

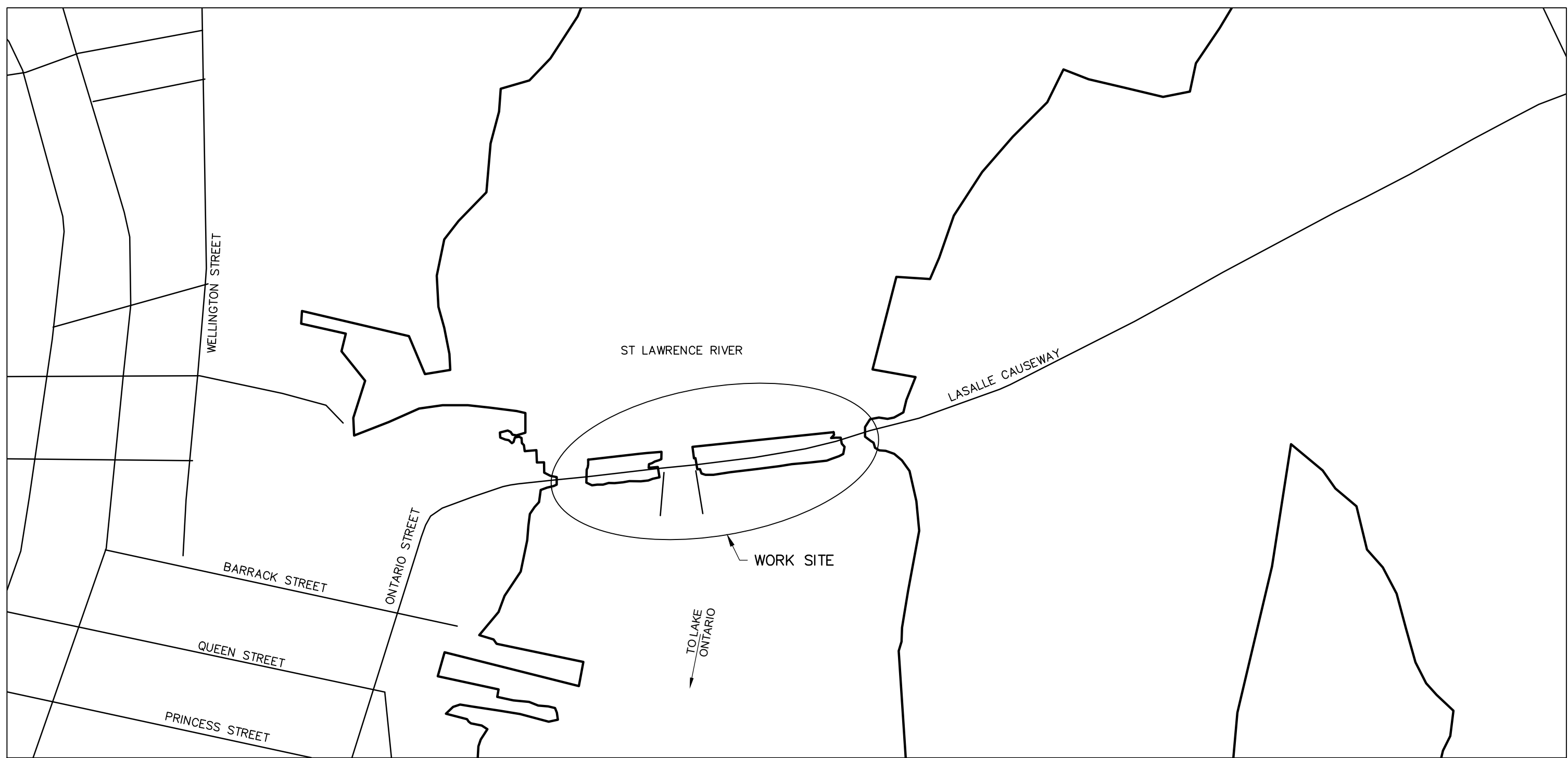


Public Works and  
Government Services  
Canada

Architectural and  
Engineering Services

Ontario Region

# LASALLE CAUSEWAY KINGSTON, ONTARIO



SITE PLAN

LSC CONCRETE REPAIRS

PWGSC Proj. No.: R.101343.040

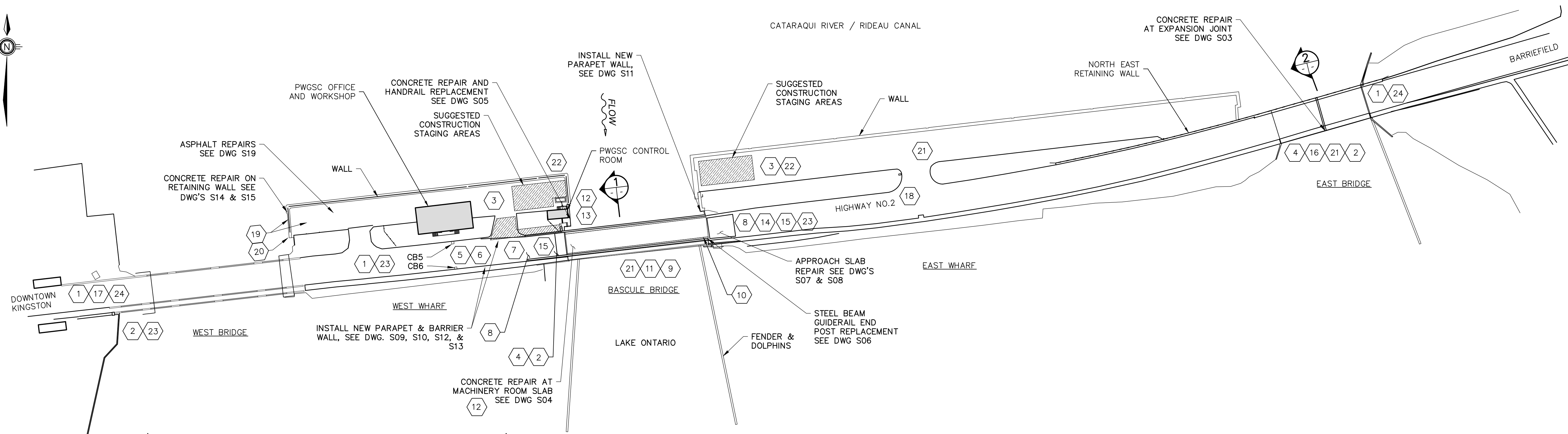
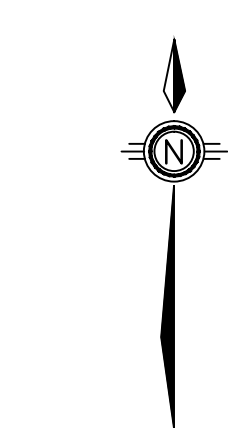
Canada

