CITY OF COQUITLAM
BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION

DRAWING INDEX

SHEET	DRAWING NAME	REVISION	DRAWING TITLE
1	2205-02-S-100	0	COVER PAGE & DRAWING INDEX
2	2205-02-S-101	0	GENERAL NOTES
3	2205-02-S-102	0	SITE PLAN
4	2205-02-S-103	0	GENERAL ARRANGEMENT
5	2205-02-S-104	0	REPAIR A: CONCRETE PATCH AND SPALL REPAIRS
6	2205-02-S-105	0	REPAIR B: DRAINAGE PIPE REPAIR AND REPLACEMENT
7	2205-02-S-106	0	REPAIR C: JOINT REPAIRS BETWEEN SIDEWALK PANELS
8	2205-02-S-107	0	REPAIR D, E & F: MISCELLANEOUS REPAIRS

PLOT DATE: 2025-05-29 11:10:28 AM
SAVE DATE: 2025-05-29 11:08:09 AM SAVED BY: MOROJ
DWG PATH: q:\2025-2205-02\stru\model\2205-02-s-100.dwg

Associated Engineering

BEST MANAGED COMPANIES CANADA
Platinum member

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

DRAWING	REVISION	SHEET
2205-02-S-100	0	1

GENERAL NOTES:

GENERAL:

1. SPECIFICATIONS PROVIDED ARE MINIMUM REQUIREMENTS, U.N.O.
2. THE LATEST EDITION OF STANDARDS AND CODES REFERENCED IN THESE NOTES SHALL APPLY.
3. ALL DIMENSIONS ARE IN MILLIMETERS, U.N.O.
4. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND PROJECT SPECIFICATIONS.
5. DESIGN IN ACCORDANCE WITH THE CSA-S6-19 CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC).
6. ANY CHANGES TO THE DESIGN DURING FABRICATION AND CONSTRUCTION SHALL REQUIRE PRIOR WRITTEN APPROVAL FROM THE CONTRACT ADMINISTRATOR.
7. WHERE "EQUIVALENT" PRODUCTS ARE PROPOSED TO THOSE SPECIFIED, THEIR EQUIVALENCE SHALL BE DETERMINED SOLELY BY THE CONTRACT ADMINISTRATOR.

EXISTING STRUCTURE:

1. ELEVATIONS AND DIMENSIONS SHOWN FOR THE EXISTING CONDITIONS AND COMPONENTS HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE DESIGN DRAWINGS WITHOUT FIELD VERIFICATION. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR DETERMINING RELEVANT EXISTING ELEVATIONS AND DIMENSIONS IN THE FIELD PRIOR TO ORDERING AFFECTED MATERIALS, PRODUCING SHOP OR TEMPORARY WORK DRAWINGS, OR FABRICATING AFFECTED COMPONENTS. CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR OF ANY DISCREPANCIES AND ADJUST AFFECTED COMPONENTS TO SUIT FIELD CONFIRMED DIMENSIONS.
2. THE CONTRACTOR SHALL DOCUMENT THE EXISTING CONDITION OF THE BRIDGE USING PHOTOGRAPHS PRIOR TO START OF CONSTRUCTION AND PROVIDE COPIES OF DOCUMENTATION TO THE CITY AND THE CONTRACT ADMINISTRATOR.
3. EXISTING UTILITIES SHALL NOT BE DAMAGED OR INTERRUPTED DURING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF THE SITE TO PRECONSTRUCTION CONDITION FOLLOWING COMPLETION OF THE WORKS. THIS INCLUDES, BUT IS NOT LIMITED TO, REPAIRING DAMAGE TO THE STRUCTURE AND / OR SURROUNDING STRUCTURES CAUSED BY THE CONTRACTOR AND RESTORATION OF ANY AREAS DISTURBED DURING THE COMPLETION OF THE WORKS.

CONSTRUCTION AND TEMPORARY WORKS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION AND REMOVAL OF ALL TEMPORARY WORKS. TEMPORARY WORKS TO BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED WITH EGBC AND IN ACCORDANCE WITH WORKSAFE BC REQUIREMENTS.
2. CONTRACTOR TO PROVIDE TEMPORARY SCREENS AND HOARDING TO PROTECT ADJACENT RAILWAY LINES AND VEHICLES BELOW BRIDGE FROM ALL CONSTRUCTION DEBRIS.
3. THE CONTRACTOR SHALL PROTECT STRUCTURE FROM DAMAGE DURING CONSTRUCTION.
4. CONSTRUCTION STAGES AND LOADS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING REQUIRED FOR CONSTRUCTION.

CONCRETE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND QUALITY CONTROL OF ALL CONCRETE USED ON THIS PROJECT.
2. ALL CONCRETE WORK, INCLUDING CONCRETE MATERIALS, TESTS AND PROCEDURES, SHALL CONFORM TO THE REQUIREMENTS OF CSA A23.1/A23.2-19AND THE CONTRACT SPECIFICATIONS.
3. CONTRACTOR SHALL SUPPLY ALL REPAIR PROCEDURES, MATERIAL DATA SHEETS AND MIX DESIGNS TO THE CONTRACT ADMINISTRATOR FOR ACCEPTANCE AT LEAST 2 WEEKS BEFORE COMMENCEMENT OF WORKS.
4. ALL SURFACE FINISHES TO MATCH EXISTING ADJACENT CONCRETE SURFACES.
5. ALL REPAIRS TO CONCRETE SURFACES, CRACKS, DELAMINATION AND SPALLED AREAS SHALL BE REPAIRED WITH SIKATOP 123 PLUS, TARGET SC100W, MIN COMPRESSIVE STRENGTH OF 35MPA AT 7 DAYS, OR APPROVED EQUAL ,TO THE ACCEPTANCE OF THE CONTRACT ADMINISTRATOR.
6. EXPOSED EDGES TO BE CHAMFERED 20 mm, U.N.O.
7. ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE SHALL BE PREPARED IN ACCORDANCE WITH CSA A23.1-19. CONTINUOUSLY ROUGHEN SURFACES TO 6 mm AMPLITUDE.
8. ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE OR GROUT SHALL BE POWER WASHED TO REMOVE ALL LOOSE MATERIAL, LAITANCE AND CORROSION PRODUCTS FROM THE REINFORCEMENT.
9. SATURATE THE CONCRETE REPAIR SURFACE WITH CLEAN WATER. ENSURE THE SUBSTRATE IS SATURATED, SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION WHEN POSSIBLE.
10. CURING OF CONCRETE SHALL BE COMPLETED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

REINFORCING STEEL:

