

ISSUED FOR TENDER 2021/06/22

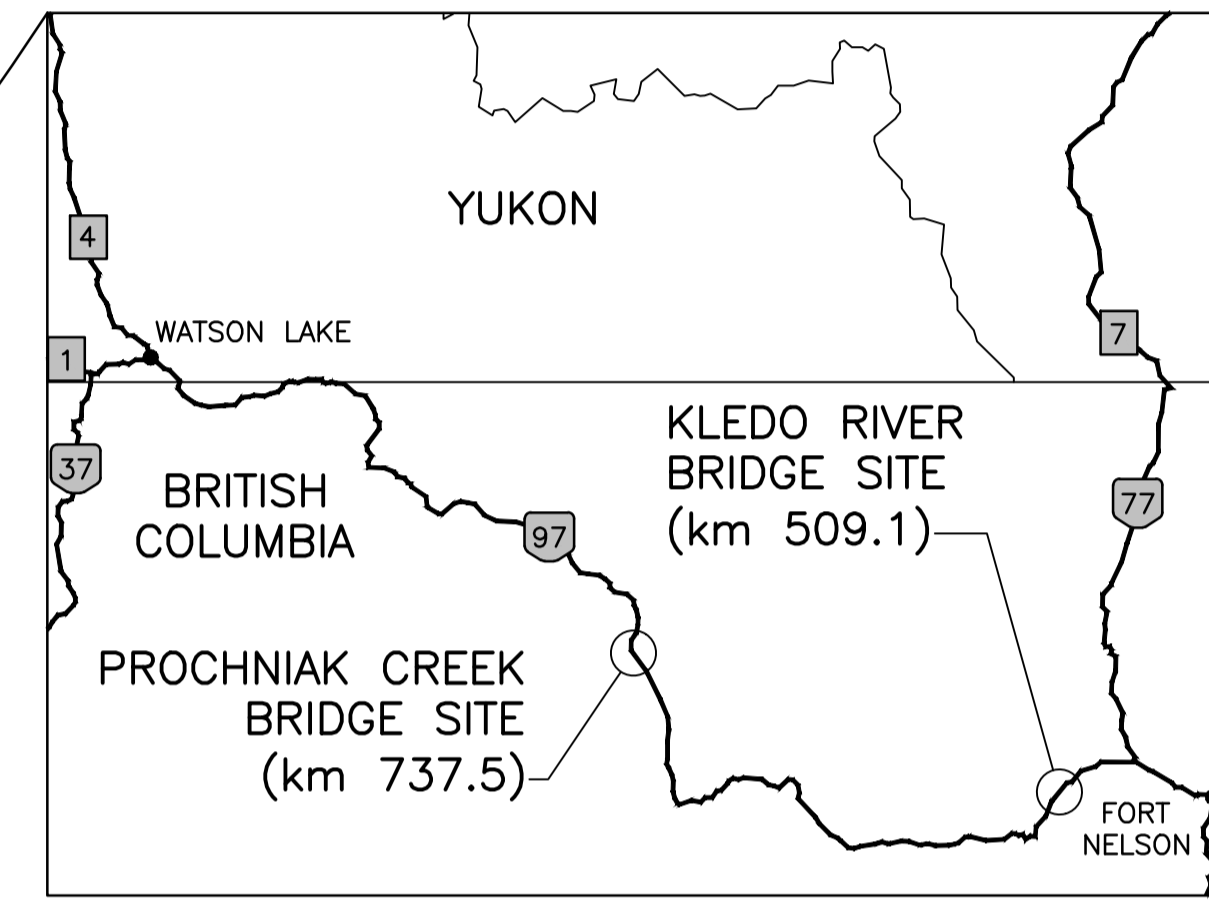
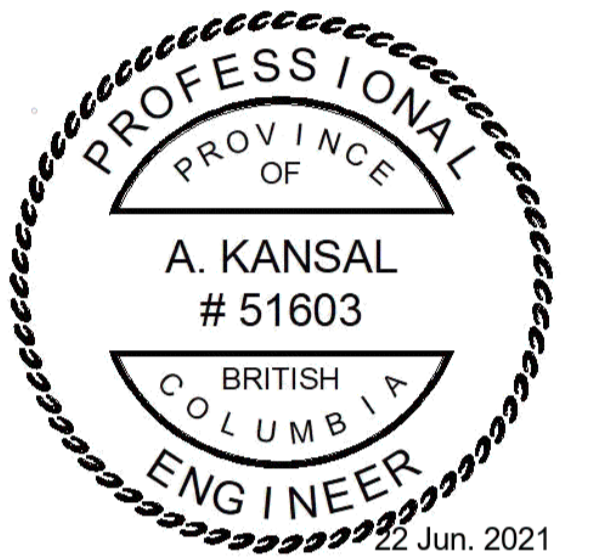


Public Services
and Procurement
Canada

Services publics et
Approvisionnement
Canada

BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIAK CREEK BRIDGE ALASKA HWY BRITISH COLUMBIA

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REAL PROPERTY SERVICES Pacific Region / SERVICES IMMOBILIERS Région de Pacifique



LIST OF STRUCTURAL DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
KLEDO RIVER BRIDGE R.114774.002	
S01 OF 15	COVER SHEET
S02 OF 15	GENERAL NOTES
S03 OF 15	GENERAL ARRANGEMENT
S04 OF 15	DETAILS - SHEET 1
S05 OF 15	DETAILS - SHEET 2
S06 OF 15	DETAILS - SHEET 3
S07 OF 15	DECK DRAIN DETAILS
S08 OF 15	ROADWAY TRANSITION BARRIER
PROCHNIAK CREEK BRIDGE R.114778.002	
S09 OF 15	GENERAL NOTES
S10 OF 15	GENERAL ARRANGEMENT
S11 OF 15	DETAILS - SHEET 1
S12 OF 15	DETAILS - SHEET 2
S13 OF 15	DETAILS - SHEET 3
S14 OF 15	DECK DRAIN DETAILS
S15	ROADWAY TRANSITION BARRIER

Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22

Client: _____ client



Project title: **BRITISH COLUMBIA** Projet

**BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIAK CREEK BRIDGE
ALASKA HWY**

Designed by: **A. KANSAL** Conçu par

Drawn by: **S. HUNG** Dessiné par

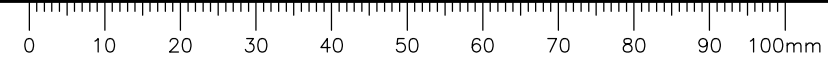
Approved by: **J. DONIC/M. BOWSER** Approuvé par

PWSSC Project Manager / Administrateur de Projets TPSGC: **R. HAGHIGHI**

Drawing title: **COVER SHEET** Titre du dessin

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002 R.114778.002	S01 OF 15	0

DATE: 2021-06-22 - 3:07pm (harry.yu) - Kledo River Bridge\02 Drawings\S01 - Cover Sheet.dwg
LAYOUT COVER SHEET



1. GENERAL

- 1.1 THE METRIC SYSTEM OF MEASUREMENT IS USED ON ALL DRAWINGS. ELEVATIONS AND STATIONS WHERE SHOWN ARE IN METERS AND ALL OTHER DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE (U.N.O.).
- 1.2 SPECIFIC STRUCTURAL DRAWING NOTES SUPERSEDE GENERAL NOTES WHERE THERE ARE DIFFERENCES.
- 1.3 CONSTRUCTION OF THE WORKS TO COMPLY WITH THE PROJECT SPECIFICATIONS.
- 1.4 EXISTING BRIDGE DETAILS ARE BASED ON 1977 PSPC STRUCTURES (BRIDGES) DIVISION RECORD DRAWINGS. THE ACCURACY OF THE INFORMATION HAS NOT BEEN VERIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM ALL NECESSARY DIMENSIONS SUCH THAT THE WORK CAN BE CONSTRUCTED AS SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL INFORM THE DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCY IDENTIFIED BETWEEN NOTED RECORD DRAWINGS, SITE MEASUREMENTS, AND THE CONTRACT DRAWINGS.
- 1.5 REFERENCE DRAWING LIST:
SELECTED 1977 RECORD DRAWINGS

DRAWING NUMBER	TITLE
116-21-2	GENERAL LAYOUT
116-21-4	ABUTMENT - CONCRETE
116-21-5	ABUTMENT - REINFORCING
116-21-6	GIRDER LAYOUT & DETAILS
116-21-9	DECK & CURB - CONCRETE & DRAINS
116-21-10	DECK & CURB - REINFORCING
116-21-11	EXPANSION JOINTS
116-21-12	APPROACH DRAIN & BENDING SCHEDULE
116-21-13	GUIDERAIL LAYOUT

2. DESIGN DATA

- 2.1 STRUCTURAL DESIGN FOR ALL RECONSTRUCTED COMPONENTS OF THE EXISTING BRIDGE IS BASED ON CAN/CSA-S6-19.
- 2.2 DESIGN LIVE LOAD FOR THE COMPONENTS THAT ARE WITHIN THE SCOPE OF BARRIER REPLACEMENT BCL-625.
- 2.3 BARRIER TEST LEVEL WAS ESTABLISHED IN ACCORDANCE WITH CAN/CSA S6-19 SECTION 12 AND TRAFFIC COUNT DATA PROVIDED BY PSPC.
- 2.4 BARRIER TEST LEVEL DESIGN DATA:
MAX. AADT FOR KLEDO RIVER BRIDGE = 1015
POSTED SPEED = 100 km/h
TRUCK PROPORTION = 40% (MAXIMUM FROM S6-19, TAB. 12.5)
- 2.5 THE DESIGN OF BRIDGERAIL POSTS, ANCHORAGE AND MODIFICATIONS TO BRIDGE DECK CANTILEVER WAS BASED ON THE LOAD EFFECTS OF THE BCL-625 ON THE RECONSTRUCTED PORTION OF THE DECK CANTILEVER AND THE TL-2 BARRIER IMPACT FORCES.
- 2.6 THE DESIGN OF BRIDGE DECK CANTILEVER INCLUDES A DEAD LOAD ALLOWANCE OF 50mm FOR A FUTURE CONCRETE OVERLAY, EQUIVALENT TO 1.2kPa.

3. SCOPE OF WORK

- 3.1 REMOVAL AND DISPOSAL OF EXISTING BRIDGERAILS, AND CONCRETE CURBS ALONG THE BRIDGE DECK AND ABUTMENT WINGWALLS.
- 3.2 REMOVAL OF THE EXISTING DECK CANTILEVER AND BRIDGE DECK DRAINS (SALVAGING EXISTING DECK REINFORCING IN THE DECK CANTILEVERS) AND PARTIAL DEPTH DECK CONCRETE REMOVAL AT DISCRETE LOCATIONS ABOVE THE EDGE GIRDERS.
- 3.3 RECONSTRUCTION OF THE CONCRETE DECK CANTILEVER WITH NEW DECK DRAINS.
- 3.4 CONSTRUCTION OF THE NEW CONCRETE CURBS, STEEL BRIDGE RAIL POSTS AND NEW THRIEBEAM BRIDGERAIL BARRIER ON THE BRIDGE.
- 3.5 CONSTRUCTION OF THE NEW CIP CONCRETE BRIDGE TRANSITION BARRIER ON TOP OF EXISTING ABUTMENT WINGWALLS.

4. CAST IN PLACE CONCRETE

- 4.1 ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 03 30 00 - CAST-IN-PLACE CONCRETE.
- 4.2 ALL CONCRETE SHALL HAVE 28 DAY COMPRESSIVE STRENGTH OF 35MPa, EXPOSURE CLASS C-1 TO CSA A23.1-19.
- 4.3 ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
- 4.4 SPECIFIED MINIMUM CONCRETE COVERS:
TOP SURFACE OF DECK SLAB TO MATCH EXISTING REINFORCEMENT
INNER VERTICAL SURFACE OF CURB AND ALL OTHER SURFACES U.N.O. 70mm
SOFFIT AND VERTICAL SURFACES OF DECK SLAB 50mm
- 4.5 CURING OF ALL CONCRETE SHALL BE IN STRICT COMPLIANCE WITH THE SPECIFICATIONS.
- 4.6 ALL EXPOSED CORNERS SHALL HAVE A 20mm CHAMFER U.N.O.
- 4.7 ALL NEW CONCRETE FOR BRIDGE CURB AND BARRIERS SHALL BE SEALED WITH A CONCRETE SEALER LISTED ON THE BC MINISTRY OF TRANSPORTATION AND INFRASTRUCTURES APPROVED PRODUCT LIST. APPLICATION OF SEALER SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

5. REINFORCING STEEL

- 5.1 ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 03 20 00 - CONCRETE REINFORCING.
- 5.2 REINFORCING SHOP DRAWINGS FOR ALL COMPONENTS SHALL BE SUBMITTED TO DEPARTMENTAL REPRESENTATIVE FOR REVIEW AT LEAST 14 DAYS PRIOR TO FABRICATION.
- 5.3 BARS SHALL BE CHAIRED IN ACCORDANCE WITH THE SPECIFICATIONS TO ENSURE ADEQUATE COVER.
- 5.4 LAP SPLICE SCHEDULE:
BAR SIZE LAP LENGTH
10M 590
15M 790
20M 980
A. LAP SPLICE SCHEDULE IS FOR CLASS B SPLICE.
B. APPLIES TO REINFORCEMENT SPLICES NOT OTHERWISE DETAILED.
- 5.5 PRIOR TO CONCRETE PLACEMENT THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE REINFORCEMENT HAS BEEN PLACED IN ACCORDANCE WITH THE CONTRACT DRAWINGS.

6. MISCELLANEOUS STEEL

- 6.1 ALL MISCELLANEOUS STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 05 12 33. -STRUCTURAL STEEL FOR BRIDGES.
- 6.2 ALL STEELWORK SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123/A123M AND ASTM F2329 UNLESS NOTED OTHERWISE.
- 6.3 ALL NEW STEEL MEMBERS AND INSERTS CAST INTO CONCRETE TO BE GALVANIZED AND ISOLATED FROM ALL REINFORCING STEEL INCLUDING TIES.
- 6.4 STEEL STUDS SHALL CONFORM TO ASTM A108 GRADE 1015, 1018 OR 1020 WITH A MINIMUM TENSILE STRENGTH OF 413 MPa. STEEL STUDS SHALL BE 19mm DIAMETER UNLESS NOTED OTHERWISE.
- 6.5 ALL BOLTS SHALL BE HIGH STRENGTH STRUCTURAL BOLTS CONFORMING TO ASTM F3125 GRADE A325, TYPE 3. BOLTS SHALL BE 22mm DIAMETER WITH THREADS EXCLUDED FROM THE SHEAR PLANE UNLESS NOTED OTHERWISE.

7. CONCRETE DEMOLITION

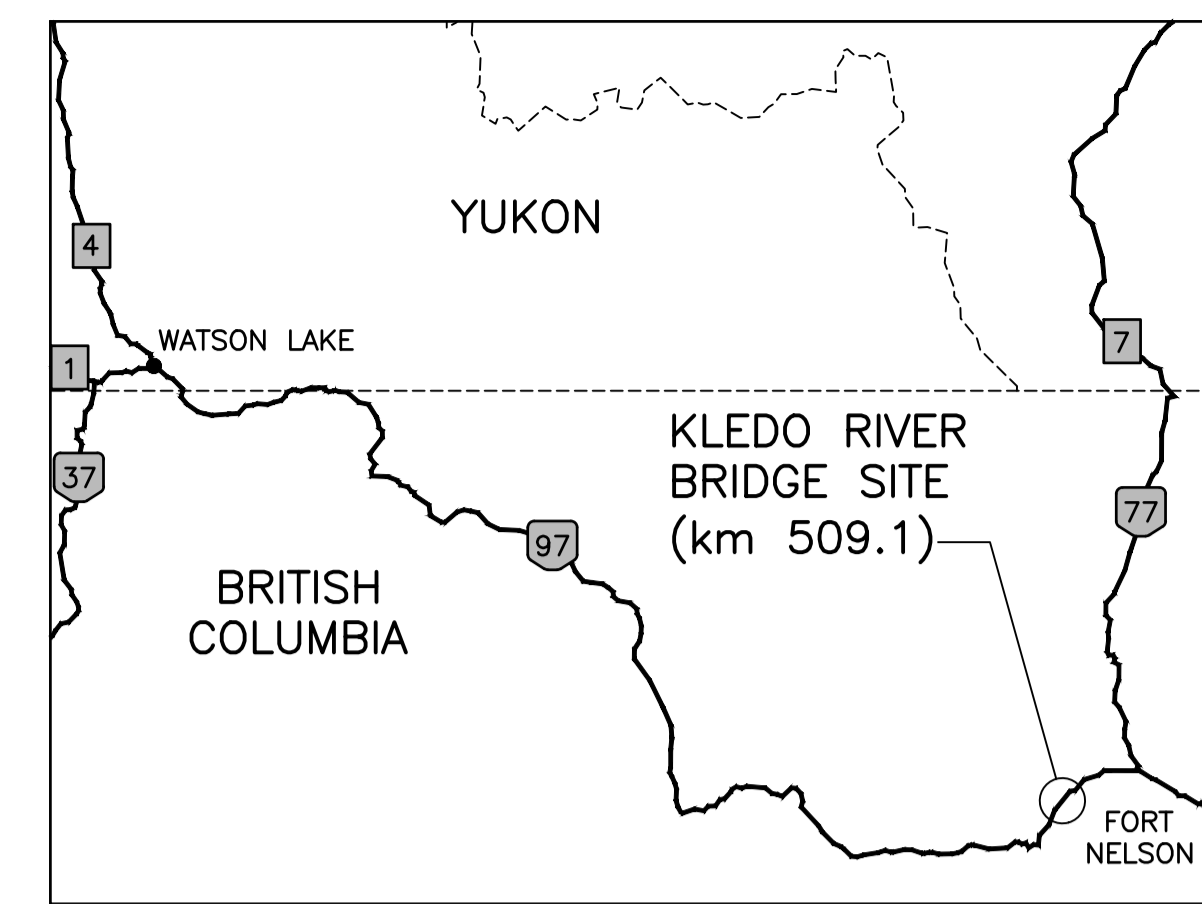
- 7.1 ALL DEMOLITION TO BE DONE IN ACCORDANCE WITH THE SPECIFICATION SECTION 02 41 99. -DEMOLITION FOR CIVIL WORKS.
- 7.2 THE CONTRACTOR SHALL MARK OUT ALL CONCRETE AREAS TO BE DEMOLISHED/REMOVED. THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE CONCRETE AREAS MARKED FOR DEMOLITION PRIOR TO COMMENCING CONCRETE DEMOLITION.
- 7.3 CONTRACTOR SHALL NOT DAMAGE EXISTING REINFORCEMENT THAT IS TO BE RETAINED AS PART OF PERMANENT WORKS DURING CONCRETE DEMOLITION WORKS.
- 7.4 SEVERELY CORRODED REINFORCEMENT (WITH MORE THAN 20% OF SECTION LOSS AS DETERMINED BY THE DEPARTMENTAL REPRESENTATIVE) SHALL BE EITHER REPLACED OR SUPPLEMENTED WITH NEW REINFORCEMENT OF THE SAME DIAMETER. SUPPLEMENTAL BARS SHALL OVERLAP MINIMUM LAP LENGTH EACH SIDE OF THE SEVERELY CORRODED SECTION. MINIMUM LENGTH OF ANY REINFORCEMENT SHALL NOT BE LESS THAN 1000mm.
- 7.5 FOLLOWING CONCRETE REMOVAL WORK, THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE EXISTING REINFORCEMENT FOR DAMAGE, CORROSION, AND/OR OMISSION AND RECOMMEND SUPPLEMENTAL REINFORCING STEEL TO COMPENSATE FOR EXISTING CONDITION.
- 7.6 ALL CONCRETE SURFACES THAT ARE TO RECEIVE NEW CONCRETE SHALL BE ABRASIVE BLAST (MIN. 35 MPa/5000 psi) OR HIGH-PRESSURE WATER BLAST (35MPa/5000 psi) CLEANED TO REMOVE ALL BRUISED AND FRACTURED CONCRETE AND FOREIGN MATERIAL, AND SHALL HAVE MINIMUM 5 mm AMPLITUDE FOR ROUGHNESS.
- 7.7 TOP SURFACE OF THE NEW CONCRETE DECK SHALL BE CONSTRUCTED TO FOLLOW ORIGINAL BRIDGE DECK LONGITUDINAL AND TRANSVERSE GRADES, U.N.O.
- 7.8 SPECIAL CARE SHALL BE TAKEN DURING REMOVALS TO PROTECT STRUCTURAL ELEMENTS THAT ARE NOT BEING REHABILITATED. IF ANY PART OF THE BRIDGE IS DAMAGED DUE TO THE CONTRACTOR'S REMOVALS THEN THAT ELEMENT SHALL BE REPLACED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE AT NO ADDITIONAL COST.

8. CURB PLATE INSTALLATION PROCEDURE

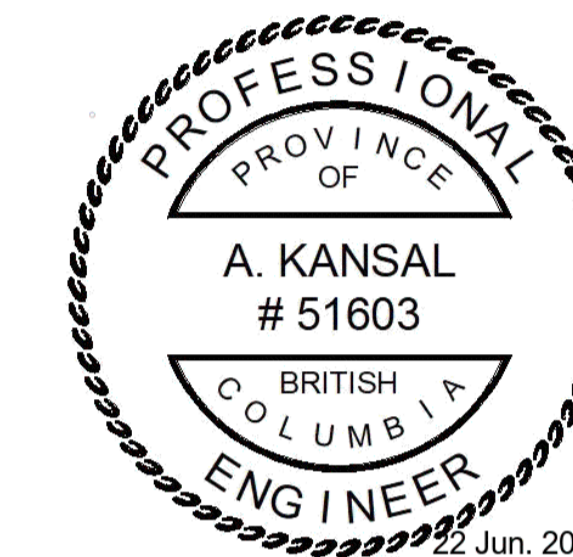
- 8.1 CURB PLATES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. ALL OTHER METAL PARTS EXCEPT ERECTION ANGLES AND STAINLESS STEEL BOLTS SHALL BE HOT DIPPED GALVANIZED OR ZINC METALIZED AFTER FABRICATION.
- 8.2 CURB PLATES SHALL BE ASSEMBLED AND TRANSPORTED WITH ERECTION ANGLES ATTACHED.
- 8.3 SECURE CURB PLATES TO THE CURB. THE ATTACHEMENT SHALL BE STRONG ENOUGH TO MAINTAIN THE CORRECT GAP AND ALIGNMENT OF THE PLATES UNTIL AFTER CONCRETE PLACEMENT.
- 8.4 AFTER CURB PLATES ARE SECURELY ATTACHED, LOOSEN BOLTS IN SLOTTED HOLES IN THE ERECTION ANGLE SUFFICIENTLY TO FACILITATE THERMAL MOVEMENT WITHOUT DAMAGING BRIDGE COMPONENTS. CLAMPED PARTS OF THE CURB PLATE SHALL NOT DEFORM WHEN BOLTS ARE LOOSENED.
- 8.5 CURB PLATE PLACEMENT SHALL BE INSPECTED BY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO CONCRETE PLACEMENT.
- 8.6 REMOVE ERECTION ANGLE IMMEDIATELY AFTER CONCRETE CAN SUPPORT THE CURB PLATE ASSEMBLY.
- 8.7 REMOVE ALL FORMWORK, CLEAN EXCESS CONCRETE AND DEBRIS, WHEN CONCRETE ACHIEVED MINIMUM STRENGTH OF 15MPa AND HAS A SUFFICIENT STRENGTH TO SUPPORT ITS WEIGHT, BUT NOT SOONER THAN 48 HOURS FOLLOWING CONCRETE PLACEMENT.
- 8.8 TIGHTEN CURB PLATE BOLTS TO "SNUG TIGHT" CONDITION AFTER CONCRETE HAS GAINED MINIMUM STRENGTH OF 15MPa.