LIST OF DRAWINGS

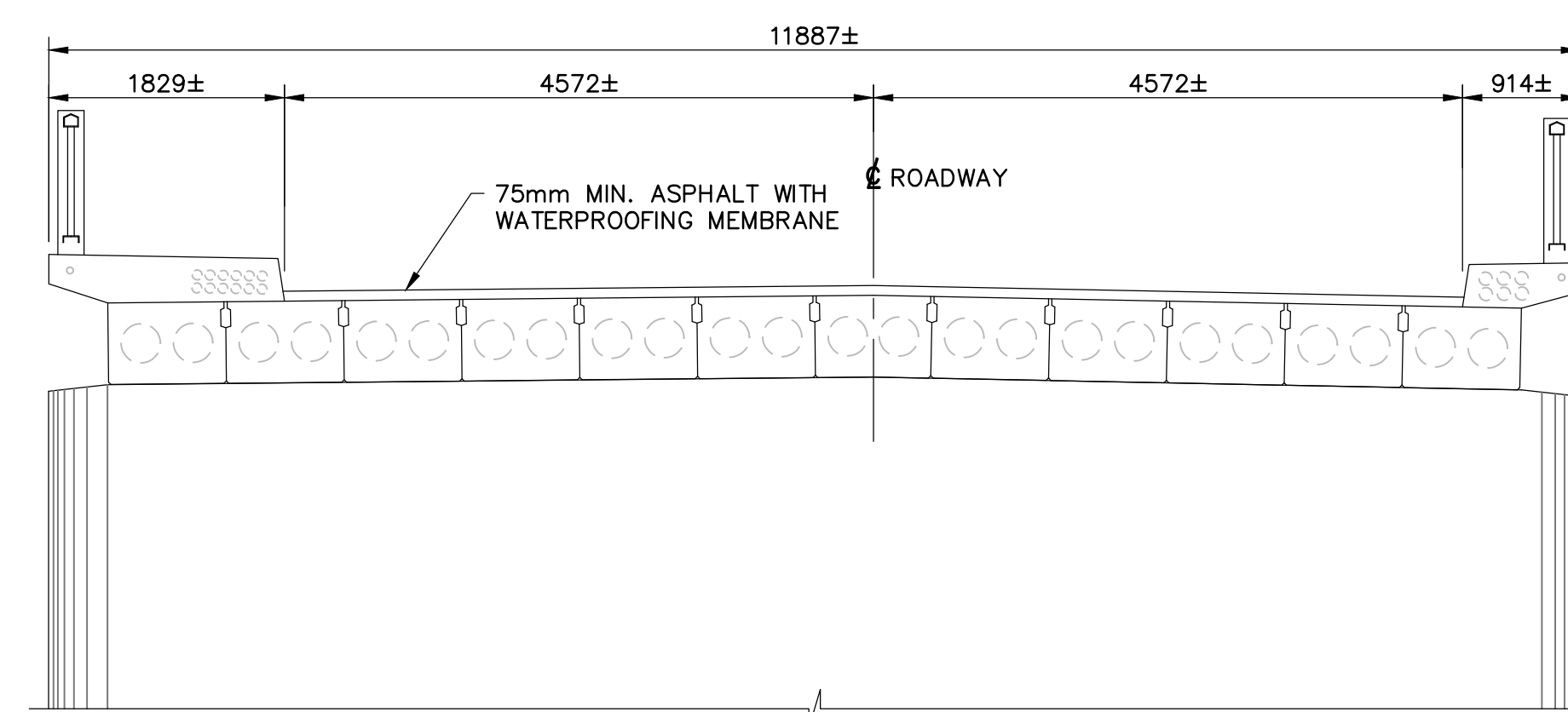
- CIVIL
- C01 TRAFFIC CONTROL PLAN I
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  - C04 CONSTRUCTION STAGING AREA
  - C05 ALIGNMENT DETAILS
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  - S14 WEST WHARF RETAINING WALL REMOVALS
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  - S16 EAST BRIDGE SOUTH SIDEWALK REPAIRS
  - S17 MISCELLANEOUS DETAILS
  - S18 STANDARD DETAILS
  - S19 WEST WHARF ASPHALT PATCH REPAIRS



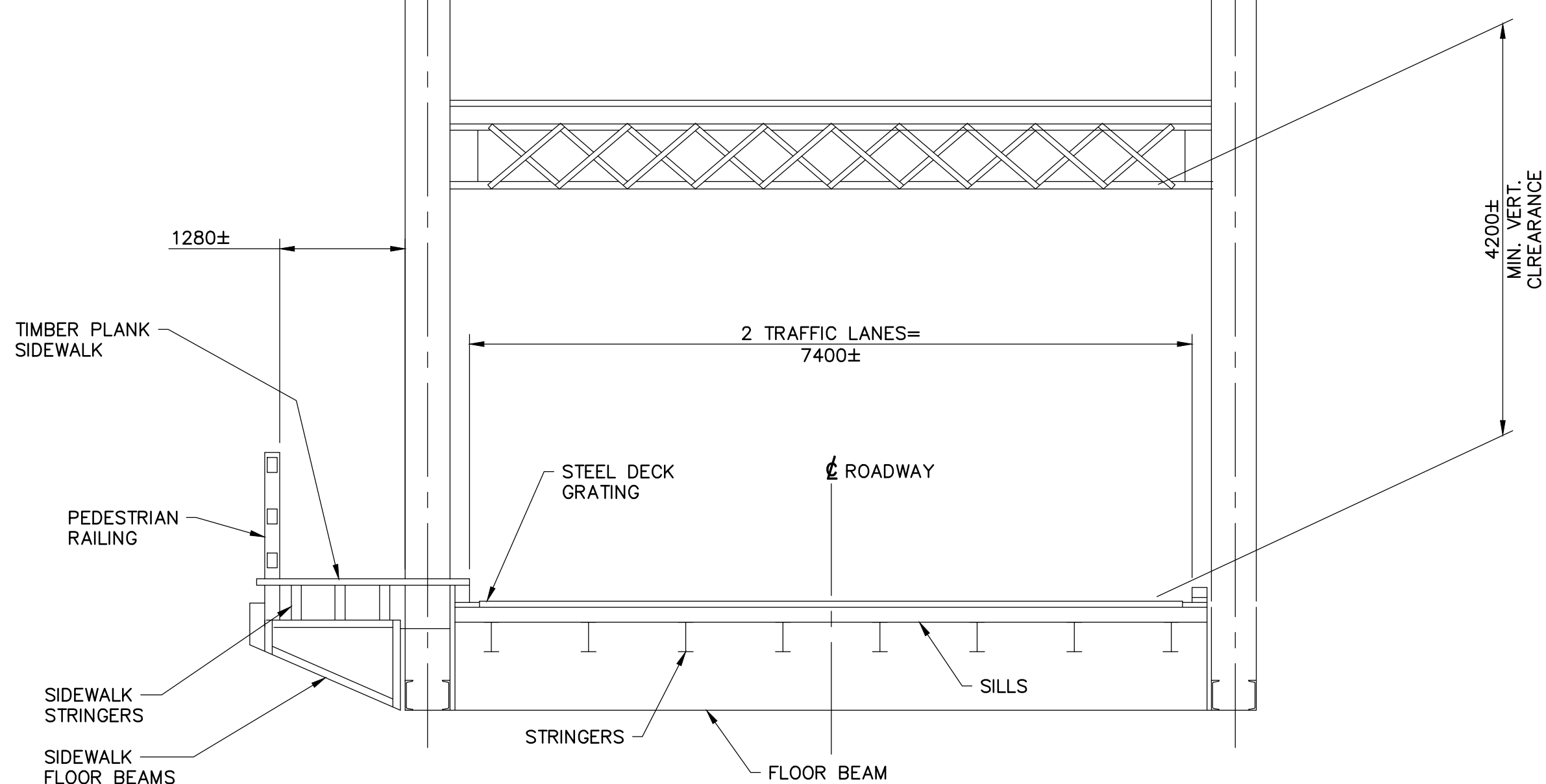




**PLAN**  
1:750



**SECTION 2-2**  
SCALE 1:50



**SECTION 1-1**  
SCALE 1:50

#### NOTES:

THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG. S02.

#### SCOPE OF WORK

THE FOLLOWING SCOPE OF WORK SHALL BE CARRIED OUT IN STAGES AND IS NOT INTENDED TO BE A COMPREHENSIVE LIST OF ALL ITEMS REQUIRED TO COMPLETE THE REHABILITATION WORK, NOR IS IT TO BE A SEQUENCE OF WORK.

#### LASALLE CAUSEWAY

- 1 INSTALL TRAFFIC CONTROL MEASURES AND DETOUR ALL TRAFFIC TO ONE SIDE OF THE CROSSING DURING EACH STAGE. INSTALL PEDESTRIAN SITE CONTROL MEASURES.
- 2 INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
- 3 SET UP CONSTRUCTION STAGING AREAS.
- 4 INSTALL ACCESS TO WORK AREAS AND ENVIRONMENTAL PROTECTION MEASURES.
- 5 PERFORM CONCRETE REMOVALS AND REPAIRS TO CONCRETE SLAB OVER CB6.
- 6 UNBLOCK CAST IRON PIPE BETWEEN CB5 AND CB6 AND RESTORE WATER FLOW BETWEEN CB5 AND CB6 AND LAKE ONTARIO BY REMOVING EXCESS CONCRETE. REGRADE ROADWAY WEST OF CB6 AND RESTORE DRAINAGE TO CB6.
- 7 INSTALL NEW E-27 ELECTRICAL TRAFFIC MANHOLES AND BELL BURIED CONDUITS BELOW THE ROADWAY EAST OF CB6.

#### BASCULE BRIDGE

- 8 REMOVE NE, NW AND SW APPROACH GUIDERAILS.
- 9 REPLACE MISSING AND LOOSE BOLTS ON THREE-BEAM SPLICES OF ROADSIDE BARRIERS.
- 10 REPLACE POST ANCHORAGE AT EAST END OF SOUTH ROADSIDE BARRIER.
- 11 INSTALL NEW STAINLESS STEEL BARRIER CHAIN ABOVE MAIN TRUNNION AT SOUTH SIDE OF STRUCTURE.
- 12 PERFORM PARTIAL DEPTH CONCRETE REMOVALS AND REPAIRS TO CONCRETE STAIRS AND SLAB AROUND THE CONTROL ROOM AND TO THE MACHINE ROOM SLAB SOFFIT.
- 13 REMOVE EXISTING RAILING AND INSTALL NEW RAILING AROUND CONTROL ROOM.
- 14 RECONSTRUCT EAST END OF EAST APPROACH SLAB AND REGRADE THE EAST APPROACH TO MINIMIZE DEPRESSION IN ROADWAY.
- 15 CONSTRUCT NEW REINFORCED CONCRETE BARRIER WALL/PARAPET WALL AND FOOTING AT NE, NW AND SW APPROACHES. INSTALL NEW STEEL BEAM GUIDRAILS AND POSTS AND CONNECT TO NEW CONCRETE BARRIERS AT NE AND NW APPROACHES AS PER OPSD 912.430.

