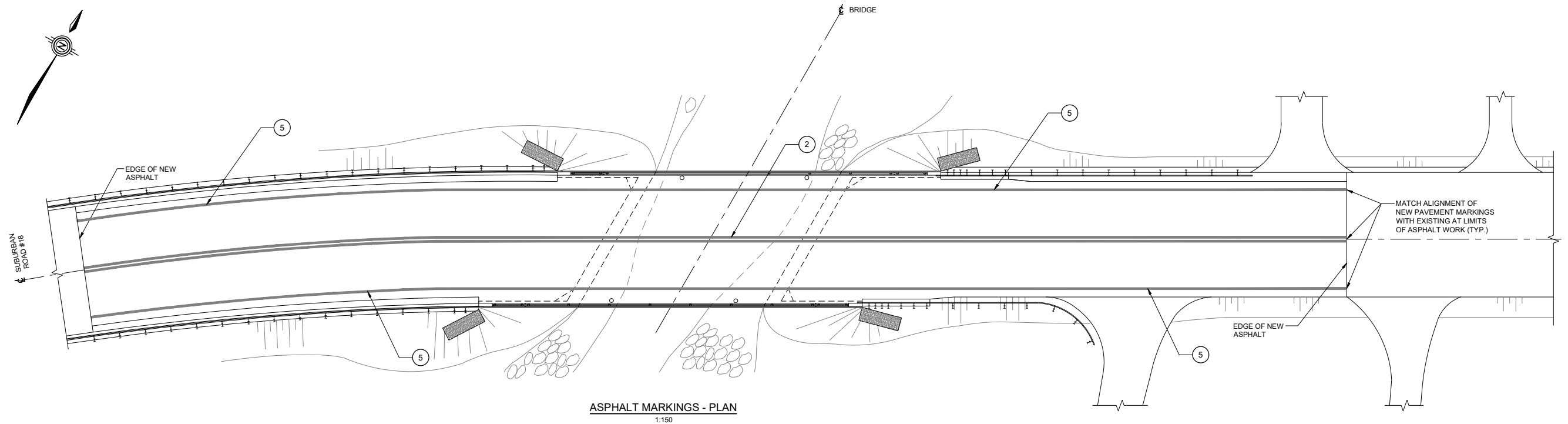


DETAIL 2
1:20

| | | | | | | | | |
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| | | | NO. | REVISION | BY | DATE | CLIENT | DATE: NOVEMBER 2024 |
| | | | 1 | ISSUED FOR TENDER | T.D. | 04/11/24 | UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | Drawn: M.I.B. Chk. T.D. |
| | | | | | | | PROJECT TITLE | Scale: AS SHOWN |
| | | | | | | | LUNENBURG BRIDGE REHABILITATION | Des. T.D. Chk. J.P. |
| | | | | | | | DRAWING TITLE | CONTRACT NO. 2025-18-469 |
| | | | | | | | ROADWAY REMOVALS AND RECONSTRUCTION | SHEET 4 OF 11 |
| | | | | | | | DWG. NO. | 03 |

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.



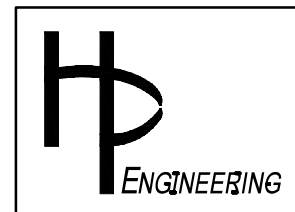
ASPHALT MARKINGS - PLAN
1:150

| | |
|-----|--------------------------|
| 1 | SOLID YELLOW,10cm |
| 2 | SOLID DOUBLE YELLOW,10cm |
| 3 | 363 BROKEN YELLOW,10cm |
| 4 | SOLID YELLOW,20cm |
| 5 | SOLID WHITE,10cm |
| 6 | 333 BROKEN WHITE,10cm |
| 7 | 363 BROKEN WHITE,10cm |
| 8 | 393 BROKEN WHITE,10cm |
| 9 | SOLID WHITE,20cm |
| 10 | 111 BROKEN WHITE,20cm |
| 11 | 333 BROKEN WHITE,20cm |
| 12 | 333 BROKEN WHITE,30cm |
| 13 | SOLID WHITE,30cm |
| 14 | SOLID WHITE,45cm |
| 15 | SOLID WHITE,60cm |
| 20 | SYMBOLS |
| [] | LIMITS OF MARKINGS |

NOTES:

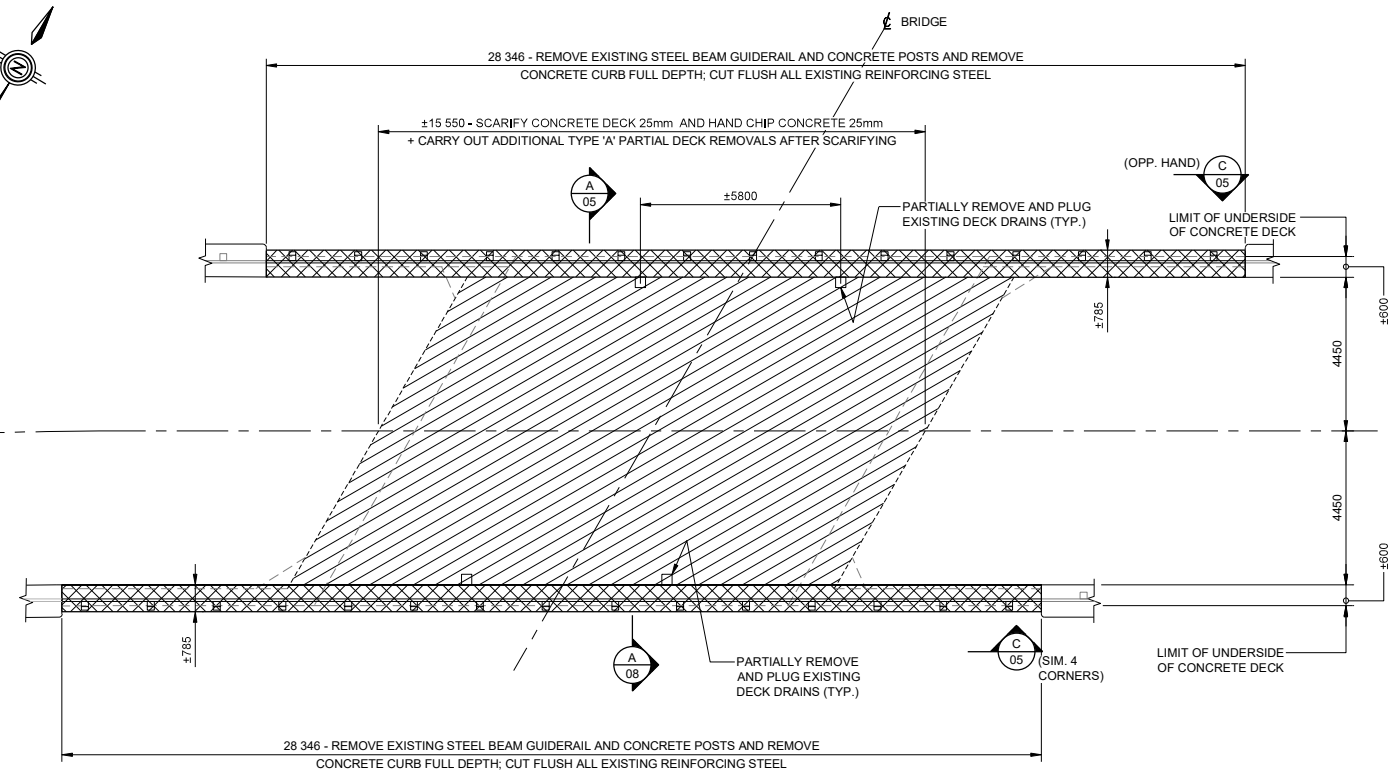
1. 333, 363, 393, Denotes Pavement Marking Spacing (i.e., 3 m line, 3 m gap, 3 m line)
2. Use (1) to Denote PAVEMENT MARKING
3. Use (T) to Denote PAVEMENT MARKING, TEMPORARY
4. Use (R) to Denote PAVEMENT MARKING, TEMPORARY-REMOVABLE
5. Use (D) to Denote PAVEMENT MARKING, DURABLE

| | | | |
|--|----------------|------------|-----|
| MINISTRY OF TRANSPORTATION ONTARIO DRAWING | Date | 1994 04 01 | Rev |
| LEGEND | | | |
| PAVEMENT MARKINGS | | | |
| Issue Date | WP | | |
| Issued By | MTOD - 101.070 | | |