1. REINFORCING STEEL BARS SHALL BE SUPPLIED AND INSTALLED TO CSA A23.1 AND THE REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY THE REINFORCING STEEL INSTITUTE OF CANADA, U.N.O.
2. ALL REINFORCING STEEL TO CONFORM TO CSA G30.18 GRADE 400W, U.N.O.
3. COVER TO REINFORCEMENT TO MATCH EXISTING, U.N.O.
4. FOR GALVANISED STEEL SAFEGUARD AGAINST EMBRITTLEMENT TO ASTM A143.
5. WELDING OF REINFORCEMENT BARS IS NOT PERMITTED.
6. SPLICE REINFORCING STEEL WHERE REQUIRED AS FOLLOWS:

BAR SIZE	SPLICE LENGTH
10M	420
15M	630
20M	840

7. CHEMICALLY ANCHORED DOWELS SHALL BE INSTALLED IN HAMMER DRILLED HOLES USING CARBINE TIPPED BITS AND STANDARD HOLE CLEANING USING MULTIPLE BRUSHING OR AIR BLAST STEPS OR ANOTHER EQUIVALENT METHOD APPROVED BY THE CONTRACT ADMINISTRATOR AND MANUFACTURER.
8. ADHESIVE FOR DOWELS TO BE HILTI HIT-HY 200 V3 EPOXY ADHESIVE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL BE PERFORMED BY PERSONNEL TRAINED TO INSTALL THE SYSTEM.
9. DOWELS SHALL HAVE MINIMUM EMBEDMENT AS FOLLOWS, U.N.O:

BAR SIZE	MINIMUM EMBEDMENT
10M	150
15M	200
20M	270

STEEL WORK:

1. EXISTING STEEL COMPONENTS INDICATED FOR REPAIR ON THE DRAWINGS SHALL BE CLEANED AND FREE OF CORROSION AND OTHER FOREIGN MATERIALS AND COATED WITH TWO COATS OF ZINC RICH PRIMER PRIOR TO ANY REPAIRS TAKING PLACE.
2. STEEL TO CONFORM TO CSA G40.20/G40.21
   2.1. PLATES: GRADE 300W
   2.2. SECTIONS: GRADE 300W
3. ALL WELDS TO BE COMPLETED IN ACCORDANCE WITH CSA W59.
4. MIN. 6 mm FILLET WELD, U.N.O.
5. STEEL FABRICATOR TO BE CERTIFIED FOR DIVISION 3 IN ACCORDANCE WITH CSA 47.1.
6. ALL STEEL WORK TO BE HOT DIP GALVANIZED TO ASTM A123M AND ASTM A385, MINIMUM 610 g/m² THICKNESS OF COATING, U.N.O.
7. DAMAGE TO GALVANIZING AND FIELD WELDS TO BE TOUCHED UP WITH TWO COATS OF ZINC RICH PAINT.

REMOVAL AND DEMOLITION:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY MEASURES REQUIRED TO REMOVE AND DISPOSE OF ALL MATERIALS IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SHOWN ON THE DRAWINGS, AS WELL AS PREVENT CONSTRUCTION DEBRIS OR OTHER DELETERIOUS MATERIAL FROM FALLING INTO THE ROADWAY. DO NOT REMOVE MORE CONCRETE THAN SHOWN ON THE REPAIRS WITHOUT THE APPROVAL OF THE CONTRACT ADMINISTRATOR.
2. REMOVE CONCRETE USING MAX 7 kg CHIPPING HAMMERS UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
3. ALL EXISTING REINFORCING BARS TO REMAIN U.N.O. DO NOT DAMAGE EXISTING REINFORCEMENT. ANY DAMAGED REINFORCEMENT TO REINSTATED OR REPLACED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

JOINTS AND SEALS:

1. ALL MATERIALS AND PRODUCTS SHALL BE HANDLED, STORED AND INSTALLED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS, U.N.O.
2. ELASTOMERIC COMPRESSION SEALS SHALL BE INSTALLED IN AMBIENT TEMPERATURES BETWEEN 5°C AND 25°C.
3. ELASTOMERIC COMPRESSION SEALS SHALL BE SUPPLIED AND INSTALLED IN ONE CONTINUOUS LENGTH WHERE POSSIBLE.
4. TO ACCOMMODATE VERTICAL ANGLES AND CURBS, THE CONTRACTOR MAY CUT, SHAPE, VULCANIZE AND FIELD SPLICE SEALS, TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS, FOLLOWING PRIOR REVIEW AND ACCEPTANCE OF SHOP DRAWINGS BY THE CONTRACT ADMINISTRATOR.
5. JOINT TEST:
   5.1. UPON COMPLETION OF JOINT INSTALLATION, THE CONTRACTOR SHALL POUR WATER OVER EACH JOINT TO TEST THAT JOINTS ARE PROPERLY SEALED FROM WATER INGRESS.
   5.2. A MINIMUM OF 5 LITRES OF WATER USED IN JOINT TESTING.
   5.3. A PASSING TEST WILL ONLY BE GIVEN IF NO WATER IS OBSERVED PASSING THROUGH THE JOINT FROM THE UNDERSIDE OF THE BRIDGE. IF WATER INGRESS IS OBSERVED, THE CONTRACTOR SHALL RESET THE JOINT SEAL.

PIPING:

1. ALL PIPING MATERIALS, CONNECTIONS AND JOINTS SHALL CONFORM TO CONTRACT SPECIFICATIONS.
2. PIPE SHALL BE TYPE PVC DWB PIPE (COLOUR GREY) CERTIFIED TO CSA B182.1.
3. JOINTS TO CONFIRM TO D3212.
4. ALL PIPING SHALL BE FIRMLY SUPPORTED AND SECURELY BRACED AT LOCATIONS AS SHOWN ON THE DRAWINGS. ALTERATION TO THE BRACKET LOCATIONS SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR AND AGREED PRIOR TO INSTALLATION.
5. ALL HANGERS, SUPPORTS AND BRACKETS SHALL BE GALVANIZED TO CONTRACT SPECIFICATIONS.