9. BRIDGERAIL NOTES

- 9.1 ALL ANCHOR RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A193 GRADE B7 (Fy = 725 MPa; Fu = 860 MPa) ALL NUTS AND WASHERS TO SHALL CONFORM TO A325. GALVANIZING SHALL STRICTLY FOLLOW THE FOLLOWING PROCEDURE WITH THE PRESENCE OF THE DEPARTMENTAL REPRESENTATIVE:
-BRUSH BLAST ANCHOR RODS TO REMOVE MILL SCALE AND OIL AFTER THREADING ENDS.
-FLASH PICKLING NOT TO EXCEED 5 MINUTES.
-QUICK DRY PRIOR TO HOT-DIP GALVANIZING (DO NOT STORE IN FLUX OR ACID RINSE)
- 9.2 ALL W-BEAM AND THRIE BEAM GUARDRAIL (INCLUDING W-THRIE BEAM TRANSITION SECTION) SHALL HAVE A MINIMUM YIELD STRENGTH OF 345 MPa.
- 9.3 THE BOTTOM SURFACE OF THE BASEPLATES SHALL BE COATED WITH AN APPROVED COATING SYSTEM SUITABLE FOR APPLICATION ON GALVANIZED STEEL TO PREVENT CONTACT BETWEEN THE ZINC AND THE GROUT. THE COLOUR SHALL BE MEDIUM GREY.
- 9.4 BRIDGERAIL ANCHOR BOLTS SHALL BE TIGHTENED AN ADDITIONAL 1/2 TURN OF THE NUT PAST THE "SNUG TIGHT" CONDITION.
- 9.5 ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP SURFACE OF BRIDGE DECK AND ALONG THE CENTRELINE OF ANCHOR ROD ASSEMBLY.
- 9.6 VERTICAL AND HORIZONTAL ALIGNMENT OF THE THRIE BEAM GUARDRAILS SHALL BE SUBJECT TO A TOLERANCE OF 6mm.
- 9.7 ALL NON-STANDARD GUARDRAIL LENGTHS SHALL BE CUT TO SUIT AND ALL NON-STANDARD HOLES SHALL BE DRILLED. FLAME CUTTING OF GUARDRAIL SHALL NOT BE ALLOWED. APPLY TWO COATS OF ZINC RICH PAINT ON AREAS DAMAGED BY SAW CUTTING OR DRILLING.



KEY PLAN
SCALE NTS



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22

Client client



Project title BRITISH COLUMBIA

BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY

Designed by A. KANSAL Conçu par

Drawn by S. HUNG Dessiné par

Approved by J. DONIC/M. BOWSER Approuvé par

PWSSC Project Manager Administrateur de Projets TPSOC
R. HAGHIGHI

Drawing title KLEDO RIVER BRIDGE

(km 509.1)

GENERAL NOTES

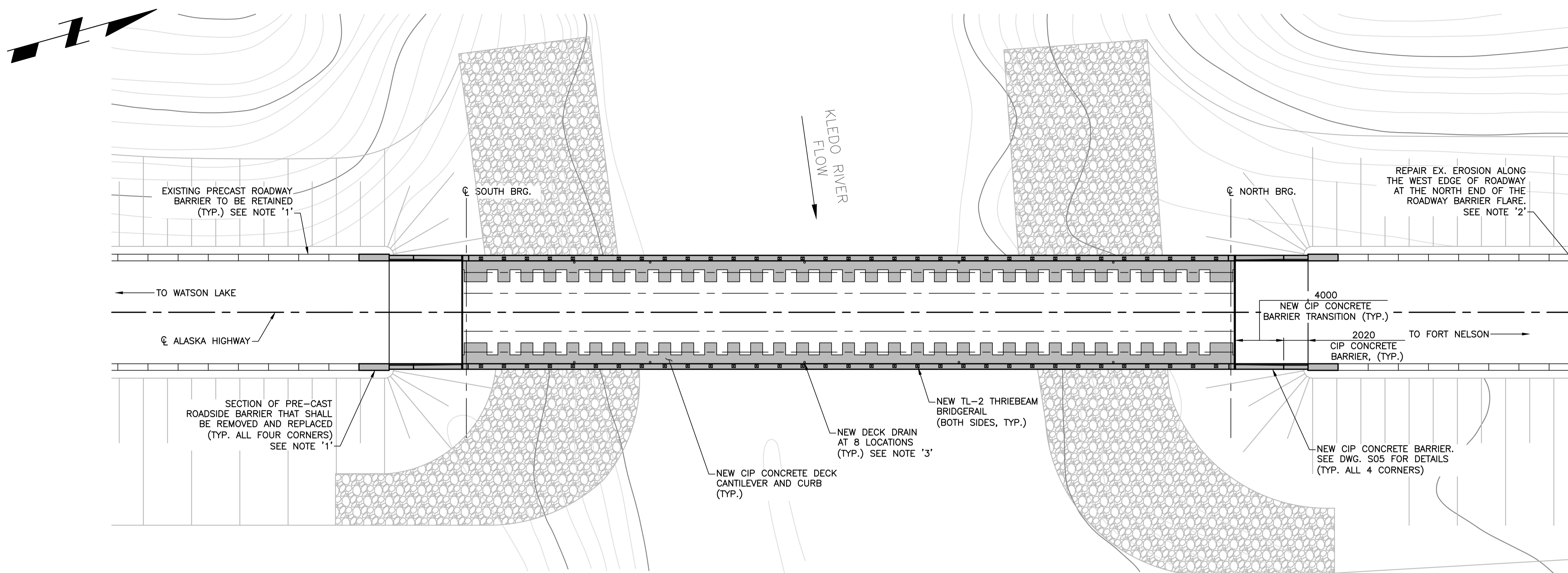
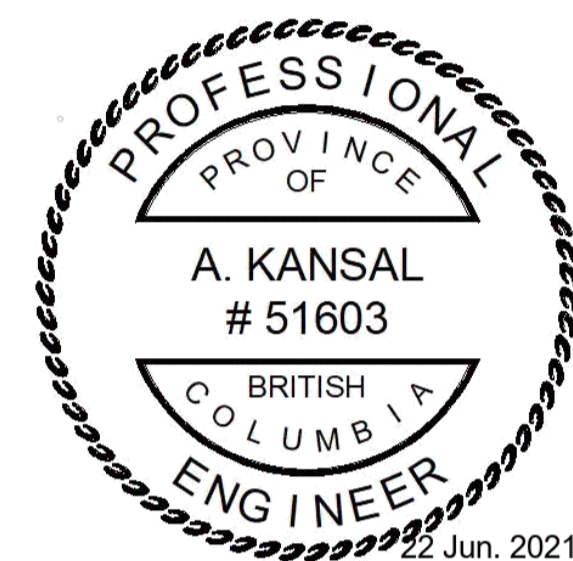
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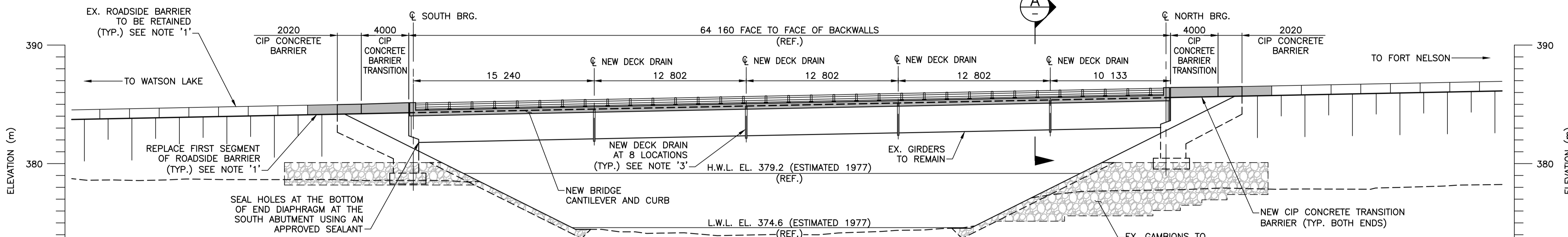
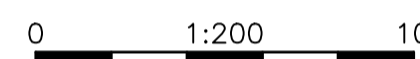
OF 15

LIST OF ABBREVIATIONS

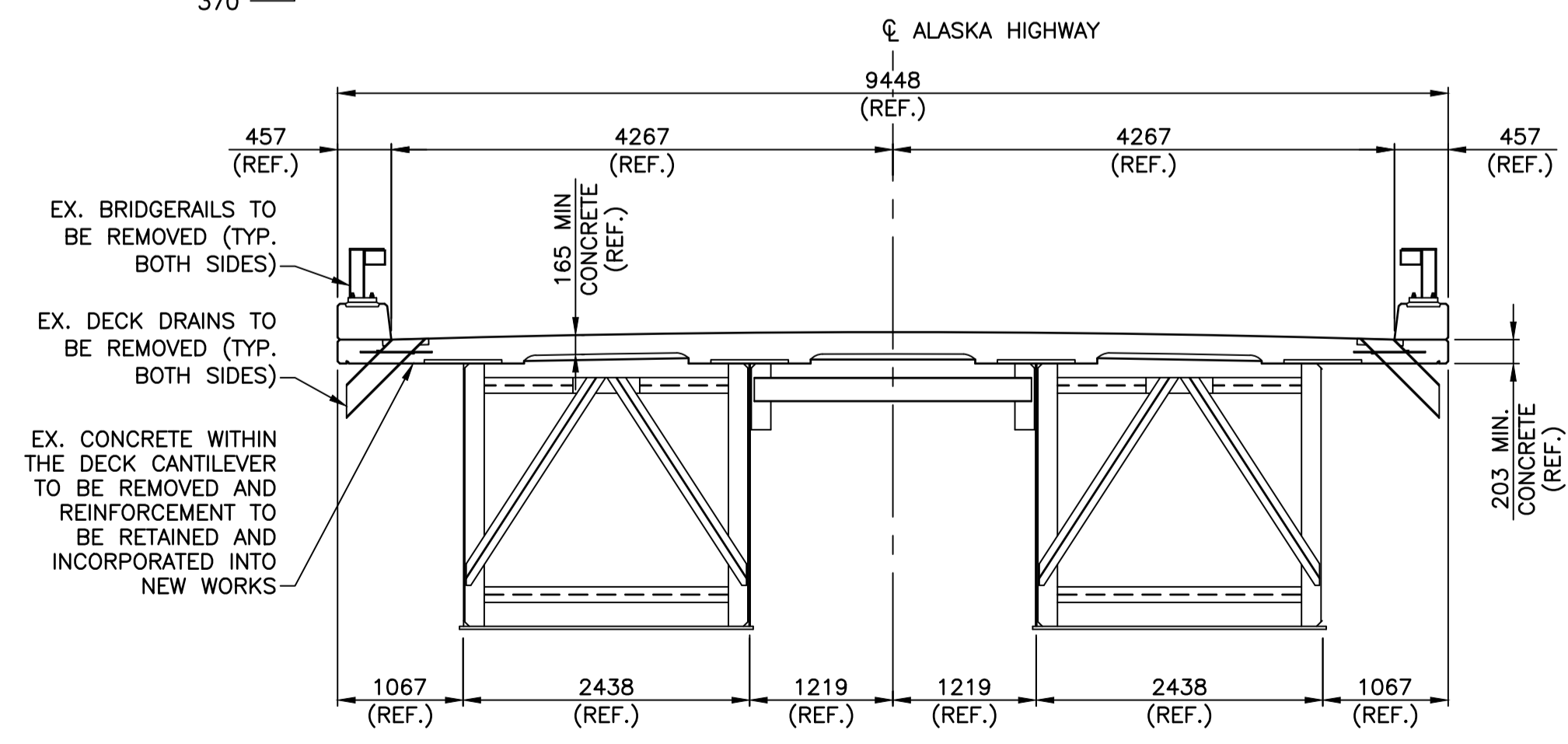
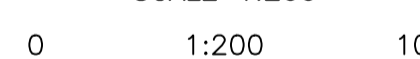
APPROX.	- APPROXIMATE	LG.	- LONG
BOT.	- BOTTOM	L.W.L.	- LOW WATER LEVEL
BRG.	- BEARING	MAX.	- MAXIMUM
DWG.	- DRAWING	MIN.	- MINIMUM
c/c	- CENTER TO CENTER	NTS	- NOT TO SCALE
CIP	- CAST-IN-PLACE	PL.	- PLATE
CL	- CENTRELINE	REF.	- REFERENCE
C.J.	- CONSTRUCTION JOINT	REINF.	- REINFORCEMENT
c/w	- COMPLETE WITH	THK.	- THICK
EX.	- EXISTING	T.O.	- TOP OF
GALV.	- GALVANIZED	TYP.	- TYPICAL
H.W.L.	- HIGH WATER LEVEL	U.N.O.	- UNLESS NOTED OTHERWISE



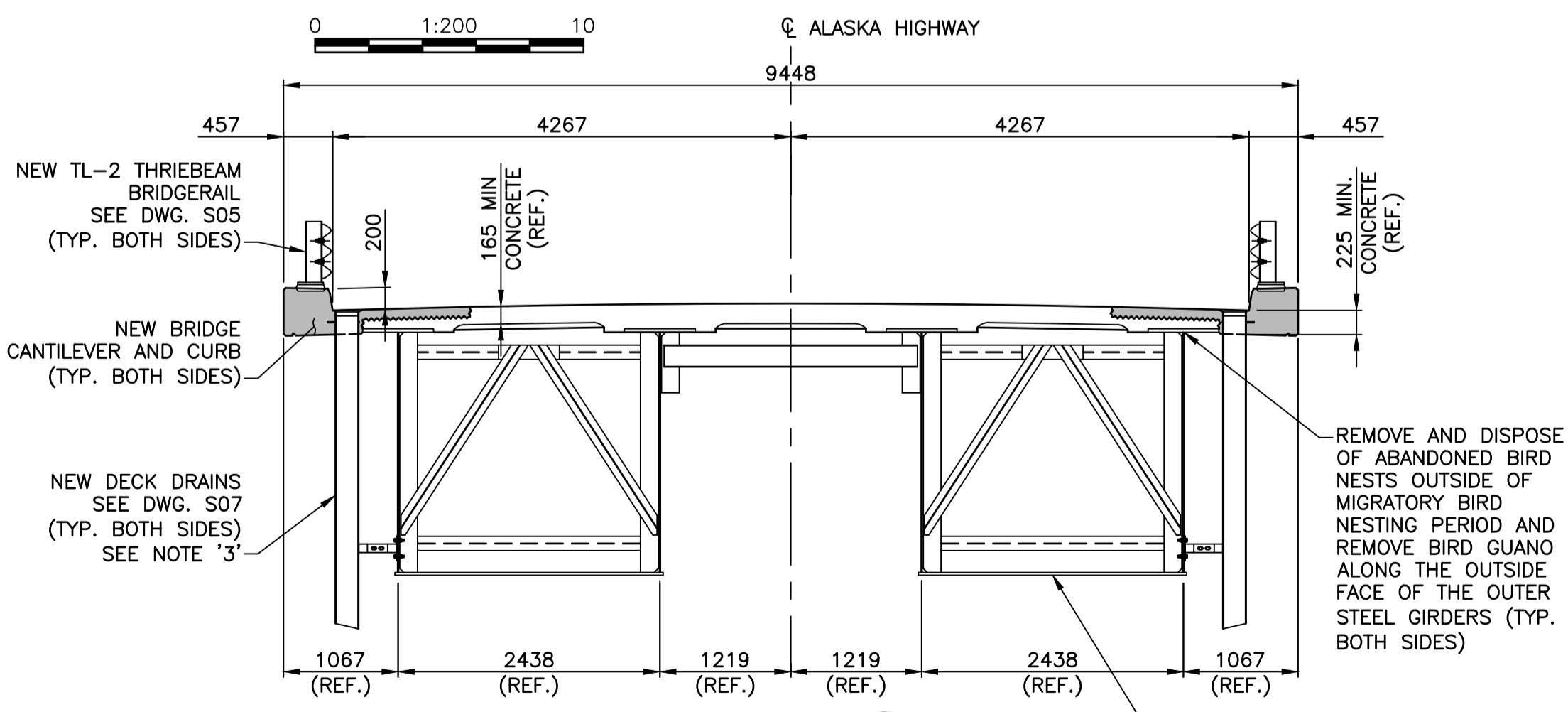
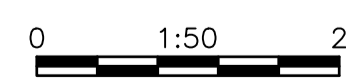
PLAN
SCALE 1:200



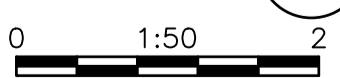
ELEVATION
SCALE 1:200



EXISTING BRIDGE SECTION
SCALE 1:50



SECTION A
SCALE 1:50



NOTES:

- EXISTING SEGMENT OF ROADSIDE BARRIER DIRECTLY BEHIND PROPOSED CIP BARRIER TRANSITION SHALL BE REMOVED AND DISPOSED OF OFF-SITE. FOLLOWING CONSTRUCTION OF CIP BARRIER TRANSITION NEW CIP ROADSIDE BARRIER SHALL BE CAST BETWEEN CIP BARRIER AND EXISTING ROADSIDE BARRIER. NEW CIP ROADSIDE BARRIER SHALL BE CONSTRUCTED AS PER DETAILS FROM DWG. S08 (TYPICAL ALL 4 CORNERS OF THE BRIDGE).
- EROSION REPAIR WORK DESCRIPTION:
 - REMOVE LOOSE MATERIAL AROUND THE ERODED PART OF GRANULAR MATERIAL WITHIN THE ROADWAY SHOULDERING (NOT TO EXCEED 1m³. ACTUAL QUANTITY TO BE DETERMINED BY CONTRACTOR ON SITE). SIDE SLOPES OF THE EXCAVATION/HOLE SHALL NOT BE STEEPER THAN 2:1.
 - FILL IN THE HOLE WITH NEW GRANULAR MATERIAL AND COMPACT TO 95% SPD (NOT TO EXCEED 1.5m³. ACTUAL QUANTITY TO BE DETERMINED BY CONTRACTOR ON SITE).
 - LEVEL THE TOP OF THE REINSTATED MATERIAL TO MATCH GRADES OF THE ADJACENT MATERIAL.
- NEW DECK DRAIN LOCATION MAY BE LOCALLY ADJUSTED ±150mm TO AVOID CONFLICT WITH EXISTING GIRDER BRACING & DECK REINFORCEMENT.