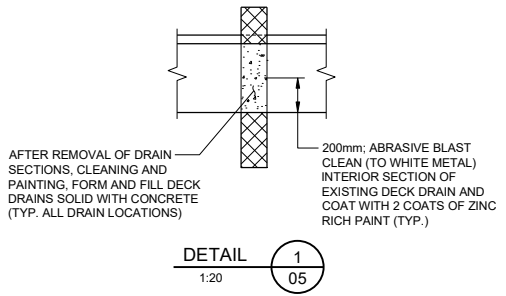


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|---------------|--|--------------------------|
| CLIENT | UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | DATE: NOVEMBER 2024 |
| PROJECT TITLE | LUNENBURG BRIDGE REHABILITATION LUNENBURG - UNITED COUNTIES OF STORMONT DUNDAS AND GLENGARRY | Drawn: M.I.B. Chk. T.D. |
| DRAWING TITLE | ASPHALT MARKINGS | Scale: AS SHOWN |
| | | Des. T.D. Chk. J.P. |
| | | CONTRACT NO. 2025-18-469 |
| | | SHEET 5 OF 11 |
| | | DWG. NO. 04 |



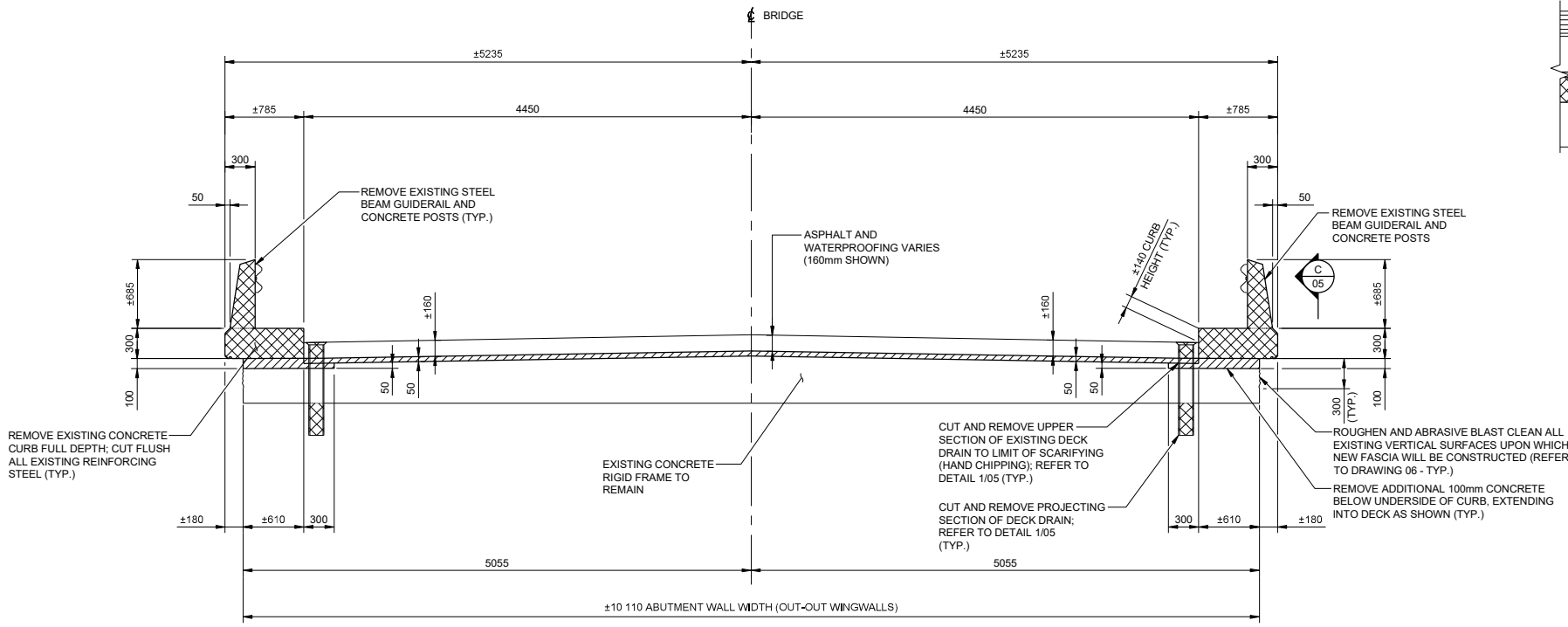
STRUCTURE REMOVALS - PLAN
1:100



DETAIL 1/05
1:20

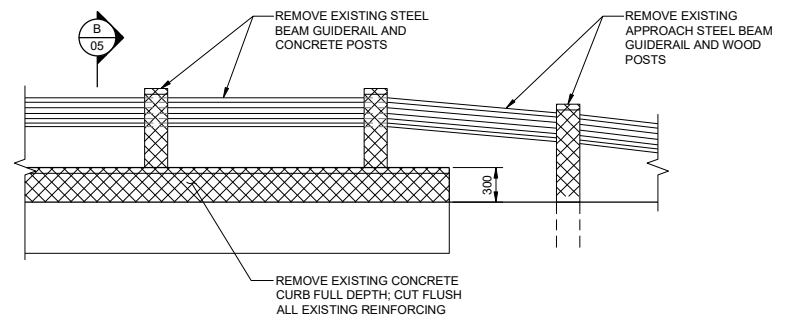
- NOTES:**
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
 - REFER TO DRAWING 01 FOR GENERAL NOTES AND SCOPE OF WORK.
 - ALL REINFORCING STEEL TO BE MAINTAINED SHALL BE ABRASIVE BLAST CLEANED TO NEAR WHITE METAL AND IMMEDIATELY COATED WITH 2 COATS OF AN APPROVED EPOXY PAINT.
 - ALL REINFORCING STEEL TO BE REMOVED SHALL BE CUT FLUSH WITH REMOVAL SURFACES UNLESS NOTED OTHERWISE.
 - ACTUAL LOCATION OF CONCRETE REMOVALS WILL BE MARKED ON SITE BY CONTRACT ADMINISTRATOR.
 - AFTER SCARIFYING / HAND SCARIFYING, THE CONTRACT ADMINISTRATOR WILL DELINEATE THE LOCATION OF THE ADDITIONAL TYPE 'A' PARTIAL DEPTH REMOVALS, DEPENDING ON LOCATION AND EXTENT. STAGING OF REPAIRS MAY BE REQUIRED. CONTRACT ADMINISTRATOR TO PROVIDE FURTHER DIRECTION AS REQUIRED. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME THAT PARTIAL DEPTH CHIPPING AND REINSTATEMENT (TO THE UNDERSIDE OF THE OVERLAY) WILL BE REQUIRED IN FOUR (4) SEPARATE STAGES (PER STAGE); WITH EACH STAGE DELINEATED BY FINITE WIDTH LONGITUDINAL 'STRIPS' ALONG THE LENGTH OF THE DECK. CHIPPING AND REINSTATEMENT IN EACH STAGE SHALL BE COMPLETED IN SEQUENCE, AND COMMENCING OF CHIPPING ON THE NEXT STAGE WILL NOT BE PERMITTED UNTIL THE CONCRETE HAS REACHED A MINIMUM STRENGTH OF 25MPa IN THE PREVIOUS STAGE. TO MINIMIZE OVERALL SCHEDULE IMPACTS, THE CONTRACTOR WILL BE PERMITTED TO USE HIGH EARLY STRENGTH CONCRETE.
 - PARTIAL REMOVAL AND PLUGGING OF DECK DRAINS REQUIRED AT A TOTAL OF 4 DECK DRAINS (2 PER SIDE).
 - ALL REMOVALS SHALL BE DELINEATED WITH 25mm SAWCUT.

