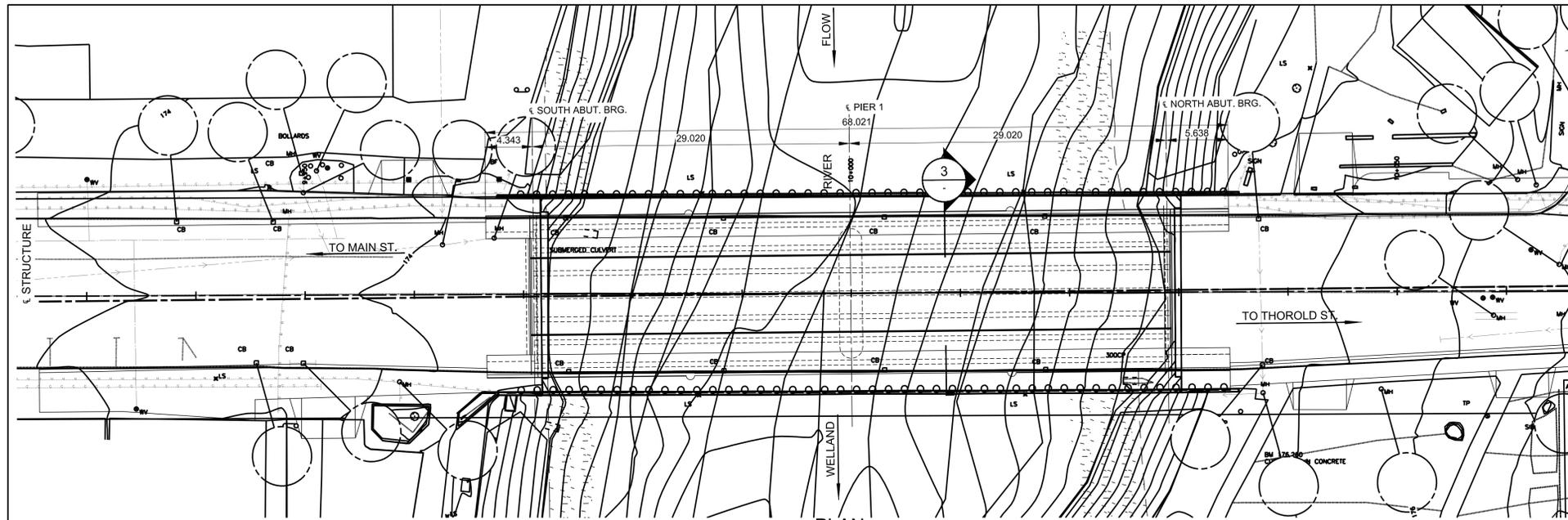
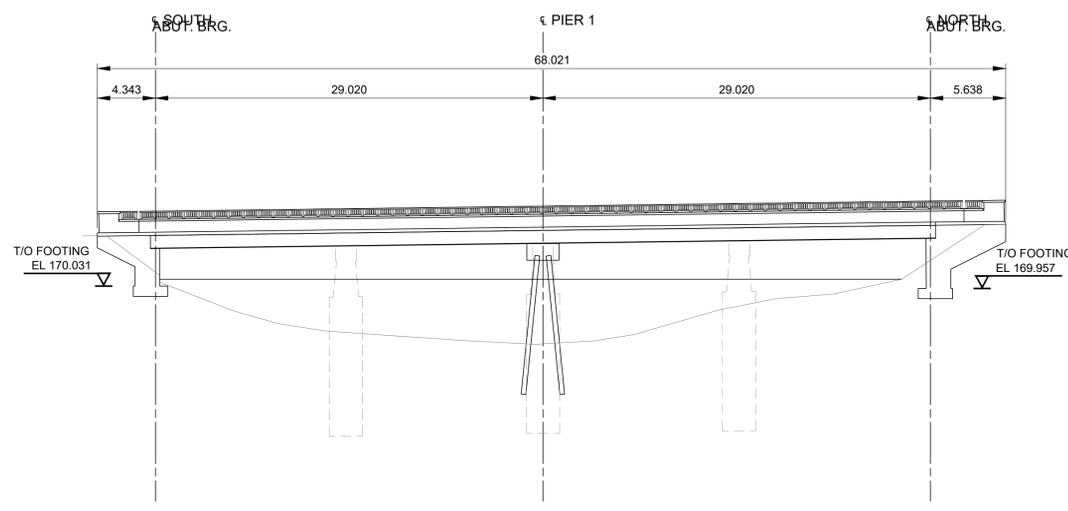


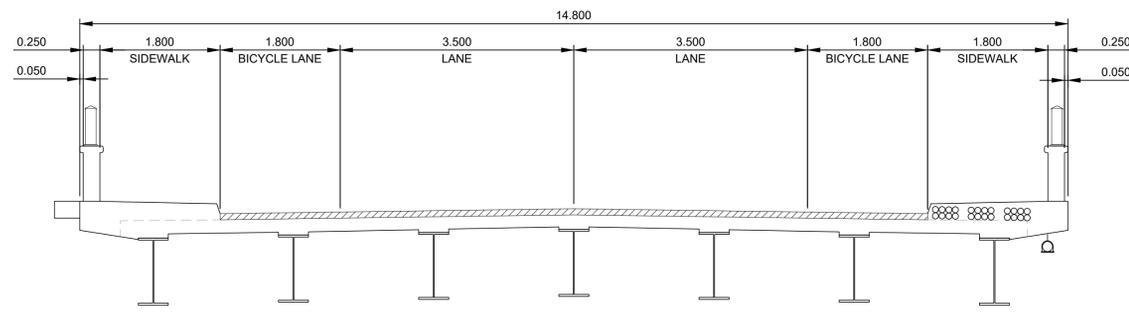
# APPENDIX H - CONCEPTUAL DESIGN DRAWINGS