#### EAST BRIDGE

- 16 PERFORM PARTIAL DEPTH CONCRETE REMOVALS AND REPAIRS TO SIDEWALK AND SOUTH DECK SOFFIT FASCIA AND CANTILEVER.

#### WEST BRIDGE

- 17 REGRADE THE WEST END OF THE WEST APPROACH AND RESTORE ROADWAY DRAINAGE.

#### EAST WHARF

- 18 REMOVE DETERIORATED CURB SECTIONS AND CONSTRUCT NEW CONCRETE CURB AND GUTTER AT WEST END OF ENTRANCE.

#### WEST WHARF

- 19 FILL VOID AT BOTTOM OF CONCRETE RETAINING WALL AND PERFORM ASPHALT PATCH REPAIRS.
- 20 PERFORM PARTIAL DEPTH CONCRETE REMOVALS AND REPAIRS TO CONCRETE APRON BELOW MASONRY RETAINING WALL.

#### LASALLE CAUSEWAY

- 21 REMOVE ACCESS TO WORK AREAS.
- 22 REINSTATE CONSTRUCTION STAGING AND STORAGE AREAS.
- 23 REMOVE EROSION AND SEDIMENT CONTROL MEASURES.
- 24 REMOVE TRAFFIC CONTROL MEASURES.



#### LEGEND



1 DENOTES NUMBER IN SCOPE OF WORK (TYPICAL LOCATION SHOWN NOT AT ALL LOCATIONS REQUIRED).

#### LIST OF ABBREVIATIONS

|      |                       |
|------|-----------------------|
| ±    | APPROXIMATE DIMENSION |
| TYP. | TYPICAL               |
| Ø    | DIAMETER              |
| E.W. | EACH WAY              |
| EL.  | ELEVATION             |
| W.L. | WATER LEVEL           |
| C/L  | CENTRELINE            |
| N    | NORTH                 |
| S    | SOUTH                 |
| E    | EAST                  |
| W    | WEST                  |
| MH   | MANHOLE               |
| CB   | CATCH BASIN           |
| LP   | LIGHT POST            |

1 ISSUED FOR BID SUBMISSION 21/09/10

| revision | description | date |
|----------|-------------|------|
|          |             |      |

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the departmental representative of all discrepancies.

|             |   |                                     |
|-------------|---|-------------------------------------|
| A<br>B<br>C | A | Detail No.                          |
|             | B | drawing no. - where detail required |
|             | C | drawing no. - where detailed        |

project title  
**KINGSTON** Ontario  
PWGSC  
LaSalle Causeway

#### LSC CONCRETE REPAIRS

drawing title

#### GENERAL ARRANGEMENT

drawn by  
VINCE GUO

designed by  
VINCE GUO

approved by  
J. GOLZARI

bid project manager  
ELISABETH OHI

project date  
2021/09/10

project no.  
R.101343.040

drawing no.  
S01



GENERAL NOTES:

GENERAL:

1. DO NOT SCALE DRAWINGS.
2. THE LATEST VERSION OF ALL REFERENCE DOCUMENTS SHALL APPLY.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE CANADIAN HIGHWAY BRIDGE DESIGN CODE CSA S6-19 (LATEST EDITION).
4. DIMENSIONS RELATING TO EXISTING ELEMENTS OR IDENTIFIED AS REQUIRING FIELD VERIFICATION MUST BE FIELD VERIFIED BY CONTRACTOR BEFORE COMMENCING SHOP DRAWING PREPARATION, FABRICATION OR WORK.
5. THE CONTRACTOR SHALL EXAMINE THE SITE AND SATISFY HIMSELF OF THE ACTUAL CONDITIONS AND REQUIREMENTS OF THE WORK.
6. HISTORICAL WATER LEVEL DATA IS AVAILABLE ON THE FOLLOWING WEBSITES:

<https://waterlevels.gc.ca/eng/station/Month?sid=13988&tz=EST&pres=2&type=1>  
[waterlevel.gc.ca]  
<https://waterlevels.gc.ca/C&A/bulletin-eng.html> [waterlevel.gc.ca]  
<https://ijc.org/en/loslrb/watershed/water-levels> [ijc.org]

CLASS OF CONCRETE:

1. ALL CONCRETE SHALL BE CSA EXPOSURE CLASS C-1 IN ACCORDANCE WITH CSA A23.1/A23.2 WITH A MINIMUM COMPRESSIVE STRENGTH OF 35MPa AT 28 DAYS.

CLEAR COVER TO REINFORCING STEEL:

ALL LOCATIONS (UNLESS NOTED OTHERWISE): 70±20mm.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE GRADE 400W, UNLESS NOTED OTHERWISE.
2. BAR MARKS WITH PREFIX "G" DENOTE GALVANIZED BARS.
3. BAR MARKS WITH PREFIX "S" DENOTE STAINLESS BARS
4. BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE MINISTRY OF TRANSPORTATION OF ONTARIO'S STRUCTURAL STANDARD DRAWINGS SS12-1, UNLESS INDICATED OTHERWISE.
5. UNLESS SHOWN OTHERWISE, TENSION LAP SPICES FOR REINFORCING STEEL SHALL BE CLASS B.
6. ALL BOLTS SHALL BE TIGHTENED BY THE TURN-OF-NUT METHOD.
7. UNLESS NOTED OTHERWISE, THE MINIMUM FILLET WELD SHALL BE AS FOLLOWS:

| MATERIAL THICKNESS OF THICKER PART JOINED (mm) | MINIMUM SIZE OF FILLET WELDS (mm) |
|--|-----------------------------------|
| TO 12 INCLUSIVE                                | 5                                 |
| OVER 12 TO 20                                  | 6                                 |
| OVER 20 TO 40                                  | 8                                 |
| OVER 40 TO 60                                  | 10                                |
| OVER 60 TO 120                                 | 20                                |

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS, DETAILS AND ELEVATIONS OF EXISTING STRUCTURES THAT ARE RELEVANT TO THE WORK SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE AND THE PROPOSED ADJUSTMENT OF THE WORK REQUIRED TO MATCH THE EXISTING STRUCTURES SHALL BE SUBMITTED FOR APPROVAL.
2. CONSTRUCTION STAGING AREAS SHALL BE LIMITED TO THE AREAS IDENTIFIED ON THE GENERAL ARRANGEMENT DRAWING. REINSTATE AND MAKE GOOD ALL DISRUPTED AREAS AFTER THE COMPLETION OF WORK TO PRE-CONSTRUCTION OR BETTER CONDITION TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE
3. ALL DIMENSIONS ARE IN MILLIMETERS. STATIONS AND ELEVATIONS ARE SHOWN IN METERS, UNLESS NOTED OTHERWISE.
4. EXISTING CONCRETE SURFACES TO BE ABRASIVE BLAST CLEANED AND A BONDING AGENT AND CORROSION INHIBITOR SHALL BE APPLIED PRIOR TO CASTING NEW CONCRETE.
5. DOWEL ADHESIVE SHALL BE APPLIED IN STRICT ADHERENCE TO THE MANUFACTURERS WRITTEN INSTRUCTIONS. DOWEL EMBEDMENT SHALL BE 150mm, UNLESS NOTED OTHERWISE. HOLES FOR DOWELS SHALL BE 19mm DIAMETER.
6. ALL MATERIALS SHALL BE IN ACCORDANCE WITH MTO DESIGNATED SOURCES OF MATERIALS (DSM), UNLESS NOTED OTHERWISE. PROPRIETARY PRODUCTS SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.
7. SAWCUTS IN CONCRETE, WHERE DESIGNATED, SHALL BE 25mm DEEP OR TO THE FIRST LAYER OF REINFORCING STEEL, WHICHEVER IS LESS, UNLESS NOTED OTHERWISE.
8. EXPOSED EXISTING REINFORCING STEEL TO REMAIN SHALL BE ABRASIVE BLAST CLEANED.
9. ALL EXISTING CONCRETE SURFACES, ON WHICH NEW CONCRETE WILL BE POURED, SHALL BE ROUGHENED BY SCABBLING, CHIPPING OR BUSH HAMMERING TO CREATE AN IRREGULAR SURFACE.
10. CHAMFER ALL EXPOSED CONCRETE EDGES 20mm x 20mmmm UNLESS NOTED OTHERWISE.
11. THE CONTRACTOR SHALL LOCATE, TEMPORARILY SUPPORT, AND PROTECT ALL UTILITIES THAT ARE TO REMAIN DURING ALL STAGES OF CONSTRUCTION OPERATIONS.
12. EXTENT OF CONCRETE REMOVALS/REPAIRS TO BE AS DETERMINED AND DIRECTED BY DEPARTMENTAL REPRESENTATIVE.
13. THE CONTRACTOR SHALL CONTROL THE ON-SITE OPERATIONS TO PREVENT ENTRY OF DELETERIOUS MATERIALS INTO LAKE ONTARIO AND THE CATAQUI RIVER/RIDEAU CANAL. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL MEASURES, SUBJECT TO THE APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE, PRIOR TO THE COMMENCEMENT OF WORK.
14. THE CONTRACTOR SHALL MAINTAIN NAVIGATION ON LAKE ONTARIO AND THE CATAQUI RIVER/RIDEAU CANAL BELOW ALL BRIDGES THROUGHOUT CONSTRUCTION.
15. EXISTING EMBEDDED UTILITY DUCTS IN SIDEWALKS MAY CONTAIN ASBESTOS. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS DURING CONCRETE REMOVALS. SIGNIFICANT CARE SHALL BE TAKEN BY THE CONTRACTOR DURING REMOVAL OF CONCRETE ABOVE UTILITY DUCTS. CONCRETE REMOVAL EQUIPMENT SHALL BE LIMITED TO CHIPPING HAMMERS (I.E. NO JACKHAMMERS) AND HAND TOOLS.