- LEGEND:**
- CONCRETE REMOVAL, SCARIFY (50mm)
 - CONCRETE REMOVAL, PARTIAL DEPTH (100mm)
 - CONCRETE REMOVAL, FULL DEPTH

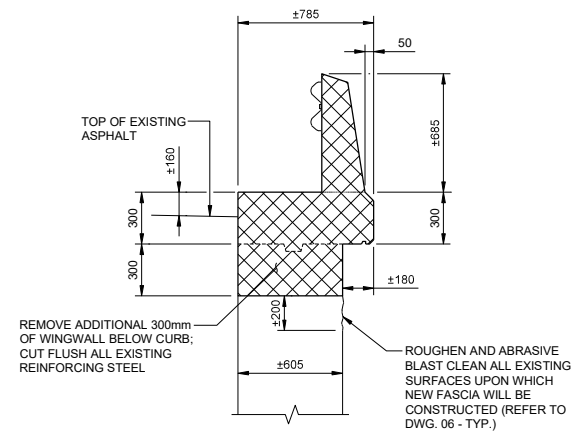


SECTION A/05
1:30

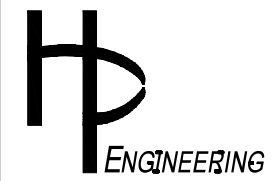
NOTE: CO-ORDINATE ALL REMOVALS WITH CONSTRUCTION STAGING



SECTION B/05
1:30



SECTION C/05
1:30



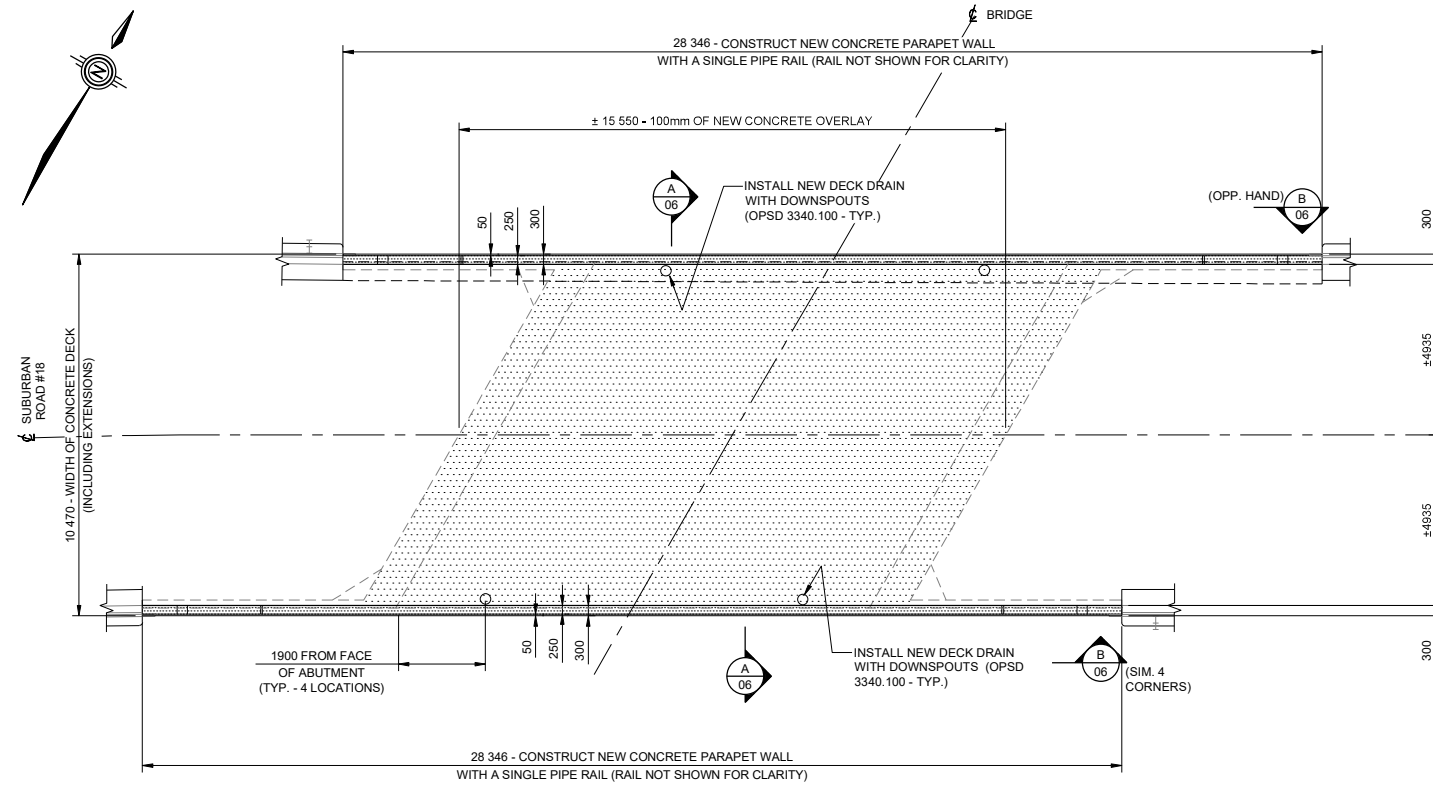
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CLIENT
UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY

PROJECT TITLE
LUNENBURG BRIDGE REHABILITATION
LUNENBURG - UNITED COUNTIES OF STORMONT DUNDAS AND GLENGARRY

DRAWING TITLE
STRUCTURE REMOVALS

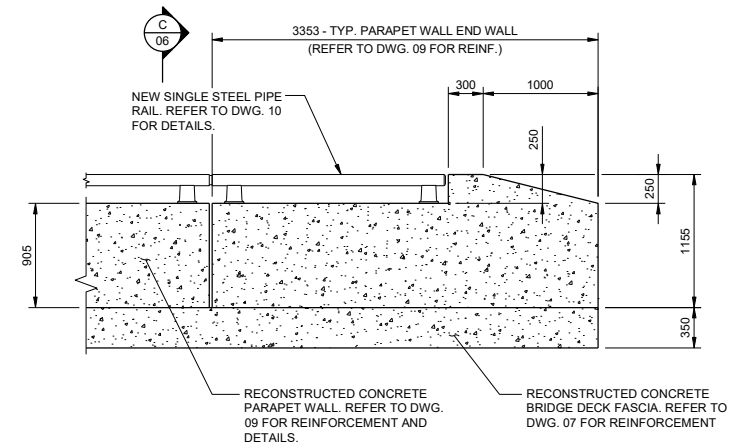
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|--------------------------|
| DATE: NOVEMBER 2024 |
| Drawn: M.I.B. Chk. T.D. |
| Scale: AS SHOWN |
| Des. T.D. Chk. J.P. |
| CONTRACT NO. 2025-18-469 |
| SHEET 6 OF 11 |
| DWG. NO. 05 |