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0	ISSUED FOR TENDER	21/06/22



Project title: BRITISH COLUMBIA

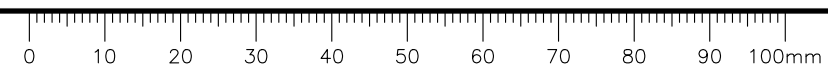
BRIDGE RAILING UPGRADE FOR
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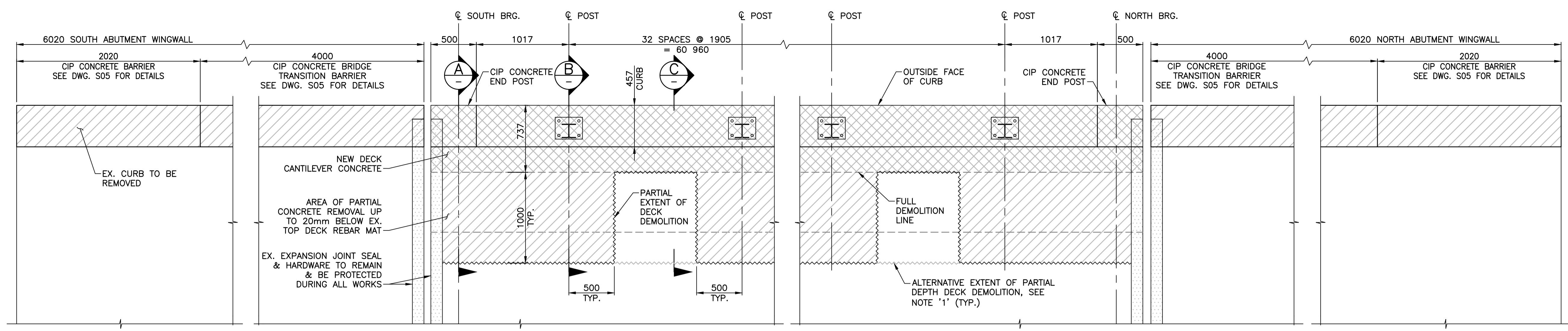
Designed by: A. KANSAL
Drawn by: S. HUNG
Approved by: J. DONIC/M. BOWSER
PWSCC Project Manager: R. HAGHIGHI

Titre du dessin
**KLEDO RIVER BRIDGE
(km 509.1)
GENERAL ARRANGEMENT**

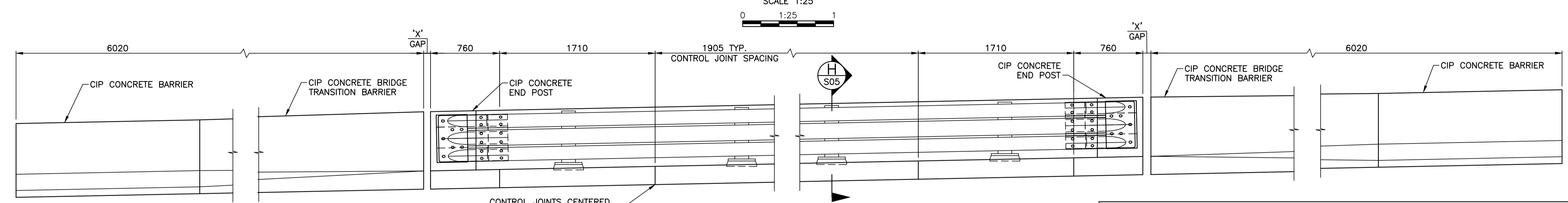
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S03	0

DATE: 2021-06-22 2:18pm (harry.yu) - 2:18pm (harry.yu) - 601-06 - Kleedo and Prochnik Barriers (01 - Kleedo River Bridge) (02 Drawings) (S03 - General Arrangement) (03 - General Arrangement) (04 - General Arrangement) (05 - General Arrangement) (06 - General Arrangement) (07 - General Arrangement) (08 - General Arrangement) (09 - General Arrangement) (10 - General Arrangement) (11 - General Arrangement) (12 - General Arrangement) (13 - General Arrangement) (14 - General Arrangement) (15 - General Arrangement) (16 - General Arrangement) (17 - General Arrangement) (18 - General Arrangement) (19 - General Arrangement) (20 - General Arrangement) (21 - General Arrangement) (22 - General Arrangement) (23 - General Arrangement) (24 - General Arrangement) (25 - General Arrangement) (26 - General Arrangement) (27 - General Arrangement) (28 - General Arrangement) (29 - General Arrangement) (30 - General Arrangement) (31 - General Arrangement) (32 - General Arrangement) (33 - General Arrangement) (34 - General Arrangement) (35 - General Arrangement) (36 - General Arrangement) (37 - General Arrangement) (38 - General Arrangement) (39 - General Arrangement) (40 - General Arrangement) (41 - General Arrangement) (42 - General Arrangement) (43 - General Arrangement) (44 - General Arrangement) (45 - General Arrangement) (46 - General Arrangement) (47 - General Arrangement) (48 - General Arrangement) (49 - General Arrangement) (50 - General Arrangement) (51 - General Arrangement) (52 - General Arrangement) (53 - General Arrangement) (54 - General Arrangement) (55 - General Arrangement) (56 - General Arrangement) (57 - General Arrangement) (58 - General Arrangement) (59 - General Arrangement) (60 - General Arrangement) (61 - General Arrangement) (62 - General Arrangement) (63 - General Arrangement) (64 - General Arrangement) (65 - General Arrangement) (66 - General Arrangement) (67 - General Arrangement) (68 - General Arrangement) (69 - General Arrangement) (70 - General Arrangement) (71 - General Arrangement) (72 - General Arrangement) (73 - General Arrangement) (74 - General Arrangement) (75 - General Arrangement) (76 - General Arrangement) (77 - General Arrangement) (78 - General Arrangement) (79 - General Arrangement) (80 - General Arrangement) (81 - General Arrangement) (82 - General Arrangement) (83 - General Arrangement) (84 - General Arrangement) (85 - General Arrangement) (86 - General Arrangement) (87 - General Arrangement) (88 - General Arrangement) (89 - General Arrangement) (90 - General Arrangement) (91 - General Arrangement) (92 - General Arrangement) (93 - General Arrangement) (94 - General Arrangement) (95 - General Arrangement) (96 - General Arrangement) (97 - General Arrangement) (98 - General Arrangement) (99 - General Arrangement) (100 - General Arrangement)





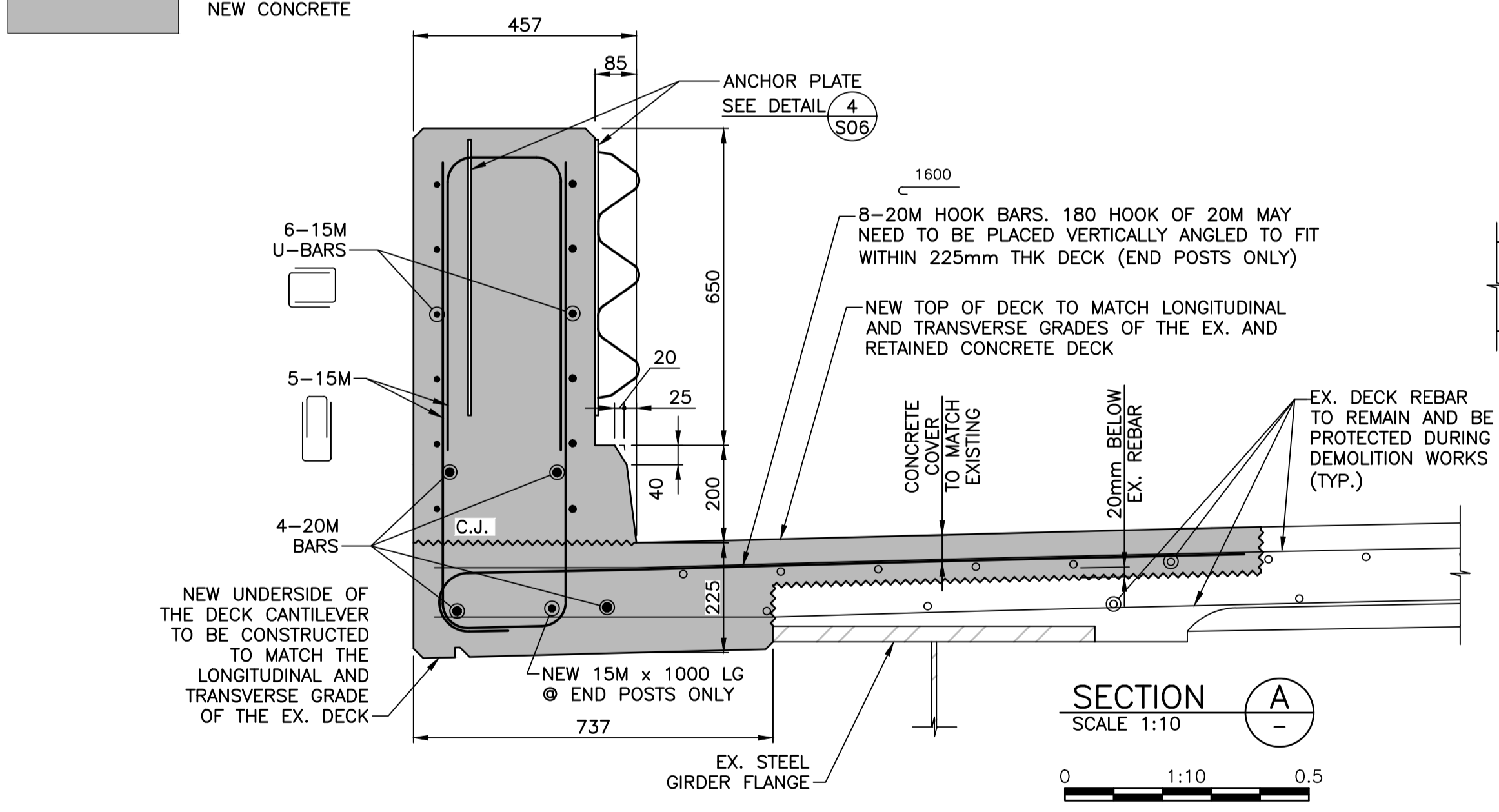
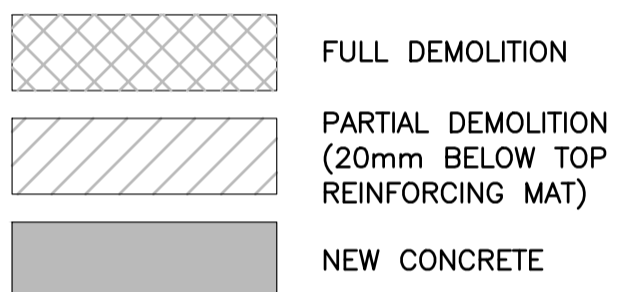
PLAN - NEW BARRIER AND CONCRETE REMOVAL
 SCALE 1:25



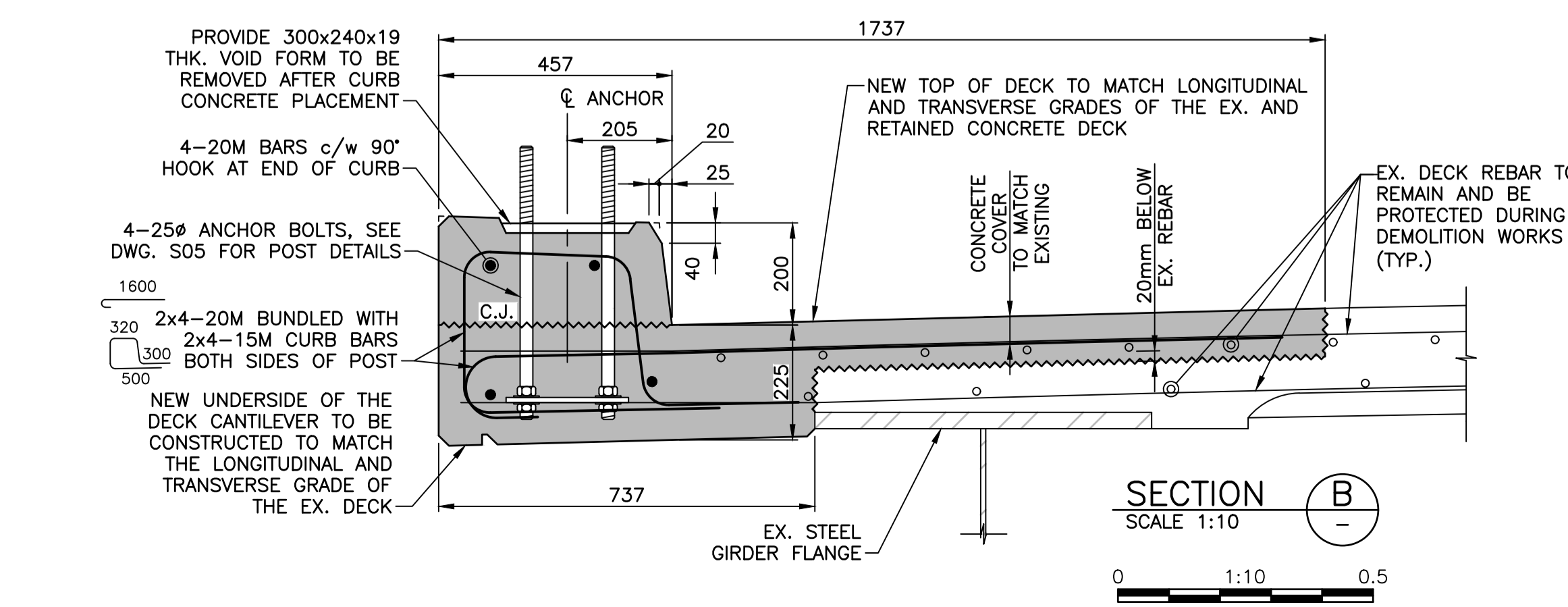
ELEVATION - CURB CONTROL JOINTS
 SCALE 1:25

TABLE 1 - 'X' GAP DIMENSIONS (mm)

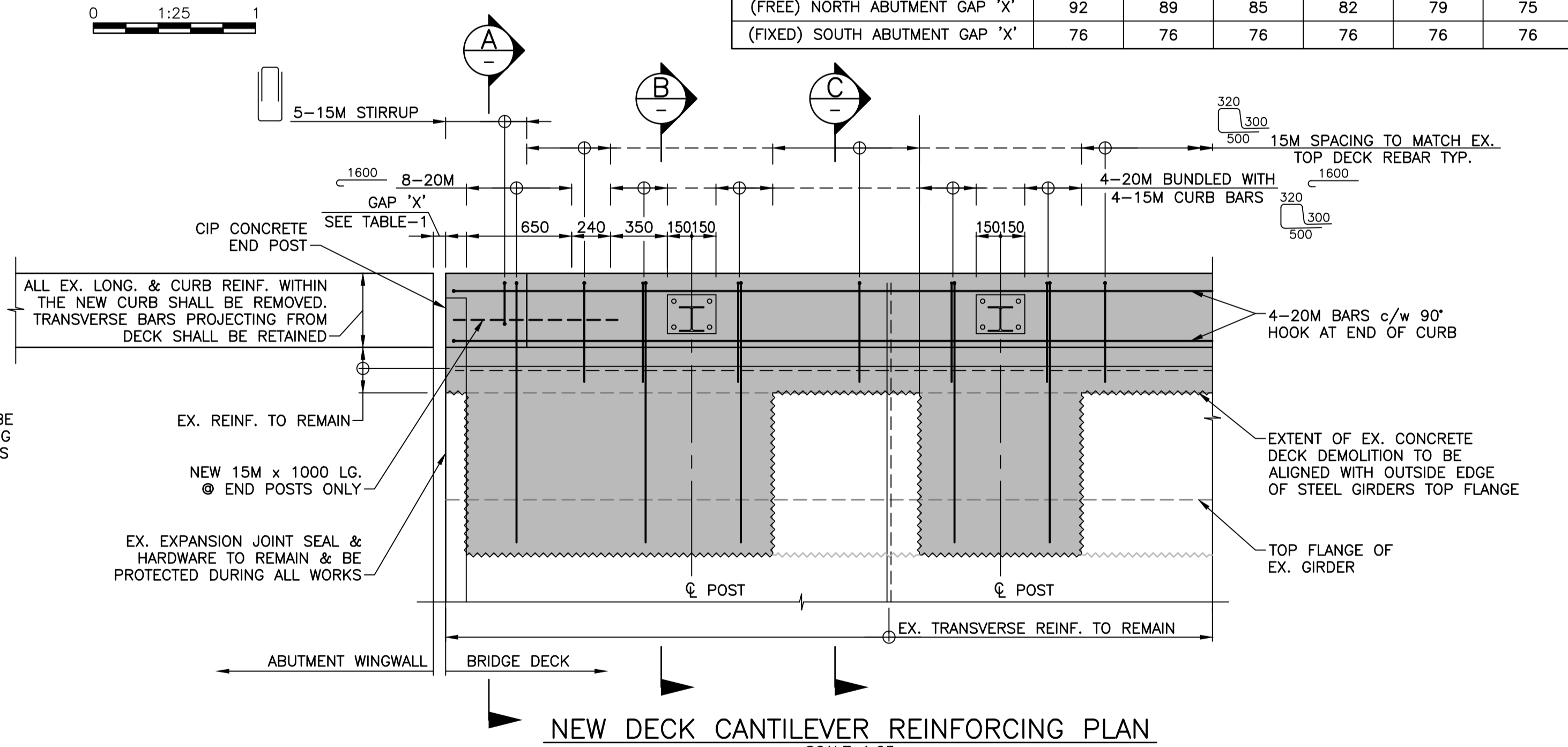
AMBIENT GIRDER TEMP (C°)	-15	-5	0	5	10	15
(FREE) NORTH ABUTMENT GAP 'X'	92	89	85	82	79	75
(FIXED) SOUTH ABUTMENT GAP 'X'	76	76	76	76	76	76



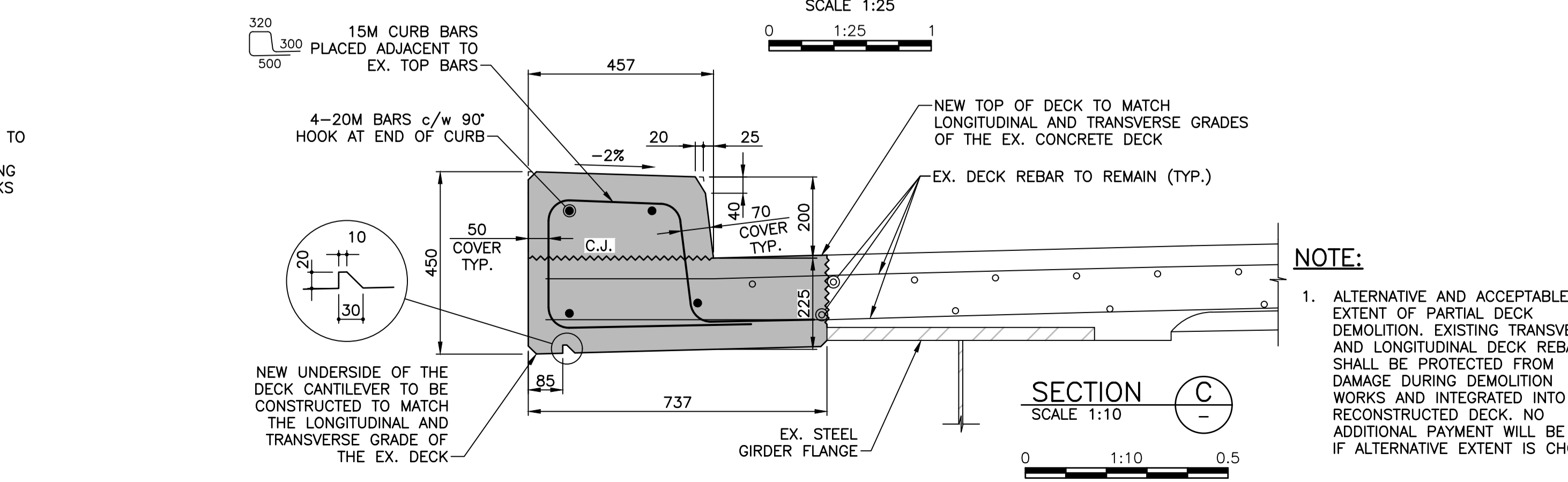
SECTION A
 SCALE 1:10



SECTION B
 SCALE 1:10



NEW DECK CANTILEVER REINFORCING PLAN
 SCALE 1:25



SECTION C
 SCALE 1:10

NOTE:
 1. ALTERNATIVE AND ACCEPTABLE EXTENT OF PARTIAL DECK DEMOLITION. EXISTING TRANSVERSE AND LONGITUDINAL DECK REBAR SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION WORKS AND INTEGRATED INTO THE RECONSTRUCTED DECK. NO ADDITIONAL PAYMENT WILL BE MADE IF ALTERNATIVE EXTENT IS CHOSEN.

Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



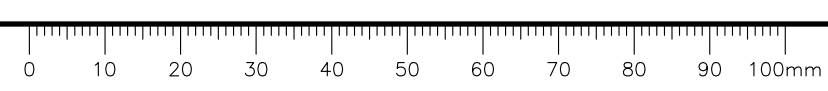
Project title: **BRITISH COLUMBIA**
BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIK CREEK BRIDGE ALASKA HWY

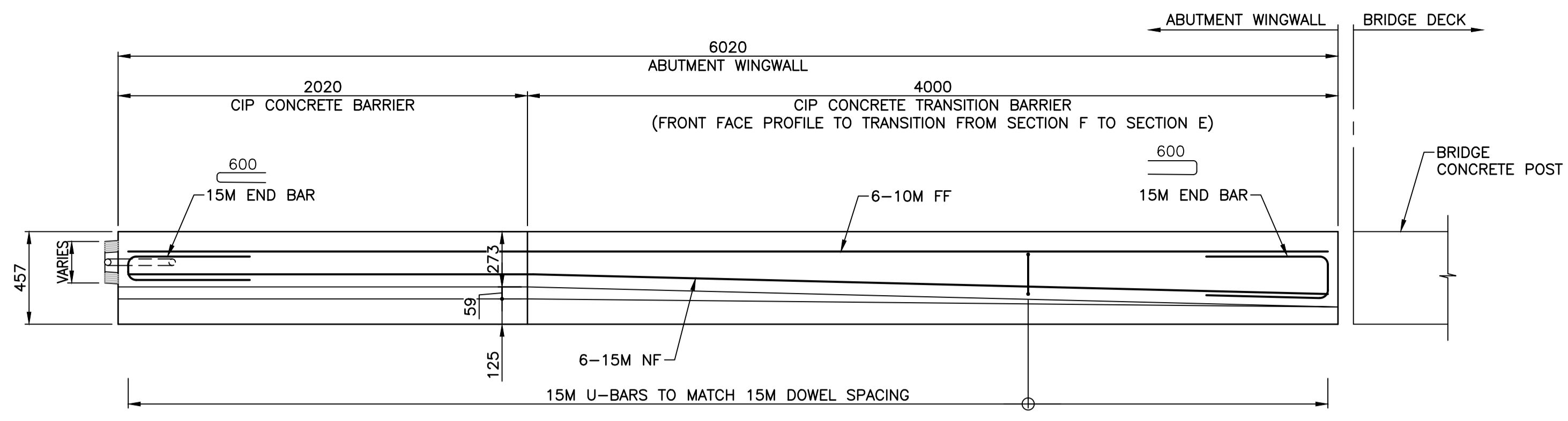
Designed by: **A. KANSAL**
 Drawn by: **S. HUNG**
 Approved by: **J. DONIC/M. BOWSER**
 Project Manager: **R. HAGHIGHI**

Drawing title: **KLEDO RIVER BRIDGE (km 509.1) DETAILS SHEET 1 OF 3**

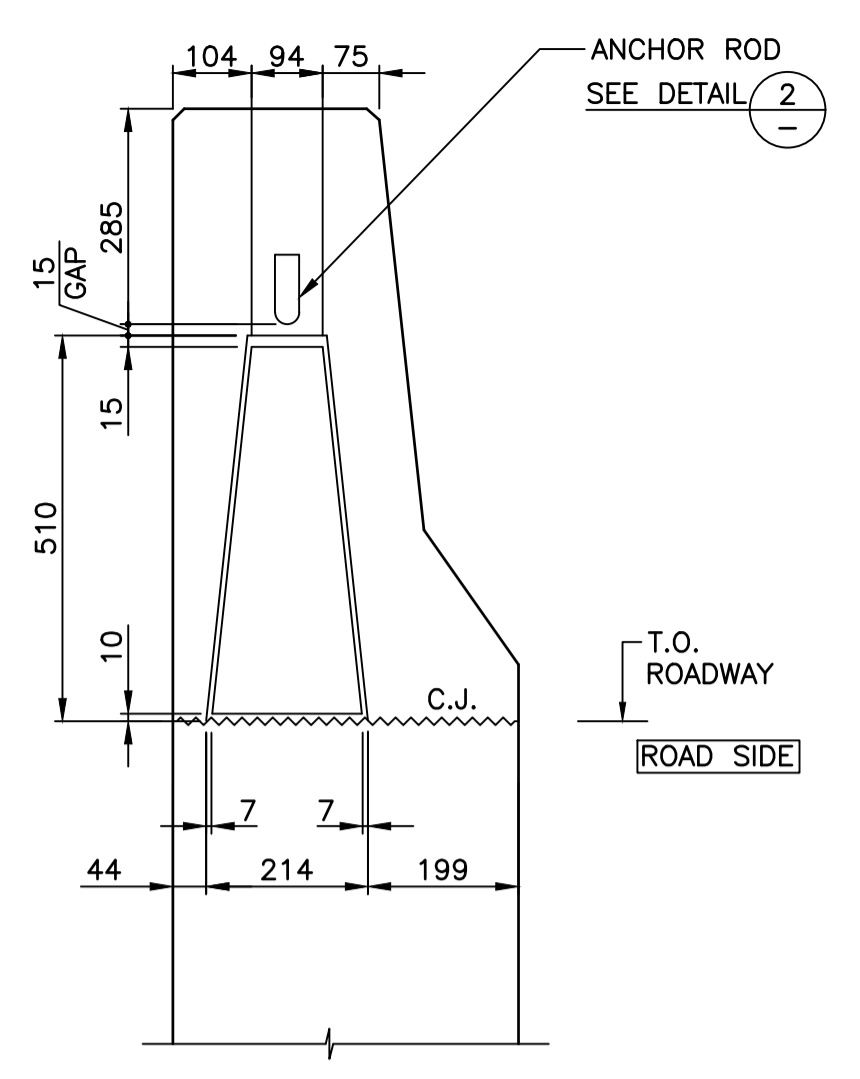
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S04	0