ABBREVIATIONS:

ABBREVIATION	MEANING
ADD'L	ADDITIONAL
CONC	CONCRETE
C/W	COMPLETE WITH
C/C	CENTRE TO CENTRE
DEG	DEGREES
OPP.	OPPOSITE
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE

PLOT DATE: 2025-05-29 11:10:32 AM
SAVE DATE: 2025-05-29 11:09:16 AM SAVED BY: MORO.J
DWG PATH: o:\2025-2205-02\structmodel\2205-02-s-101.dwg

Associated Engineering
CANADA BEST MANAGED COMPANIES
Platinum member

2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

SCALE: AS SHOWN

STRUCTURAL

GENERAL NOTES

DRAWING	REVISION	SHEET
2205-02-S-101	0	2

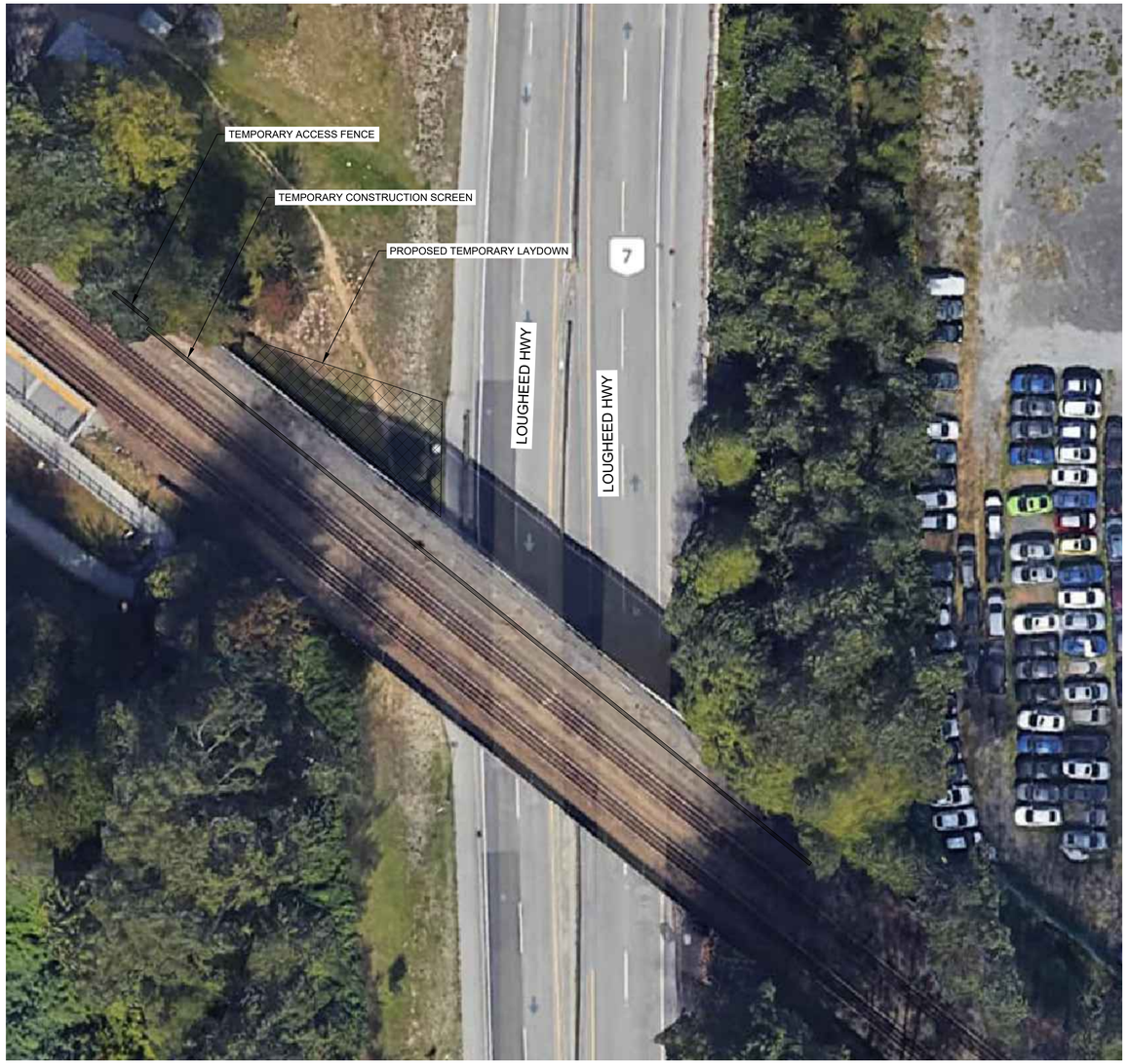


PHOTO N.T.S.
SITE PLAN

PHOTO N.T.S.
TEMPORARY ACCESS

NOTES:

TEMPORARY ACCESS FENCE:

THE CONTRACTOR SHALL INSTALL A TEMPORARY ACCESS FENCE WITH A LOCKABLE GATE AT THE TOP OF THE BRIDGE FROM THE NORTHWEST CORNER.

1. THE CONTRACTOR SHALL MAINTAIN THE FENCE AND GATE ACCESS THROUGHOUT THE DURATION OF CONSTRUCTION.
2. UPON PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE AND REINSTATE THE FENCE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

TEMPORARY CONSTRUCTION SCREEN:

A TEMPORARY SCREEN SHALL BE ERECTED 2 M BACK FROM THE WORKS ON THE NORTH SIDE ONLY.

1. THE SCREEN SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE WORKS.
2. THE CONTRACTOR SHALL ENSURE THE SCREEN REMAINS SECURE AND ADEQUATELY SUPPORTED AT ALL TIMES, WITH NO PART OF THE SCREEN PERMITTED TO ENCROACH NEAR THE TRAIN TRACKS.

TEMPORARY LAYDOWN:

THE CONTRACTOR SHALL UTILIZE THE INDICATED LAYDOWN AREA OR AN APPROVED ALTERNATIVE FOR SITE STORAGE AND LAYDOWN PURPOSES.

PLOT DATE: 2025-05-29 11:19:38 AM
SAVE DATE: 2025-05-28 12:59:23 PM SAVED BY: MOROJ
DWG PATH: q:\2025-2205-02\str\model\2205-02-s-102.dwg