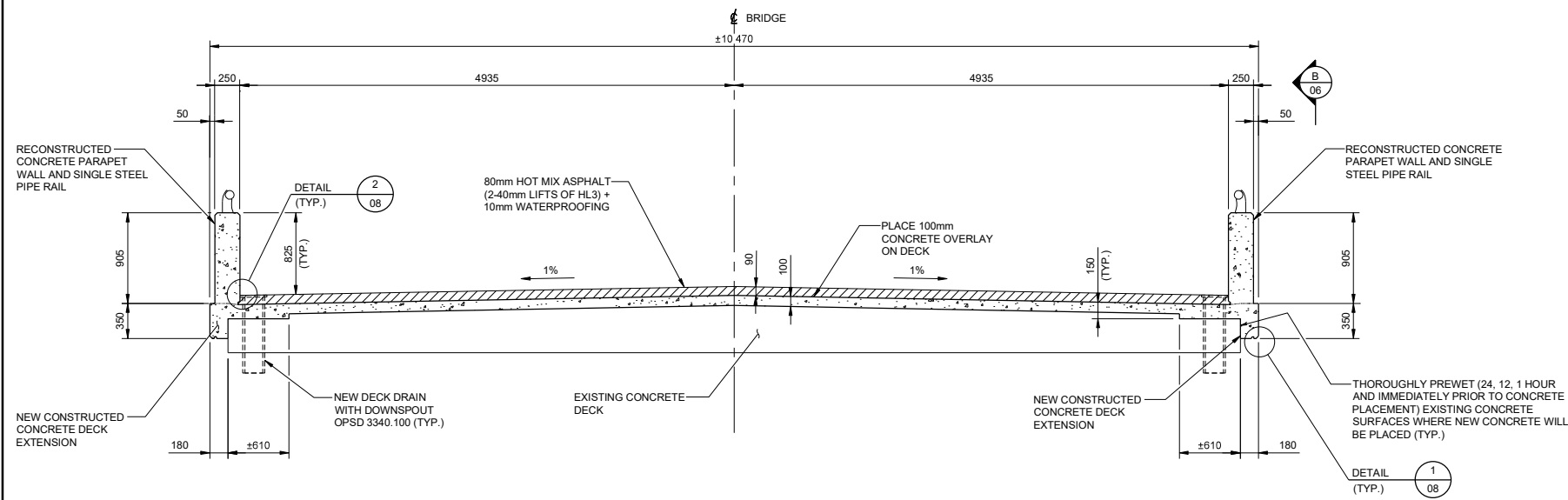
STRUCTURE RECONSTRUCTION - PLAN
1:100

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
2. REFER TO DWG. 1 FOR GENERAL NOTES AND SCOPE OF WORK.
3. TYPE 'A' PARTIAL DEPTH CONCRETE REMOVAL AREAS SHALL BE REINSTATED TO THE UNDERSIDE OF THE OVERLAY PRIOR TO PLACING THE OVERLAY. REFER TO NOTE 6 ON DRAWING 05 FOR STAGING REQUIREMENTS FOR THE CHIPPING AND REINSTATEMENT OF TYPE 'A' AREAS.
4. NEW DECK DRAINS SHALL BE GROUTED IN CORED HOLES THROUGH DECK WITH ANCHOR STUDS EMBEDDED IN OVERLAY POUR. PRIOR TO CORING FOR DECK DRAINS, THE CONTRACTOR SHALL CARRY OUT A COVER METER SURVEY AND POSITIVELY MARK TOP LAYER REINFORCING STEEL. THE CONTRACT ADMINISTRATOR WILL REVIEW REINFORCING STEEL LOCATION AND PROVIDE ADJUSTMENTS TO FINAL DRAIN LOCATION AS DEEMED REQUIRED.
5. FINISHING OF DECK OVERLAY USING A 'RAZORBACK' SCREE MACHINE WILL BE PERMITTED ON THIS CONTRACT PROVIDED THE CONTRACTOR CAN PROVIDE REFERENCES FOR A MINIMUM OF THREE PREVIOUSLY SUCCESSFULLY COMPLETED SIMILAR PROJECTS.

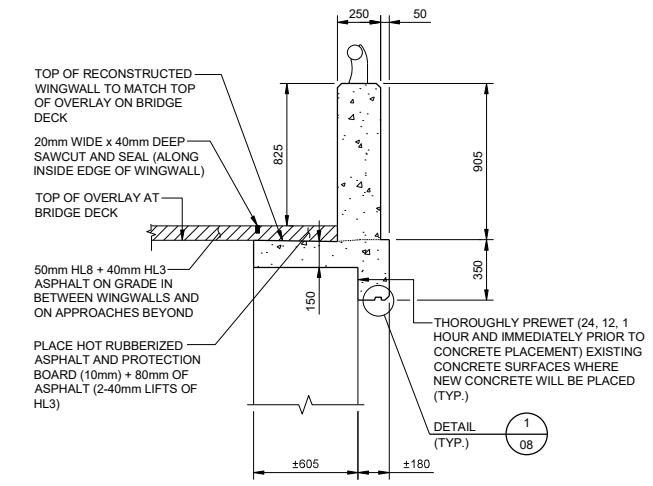


SECTION B (SIMILAR 4 CORNERS)
1:30

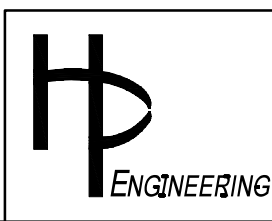


SECTION A
1:30

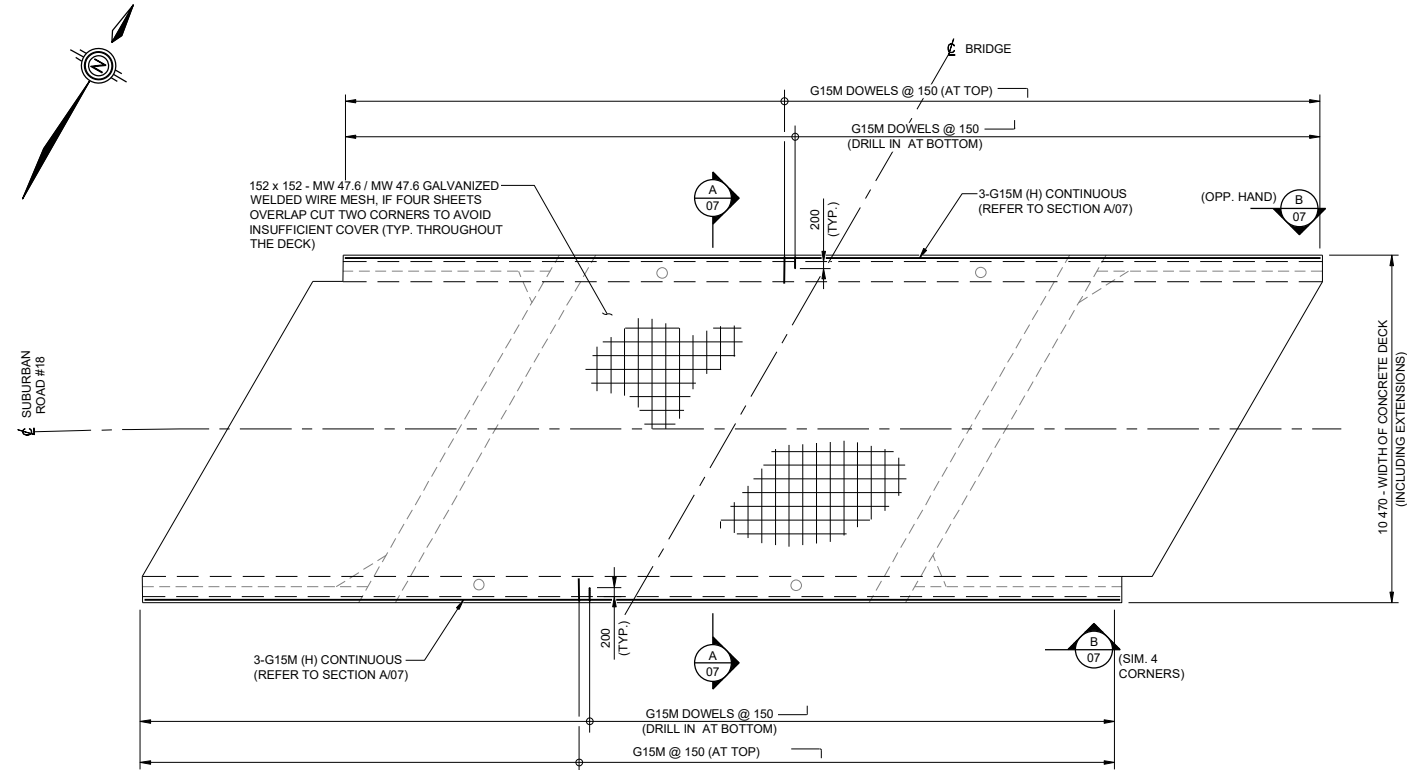
NOTE:
CO-ORDINATE ALL REMOVALS WITH
CONSTRUCTION STAGING



SECTION C
1:20

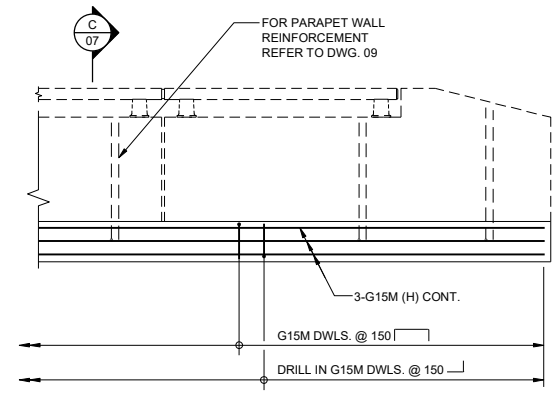


| NO. | REVISION | BY | DATE | CLIENT | DATE: NOVEMBER 2024 |
|--------------------------------------|-------------------|------|----------|---|--------------------------|
| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 | UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | Drawn: M.I.B. Chk. T.D. |
| PROJECT TITLE | | | | | Scale: AS SHOWN |
| LUNENBURG BRIDGE REHABILITATION | | | | | Des. T.D. Chk. J.P. |
| DRAWING TITLE | | | | | CONTRACT NO. 2025-18-469 |
| STRUCTURE RECONSTRUCTION DIMENSIONAL | | | | | SHEET 7 OF 11 |
| | | | | | DWG. NO. 06 |