TRAFFIC AND PEDESTRIAN CONTROL:

1. CONTRACTOR SHALL PROVIDE SCHEDULE OF LANE CLOSURES FOR APPROVAL AT LEAST 21 DAYS PRIOR TO WORK COMMENCEMENT.
2. CONTRACTOR SHALL FOLLOW PUBLIC NOTICE REQUIREMENTS AS PER LASALLE CAUSEWAY ROAD CLOSURE PROTOCOL DOCUMENT.
3. ADVANCED WARNING SIGNS SHALL FOLLOW PUBLIC NOTICE REQUIREMENTS AS PER LASSALE CAUSEWAY ROAD CLOSURE PROTOCOL DOCUMENT.
4. TRAFFIC CONTROL PLAN FOR TEMPORARY CONDITIONS (LANE CLOSURES) SHALL BE PROVIDED BY CONTRACTOR AND BE IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL (OTM) BOOK 7. THE TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DEPARTMENTAL REPRESENTATIVE.
5. THE CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS OR PROVIDE A SAFE TEMPORARY WALKWAY AT LEAST THE SAME WIDTH AS THE EXISTING SIDEWALK THROUGH THE WORK ZONE. THE TEMPORARY WALKWAY SHALL BE PROTECTED FROM ADJACENT TRAFFIC AND WORK ACTIVITIES. AN ACCESSIBLE SURFACE SHALL BE PROVIDED, AND THE TRANSITION TO THE SIDEWALK ON EITHER END SHALL BE ACCESSIBLE.



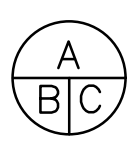
Public Works and  
Government Services Canada  
Architectural and Engineering Services  
Ontario Region



PARSONS

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| 1        | ISSUED FOR BID SUBMISSION | 21/09/10 |
| revision | description               | date     |

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately notify the departmental representative of all discrepancies.



- A Detail No.  
B drawing no. -- where detail required  
C drawing no. -- where detailed