Associated Engineering

BEST MANAGED COMPANIES
Platinum member

2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

SCALE: AS SHOWN

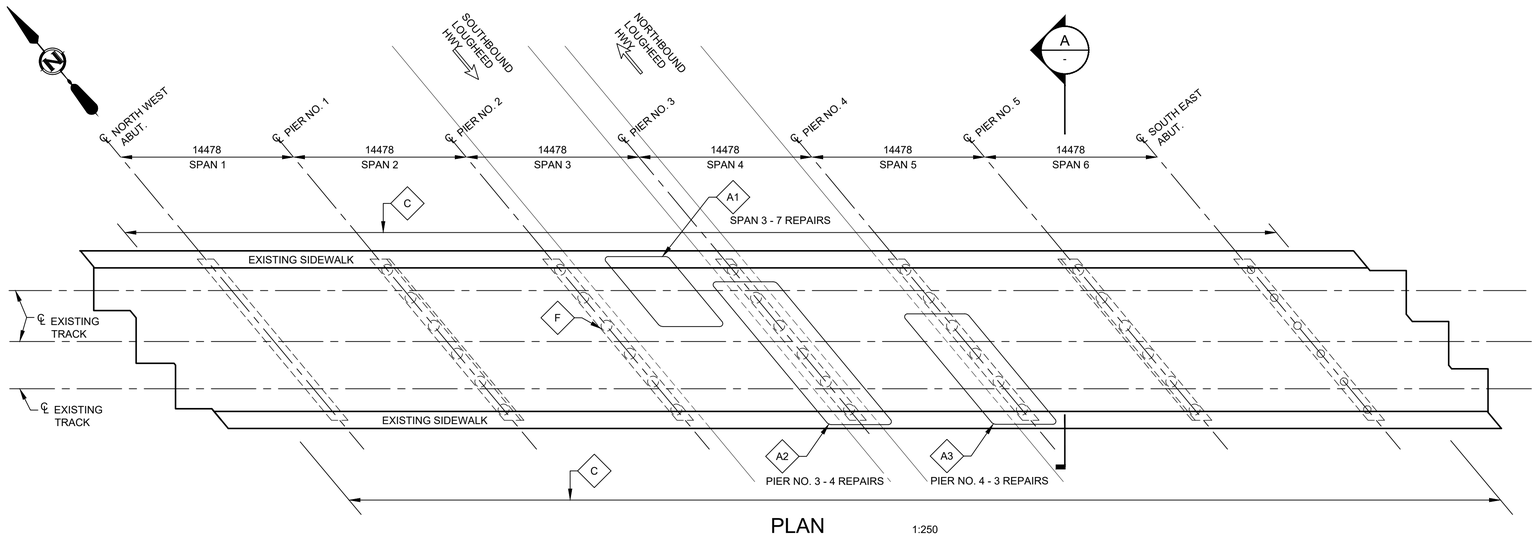
STRUCTURAL

SITE PLAN

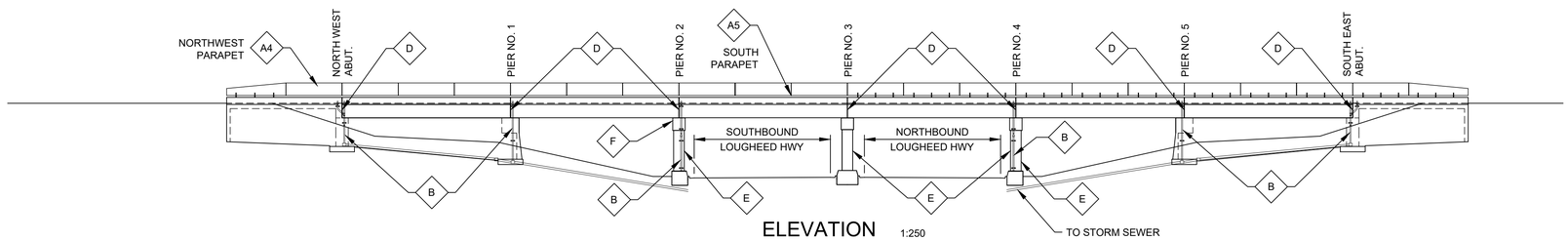
DRAWING	REVISION	SHEET
2205-02-S-102	0	3

IF NOT 50 mm ADJUST SCALES
50 mm

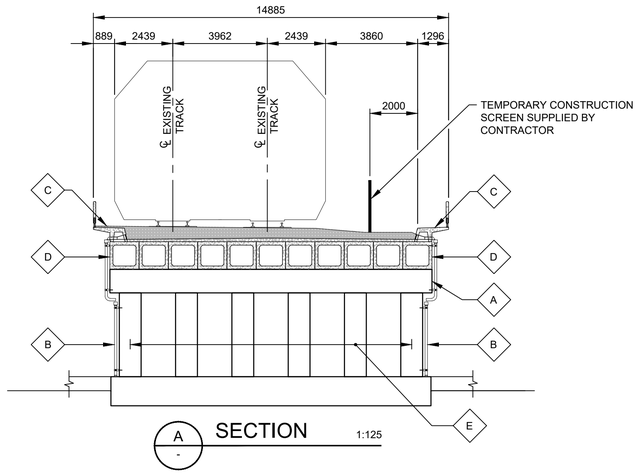
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



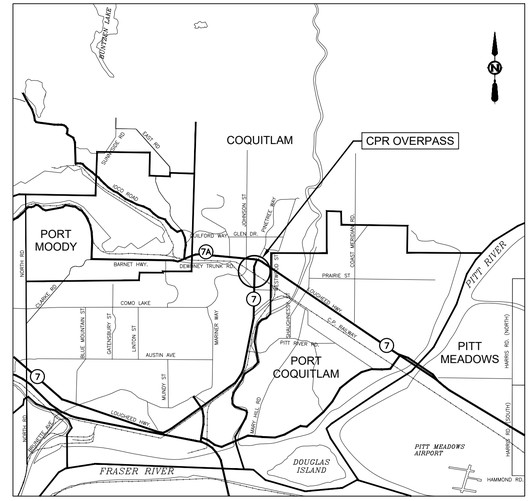
PLAN 1:250



ELEVATION 1:250



A - SECTION 1:125



KEY PLAN N.T.S.

WORK DESCRIPTION (NOT CONSTRUCTION SEQUENCE)

- A — CONCRETE PATCH AND SPALL REPAIRS, SEE DETAIL ON DWG. 2205-02-S-104
- B — DRAINAGE PIPE REPAIR AND REPLACEMENT
- C — COMPRESSION SEAL REPLACEMENT AND REGROUTING BETWEEN SIDE WALK PANELS
- D — RESEAL BETWEEN EXTERIOR GIRDERS AT PIERS AND ABUTMENTS
- E — SEAL VERTICAL CRACKS IN CONCRETE COLUMNS
- F — REPAIR EXISTING LIGHT FIXTURES

NOTE:

1. FOR GENERAL NOTES SEE DWG. 2205-02-S-101.

PLOT DATE: 2025-05-28 11:10:49 AM
SAVE DATE: 2025-05-28 12:39:16 PM SAVED BY: MORO J.
DWG PATH: c:\2025-2205-02\structmodel\2205-02-s-103.dwg

Associated Engineering

CSMA BEST MANAGED COMPANIES Platinum member

M. FENTON # 61046 PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA
2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

SCALE: AS SHOWN

STRUCTURAL

GENERAL ARRANGEMENT

DRAWING	REVISION	SHEET
2205-02-S-103	0	4

PHOTO N.T.S.