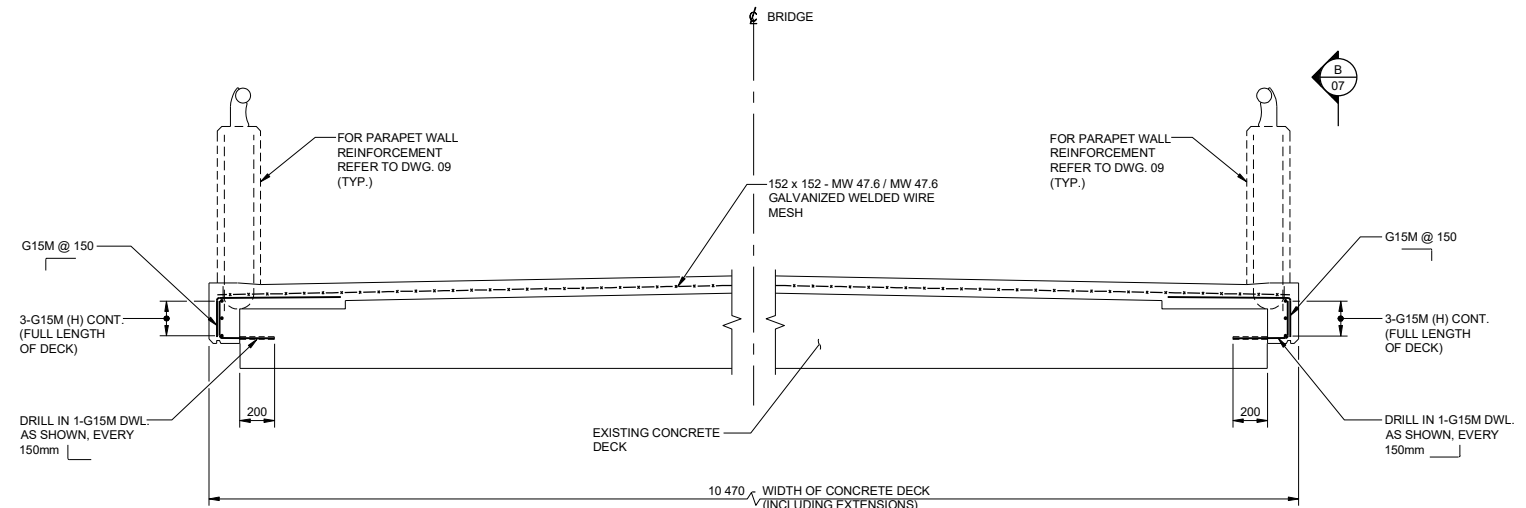


PARAPET WALLS NOT SHOWN FOR CLARITY

PLAN
1:100

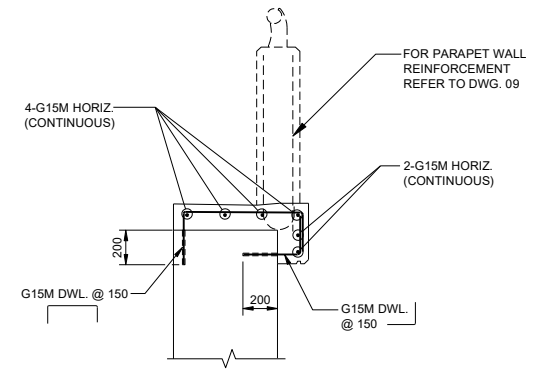


SECTION B (SIMILAR 4 CORNERS)
1:30



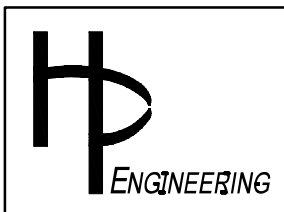
EXISTING CONCRETE DECK REINFORCEMENT NOT SHOWN FOR CLARITY

SECTION A
1:20



SECTION C
1:20

- NOTES:**
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
 - REFER TO DWG. 1 FOR GENERAL NOTES AND SCOPE OF WORK.
 - WIRE MESH SHALL BE LAPPED MINIMUM 200mm AT STAGED LONGITUDINAL JOINT.
 - TOTAL OF 8 NEW DECK DRAINS REQUIRED THROUGH OUT CONCRETE DECK.



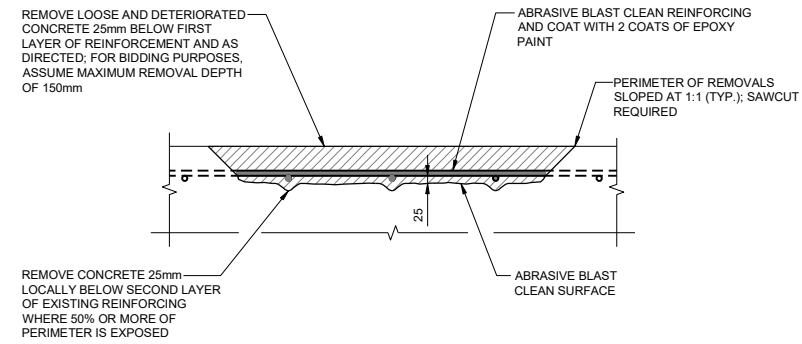
| NO. | REVISION | BY | DATE |
|-----|-------------------|------|----------|
| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 |

| | |
|---------------|---|
| CLIENT | UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY |
| PROJECT TITLE | LUNENBURG BRIDGE REHABILITATION |
| DRAWING TITLE | STRUCTURE RECONSTRUCTION REINFORCING |

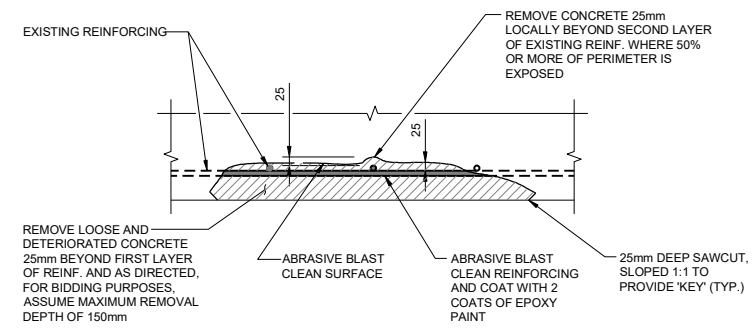
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|--------------------------|
| DATE: NOVEMBER 2024 |
| Dwn. M.I.B. Chk. T.D. |
| Scale: AS SHOWN |
| Des. T.D. Chk. J.P. |
| CONTRACT NO. 2025-18-469 |
| SHEET 8 OF 11 |
| DWG. NO. 07 |

NOTES:

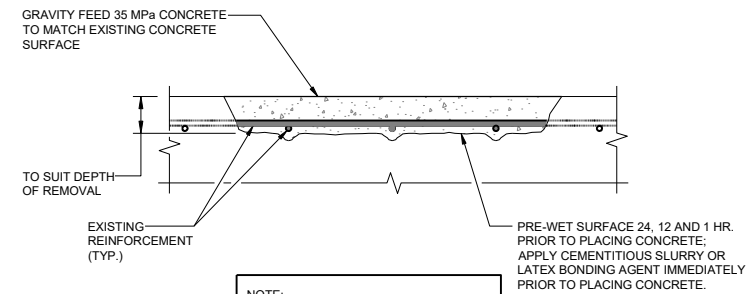
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.