DATE: 2021-06-22 - 2:20pm (harry.yu) 9000193\19M-01601-06 - Kledo and Prochnik Barriers\01 - Kledo River Bridge\02 Drawings\S04 & S05 - Details Sheets 1 to 2.dwg LAYOUT SHEET 1

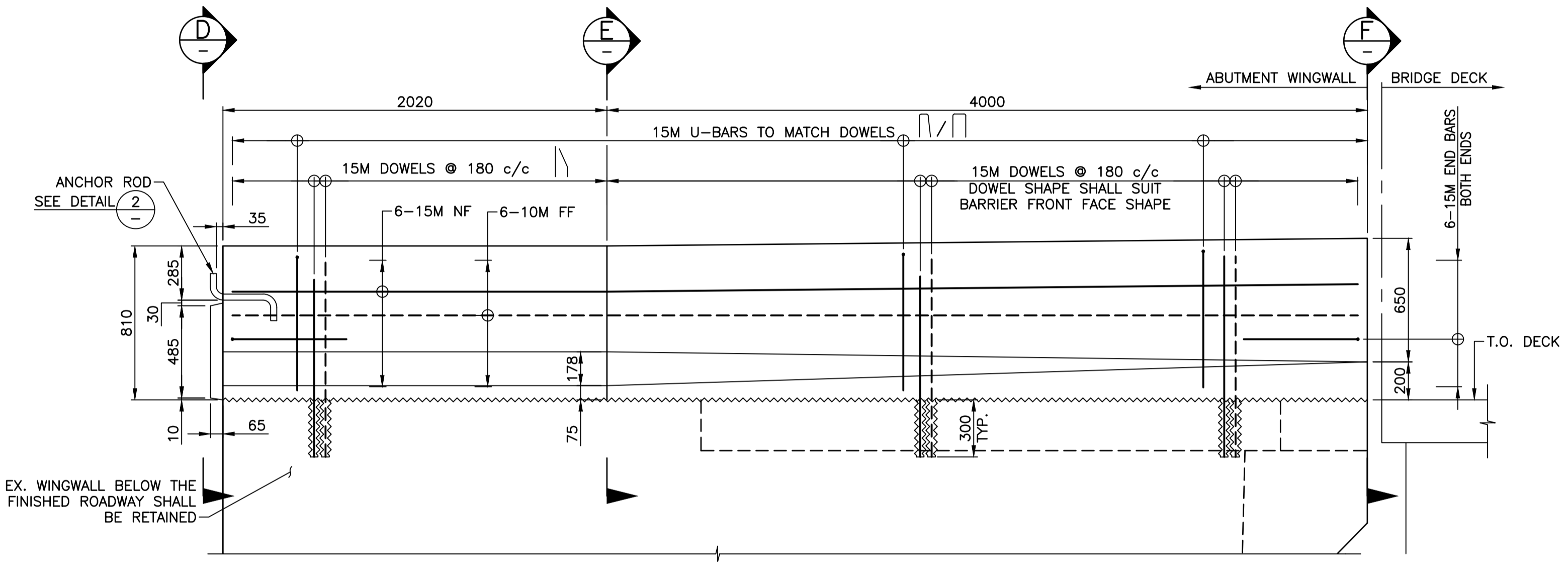




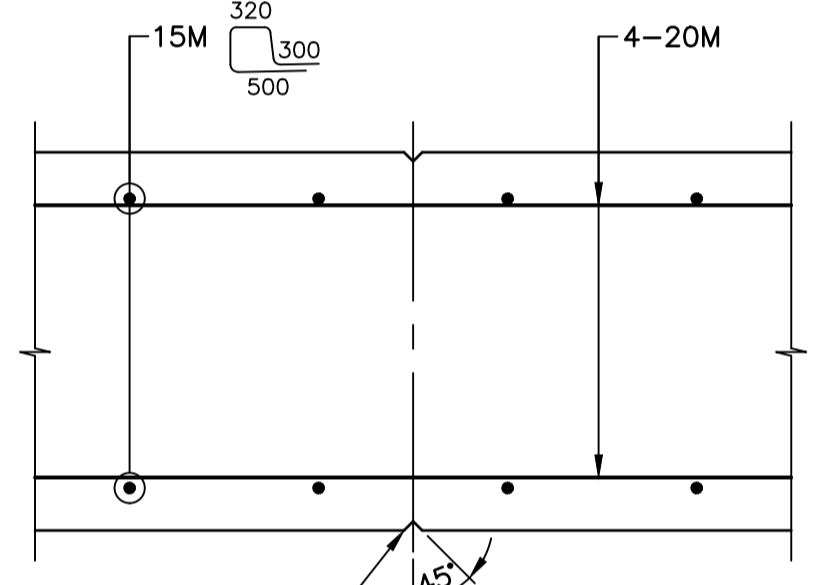
PLAN - TYPICAL BRIDGE TRANSITION BARRIER ALONG THE WINGWALL
 SCALE 1:20



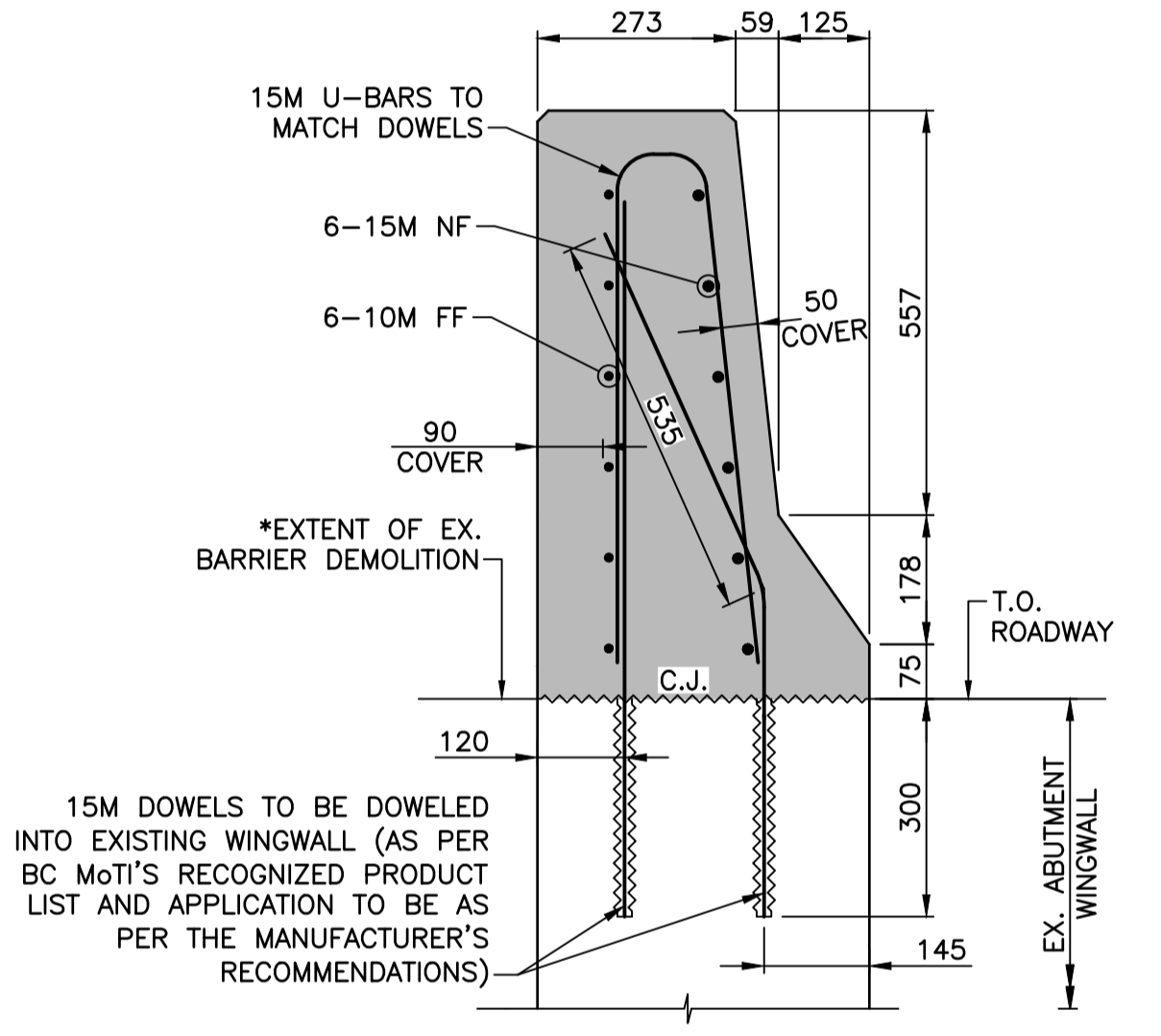
SECTION D
 SCALE 1:10



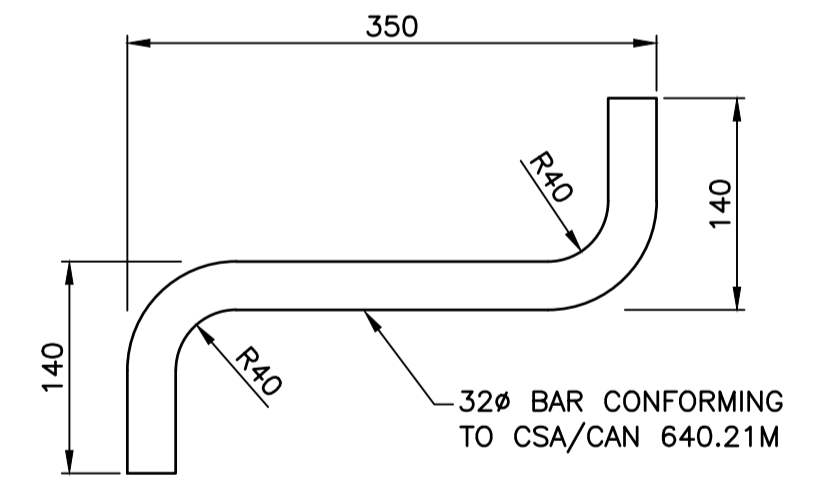
ELEVATION - TYPICAL BRIDGE TRANSITION BARRIER ALONG THE WINGWALL
 SCALE 1:20



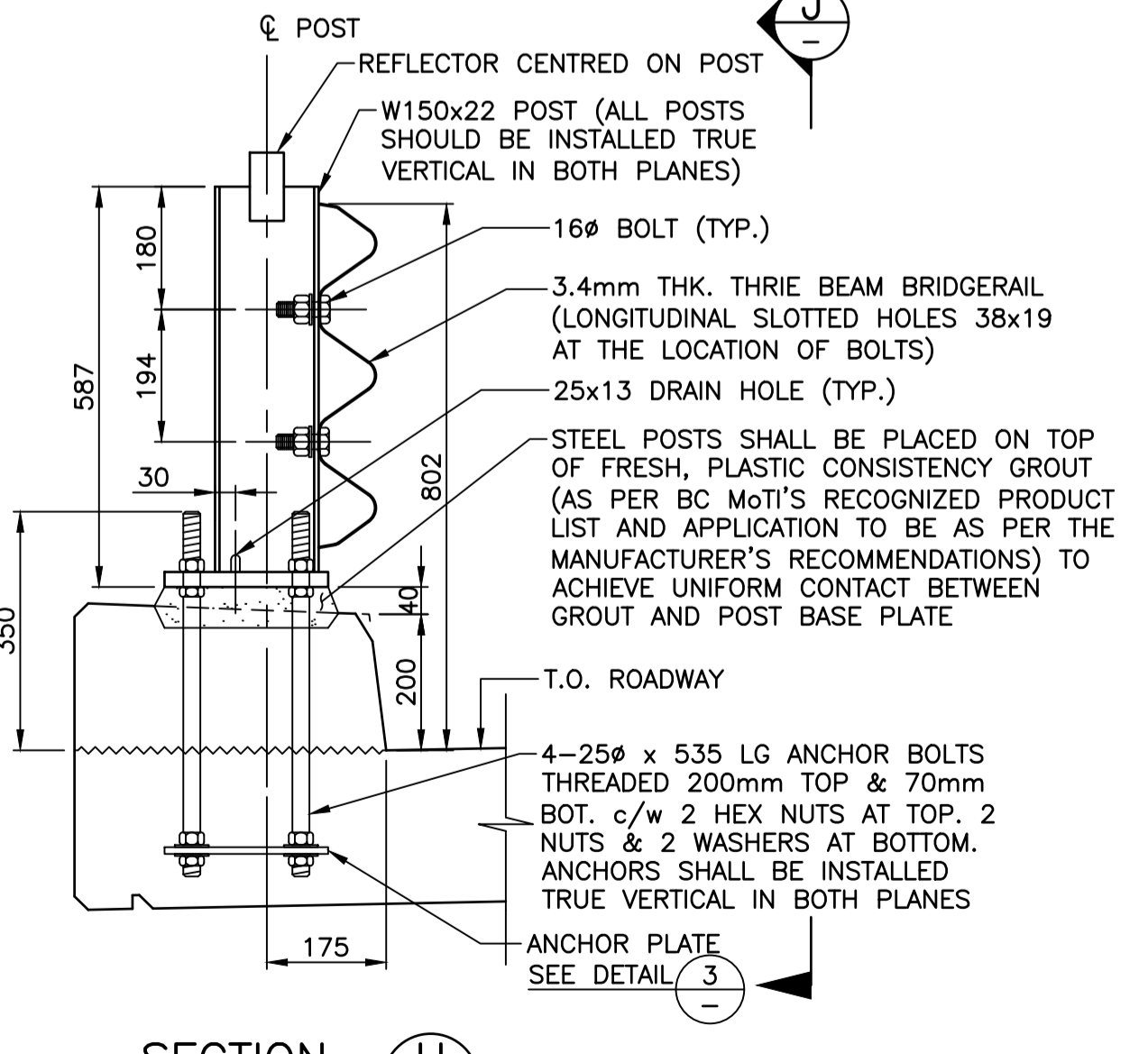
DETAIL 1
 SCALE 1:10



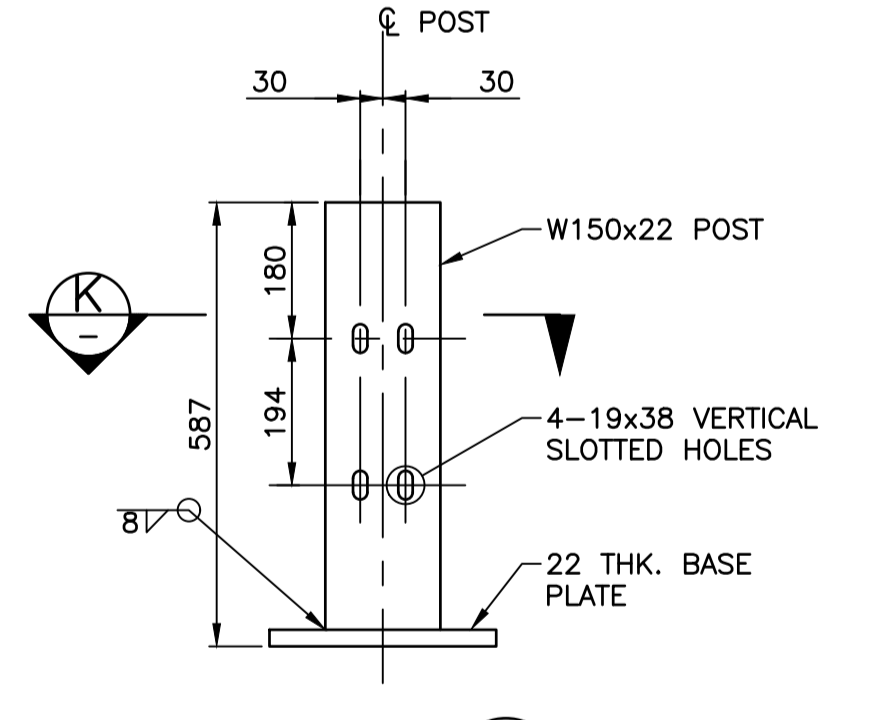
SECTION E
 SCALE 1:10



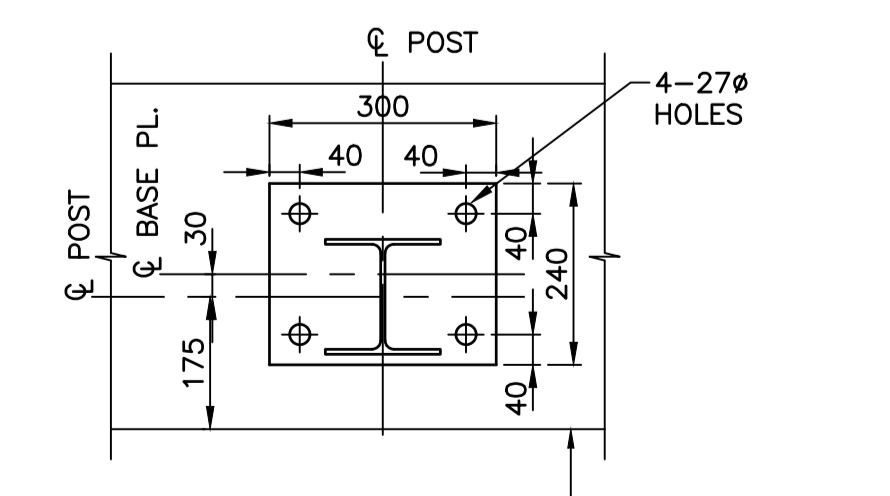
DETAIL 2
 SCALE 1:5



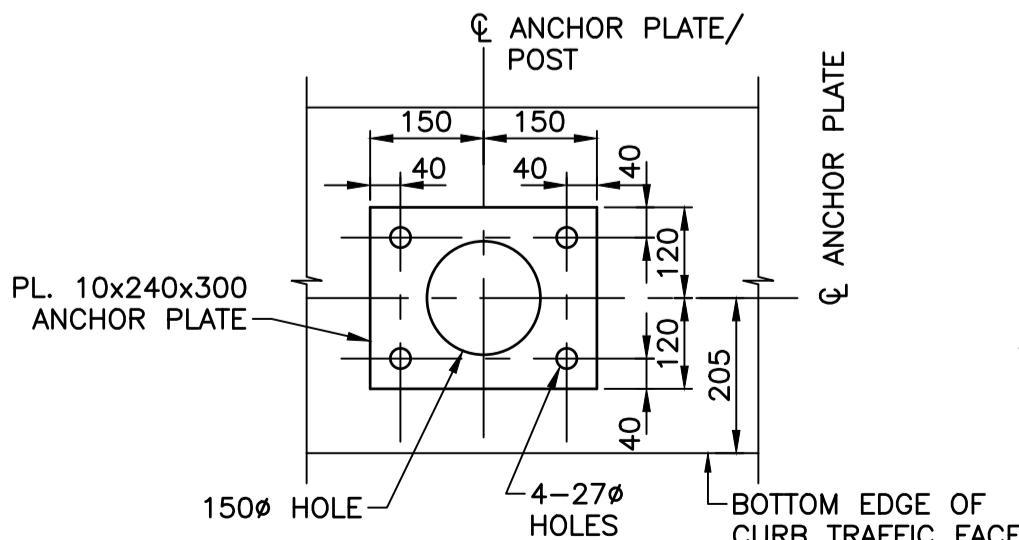
SECTION H
 SCALE 1:10



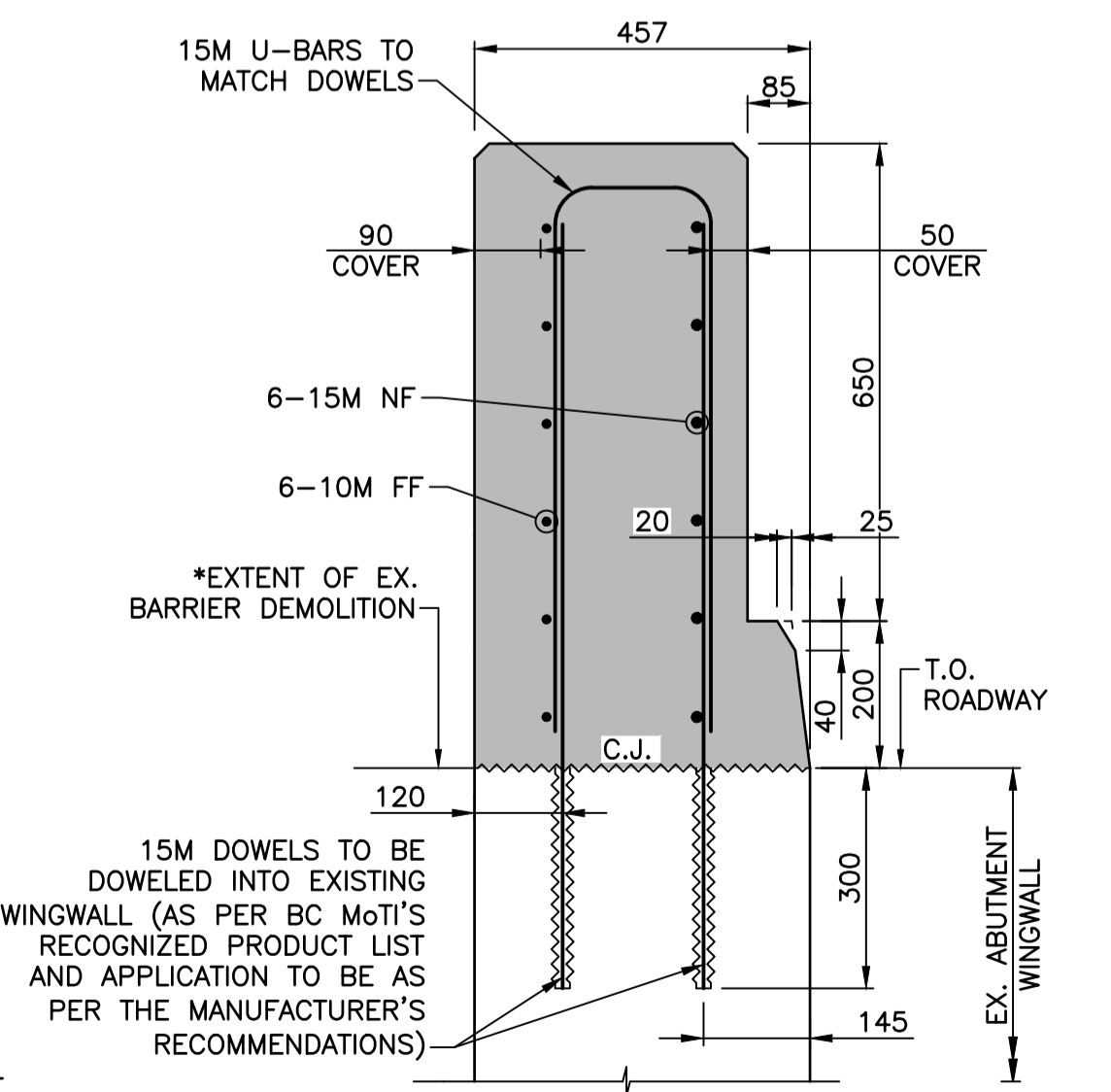
VIEW J
 SCALE 1:10



SECTION K
 SCALE 1:10



DETAIL 3
 SCALE 1:10



SECTION F
 SCALE 1:10



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