VERTICAL CONCRETE SPALLING AT FACE OF PIER, TYP

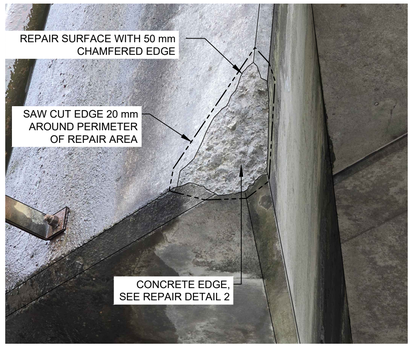


PHOTO N.T.S.

OVERHEAD CONCRETE SPALLING AT CORNER OF PIER CAP, TYP

PHOTO N.T.S.

VERTICAL CONCRETE SPALLING AT EXTERIOR FACE OF GIRDER, TYP

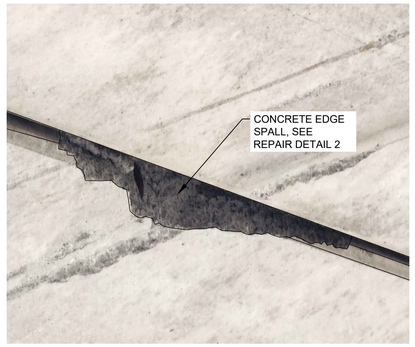


PHOTO N.T.S.

OVERHEAD CONCRETE SPALLING BETWEEN GIRDERS, TYP

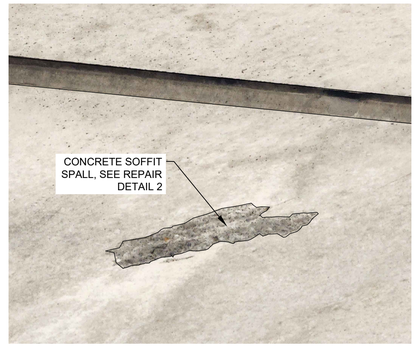
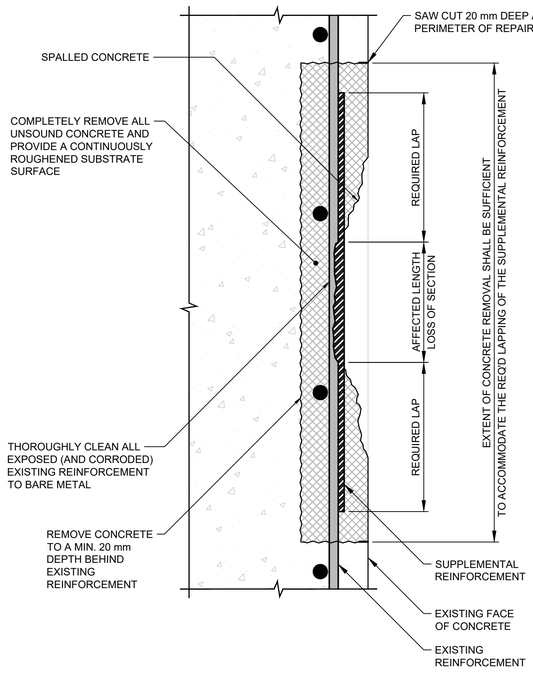


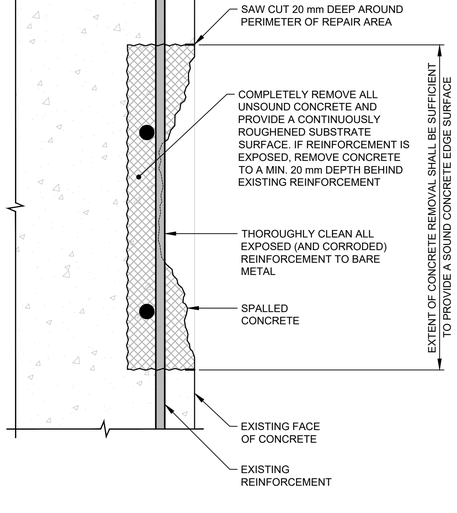
PHOTO N.T.S.

OVERHEAD CONCRETE SPALLING AT UNDERSIDE OF GIRDER, TYP



1 - DETAIL 1:5

TYPICAL CONCRETE PATCH REPAIR WITH REINFORCEMENT LOSS, HORIZONTAL FACE SIMILAR



2 - DETAIL 1:5

TYPICAL CONCRETE PATCH REPAIR WITH NO REINFORCEMENT LOSS, HORIZONTAL FACE SIMILAR

PHOTO N.T.S.

HORIZONTAL CONCRETE SPALLING AT PARAPET, TYP

PHOTO N.T.S.

HORIZONTAL CONCRETE SPALLING AT PARAPET, TYP

REPAIR SUMMARY:

REPAIR AREA	NO. OF REPAIRS	TOTAL AREA (m^2)	REPAIR TYPE
A1	7	5	OVERHEAD SPALL
A2	4	3	VERTICAL SPALL
A3	3	3	VERTICAL SPALL
A4	1	1	HORIZONTAL SPALL
A5	1	1	HORIZONTAL SPALL

NOTES:

1. FOR GENERAL NOTES SEE DWG. 2205-02-S-101.
2. FINAL LOCATION AND EXTENT OF REPAIRS TO BE CONFIRMED BY CONTRACT ADMINISTRATOR.

PLOT DATE: 2025-05-29 11:11:03 AM
SAVE DATE: 2025-05-28 12:57:15 PM, SAVED BY: MORO.J
DWG PATH: q:\2025-2205-02\str\model\2205-02-s-104.dwg