**TYPICAL CONCRETE REMOVAL
HORIZONTAL SURFACE**
N.T.S.

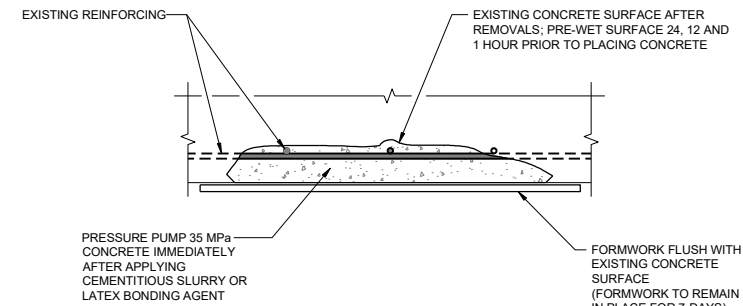


**TYPICAL CONCRETE REPAIR
OVERHEAD SURFACE**
N.T.S.

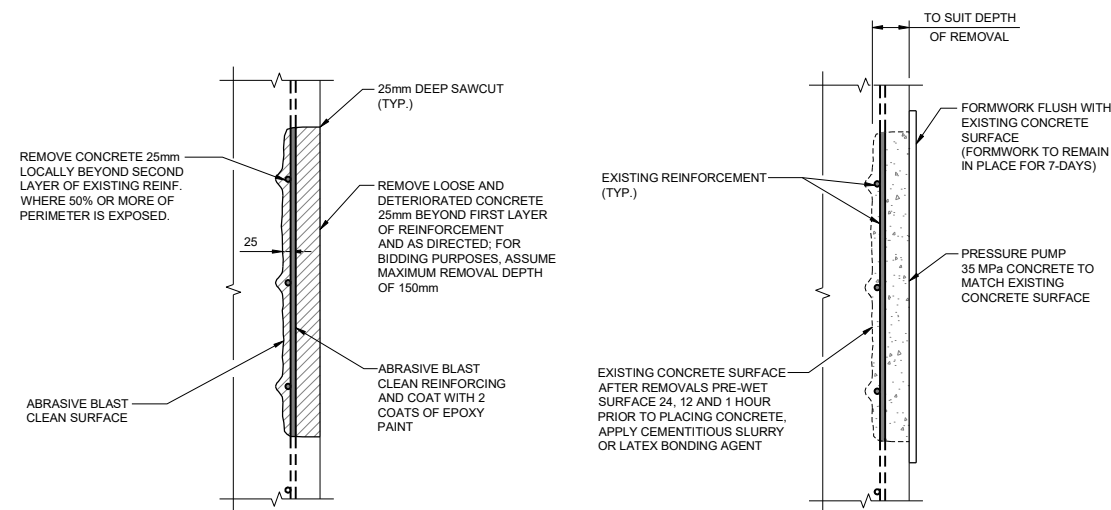


NOTE:
HORIZONTAL SURFACE REMOVAL AREAS ON TOP OF DECK SURFACE ONLY TO BE REINSTATED WITH CONCRETE OVERLAY, UNLESS DIRECTED OTHERWISE

**TYPICAL CONCRETE REPAIR
HORIZONTAL SURFACE**
N.T.S.

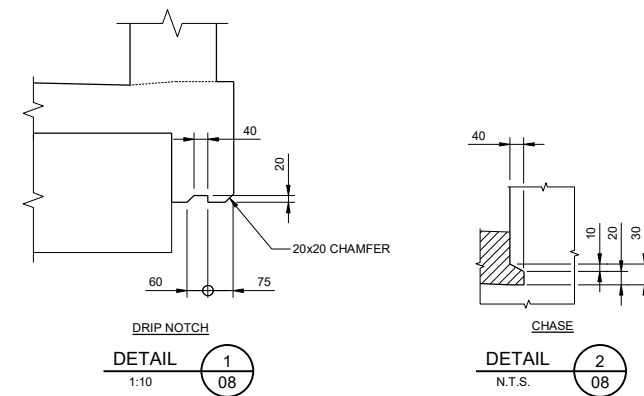


**TYPICAL FORMED CONCRETE REPAIR
OVERHEAD SURFACE**
N.T.S.

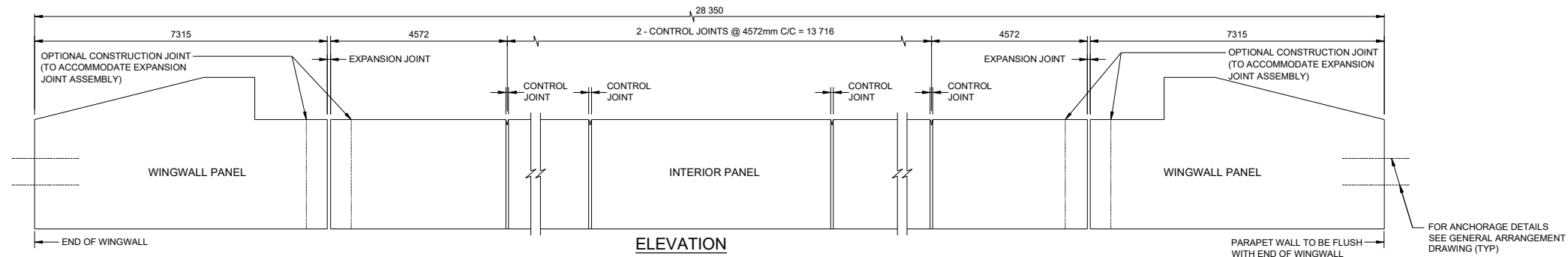


**TYPICAL CONCRETE REMOVAL
VERTICAL SURFACE**
N.T.S.

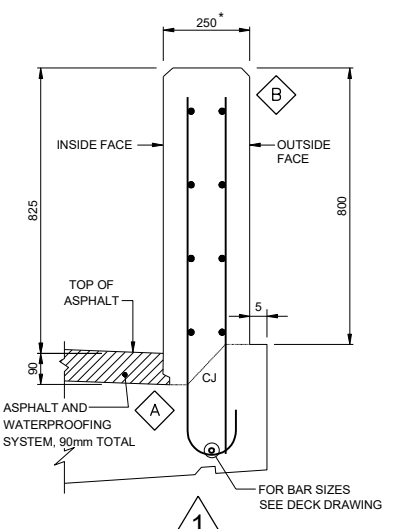
**TYPICAL FORMED CONCRETE REPAIR
VERTICAL SURFACE**
N.T.S.



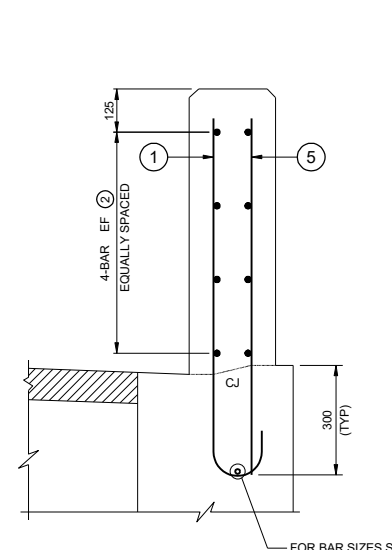
| | | | | | | | | |
|--|--|--|-----|-------------------|------|----------|--|---|
| | | | NO. | REVISION | BY | DATE | CLIENT UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | DATE: NOVEMBER 2024 |
| | | | 1 | ISSUED FOR TENDER | T.D. | 04/11/24 | | Drawn: M.I.B. Chk. T.D. Scale: AS SHOWN Des. T.D. Chk. J.P. |
| | | | | | | | PROJECT TITLE | CONTRACT NO. |
| | | | | | | | LUNENBURG BRIDGE REHABILITATION | 2025-18-469 |
| | | | | | | | DRAWING TITLE | SHEET 9 OF 11 |
| | | | | | | | MISCELLANEOUS DETAILS | DWG. NO. 08 |



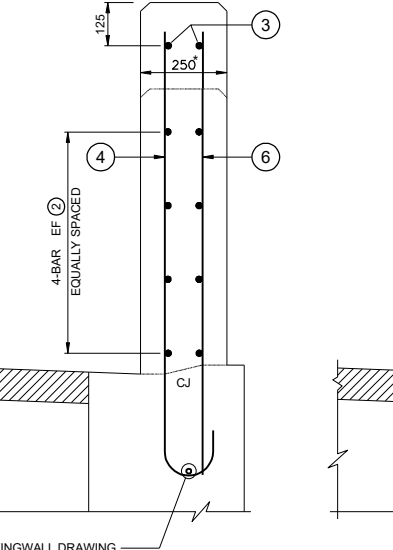
- NOTES:**
1. SYSTEM CONFIGURATION MEETS THE REQUIREMENTS OF NCHRP 350.
 2. THIS DRAWING IS ONLY APPLICABLE IN BRIDGE REHABILITATION WHEN THE REMAINING LIFE OF THE BRIDGE IS LESS THAN 35 YEARS.
 3. CONCRETE COVER TO REINFORCING STEEL 70 ±20mm EXCEPT AS NOTED.
 4. ALL REINFORCING STEEL SHALL BE GRADE 400W, HOT DIPPED GALVANIZED.
 5. BAR LAP SPLICE FOR HORIZONTAL REINFORCEMENT MUST NOT LAP THROUGH CONTROL JOINT.
 6. MINIMUM BAR LAP SPLICE TO BE 550mm.
 7. LENGTH OF HORIZONTAL BAR TO SUIT CONTRACTOR'S OPERATIONS. BAR LENGTHS NEED NOT MATCH DISTANCE BETWEEN CONTROL JOINTS.
 8. CONTROL JOINT TO BE FORMED.
 9. SAWCUTS NOT PERMITTED.
 10. CONTROL JOINT FORM HARDWARE NOT TO BE LEFT IN PLACE.
 11. OPTIONAL CONSTRUCTION JOINTS TO BE LOCATED WITHIN LIMITS OF CONCRETE DAMS ON DECK OR BALLAST WALL.
 12. CHASE REQUIRED ON HIGH AND LOW SIDE OF CROSSFALL.
 13. LEGEND:
 - EF - DENOTES EACH FACE
 - IF - DENOTES INSIDE FACE
 - OF - DENOTES OUTSIDE FACE
 - CJ - CONSTRUCTION JOINT