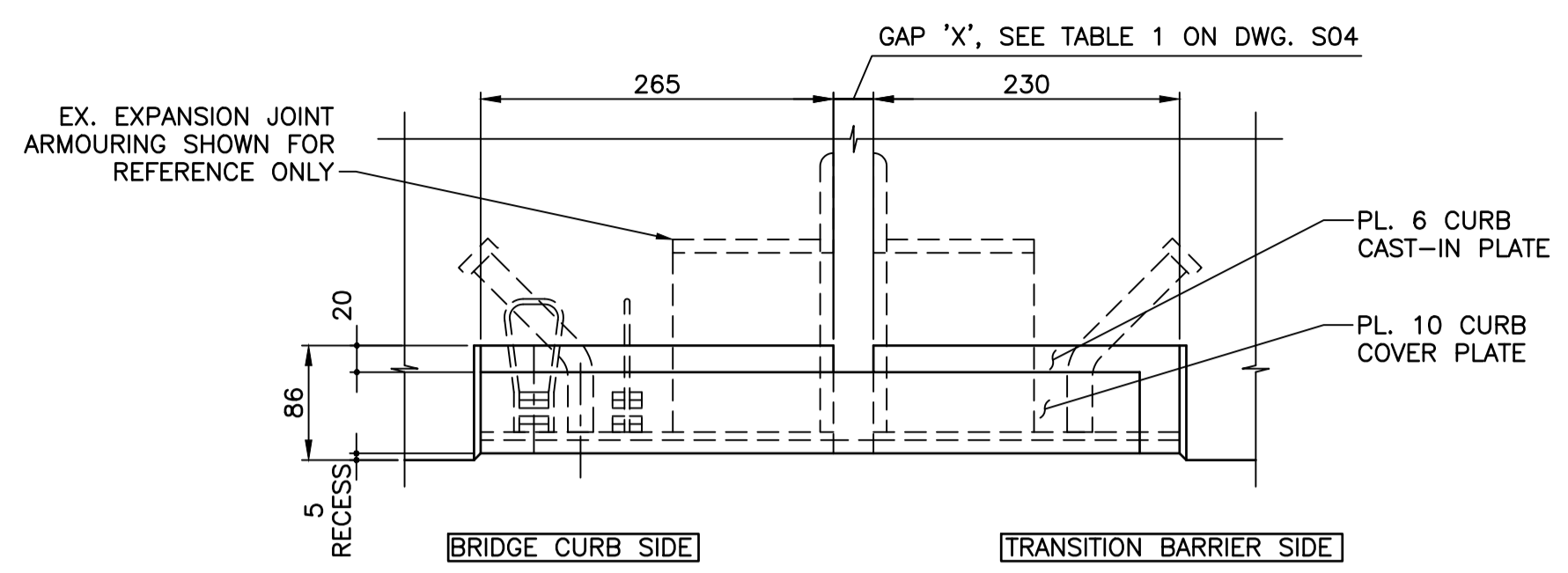
Project title: **BRITISH COLUMBIA**
BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIAK CREEK BRIDGE ALASKA HWY

Designed by: **A. KANSAL**
 Drawn by: **S. HUNG**
 Approved by: **J. DONIC/M. BOWSER**
R. HAGHIGHI

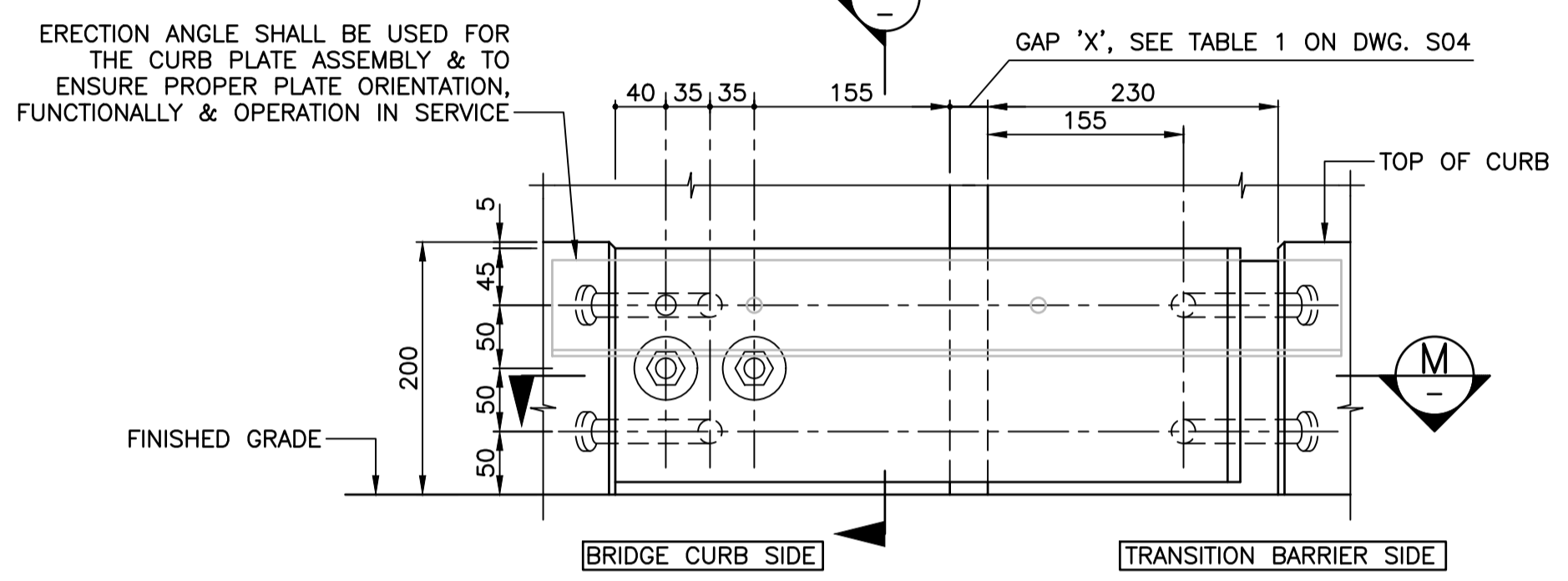
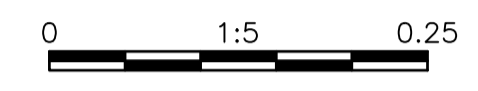
Titre du dessin: **KLEDO RIVER BRIDGE (km 509.1) DETAILS SHEET 2 OF 3**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S05 OF 15	0

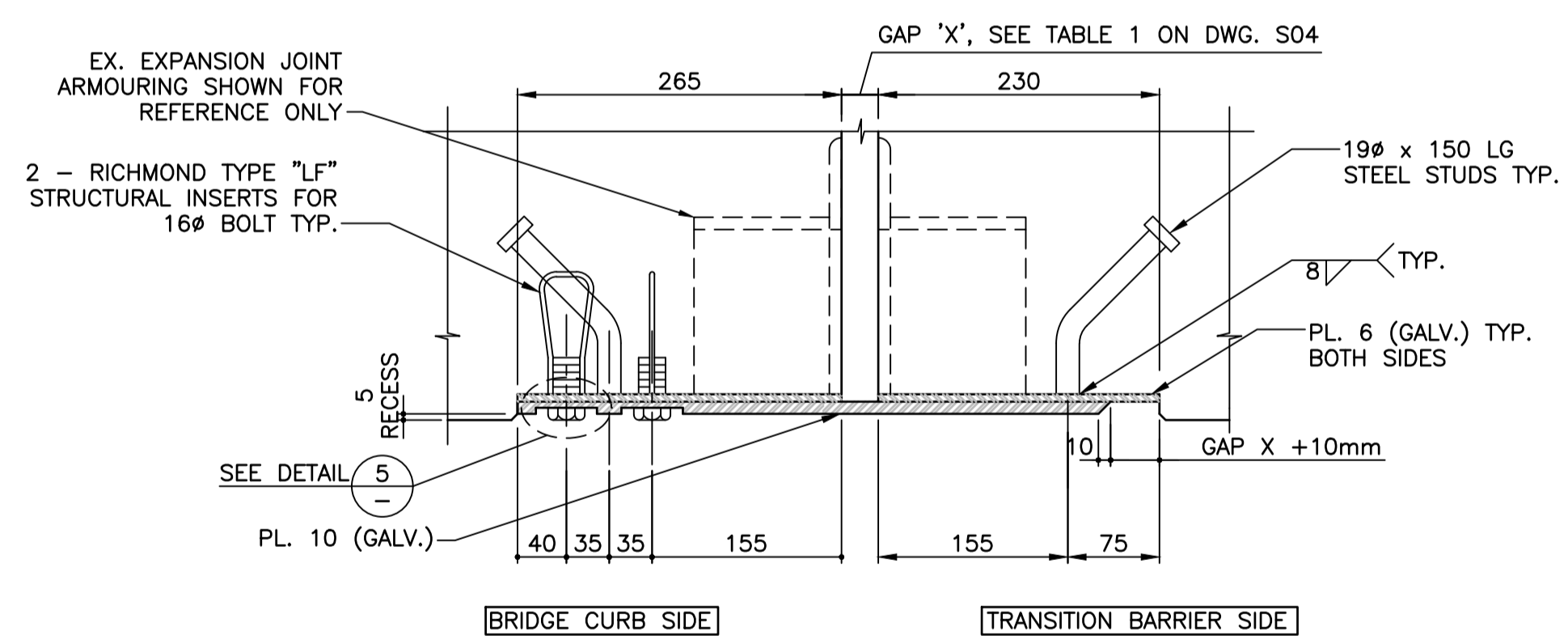
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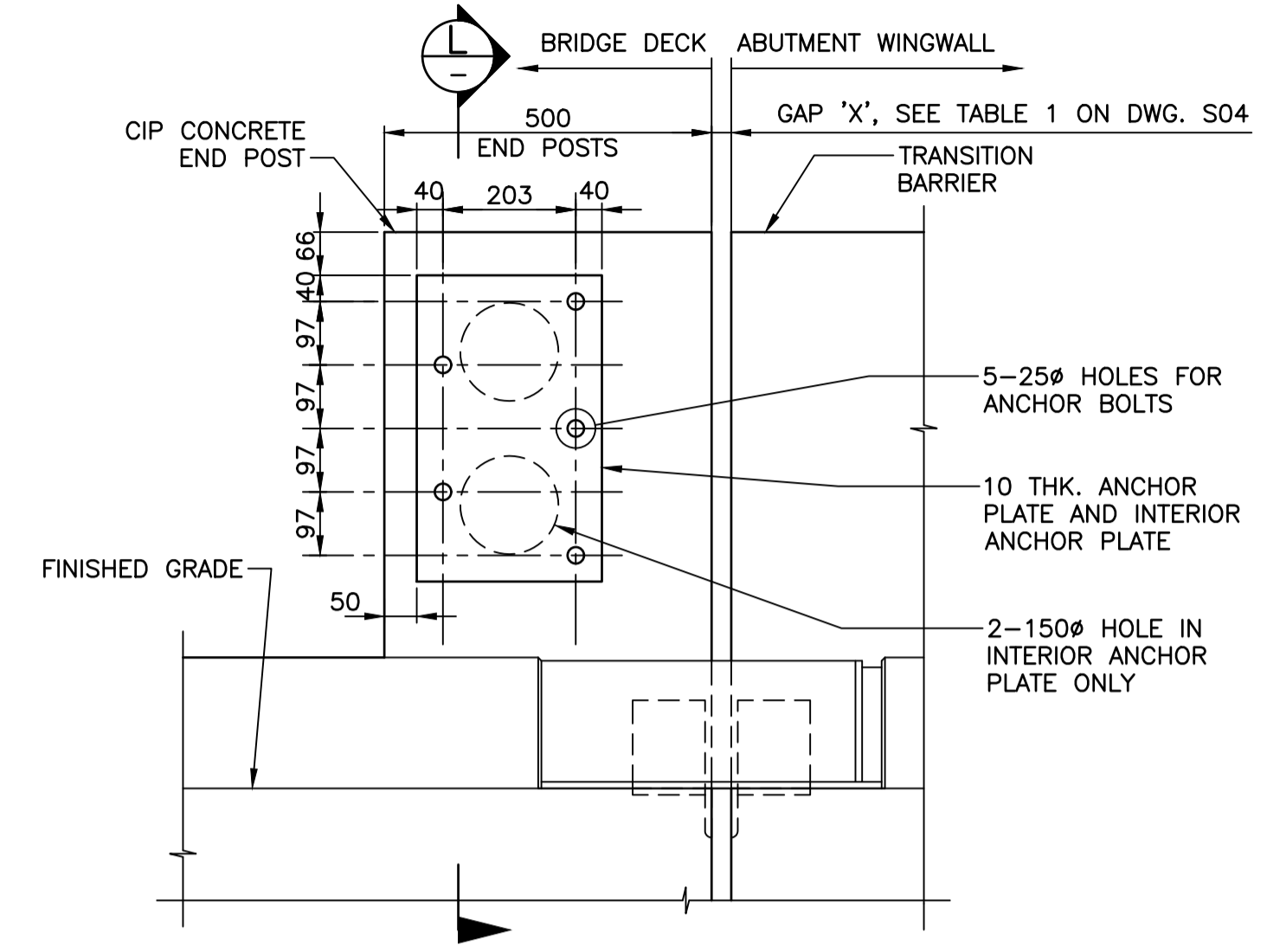
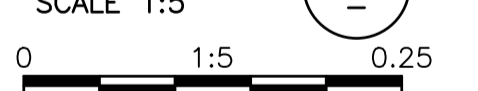
PLAN - TYPICAL CURB PLATE
SCALE 1:5



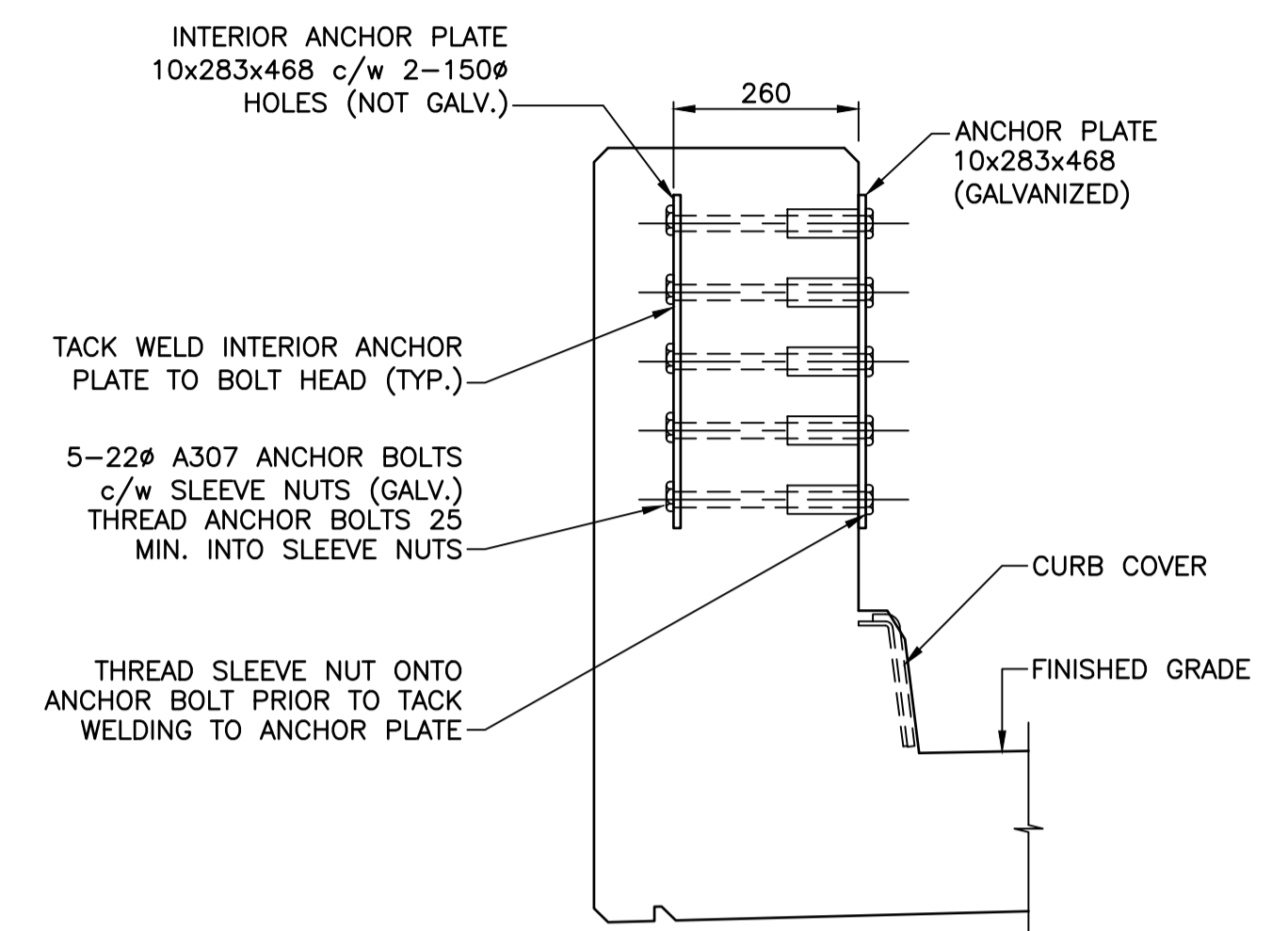
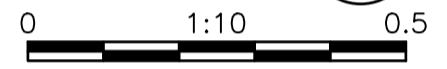
ELEVATION - TYPICAL CURB PLATE
SCALE 1:5



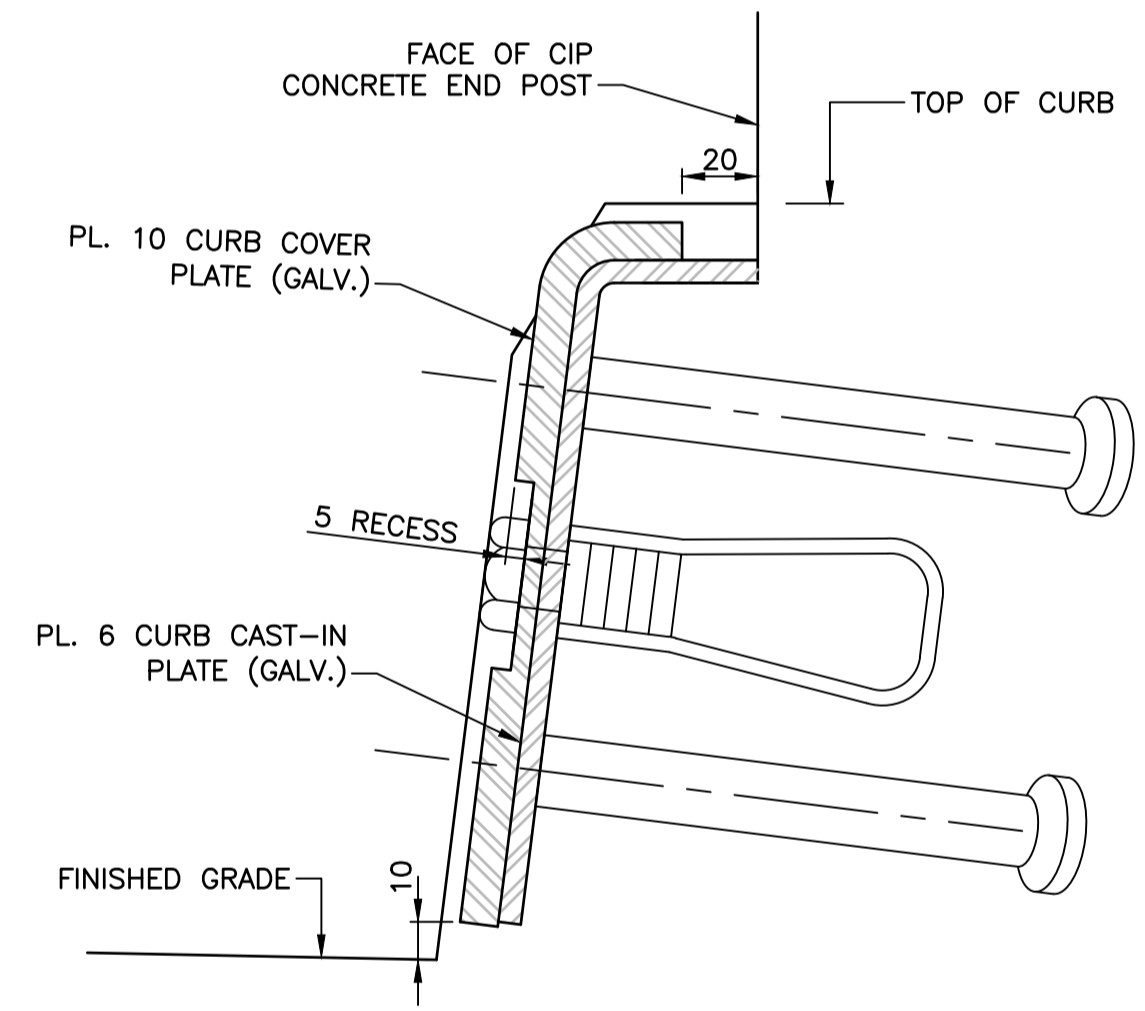
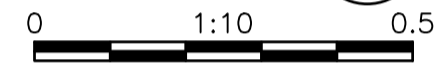
SECTION M
SCALE 1:5