Associated Engineering
BEST MANAGED COMPANIES CANADA
Platinum member

2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

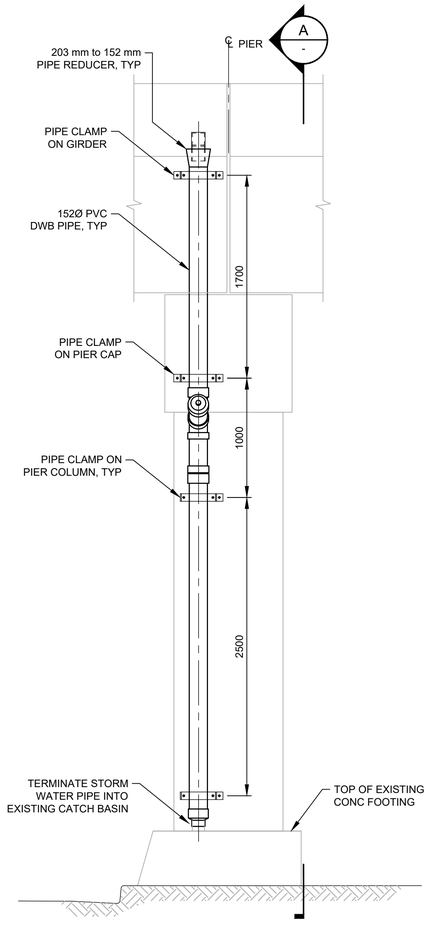
SCALE: AS SHOWN

STRUCTURAL
REPAIR A
CONCRETE PATCH AND SPALL REPAIRS

DRAWING	REVISION	SHEET
2205-02-S-104	0	5

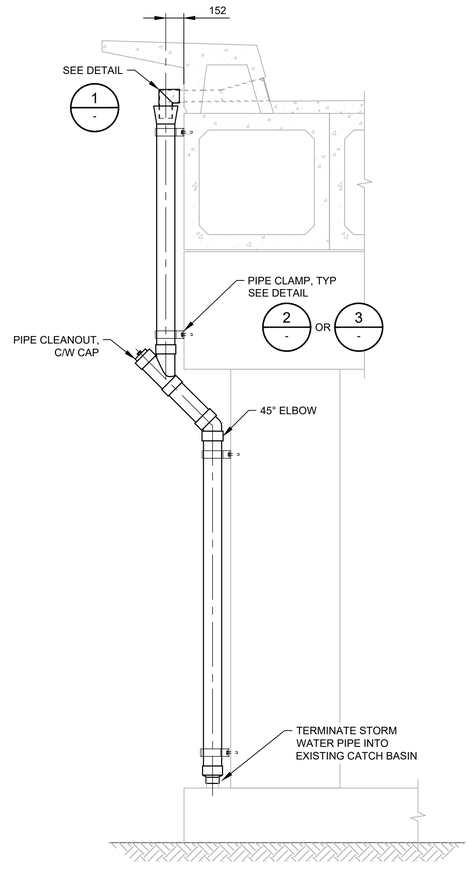
IF NOT 50 mm ADJUST SCALES
50 mm

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE

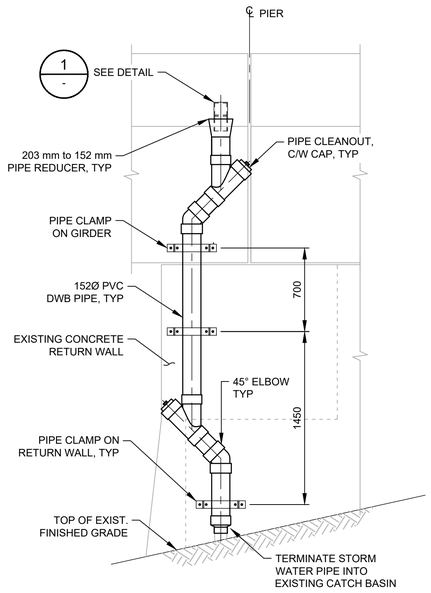


ELEVATION 1:25

(PIER NO. 4 SHOWN,
PIER NO. 2 OPP. HAND)

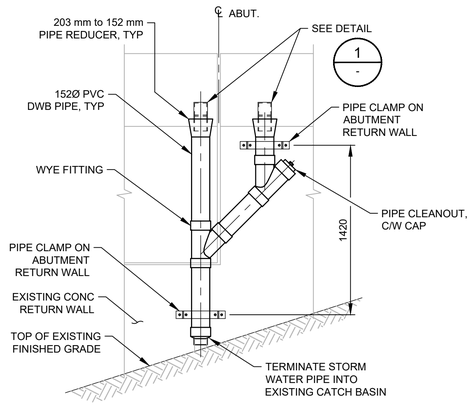


A SECTION 1:25



ELEVATION 1:25

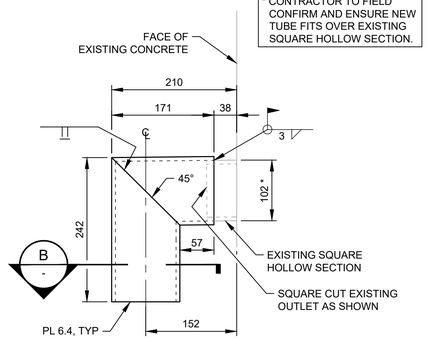
(PIER NO. 5 SHOWN,
PIER NO. 1 OPP. HAND)



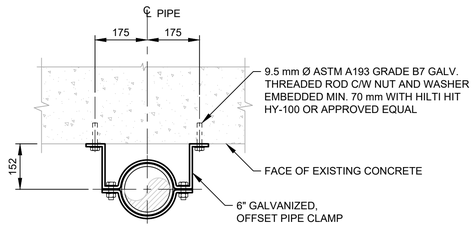
ELEVATION 1:25

(SOUTH EAST ABUT SHOWN,
NORTH WEST ABUT OPP. HAND)

NOTE:
* CONTRACTOR TO FIELD CONFIRM AND ENSURE NEW TUBE FITS OVER EXISTING SQUARE HOLLOW SECTION.

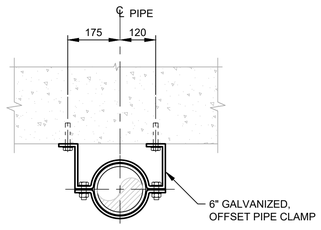


1 DETAIL 1:5



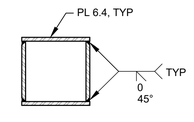
2 DETAIL 1:10

PIPE CLAMP ASSEMBLY



3 DETAIL 1:10

ALTERNATIVE
PIPE CLAMP ASSEMBLY



B SECTION 1:5

NOTES:

1. FOR GENERAL NOTES SEE DWG. 2205-02-S-101.
2. ALL DIMENSIONS TO BE FIELD CONFIRMED PRIOR TO ORDERING MATERIAL.

PLOT DATE: 2025-05-29 11:11:19 AM
SAVE DATE: 2025-05-28 12:59:06 PM SAVED BY: MORO.J
DWG PATH: q:\2020-2205-02\astru\model\2205-02-s-105.dwg