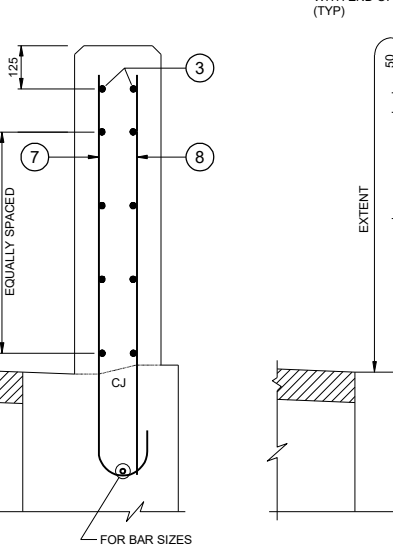
1 CONCRETE PARAPET ON DECK
TYPICAL DIMENSIONS (FOR BAR NUMBERS SEE)



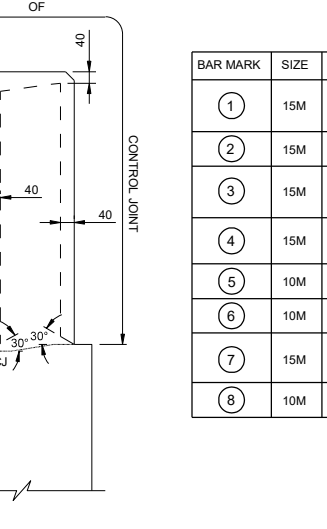
2 CONCRETE PARAPET ON WINGWALL
TYPICAL REINFORCEMENT



3 CONCRETE PARAPET ON WINGWALL
TYPICAL REINFORCEMENT

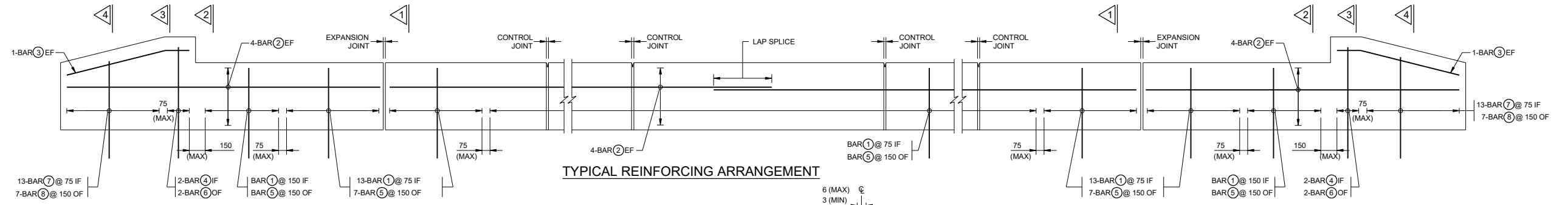


4 CONCRETE PARAPET ON WINGWALL
TYPICAL REINFORCEMENT

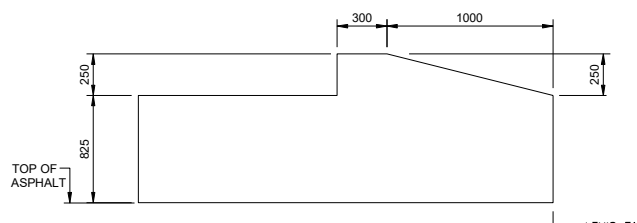


5 EXTENT OF CONTROL JOINT IN PARAPET WALL

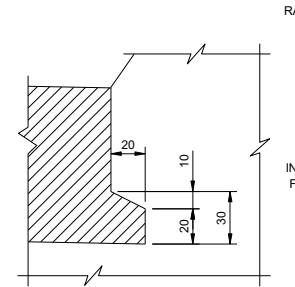
| BAR MARK | SIZE | SHAPE |
|----------|------|-------------------------|
| ① | 15M | |
| ② | 15M | STRAIGHT |
| ③ | 15M | |
| ④ | 15M | |
| ⑤ | 10M | STRAIGHT |
| ⑥ | 10M | STRAIGHT |
| ⑦ | 15M | |
| ⑧ | 10M | STRAIGHT, LENGTH VARIES |



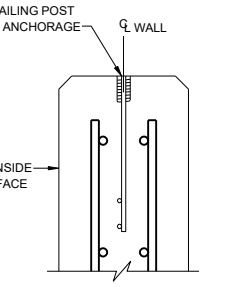
6 TYPICAL REINFORCING ARRANGEMENT



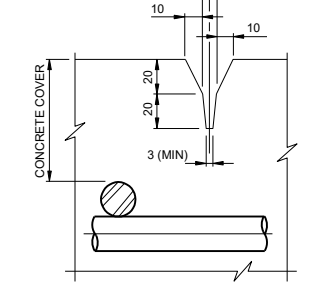
7 ELEVATION OF PARAPET ON WINGWALL



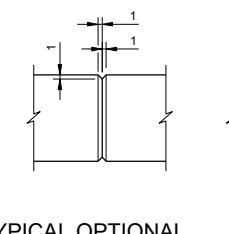
8 CHASE DETAIL



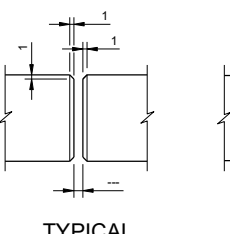
9 POST ANCHORAGE DETAIL



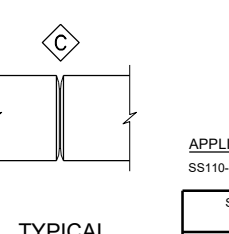
10 CONTROL JOINT DETAIL



11 TYPICAL OPTIONAL CONSTRUCTION JOINT



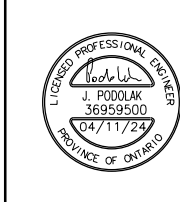
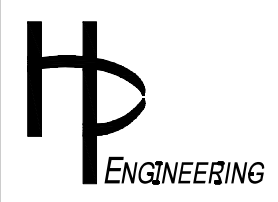
12 TYPICAL EXPANSION JOINT