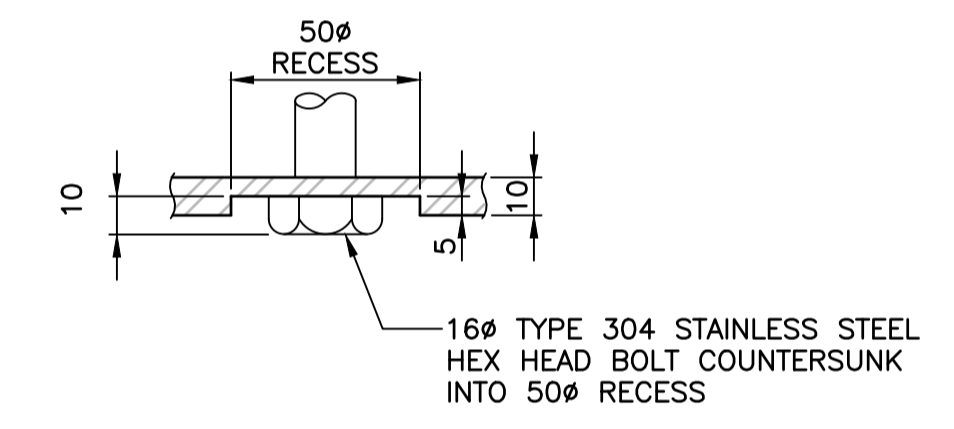
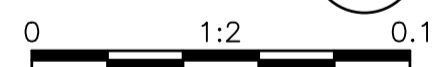
DETAIL 4
SCALE 1:10



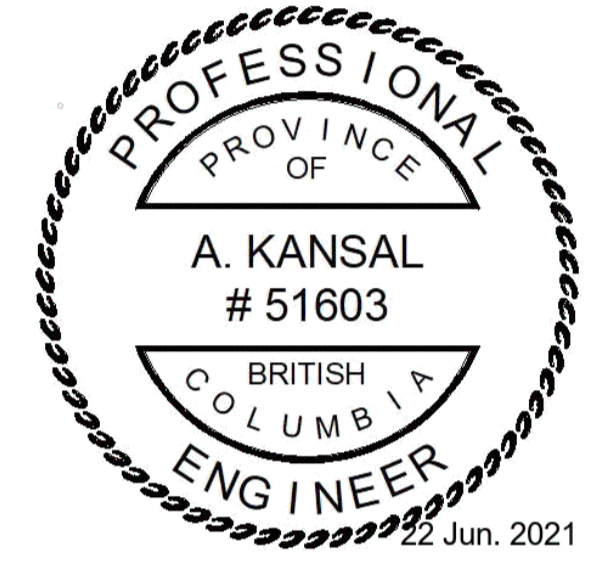
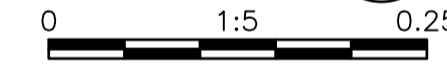
SECTION L
SCALE 1:10



SECTION N
SCALE 1:2



DETAIL 5
SCALE 1:5



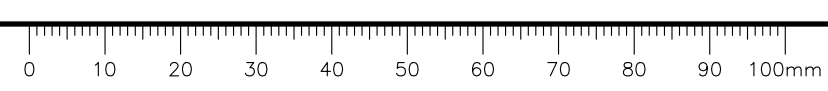
Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22

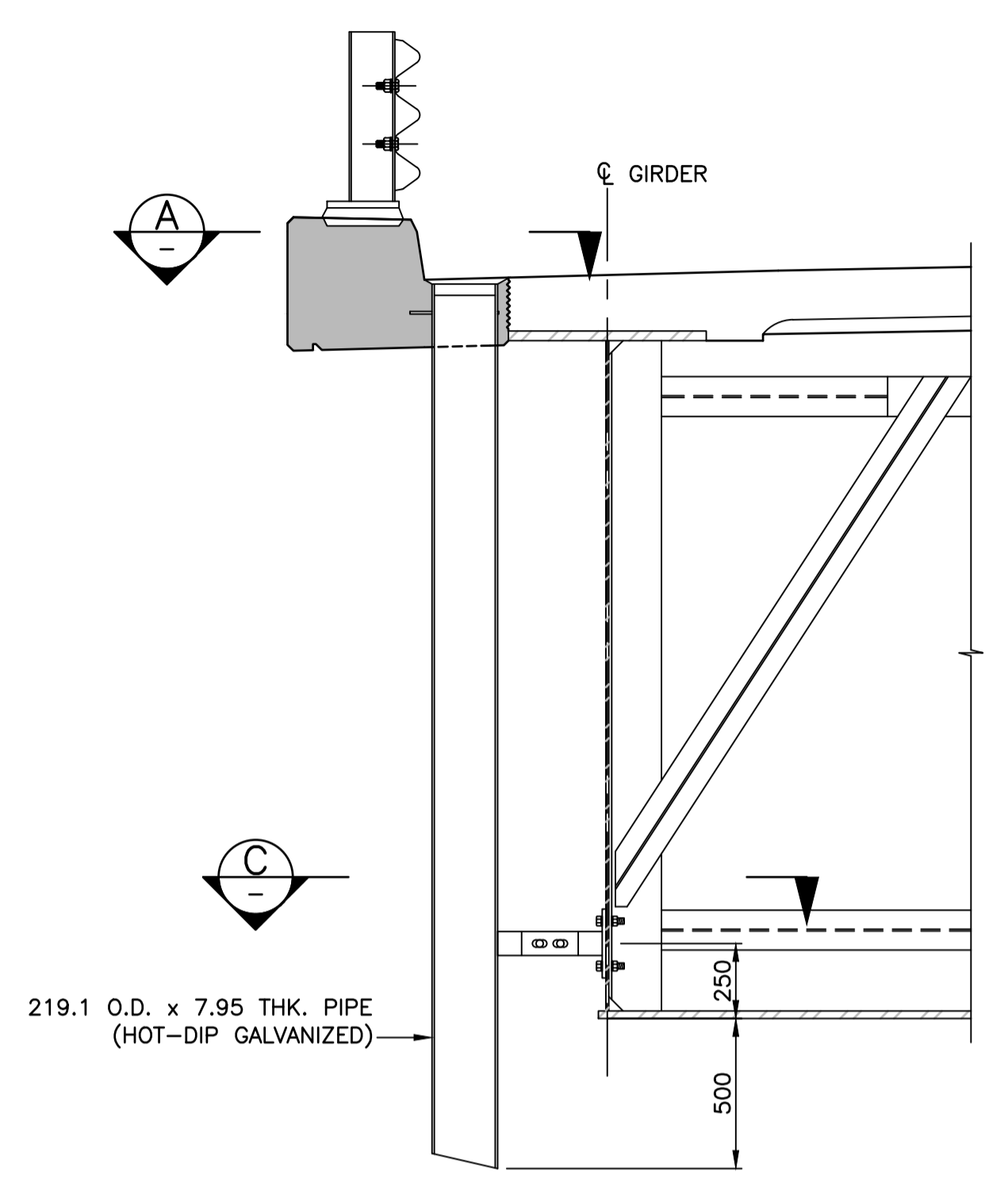
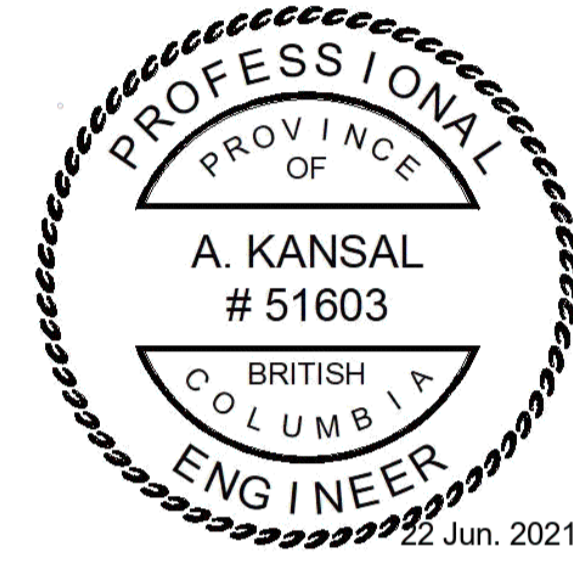


Project title	BRITISH COLUMBIA	
Project title	BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIK CREEK BRIDGE ALASKA HWY	
Designed by	Conçu par A. KANSAL	
Drawn by	Dessiné par S. HUNG	
Approved by	Approuvé par J. DONIC/M. BOWSER	
PWSSC Project Manager	Administrateur de Projets TPSOC R. HAGHIGHI	
Drawing title	Titre du dessin KLEDO RIVER BRIDGE (km 509.1) DETAILS SHEET 3 OF 3	

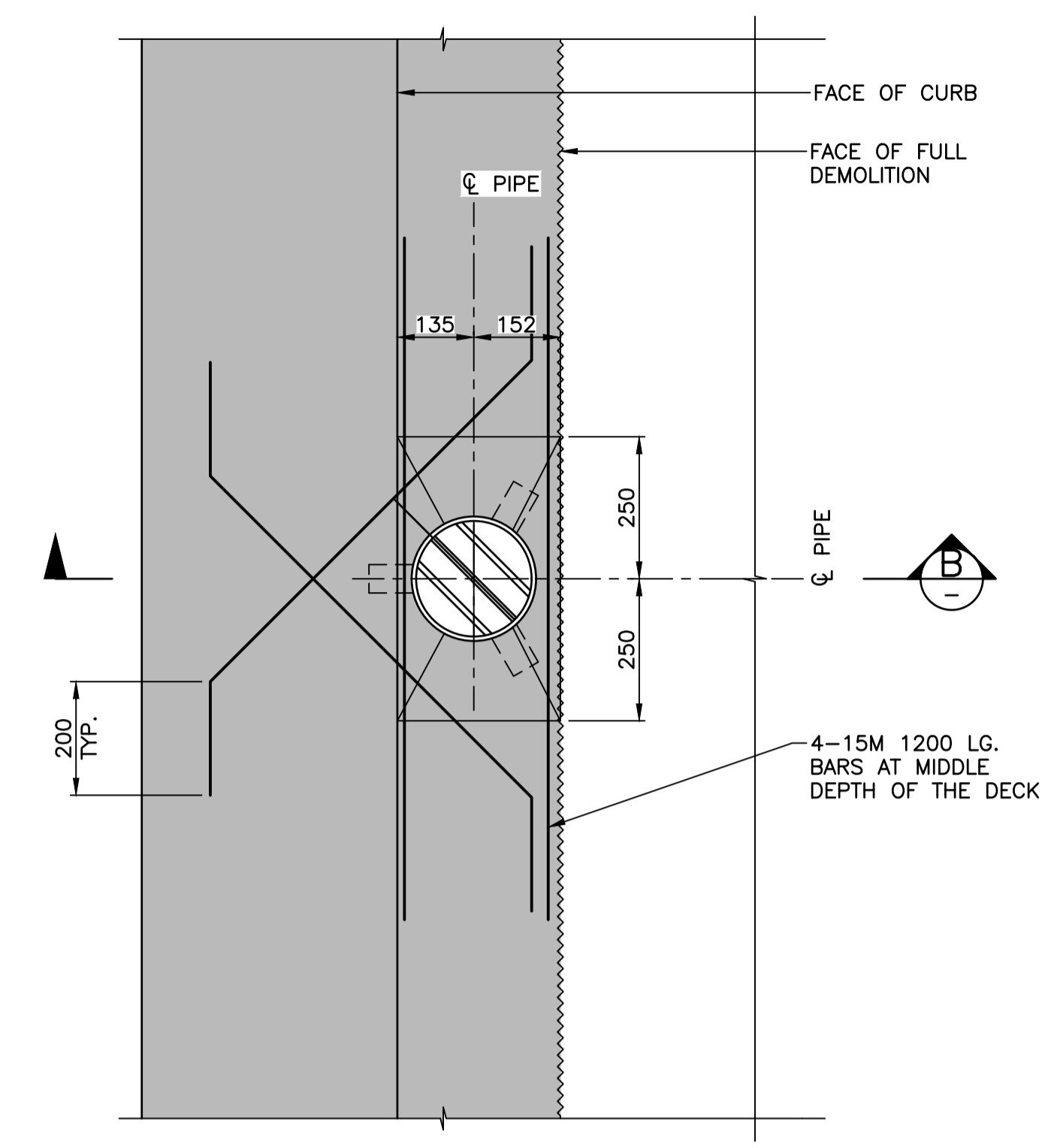
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S06 OF 15	0

DATE: 2021-06-22 - 2:20pm (harry.nyu) - Kledo River Bridge\02 Drawings\S06 - Details Sheets 3.dwg
 LAYOUT DETAILS - SHEET 3