Associated Engineering

CANADA BEST MANAGED COMPANIES
Platinum member

M. FENTON # 61046 PROFESSIONAL ENGINEER OF BRITISH COLUMBIA
2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

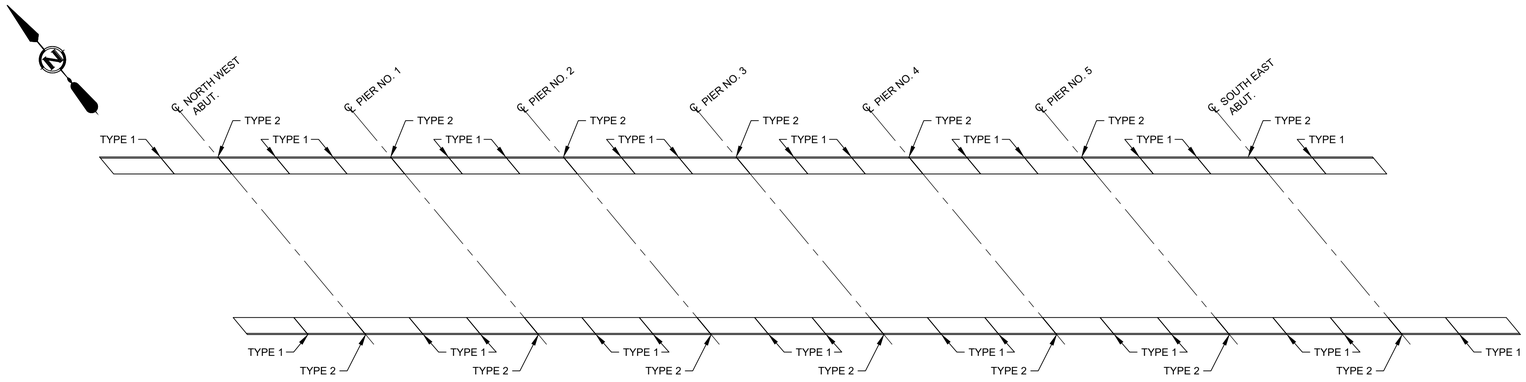
CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

SCALE: AS SHOWN

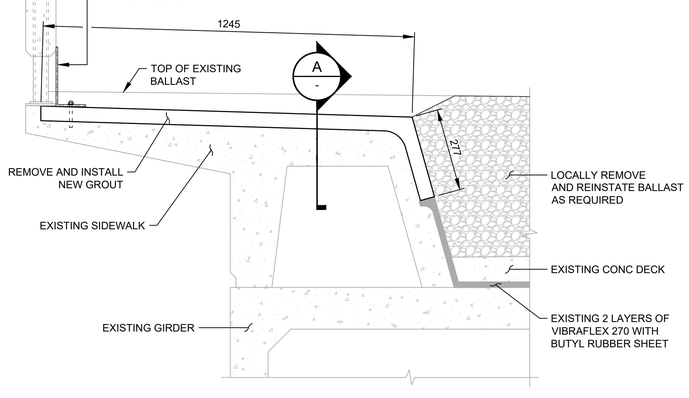
STRUCTURAL
REPAIR B
DRAINAGE PIPE REPAIR AND REPLACEMENT

DRAWING	REVISION	SHEET
2205-02-S-105	0	6



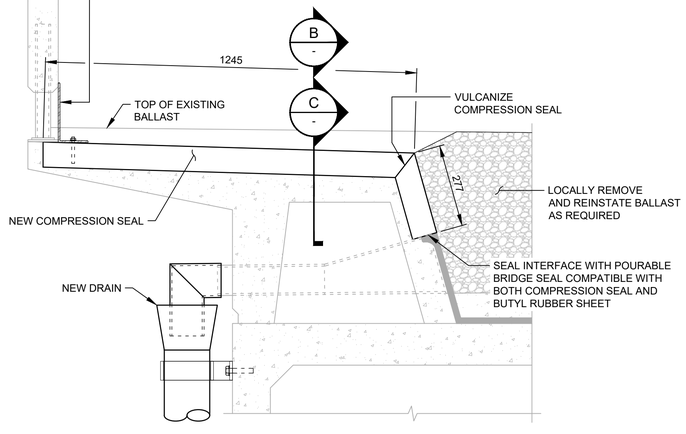
PLAN 1:250
EXISTING SIDEWALK PANEL LAYOUT

- REMOVE EXISTING ANGLE KICKER ON SOUTH SIDE.
- INSTALL NEW ANGLE KICKER, MIN. 200 mm VERTICAL LEG, ON NORTH AND SOUTH SIDES.
- ANGLE TO BE SECURED USING 9.5 mm Ø ASTM A193 GRADE B7 GALV. THREADED ROD C/W NUT AND WASHER EMBEDDED MIN. 70 mm WITH HILTI HIT HY-100 OR APPROVED EQUAL.
- ANGLE TO BE SECURED USING EXISTING BOLT HOLES ON SOUTH SIDE
- WHERE EXISTING BOLT HOLES CANNOT BE USED, OR NONE EXIST, ANGLE TO BE SECURED AT MAX. 1000 mm C/C.
- ANGLE SHALL EXTEND THE FULL LENGTH OF THE BRIDGE BETWEEN ABUTMENTS.

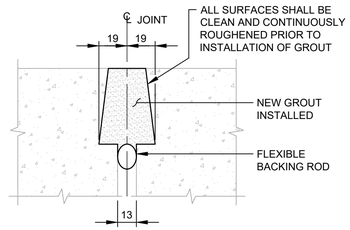


TYPICAL JOINT DETAIL 1:10
TYPE 1 - INTERMEDIATE
(28 NO. OF JOINTS)

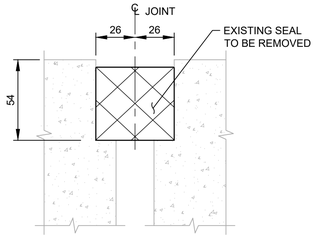
- REMOVE EXISTING ANGLE KICKER ON SOUTH SIDE.
- INSTALL NEW ANGLE KICKER, MIN. 200 mm VERTICAL LEG, ON NORTH AND SIDES.
- ANGLE TO BE SECURED USING 9.5 mm Ø ASTM A193 GRADE B7 GALV. THREADED ROD C/W NUT AND WASHER EMBEDDED MIN. 70 mm WITH HILTI HIT HY-100 OR APPROVED EQUAL.
- ANGLE TO BE SECURED USING EXISTING BOLT HOLES ON SOUTH SIDE
- WHERE EXISTING BOLT HOLES CANNOT BE USED, OR NONE EXIST, ANGLE TO BE SECURED AT MAX. 1000 mm C/C.
- ANGLE SHALL EXTEND THE FULL LENGTH OF THE BRIDGE BETWEEN ABUTMENTS.
- ANGLE TO BE DISCONTINUOUS OVER TYPE 2 JOINTS WITH MAX. 20 mm GAP.