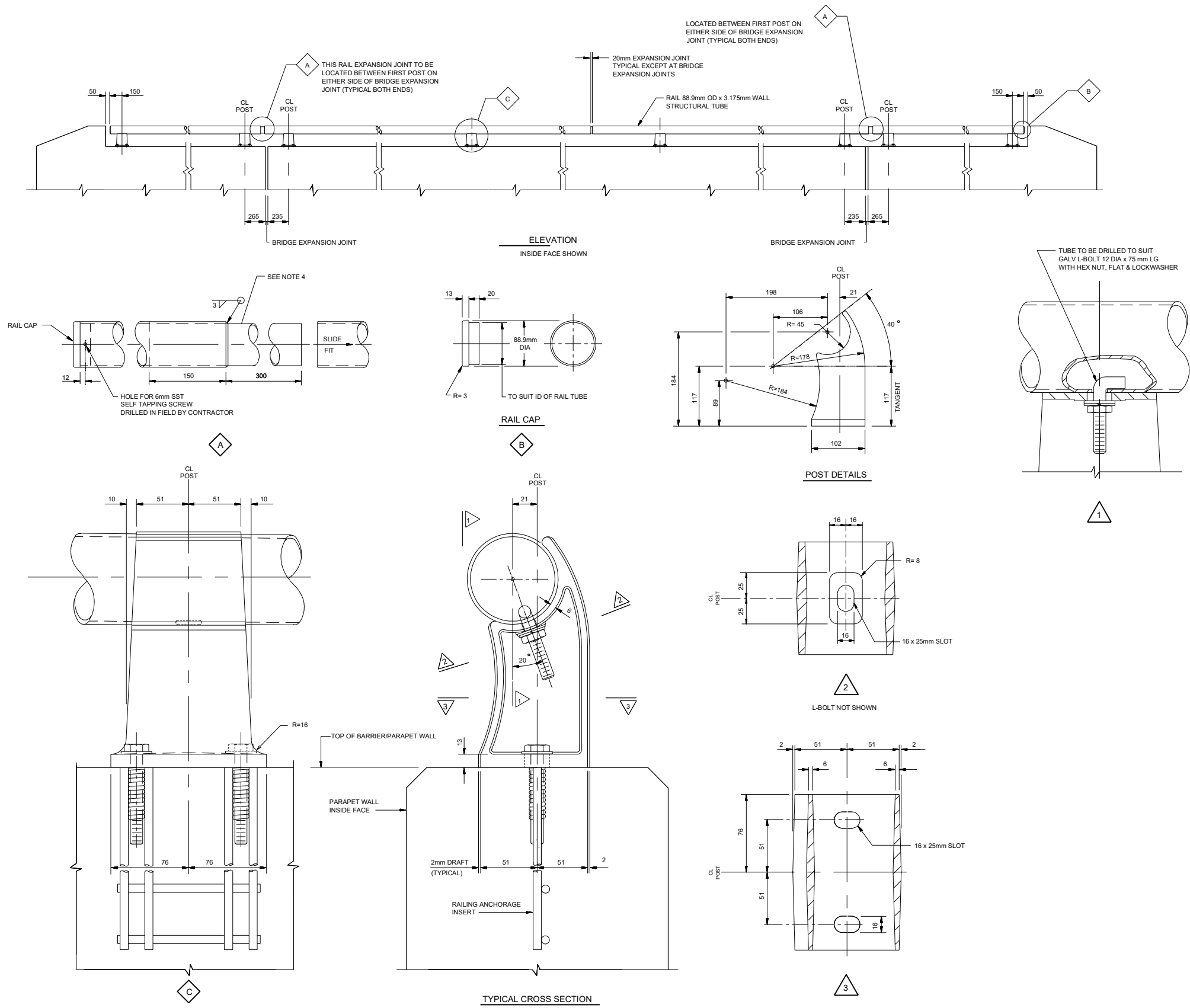
13 TYPICAL CONTROL JOINT

APPLICABLE STANDARD DRAWINGS:
SS110-21 RAILING FOR BARRIER/PARAPET WALL

| | |
|---|------------------|
| STANDARD DRAWING SEPTEMBER 2016 | SS110-104 |
| PARAPET WALL WITH RAILING, TL-4 (GALVANIZED REBAR) | |



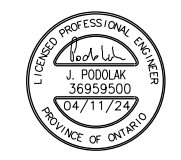
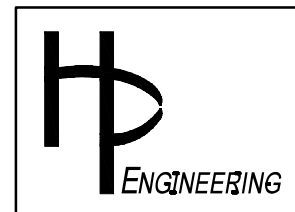
| NO. | REVISION | BY | DATE | CLIENT | DATE: NOVEMBER 2024 |
|-----|-------------------|------|----------|---|--------------------------|
| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 | UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | Dwn. M.I.B. Chk. T.D. |
| | | | | PROJECT TITLE | Scale: AS SHOWN |
| | | | | LUNENBURG BRIDGE REHABILITATION | Des. T.D. Chk. J.P. |
| | | | | DRAWING TITLE | CONTRACT NO. 2025-18-469 |
| | | | | PARAPET WALL | SHEET 10 OF 11 |
| | | | | | DWG. NO. 09 |



- NOTES:**
- RAIL ELEMENTS SHALL BE STRUCTURAL TUBING SUPPLIED IN ACCORDANCE WITH CSA G40.21-M92 GRADE 350, EXCEPT WHERE NOTED.
 - STEEL IN POSTS SHALL BE CAST STEEL SUPPLIED IN ACCORDANCE WITH ASTM A27-60 GRADE 65-35.
 - RAIL SHALL BE SUPPLIED WITH SPLICE IN LENGTHS OF 6980mm (EXCLUDING SPLICE) EXCEPT AS NOTED.
 - GALVANIZED RAIL TUBING MATING SURFACES TO HAVE A 2 ± 0.5 mm GAP ALL AROUND TO ENSURE A SLIDE FIT.
 - STEEL POSTS AND RAILS SHALL BE GALVANIZED IN ACCORDANCE WITH CSA G164-M. ALL GALVANIZING SHALL BE DONE AFTER FABRICATION.
 - ELECTRODES SHALL BE A LOW HYDROGEN SPECIFICATION E7015, E7016 OR E7018.
 - POST AND ANCHORAGE TO INCLUDE ALL BOLTS AND WASHERS.
 - END CAP TO INCLUDE SST SELF TAPPING FASTENERS.
 - L-BOLT, NUT AND WASHERS FOR FASTENING STEEL TUBING TO POSTS SHALL BE GALVANIZED (CSA G164-M).
 - RAIL CAP MATERIAL SHALL BE STEEL OR ALUMINUM.
 - RAIL SHALL BE PREBENT TO FOLLOW ROAD CURVATURE WHERE RADIUS IS LESS THAN 150m.
 - RAIL POSTS SHALL BE SET PERPENDICULAR TO GRADE.
 - WHERE LAYOUT OF POSTS IS NOT SHOWN, POST LOCATION SHALL BE DETERMINED BY THE CONTRACTOR.
 - RAIL MAY BE CUT AS REQUIRED IN FIELD WITH PIPE CUTTERS. CUT TO BE SURFACE TREATED WITH ZINC RICH PAINT.
 - WHEN CONNECTING TO EXISTING RAILING, RAIL MUST BE MADE CONTINUOUS AND POST SPACING DETERMINED WITH REFERENCE TO EXISTING POSTS.
 - ALTERNATIVE ALUMINUM RAIL AND POST DESIGNS WILL BE PERMITTED. THE RAIL SHALL BE 6061 ALLOY T-6 HEAT TREATED. WHEN AN EXTRUDED POST IS USED, THE ALLOY AND HEAT TREATMENT SHALL BE THE SAME AS SPECIFIED FOR THE RAIL. WHEN A CAST POST IS USED THE ALLOY SHALL BE A 44.2-T4.
 - SPLICING OF RAIL TUBES MAY BE DONE BY WELDING ON OF SPLICE PIECE OR BY SWEDGING OF RAIL END.
 - RAILING ANCHORAGE INSERT TO BE PLACED PRIOR TO CONCRETING.
 - THE COMBINATION OF STEEL RAIL AND ALUMINUM POSTS IS PERMITTED.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
 - REFER TO DRAWING NO. 2 FOR GENERAL NOTES.
 - CONTRACTOR SHALL COMPLETE THEIR OWN QUANTITY TAKE OFFS AND SUBMIT SHOP DRAWINGS, BASED ON THEIR FIELD MEASUREMENTS, FOR REVIEW PRIOR TO ORDERING MATERIALS.

APPLICABLE STANDARD DRAWINGS
 OPSD-4019.000 SINGLE RAIL ANCHORAGE INSERTS
 MODIFIED

| | |
|----------------------------------|-----------------|
| STANDARD DRAWING APRIL 2011 | SS110-21 |
| RAILING FOR BARRIER/PARAPET WALL | |



| NO. | REVISION | BY | DATE |
|-----|-------------------|------|----------|
| 1 | ISSUED FOR TENDER | T.D. | 04/11/24 |

| | |
|--|-----------------------------|
| CLIENT UNITED COUNTIES OF STORMONT DUNDAS AND GLEGARRY | DATE: NOVEMBER 2024 |
| PROJECT TITLE LUNENBURG BRIDGE REHABILITATION | Scale: AS SHOWN |
| DRAWING TITLE PARAPET WALL RAILING | CONTRACT NO. 2025-18-469 |
| | SHEET 11 OF 11 |
| | DWG. NO. 10 |

| | | |
|-----------------------------|----------------|-----------|
| DATE: NOVEMBER 2024 | Des. M.I.B. | Chk. T.D. |
| Scale: AS SHOWN | Des. T.D. | Chk. J.P. |
| CONTRACT NO. 2025-18-469 | SHEET 11 OF 11 | |
| DWG. NO. 10 | | |