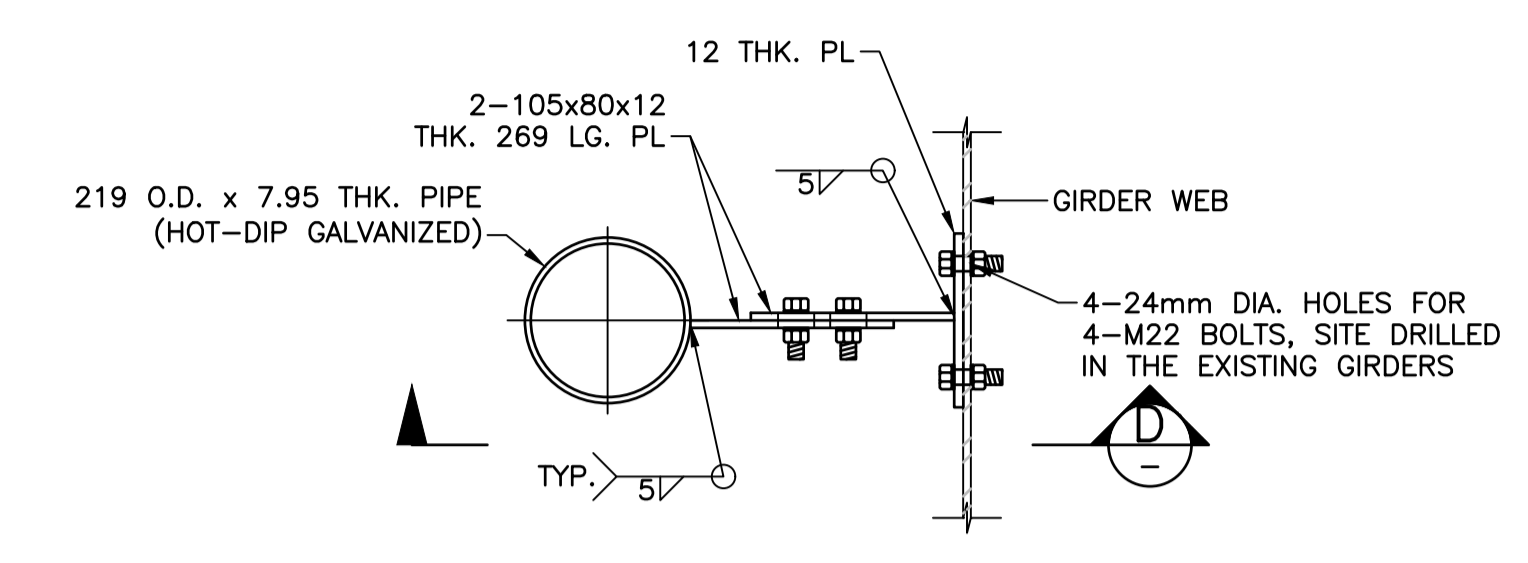




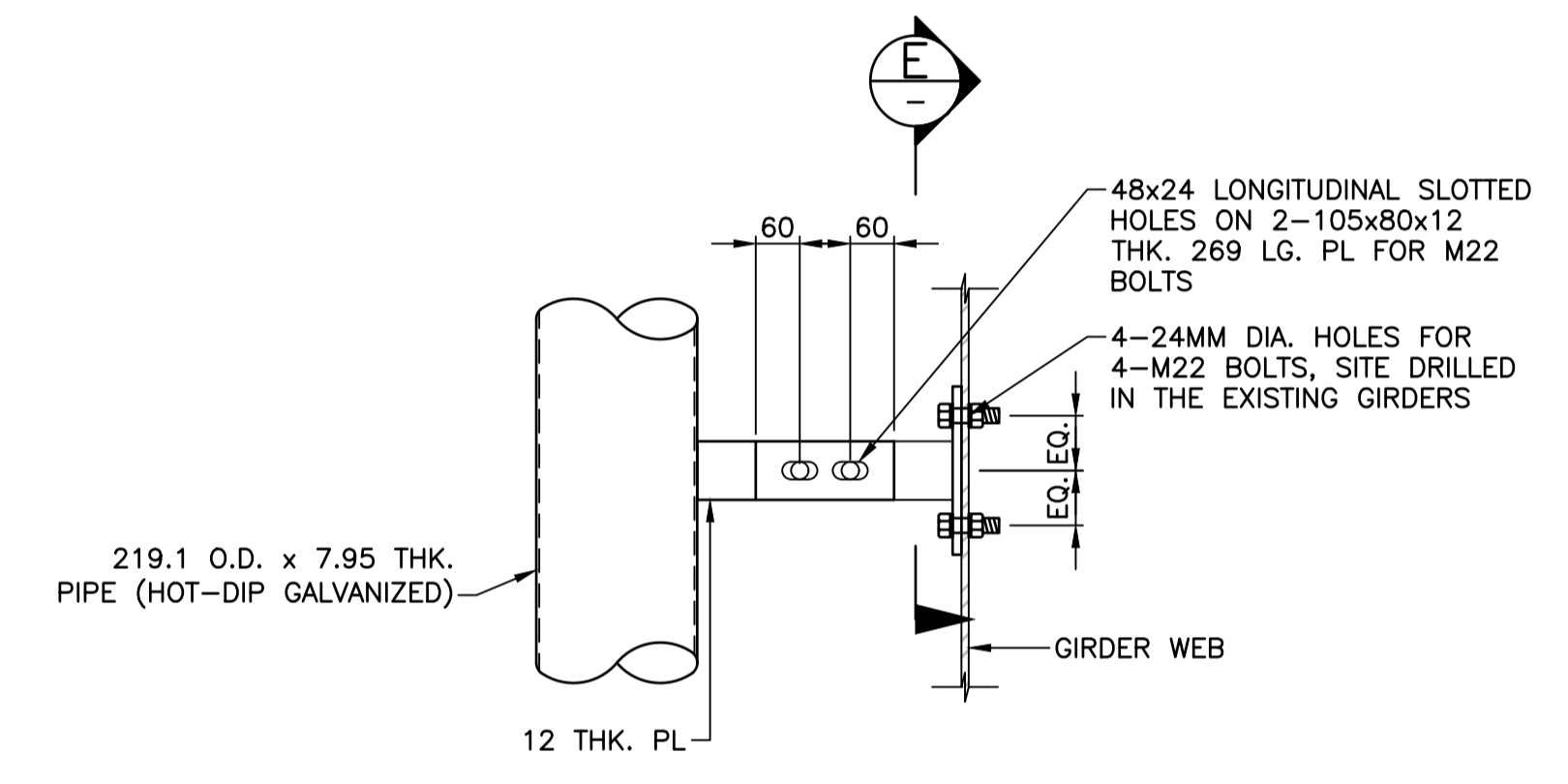
ELEVATION - TYPICAL DRAIN
SCALE 1:20



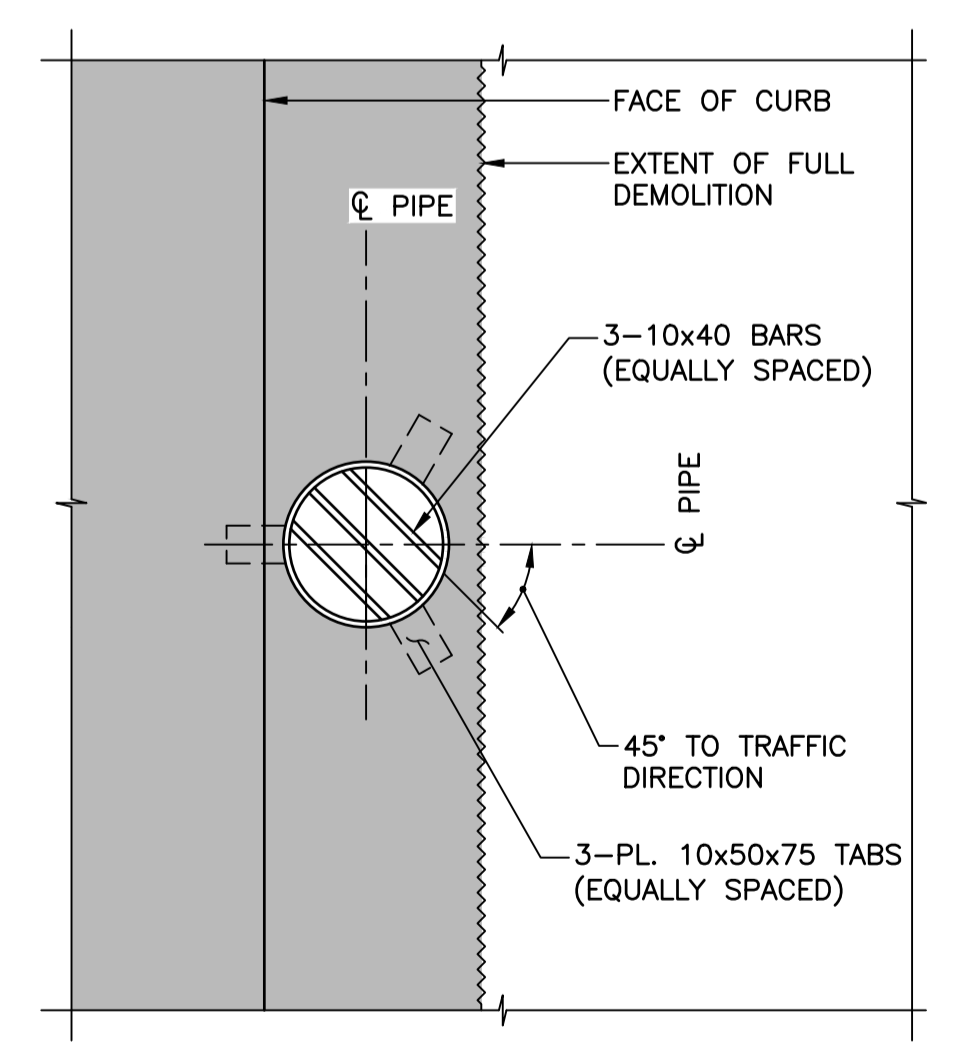
PLAN - TYPICAL DRAIN
SCALE 1:10



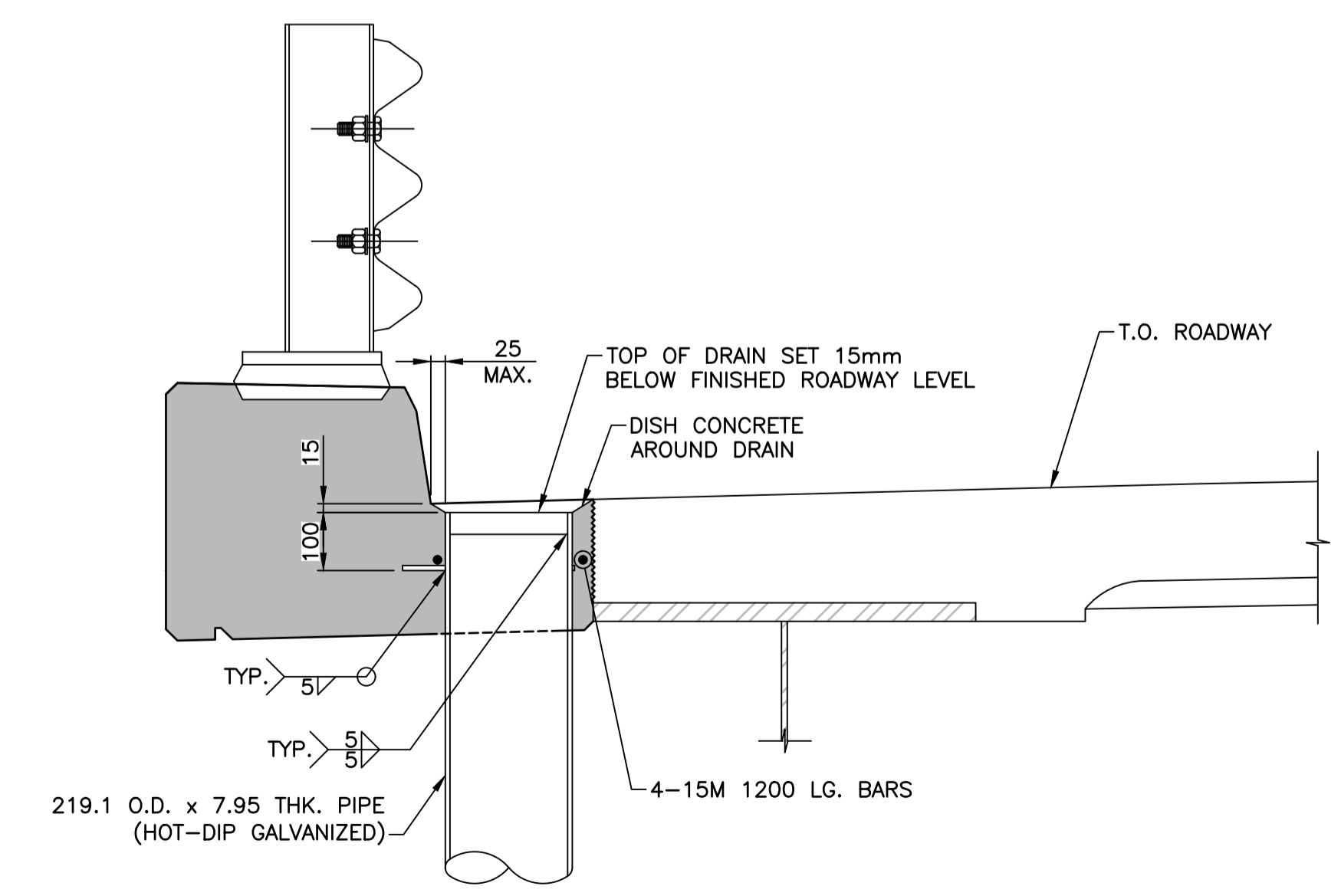
SECTION C
SCALE 1:10



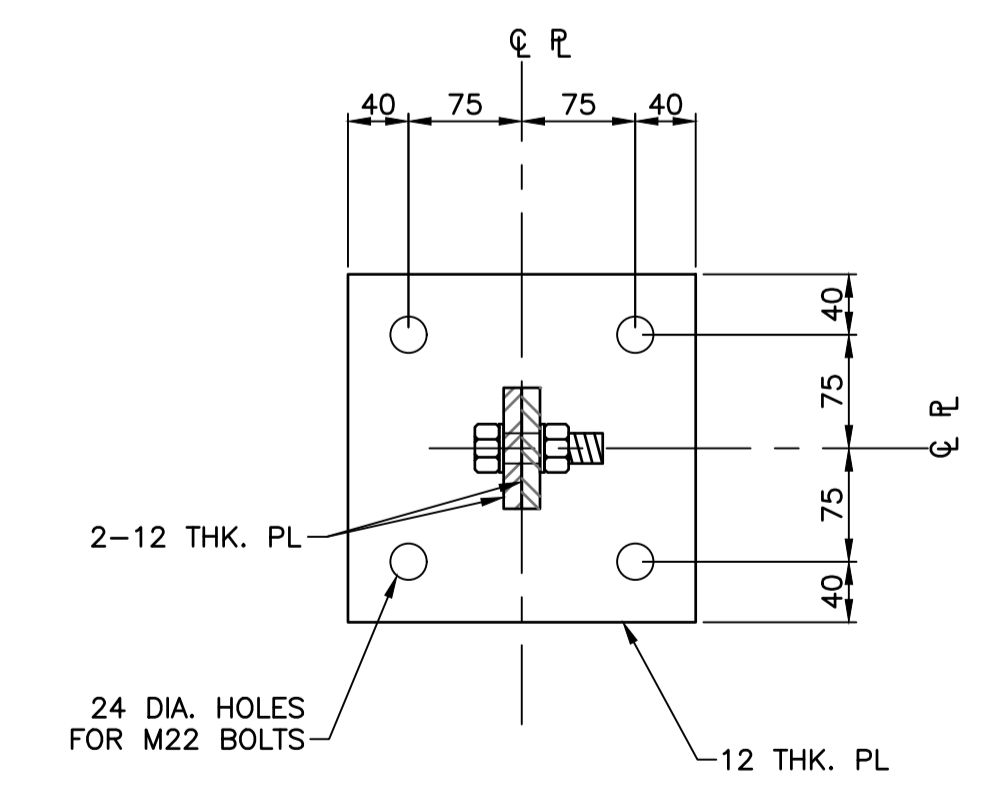
SECTION D
SCALE 1:10



SECTION A
SCALE 1:10



SECTION B
SCALE 1:10



SECTION E
SCALE 1:5

Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



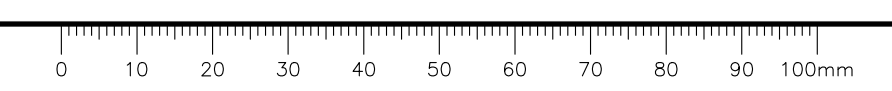
Project title: BRITISH COLUMBIA
BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY

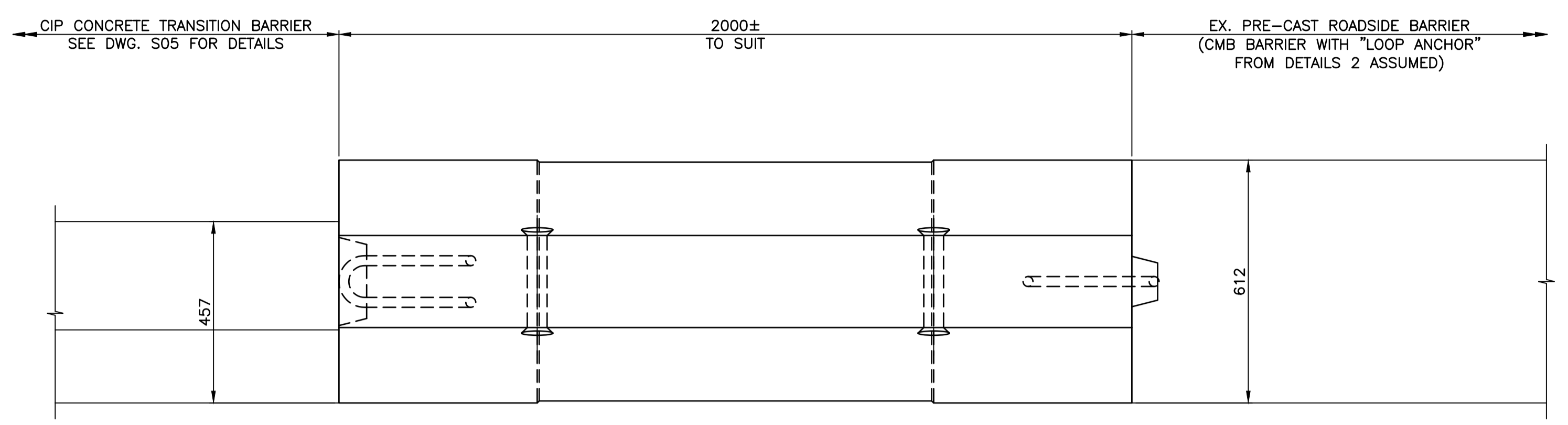
Designed by: A. KANSAL
Drawn by: S. HUNG
Approved by: J. DONIC/M. BOWSER
PWSCC Project Manager: R. HAGHIGHI

Drawing title: KLEDO RIVER BRIDGE (km 509.1) DECK DRAIN DETAILS

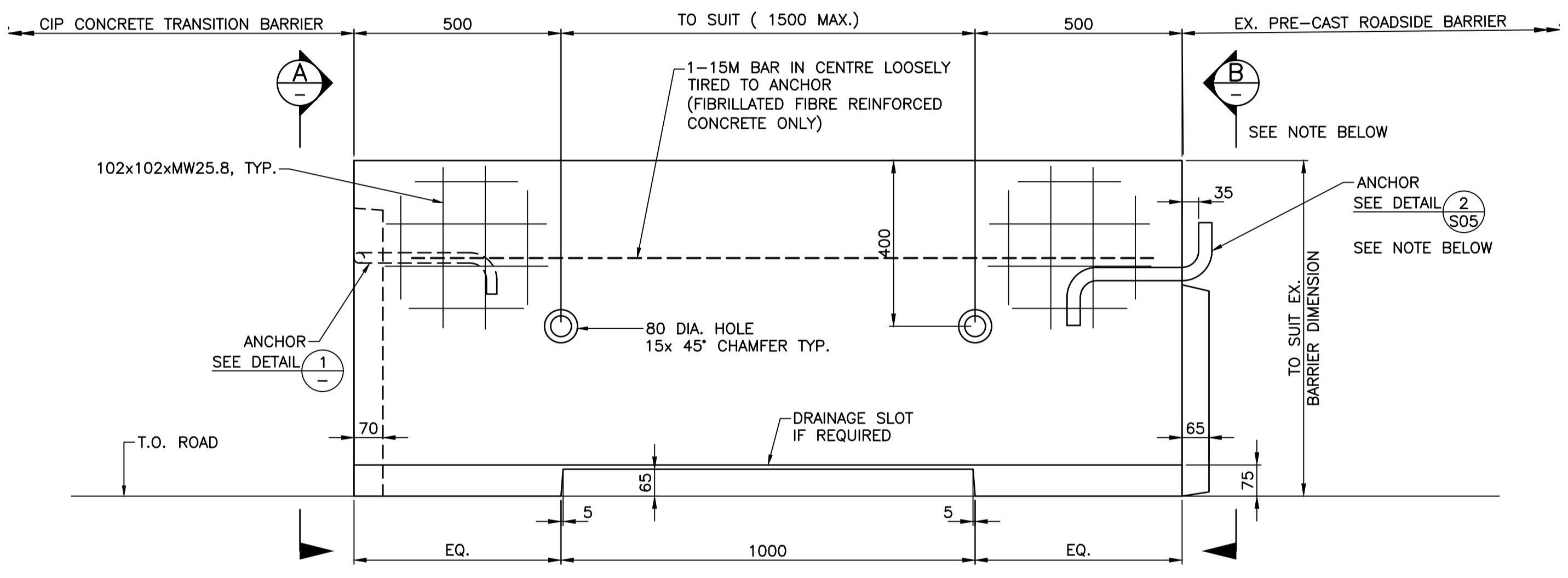
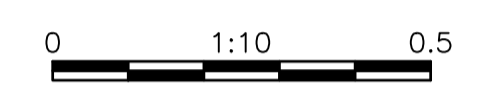
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S07 OF 15	0

DATE: 2021-06-22 - 2:20pm - 01601-06 - Kleido and Prochniak Barriers\001 - Kleido River Bridge\02 Drawings\S07 - DECK DRAIN DETAILS.dwg

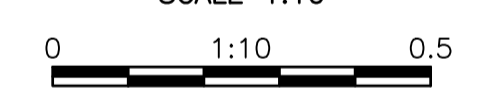




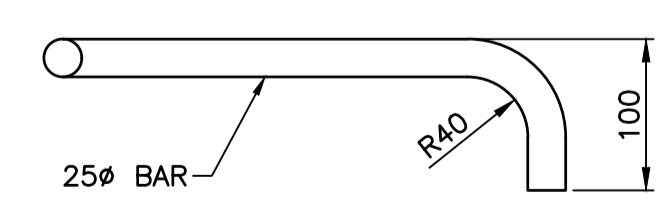
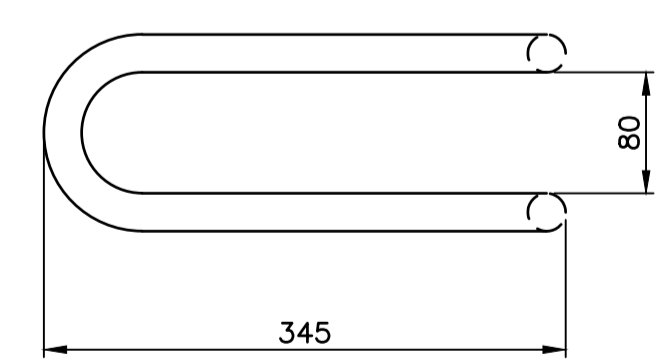
PLAN – NEW CIP CONCRETE ROADSIDE BARRIER
 SCALE 1:10



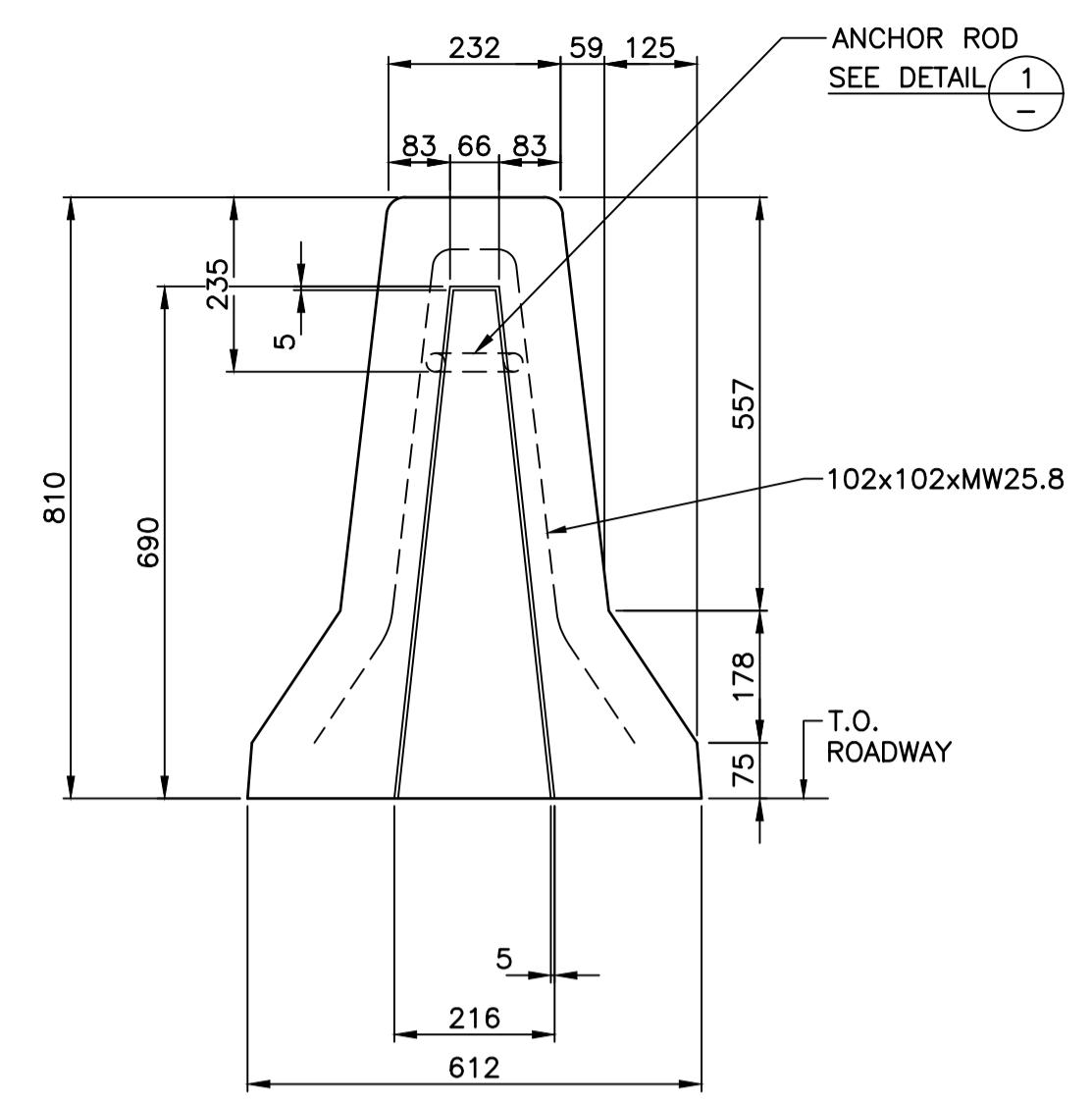
ELEVATION – NEW CIP CONCRETE ROADSIDE BARRIER
 SCALE 1:10



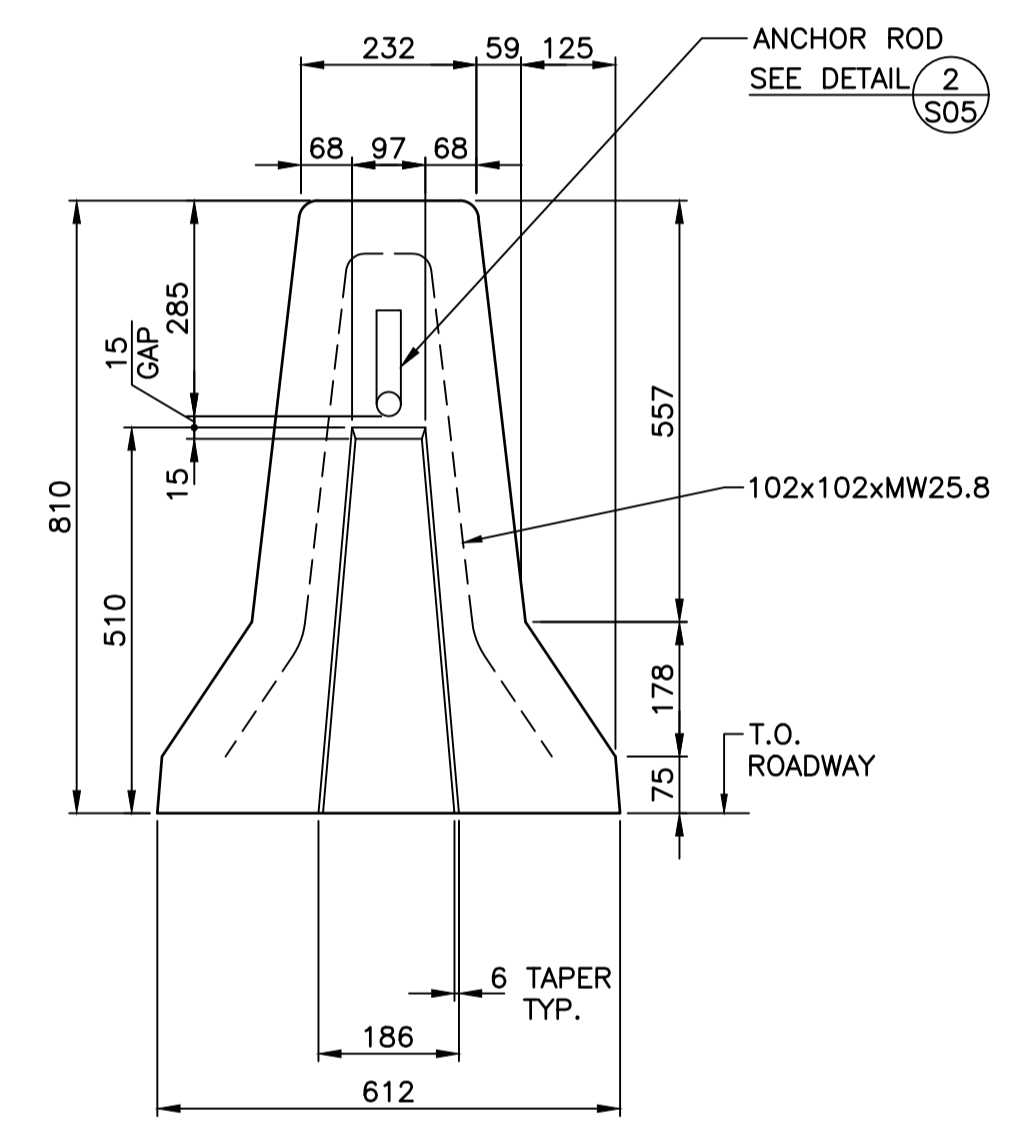
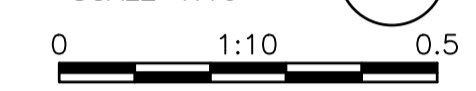
NOTE:
 BARRIER KEY AND ANCHOR DETAILS SHOWN ASSUME THAT THE EXISTING ROADSIDE BARRIER IS A PRE-CAST CMB TYPE BARRIER AND HAS ANCHOR DETAIL AS SHOWN ON SECTION A. IF EXISTING PRE-CAST ROADSIDE BARRIER HAS ANCHOR DETAIL AS PER SECTION B THE NEW CIP CONCRETE ROADSIDE BARRIER SHALL BE CONSTRUCTED TO REFLECT ANCHOR AND KEY DETAIL SHOWN ON SECTION A.