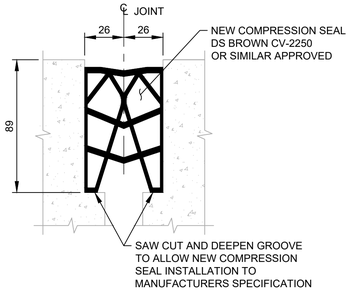
TYPICAL JOINT DETAIL 1:10
TYPE 2 - AT ABUTMENTS AND PIERS
(14 NO. OF JOINTS)



A - SECTION 1:2
NEW



B - SECTION 1:2
EXISTING



C - SECTION 1:2
NEW

Associated Engineering

CANADA BEST MANAGED COMPANIES
Platinum member

2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

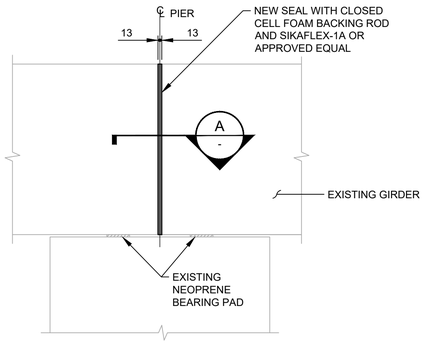
SCALE: AS SHOWN

STRUCTURAL
REPAIR C
JOINT REPAIRS BETWEEN SIDEWALK PANELS

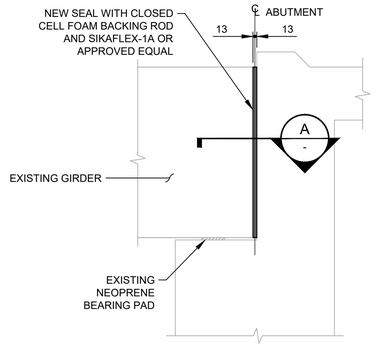
DRAWING	REVISION	SHEET
2205-02-S-106	0	7

IF NOT 50 mm ADJUST SCALES
50 mm

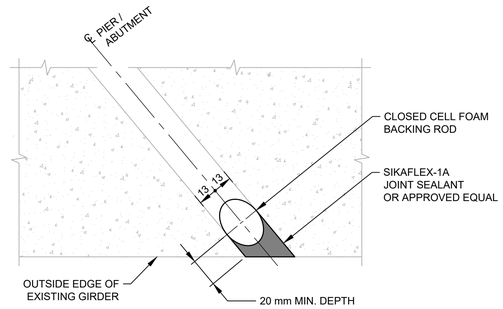
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



ELEVATION 1:20
TYPICAL JOINT REPAIR AT PIER



ELEVATION 1:20
TYPICAL JOINT REPAIR AT ABUTMENT



A
-
SECTION 1:2

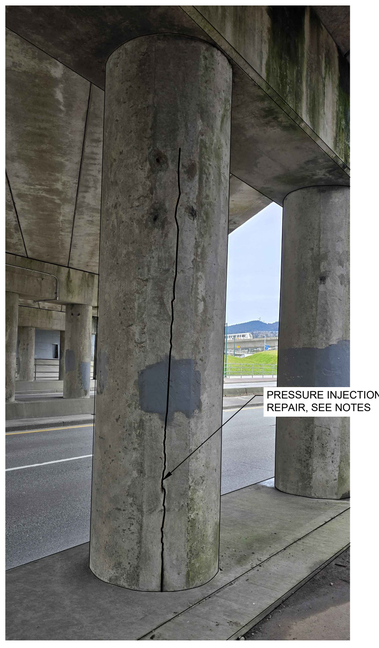


PHOTO N.T.S.
TYPICAL VERTICAL CRACK SEAL IN CONCRETE COLUMNS

PHOTO N.T.S.
REPAIR EXISTING LIGHT FIXTURES

NOTES:

1. FOR GENERAL NOTES SEE DWG. 2205-02-S-101.
2. LOCATION AND LENGTH OF VERTICAL CRACKS IN CONCRETE COLUMNS REPAIRS TO BE CONFIRMED ON SITE BY CONTRACTOR ADMINISTRATOR.
3. PRESSURE INJECTION OF EPOXY REPAIR PROCEDURE:
   - 3.1. REMOVE DIRT, GREASE, LOOSE DEBRIS, AND COATINGS FROM THE CRACK AND SURROUNDING AREAS. USE WIRE BRUSHES AND CLEANING SOLVENTS AS NECESSARY.
   - 3.2. DRILL HOLES AT REGULAR INTERVALS ALONG THE CRACK FOR INJECTION PACKERS, ENSURING PENETRATION TO CRACK DEPTH.
   - 3.3. INSTALL INJECTION PORTS SECURELY AND SEAL THE CRACK SURFACE BETWEEN PORTS USING SIKADUR 31 OR AN APPROVED EQUIVALENT SURFACE SEALANT. ALLOW THE SEALANT TO CURE AS PER THE MANUFACTURER'S GUIDELINES.
   - 3.4. START INJECTION AT THE LOWEST PORT USING SIKADUR 35 OR APPROVED EQUIVALENT AND CONTINUE UNTIL EPOXY EXITS THE ADJACENT PORT. AFTER ALL PORTS ARE FILLED, ALLOW THE EPOXY TO CURE PER THE MANUFACTURER'S RECOMMENDED TIME. ONCE THE EPOXY HAS CURED, REMOVE THE INJECTION PORTS AND GRIND OFF ANY PROTRUSIONS.
   - 3.5. PATCH OR SMOOTH THE SURFACE AS NEEDED TO MATCH EXISTING FINISH.

PLOT DATE: 2025-05-29 11:11:51 AM
SAVE DATE: 2025-05-28 12:59:44 PM SAVED BY: JMORO
DWG PATH: q:\2025-2205-02\struct\model\2205-02-s-107.dwg

Associated Engineering
BEST MANAGED COMPANIES CANADA
Platinum member

2025-05-29

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING (B.C.) LTD.
PERMIT NUMBER: 1000163
Engineers & Geoscientists BC

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2025MAY29	M. FENTON	J. MORO	ISSUED FOR TENDER

CITY OF COQUITLAM

BR190 CPR OVERPASS
AT LOUGHEED HIGHWAY
STRUCTURAL REHABILITATION
2025-2205-02

SCALE: AS SHOWN

STRUCTURAL
REPAIR D, E & F
MISCELLANEOUS REPAIRS

DRAWING	REVISION	SHEET
2205-02-S-107	0	8