project title  
KINGSTON Ontario  
PWGSC  
LaSalle Causeway

LSC CONCRETE REPAIRS

drawing title

GENERAL NOTES

drawn by  
VINCE GUO

designed by  
VINCE GUO

approved by  
J. GOLZARI

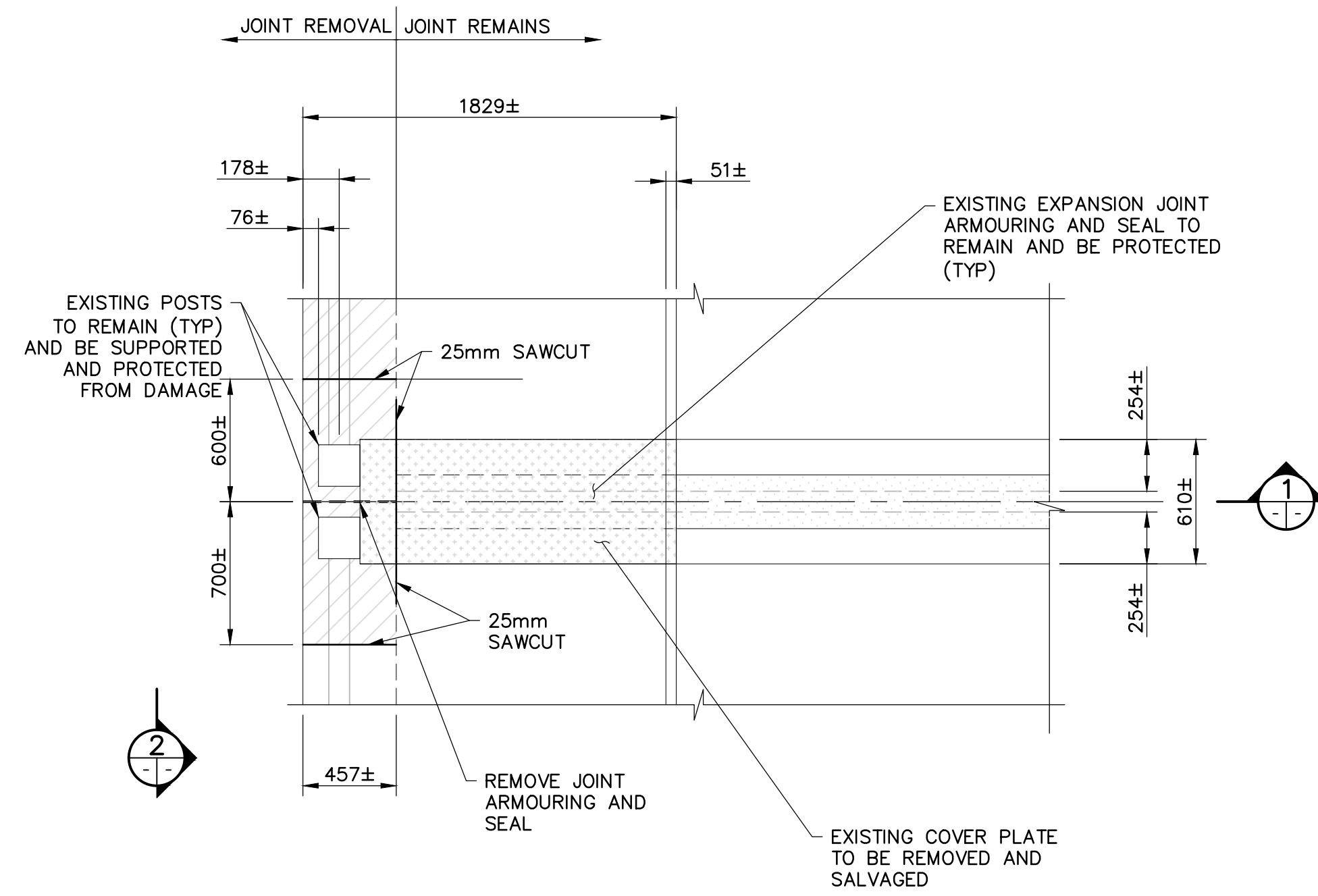
bid project manager  
ELISABETH OHI

project date  
2021/09/10

project no.  
R.101343.040

drawing no.  
S02

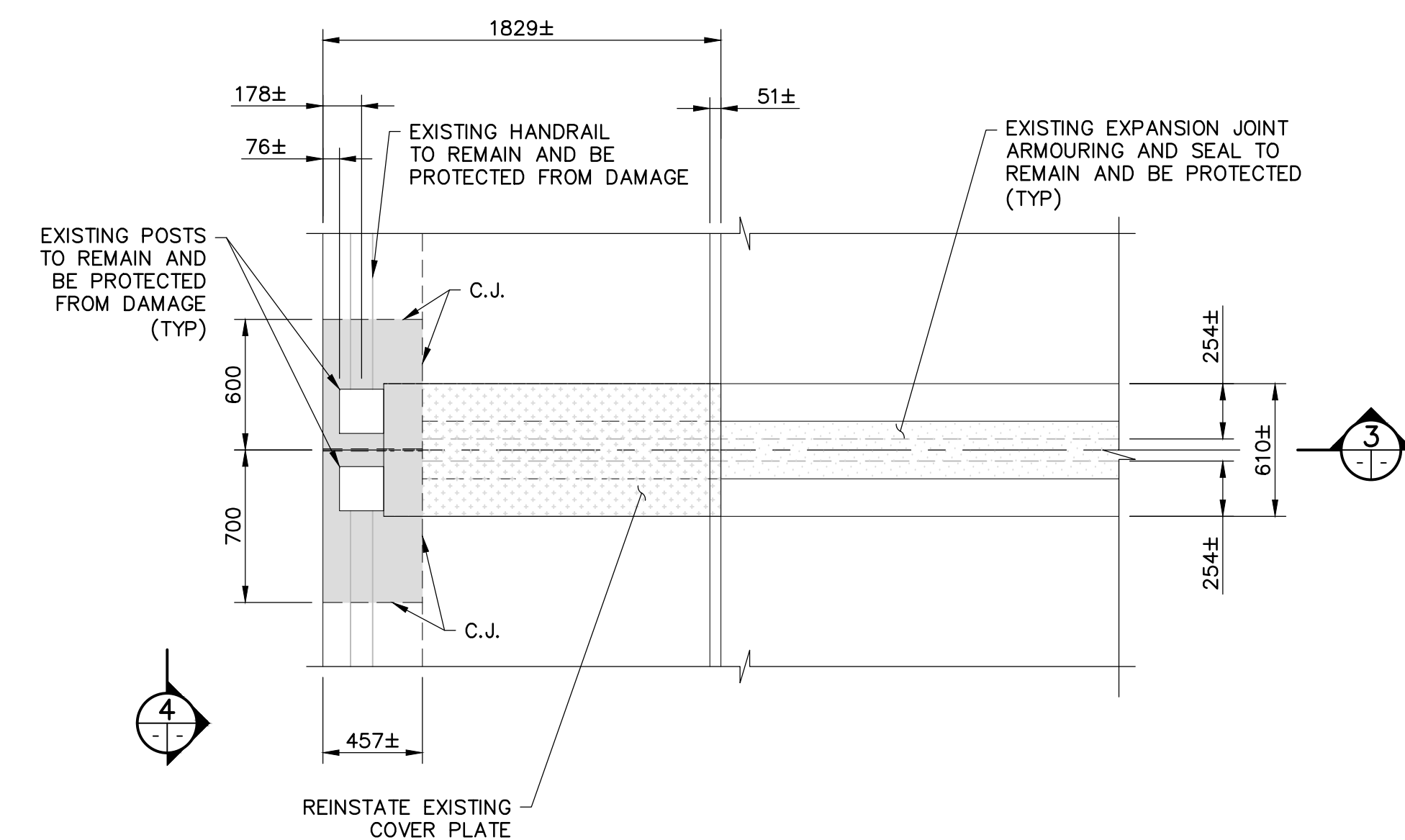




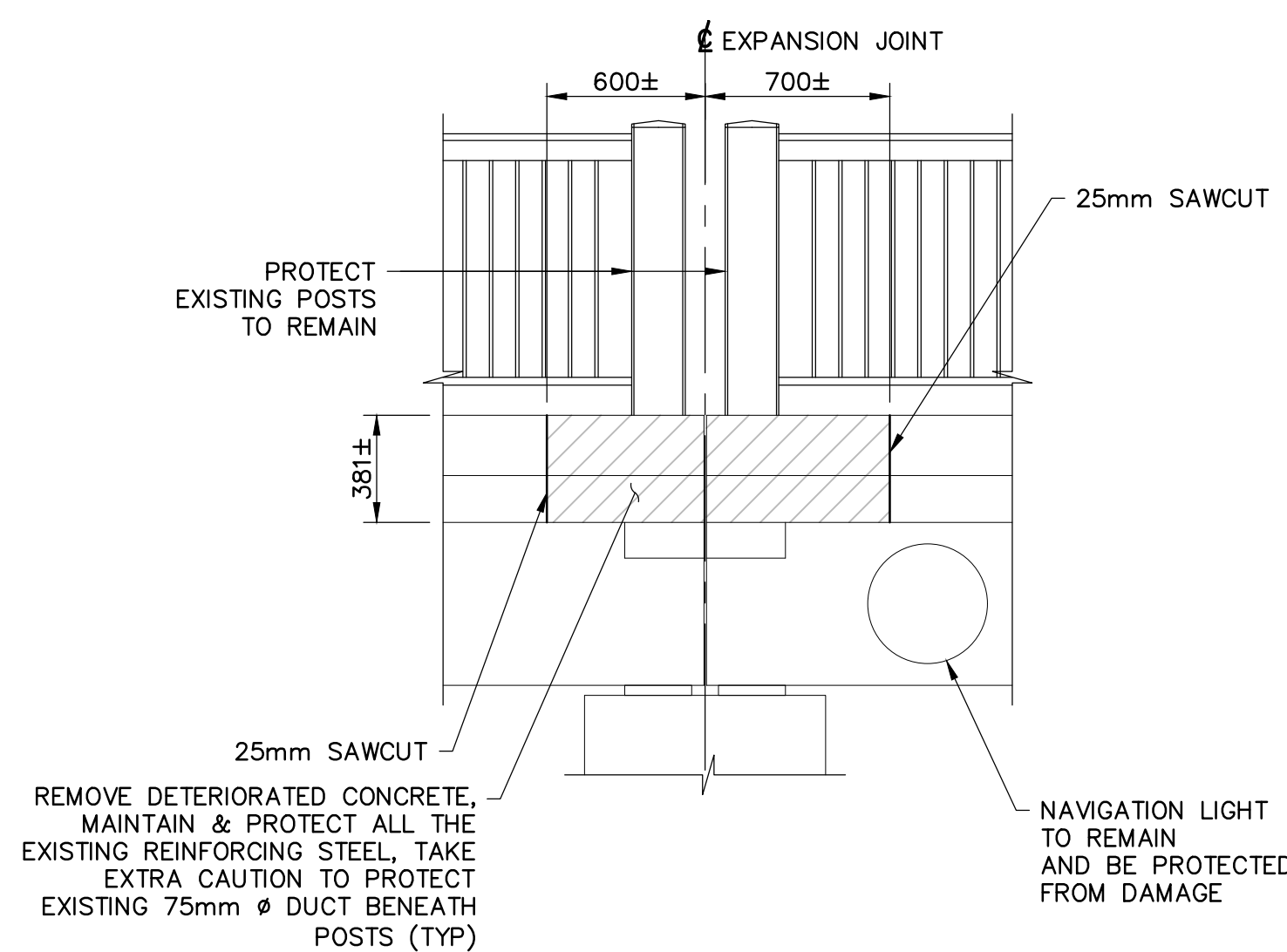
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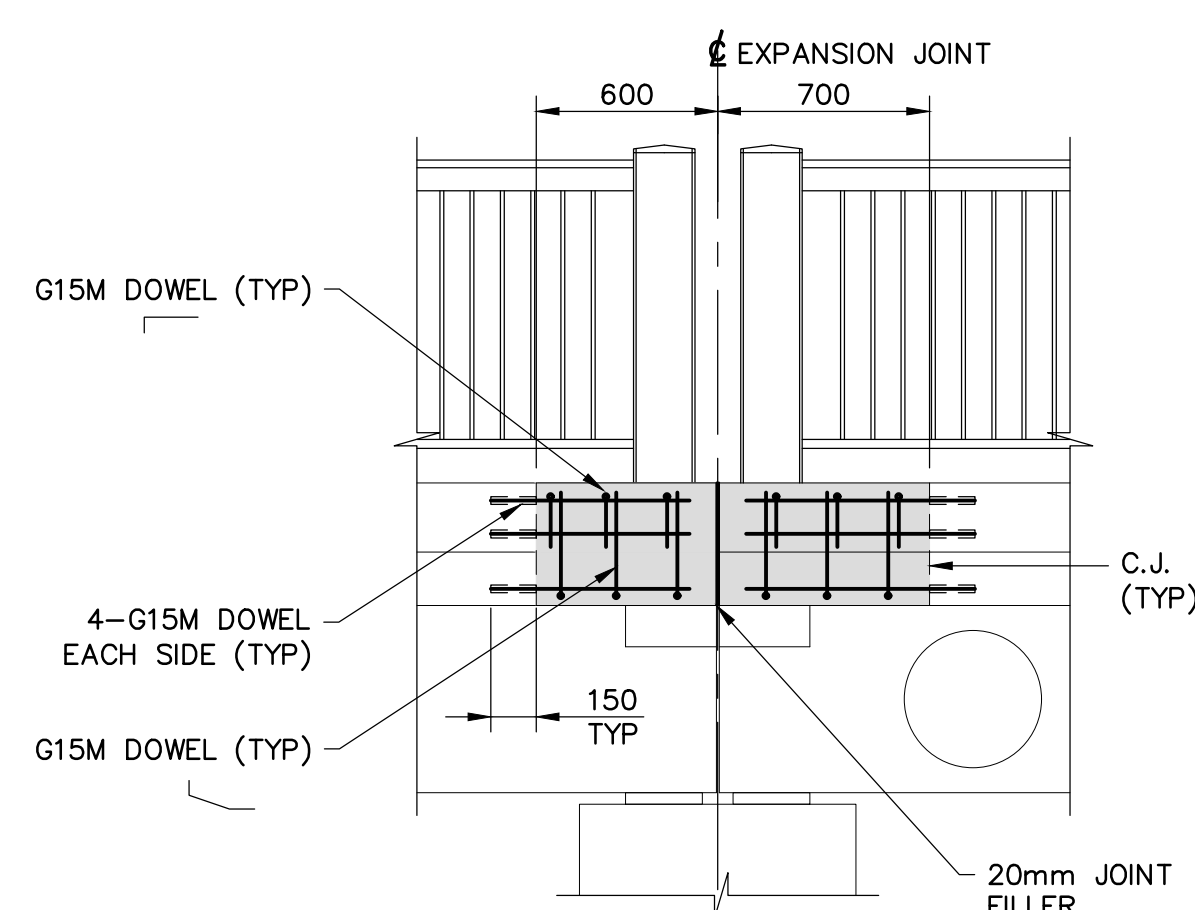
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N.T.S.