PLAN 1:250



2 ELEVATION 1:250



3 SECTION 1:50

GENERAL NOTES

1. THE STRUCTURE REHABILITATION IS DESIGNED IN ACCORDANCE WITH THE CANADIAN HIGHWAY BRIDGE DESIGN CODE CAN/CSA-S6-14 (CHBDC).  
LIVE LOAD CL-625-ON TRUCK LOAD.
2. ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE ONTARIO PROVINCIAL DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS) UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS.
3. CLASS OF CONCRETE:  
MINIMUM STRENGTH AT 7 DAYS 21 MPa  
AT 28 DAY 35 MPa  
MAXIMUM AGGREGATE SIZE 20 mm
4. CLEAR COVER TO REINFORCING STEEL  
ALL SURFACES 50 ± 10 mm

REINFORCING STEEL

- NO REINFORCING STEEL IS TO BE REMOVED UNLESS AUTHORIZED BY THE CONTRACT ADMINISTRATOR.
- REINFORCING STEEL SHALL BE GRADE 400W UNLESS OTHERWISE SPECIFIED.
- BARS TO BE BENT COLD, MINIMUM INSIDE RADIUS TO BE 4 DIAMETERS. BARS NOT TO BE BENT ON SITE.
- UNLESS SHOWN OTHERWISE, TENSION LAP SPLICES SHALL BE CLASS B.  
15M BARS TO LAP 550 mm  
20M BARS TO LAP 700 mm
- BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWINGS, UNLESS NOTES OTHERWISE.
- ALL STRUCTURAL STEEL SHALL CONFORM TO CSA STANDARD CAN/CSA-G40.21-04. ROLLED SECTIONS SHALL CONFORM TO CSA STANDARD CAN/CSA-G40.21.04 OR ASTM SPECIFICATION A588.

CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROVIDE THE NECESSARY SHORING OR SUPPORTS DURING DEMOLITION AND CONSTRUCTION TO ENSURE THE INTEGRITY AND STABILITY OF THE EXISTING STRUCTURE.
2. 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 THE 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.
3. DRAWINGS NOT TO BE SCALED.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ADEQUATE PROTECTION OF ALL UTILITIES AND SERVICES DURING CONSTRUCTION. COORDINATE WITH REGIONAL STAFF PRIOR TO REMOVALS COMMENCE.
5. THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING UTILITIES WITHIN THE WORK AREA. CARRY OUT ALL NECESSARY PROTECTION AND PRECAUTIONARY MEASURES OR ARRANGE TO DIVERT AS MAY BE REQUIRED BY RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK.

TRAFFIC

1. FULL ROAD CLOSURE WITH DETAILED DETOUR PLAN.

CONSTRUCTION

1. INSTALL SILT FENCING, TURBIDITY CURTAINS AND MONITORING SYSTEM.
2. INSTALL COFFERDAMS AROUND EXISTING PIERS AND ABUTMENTS.
3. REMOVE EXISTING 4-SPAN BRIDGE, ABUTMENTS, PIER CAPS AND PIER COLUMNS.
4. DRIVE PROPOSED H-PILES FOR ABUTMENTS AND STEEL TUBE PILES FOR PIER.
5. CONSTRUCT FOUNDATIONS.
6. POUR PROPOSED INTEGRAL ABUTMENTS AND WINGWALLS.
7. POUR PROPOSED PIER CAP.
8. PLACE PROPOSED BEARING PADS ON PIERS AND ABUTMENTS.
9. BACKFILL ABUTMENTS.
10. PLACE STEEL GIRDERS.
11. POUR DECK, CURBS, BARRIER WALLS AND SIDEWALKS.
12. POUR APPROACH SLAB.
13. INSTALL TL-4 BARRIER.
14. CONSTRUCT PROPOSED RR50 RE-ALIGNMENT.
15. PLACE NEW ROAD SUBBASE.
16. WATERPROOF AND PAVE.
17. LINE PAINTING.
18. MAINTAIN TRAILS THROUGHOUT CONSTRUCTION.

A	ISSUED FOR REVIEW	2021/05/25	DF
NO	REVISION	DATE	INIT

DRAFTING	KVH
DESIGN	RR
CHECKED BY	PB
APPROVED BY	CC

**Niagara Region**  
PUBLIC WORKS

Associated Engineering  
BEST MANAGED COMPANIES

**2019-T-275**  
**RR50 (NIAGARA ST) BRIDGE (050205) REPAIRS**  
**BETWEEN RIVERBANK STREET AND MILL STREET**  
**IN THE CITY OF WELLAND**  
**IN THE REGION OF NIAGARA**  
**GENERAL ARRANGEMENT**

CAD No.	2019-5369
DATE	2021-05-25
SCALE	AS SHOWN
REF. No.	
DWG No.	5369-00-S-303
REV.	A