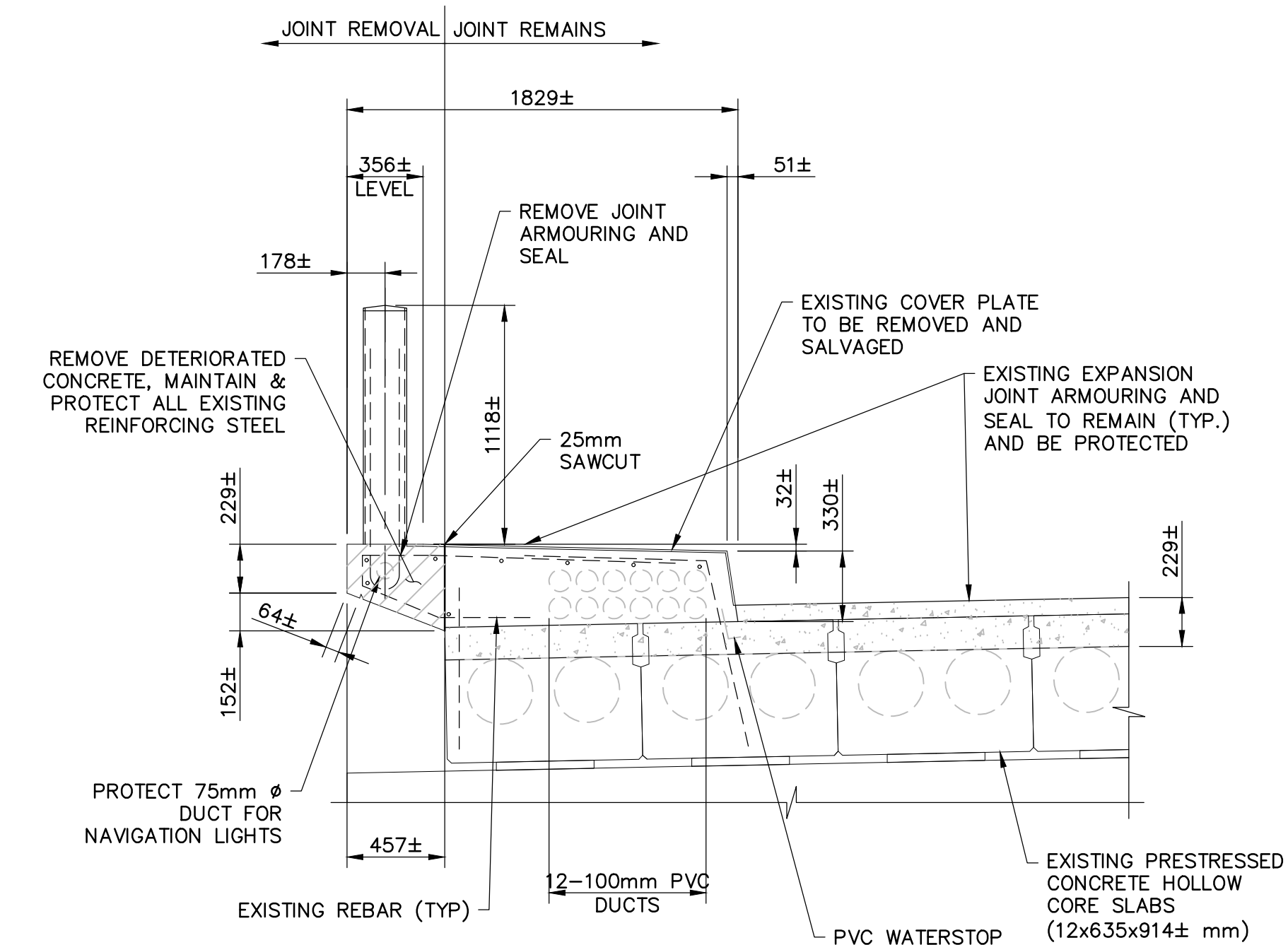
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1:25



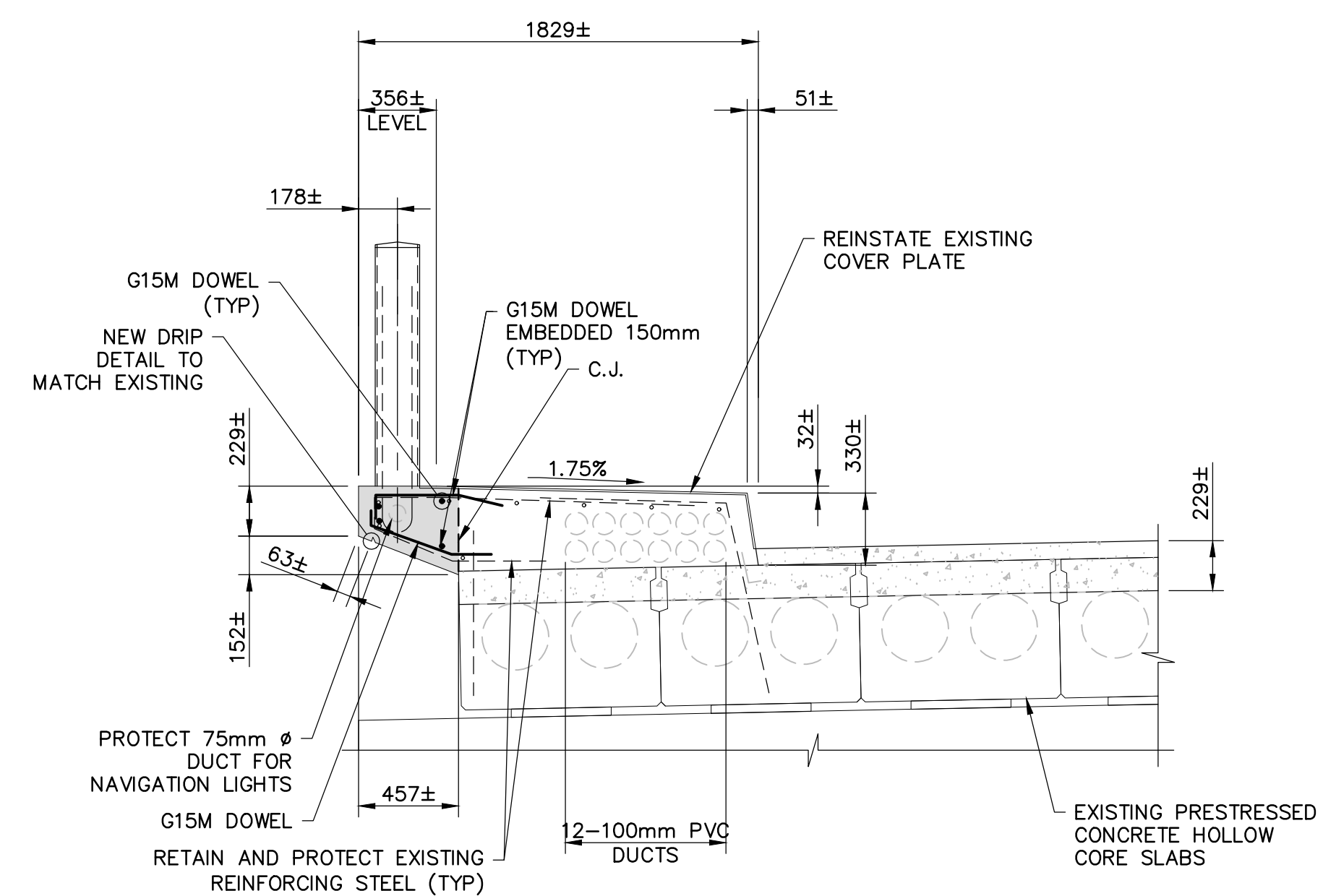
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SCALE 1:25



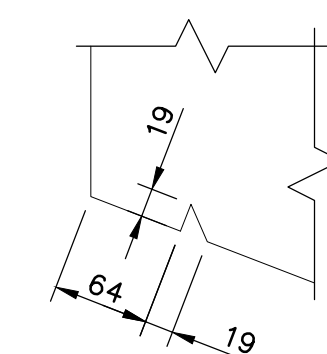
**SECTION 4**  
SCALE 1:25



**SECTION 1**  
SCALE 1:25



**SECTION 3**  
SCALE 1:25



**DRIP DETAIL**  
1:5

**SPECIAL NOTE TO CONTRACTOR**

EXISTING EMBEDDED UTILITY DUCTS MAY CONTAIN ASBESTOS. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS DURING REMOVAL AND DISPOSAL.

**NOTES:**

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. S01, S02 AND S18.
2. EXISTING STRUCTURE DETAILS, ELEVATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE ONLY AND BASED ON THE AVAILABLE REFERENCE DRAWINGS, AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONCRETE REMOVAL.
3. FOR DETAILS OF CONCRETE PATCH REPAIRS, SEE TYPICAL DETAILS ELSEWHERE ON THE CONCRETE DRAWINGS.



| LEGEND |                        |
|--------|------------------------|
|        | PARTIAL DEPTH REMOVALS |
|        | EXISTING CONCRETE      |
|        | NEW CONCRETE           |

| revision | description | date |
|----------|-------------|------|
|----------|-------------|------|

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| A | Detail No.                          |
|---|-------------------------------------|
| B | drawing no. - where detail required |
| C | drawing no. - where detailed        |

project title  
**KINGSTON**  
PWGSC  
LaSalle Causeway

**LSC CONCRETE REPAIRS**

drawing title  
**CONCRETE REPAIR AT EAST BRIDGE, SOUTH FASCIA AND CANTILEVER**

drawn by  
VINCE GUO

designed by  
VINCE GUO

approved by  
J. GOLZARI

bid  
ELISABETH OHI

project date  
2021/09/10

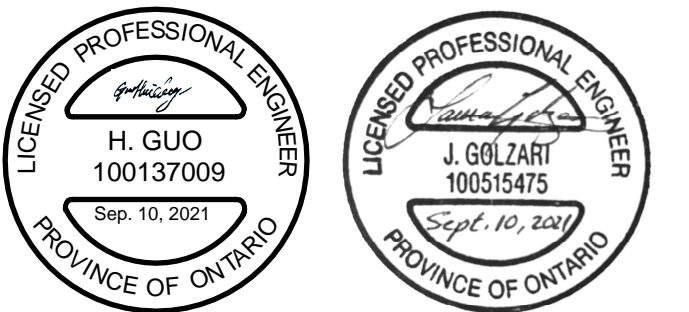
project no.  
R.101343.040

drawing no.  
S03

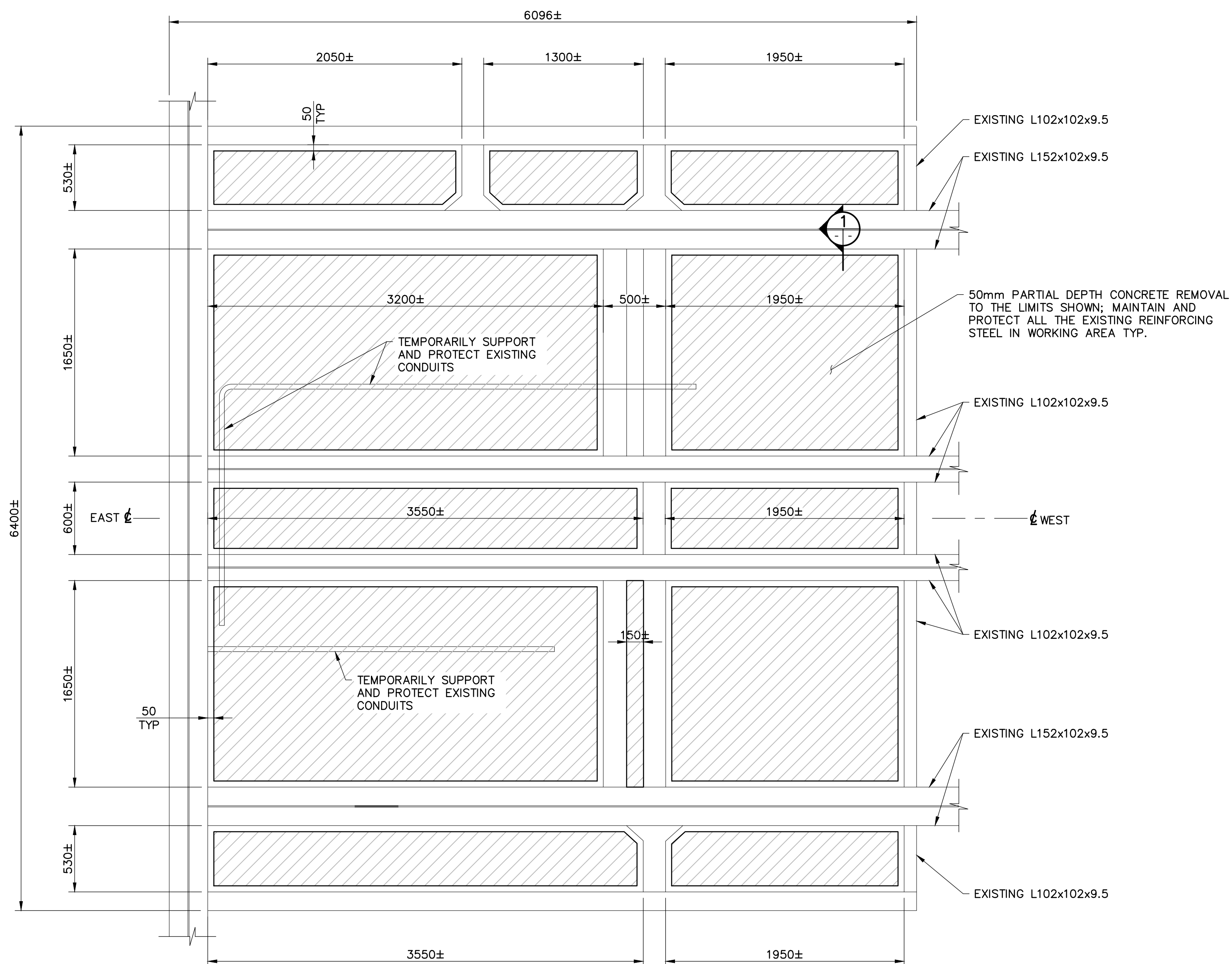


**NOTES:**

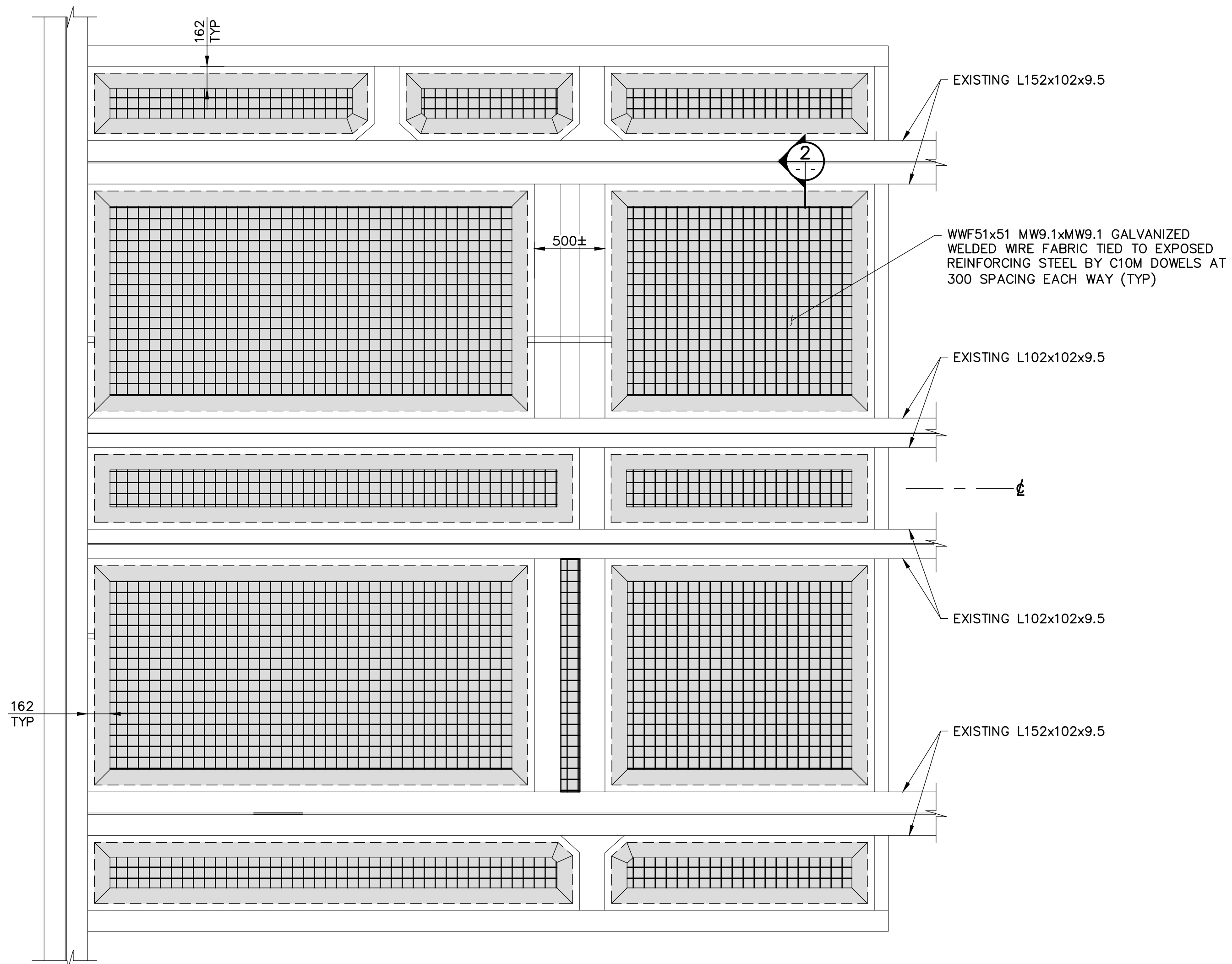
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. S01, S02 AND S18.
2. LIMITS OF ALL REMOVALS SHALL BE SAWCUT.
3. FOR DETAILS OF CONCRETE PATCH REPAIRS, SEE TYPICAL DETAILS ELSEWHERE ON THE CONTRACT DRAWINGS.
4. EXISTING CONDUITS LOCATED ON SOFFIT SHALL BE TEMPORARILY SUPPORTED AND PROTECTED DURING CONCRETE REMOVALS AND REPAIRS.
5. WELDED WIRE FABRIC SHALL BE DEFORMED WIRE CONFORMING TO ASTM 1064 WITH MINIMUM YIELD STRENGTH OF 500 MPa.



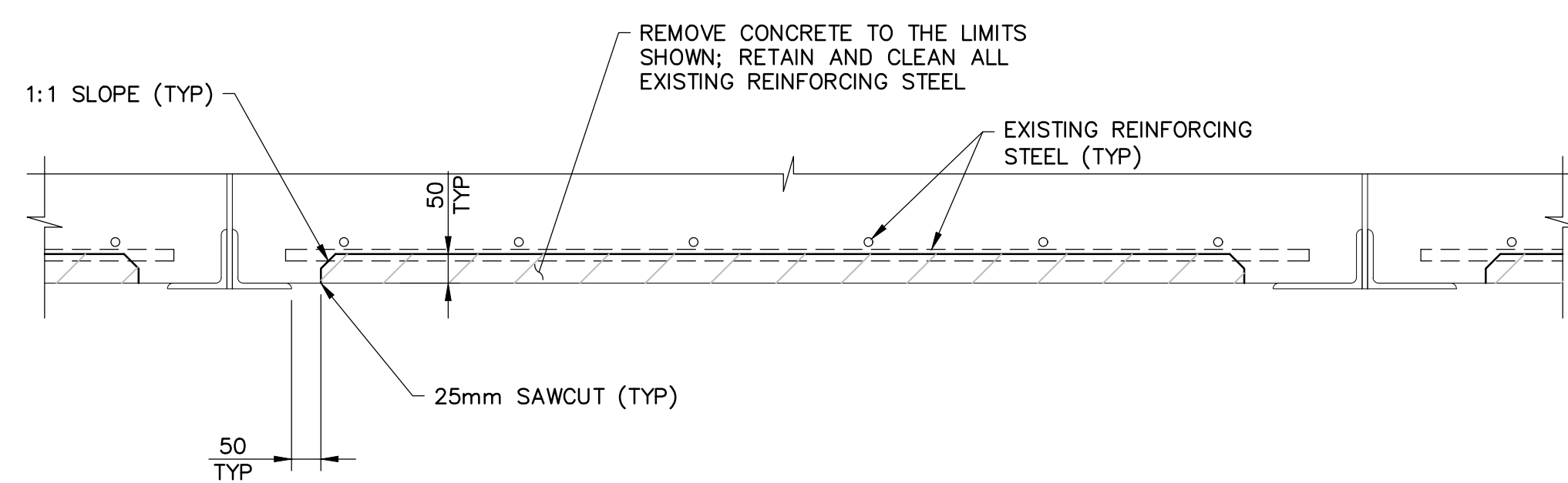
| LEGEND |                   |
|--------|-------------------|
|        | PARTIAL REMOVALS  |
|        | EXISTING CONCRETE |
|        | NEW CONCRETE      |



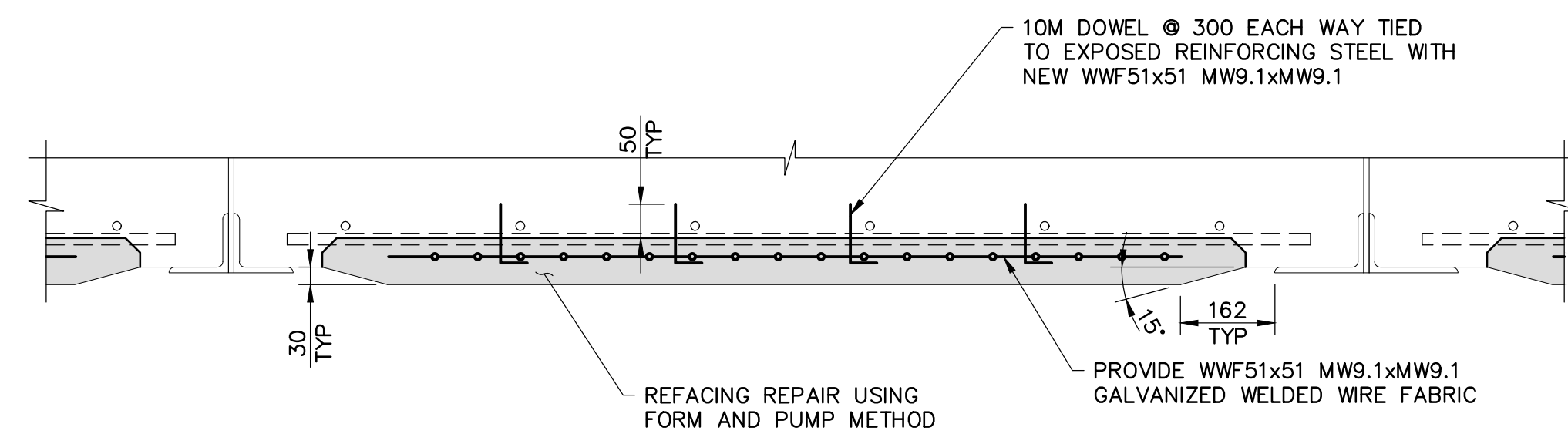
**PLAN – REMOVALS**  
1:25



**PLAN – REPAIRS**  
1:25



**SECTION 1**  
SCALE 1:10



**SECTION 2**  
SCALE 1:10

1 ISSUED FOR BID SUBMISSION 21/09/10

revision description date

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project title  
**KINGSTON** Ontario  
PWGSC  
LaSalle Causeway

**LSC CONCRETE REPAIRS**

drawing title  
**CONCRETE REPAIR AT BASCULE BRIDGE MACHINE ROOM SLAB SOFFIT**

drawn by  
**VINCE GUO**

designed by  
**VINCE GUO**

approved by  
**J. GOLZARI**

bid project manager  
**ELISABETH OHI**

project date  
**2021/09/10**

project no.  
**R.101343.040**

drawing no.  
**S04**