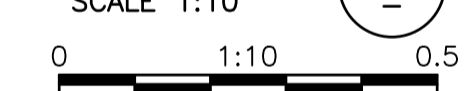
DETAIL 1
 SCALE 1:5



SECTION A
 SCALE 1:10



SECTION B
 SCALE 1:10



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



Project title: **BRITISH COLUMBIA**

BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIK CREEK BRIDGE ALASKA HWY

Designed by: **A. KANSAL**

Drawn by: **S. HUNG**

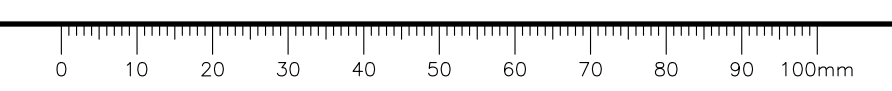
Approved by: **J. DONIC/M. BOWSER**

PWSSC Project Manager / Administrateur de Projets TPSOC: **R. HAGHIGHI**

Drawing title: **KLEDO RIVER BRIDGE (km 509.1) ROADWAY TRANSITION BARRIER**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114774.002	S08 OF 15	0

DATE: 2021-06-22 22:10pm (harry.yu) Kledo River Bridge\02 Drawings\S08 - ROADWAY TRANSITION BARRIER.dwg
 LAYOUT: ROADWAY TRANSITION BARRIER



1. GENERAL

- 1.1 THE METRIC SYSTEM OF MEASUREMENT IS USED ON ALL DRAWINGS. ELEVATIONS AND STATIONS WHERE SHOWN ARE IN METERS AND ALL OTHER DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE (U.N.O.).
- 1.2 SPECIFIC STRUCTURAL DRAWING NOTES SUPERSEDE GENERAL NOTES WHERE THERE ARE DIFFERENCES.
- 1.3 CONSTRUCTION OF THE WORKS TO COMPLY WITH THE PROJECT SPECIFICATIONS.
- 1.4 EXISTING BRIDGE DETAILS ARE BASED ON 1977 PSPC STRUCTURES (BRIDGES) DIVISION RECORD DRAWINGS. THE ACCURACY OF THE INFORMATION HAS NOT BEEN VERIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM ALL NECESSARY DIMENSIONS SUCH THAT THE WORK CAN BE CONSTRUCTED AS SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL INFORM THE DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCY IDENTIFIED BETWEEN NOTED RECORD DRAWINGS, SITE MEASUREMENTS, AND THE CONTRACT DRAWINGS.
- 1.5 REFERENCE DRAWING LIST:
SELECTED 1977 RECORD DRAWINGS

DRAWING NUMBER	TITLE
138-16-1	GENERAL LAYOUT
138-16-3	ABUTMENT CONCRETE
138-16-4	ABUTMENT REINFORCING
138-16-6	STEEL GIRDERS
138-16-7	DECK CONCRETE AND RAILING LAYOUT
138-16-8	DECK REINFORCING AND JOINTS

2. DESIGN DATA

- 2.1 STRUCTURAL DESIGN FOR ALL RECONSTRUCTED COMPONENTS OF THE EXISTING BRIDGE IS BASED ON CAN/CSA-S6-19.
- 2.2 DESIGN LIVE LOAD FOR THE COMPONENTS THAT ARE WITHIN THE SCOPE OF BARRIER REPLACEMENT BCL-625.
- 2.3 BARRIER TEST LEVEL WAS ESTABLISHED IN ACCORDANCE WITH CAN/CSA S6-19 SECTION 12 AND TRAFFIC COUNT DATA PROVIDED BY PSPC.
- 2.4 BARRIER TEST LEVEL DESIGN DATA:
MAX. AADT FOR PROCHNIK RIVER BRIDGE = 392
POSTED SPEED = 100 km/h
TRUCK PROPORTION = 40% (MAXIMUM FROM S6-19, TAB. 12.5)
- 2.5 THE DESIGN OF BRIDGERAIL POSTS, ANCHORAGE AND MODIFICATIONS TO BRIDGE DECK CANTILEVER WAS BASED ON THE LOAD EFFECTS OF THE BCL-625 ON THE RECONSTRUCTED PORTION OF THE DECK CANTILEVER AND THE TL-2 BARRIER IMPACT FORCES.
- 2.6 THE DESIGN OF BRIDGE DECK CANTILEVER INCLUDES A DEAD LOAD ALLOWANCE OF 50mm FOR A FUTURE CONCRETE OVERLAY, EQUIVALENT TO 1.2kPa.

3. SCOPE OF WORK

- 3.1 REMOVAL AND DISPOSAL OF EXISTING BRIDGERAILS, AND CONCRETE CURBS ALONG THE BRIDGE DECK AND ABUTMENT WINGWALLS.
- 3.2 REMOVAL OF THE EXISTING DECK CANTILEVER AND BRIDGE DECK DRAINS (SALVAGING EXISTING DECK REINFORCING IN THE DECK CANTILEVERS) AND PARTIAL DEPTH DECK CONCRETE REMOVAL AT DISCRETE LOCATIONS ABOVE THE EDGE GIRDERS.
- 3.3 RECONSTRUCTION OF THE CONCRETE DECK CANTILEVER WITH NEW DECK DRAINS.
- 3.4 CONSTRUCTION OF THE NEW CONCRETE CURBS, STEEL BRIDGE RAIL POSTS AND NEW THRIEBEAM BRIDGERAIL BARRIER ON THE BRIDGE.
- 3.5 CONSTRUCTION OF THE NEW CIP CONCRETE BRIDGE TRANSITION BARRIER ON TOP OF EXISTING ABUTMENT WINGWALLS.

4. CAST IN PLACE CONCRETE

- 4.1 ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 03 30 00 - CAST-IN-PLACE CONCRETE.
- 4.2 ALL CONCRETE SHALL HAVE 28 DAY COMPRESSIVE STRENGTH OF 35MPa, EXPOSURE CLASS C-1 TO CSA A23.1-19.
- 4.3 ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
- 4.4 SPECIFIED MINIMUM CONCRETE COVERS:
TOP SURFACE OF DECK SLAB TO MATCH EXISTING REINFORCEMENT
INNER VERTICAL SURFACE OF CURB AND ALL OTHER SURFACES U.N.O. 70mm
SOFFIT AND VERTICAL SURFACES OF DECK SLAB 50mm
- 4.5 CURING OF ALL CONCRETE SHALL BE IN STRICT COMPLIANCE WITH THE SPECIFICATIONS.
- 4.6 ALL EXPOSED CORNERS SHALL HAVE A 20mm CHAMFER U.N.O.
- 4.7 ALL NEW CONCRETE FOR BRIDGE CURB AND BARRIERS SHALL BE SEALED WITH A CONCRETE SEALER LISTED ON THE BC MINISTRY OF TRANSPORTATION AND INFRASTRUCTURES APPROVED PRODUCT LIST. APPLICATION OF SEALER SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

5. REINFORCING STEEL

- 5.1 ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 03 20 00 - CONCRETE REINFORCING.
- 5.2 REINFORCING SHOP DRAWINGS FOR ALL COMPONENTS SHALL BE SUBMITTED TO DEPARTMENTAL REPRESENTATIVE FOR REVIEW AT LEAST 14 DAYS PRIOR TO FABRICATION.
- 5.3 BARS SHALL BE CHAIRED IN ACCORDANCE WITH THE SPECIFICATIONS TO ENSURE ADEQUATE COVER.
- 5.4 LAP SPLICE SCHEDULE:
BAR SIZE LAP LENGTH
10M 590
15M 790
20M 980
A. LAP SPLICE SCHEDULE IS FOR CLASS B SPLICE.
B. APPLIES TO REINFORCEMENT SPLICES NOT OTHERWISE DETAILED.
- 5.5 PRIOR TO CONCRETE PLACEMENT THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE REINFORCEMENT HAS BEEN PLACED IN ACCORDANCE WITH THE CONTRACT DRAWINGS.

6. MISCELLANEOUS STEEL

- 6.1 ALL MISCELLANEOUS STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 05 12 33. -STRUCTURAL STEEL FOR BRIDGES.
- 6.2 ALL STEELWORK SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123/A123M AND ASTM F2329 UNLESS NOTED OTHERWISE.
- 6.3 ALL NEW STEEL MEMBERS AND INSERTS CAST INTO CONCRETE TO BE GALVANIZED AND ISOLATED FROM ALL REINFORCING STEEL INCLUDING TIES.
- 6.4 STEEL STUDS SHALL CONFORM TO ASTM A108 GRADE 1015, 1018 OR 1020 WITH A MINIMUM TENSILE STRENGTH OF 413 MPa. STEEL STUDS SHALL BE 19mm DIAMETER UNLESS NOTED OTHERWISE.
- 6.5 ALL BOLTS SHALL BE HIGH STRENGTH STRUCTURAL BOLTS CONFORMING TO ASTM F3125 GRADE A325, TYPE 3. BOLTS SHALL BE 22mm DIAMETER WITH THREADS EXCLUDED FROM THE SHEAR PLANE UNLESS NOTED OTHERWISE.

7. CONCRETE DEMOLITION

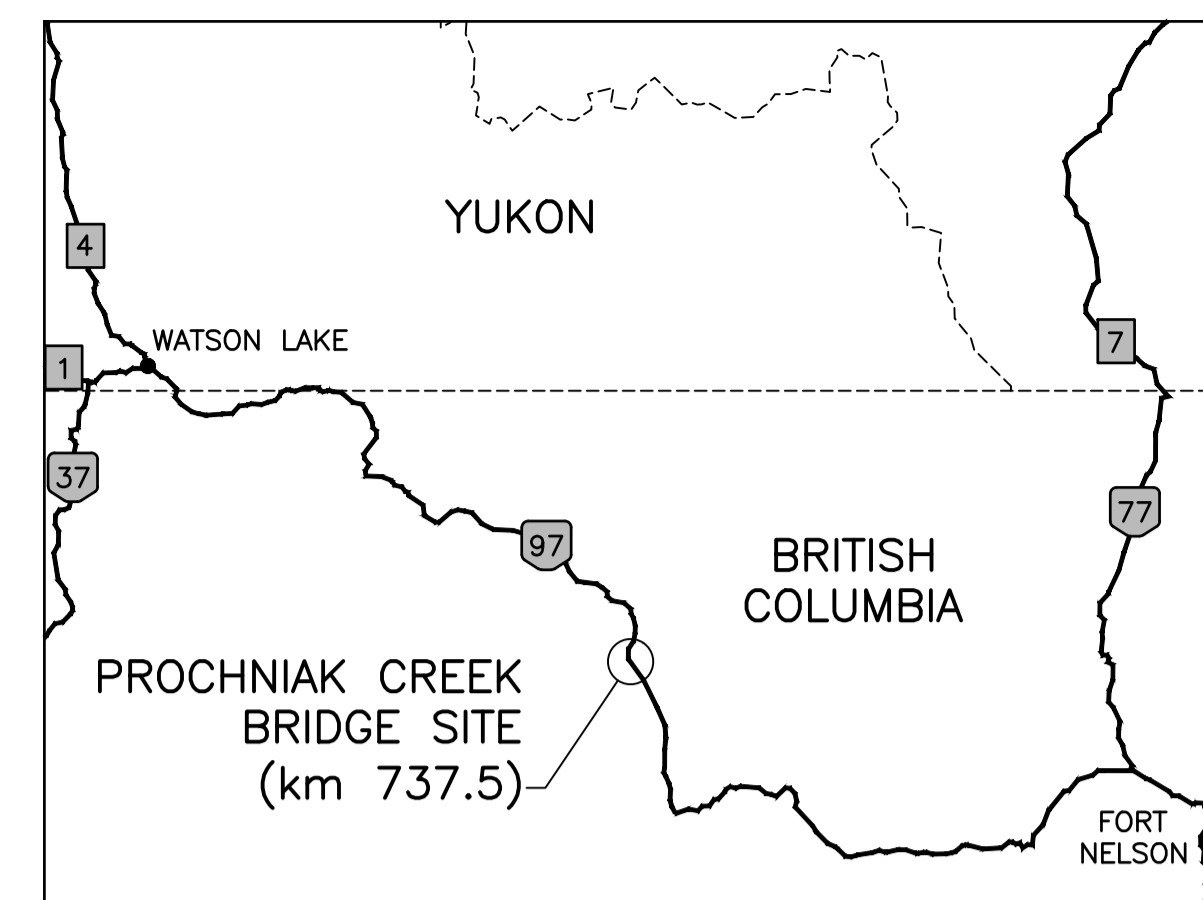
- 7.1 ALL DEMOLITION TO BE DONE IN ACCORDANCE WITH THE SPECIFICATION SECTION 02 41 99. -DEMOLITION FOR CIVIL WORKS.
- 7.2 THE CONTRACTOR SHALL MARK OUT ALL CONCRETE AREAS TO BE DEMOLISHED/REMOVED. THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE CONCRETE AREAS MARKED FOR DEMOLITION PRIOR TO COMMENCING CONCRETE DEMOLITION.
- 7.3 CONTRACTOR SHALL NOT DAMAGE EXISTING REINFORCEMENT THAT IS TO BE RETAINED AS PART OF PERMANENT WORKS DURING CONCRETE DEMOLITION WORKS.
- 7.4 SEVERELY CORRODED REINFORCEMENT (WITH MORE THAN 20% OF SECTION LOSS AS DETERMINED BY THE DEPARTMENTAL REPRESENTATIVE) SHALL BE EITHER REPLACED OR SUPPLEMENTED WITH NEW REINFORCEMENT OF THE SAME DIAMETER. SUPPLEMENTAL BARS SHALL OVERLAP MINIMUM LAP LENGTH EACH SIDE OF THE SEVERELY CORRODED SECTION. MINIMUM LENGTH OF ANY REINFORCEMENT SHALL NOT BE LESS THAN 1000mm.
- 7.5 FOLLOWING CONCRETE REMOVAL WORK, THE DEPARTMENTAL REPRESENTATIVE SHALL INSPECT THE EXISTING REINFORCEMENT FOR DAMAGE, CORROSION, AND/OR OMISSION AND RECOMMEND SUPPLEMENTAL REINFORCING STEEL TO COMPENSATE FOR EXISTING CONDITION.
- 7.6 ALL CONCRETE SURFACES THAT ARE TO RECEIVE NEW CONCRETE SHALL BE ABRASIVE BLAST (MIN. 35 MPa/5000 psi) OR HIGH-PRESSIVE WATER BLAST (35MPa/5000 psi) CLEANED TO REMOVE ALL BRUISED AND FRACTURED CONCRETE AND FOREIGN MATERIAL, AND SHALL HAVE MINIMUM 5 mm AMPLITUDE FOR ROUGHNESS.
- 7.7 TOP SURFACE OF THE NEW CONCRETE DECK SHALL BE CONSTRUCTED TO FOLLOW ORIGINAL BRIDGE DECK LONGITUDINAL AND TRANSVERSE GRADES, U.N.O.
- 7.8 SPECIAL CARE SHALL BE TAKEN DURING REMOVALS TO PROTECT STRUCTURAL ELEMENTS THAT ARE NOT BEING REHABILITATED. IF ANY PART OF THE BRIDGE IS DAMAGED DUE TO THE CONTRACTOR'S REMOVALS THEN THAT ELEMENT SHALL BE REPLACED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE AT NO ADDITIONAL COST.

8. CURB PLATE INSTALLATION PROCEDURE

- 8.1 CURB PLATES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. ALL OTHER METAL PARTS EXCEPT ERECTION ANGLES AND STAINLESS STEEL BOLTS SHALL BE HOT DIPPED GALVANIZED OR ZINC METALIZED AFTER FABRICATION.
- 8.2 CURB PLATES SHALL BE ASSEMBLED AND TRANSPORTED WITH ERECTION ANGLES ATTACHED.
- 8.3 SECURE CURB PLATES TO THE CURB. THE ATTACHEMENT SHALL BE STRONG ENOUGH TO MAINTAIN THE CORRECT GAP AND ALIGNMENT OF THE PLATES UNTIL AFTER CONCRETE PLACEMENT.
- 8.4 AFTER CURB PLATES ARE SECURELY ATTACHED, LOOSEN BOLTS IN SLOTTED HOLES IN THE ERECTION ANGLE SUFFICIENTLY TO FACILITATE THERMAL MOVEMENT WITHOUT DAMAGING BRIDGE COMPONENTS. CLAMPED PARTS OF THE CURB PLATE SHALL NOT DEFORM WHEN BOLTS ARE LOOSENED.
- 8.5 CURB PLATE PLACEMENT SHALL BE INSPECTED BY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO CONCRETE PLACEMENT.
- 8.6 REMOVE ERECTION ANGLE IMMEDIATELY AFTER CONCRETE CAN SUPPORT THE CURB PLATE ASSEMBLY.
- 8.7 REMOVE ALL FORMWORK, CLEAN EXCESS CONCRETE AND DEBRIS, WHEN CONCRETE ACHIEVED MINIMUM STRENGTH OF 15MPa AND HAS A SUFFICIENT STRENGTH TO SUPPORT ITS WEIGHT, BUT NOT SOONER THAN 48 HOURS FOLLOWING CONCRETE PLACEMENT.
- 8.8 TIGHTEN CURB PLATE BOLTS TO "SNUG TIGHT" CONDITION AFTER CONCRETE HAS GAINED MINIMUM STRENGTH OF 15MPa.

9. BRIDGERAIL NOTES

- 9.1 ALL ANCHOR RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A193 GRADE B7 (Fy = 725 MPa; Fu = 860 MPa) ALL NUTS AND WASHERS TO SHALL CONFORM TO A325. GALVANIZING SHALL STRICTLY FOLLOW THE FOLLOWING PROCEDURE WITH THE PRESENCE OF THE DEPARTMENTAL REPRESENTATIVE:
-BRUSH BLAST ANCHOR RODS TO REMOVE MILL SCALE AND OIL AFTER THREADING ENDS.
-FLASH PICKLING NOT TO EXCEED 5 MINUTES.
-QUICK DRY PRIOR TO HOT-DIP GALVANIZING (DO NOT STORE IN FLUX OR ACID RINSE)
- 9.2 ALL W-BEAM AND THRIE BEAM GUARDRAIL (INCLUDING W-THRIE BEAM TRANSITION SECTION) SHALL HAVE A MINIMUM YIELD STRENGTH OF 345 MPa.
- 9.3 THE BOTTOM SURFACE OF THE BASEPLATES SHALL BE COATED WITH AN APPROVED COATING SYSTEM SUITABLE FOR APPLICATION ON GALVANIZED STEEL TO PREVENT CONTACT BETWEEN THE ZINC AND THE GROUT. THE COLOUR SHALL BE MEDIUM GREY.
- 9.4 BRIDGERAIL ANCHOR BOLTS SHALL BE TIGHTENED AN ADDITIONAL 1/2 TURN OF THE NUT PAST THE "SNUG TIGHT" CONDITION.
- 9.5 ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP SURFACE OF BRIDGE DECK AND ALONG THE CENTRELINE OF ANCHOR ROD ASSEMBLY.
- 9.6 VERTICAL AND HORIZONTAL ALIGNMENT OF THE THRIE BEAM GUARDRAILS SHALL BE SUBJECT TO A TOLERANCE OF 6mm.
- 9.7 ALL NON-STANDARD GUARDRAIL LENGTHS SHALL BE CUT TO SUIT AND ALL NON-STANDARD HOLES SHALL BE DRILLED. FLAME CUTTING OF GUARDRAIL SHALL NOT BE ALLOWED. APPLY TWO COATS OF ZINC RICH PAINT ON AREAS DAMAGED BY SAW CUTTING OR DRILLING.



KEY PLAN
SCALE NTS

Public Services and Procurement Canada / Services publics et Approvisionnement Canada

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



Project title: **BRITISH COLUMBIA** Projet

**BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY**

Designed by **A. KANSAL** Conçu par
Drawn by **S. HUNG** Dessiné par
Approved by **J. DONIC/M. BOWSER** Approuvé par

PWOSC Project Manager / Administrateur de Projets TPSOC
R. HAGHIGHI

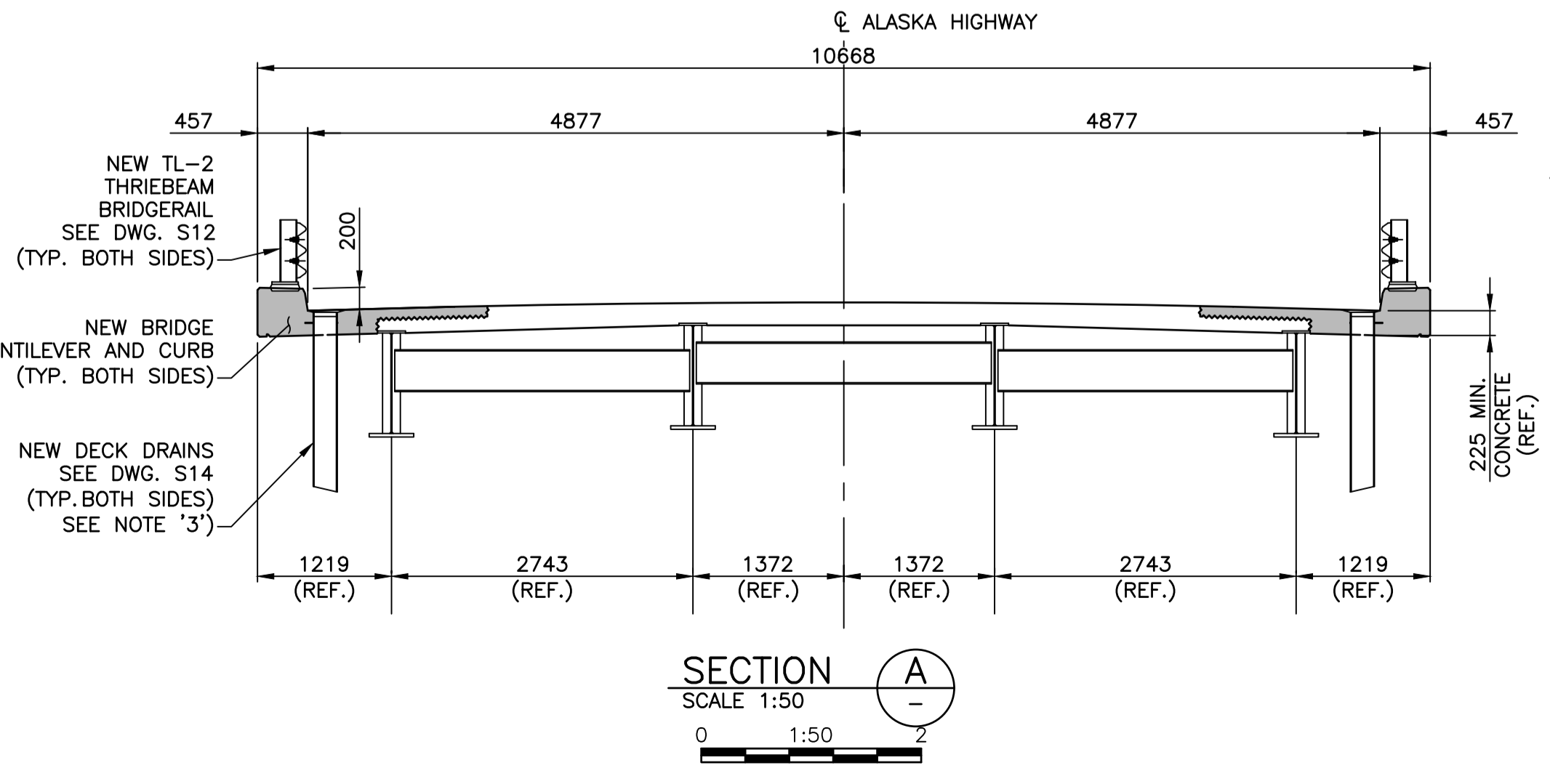
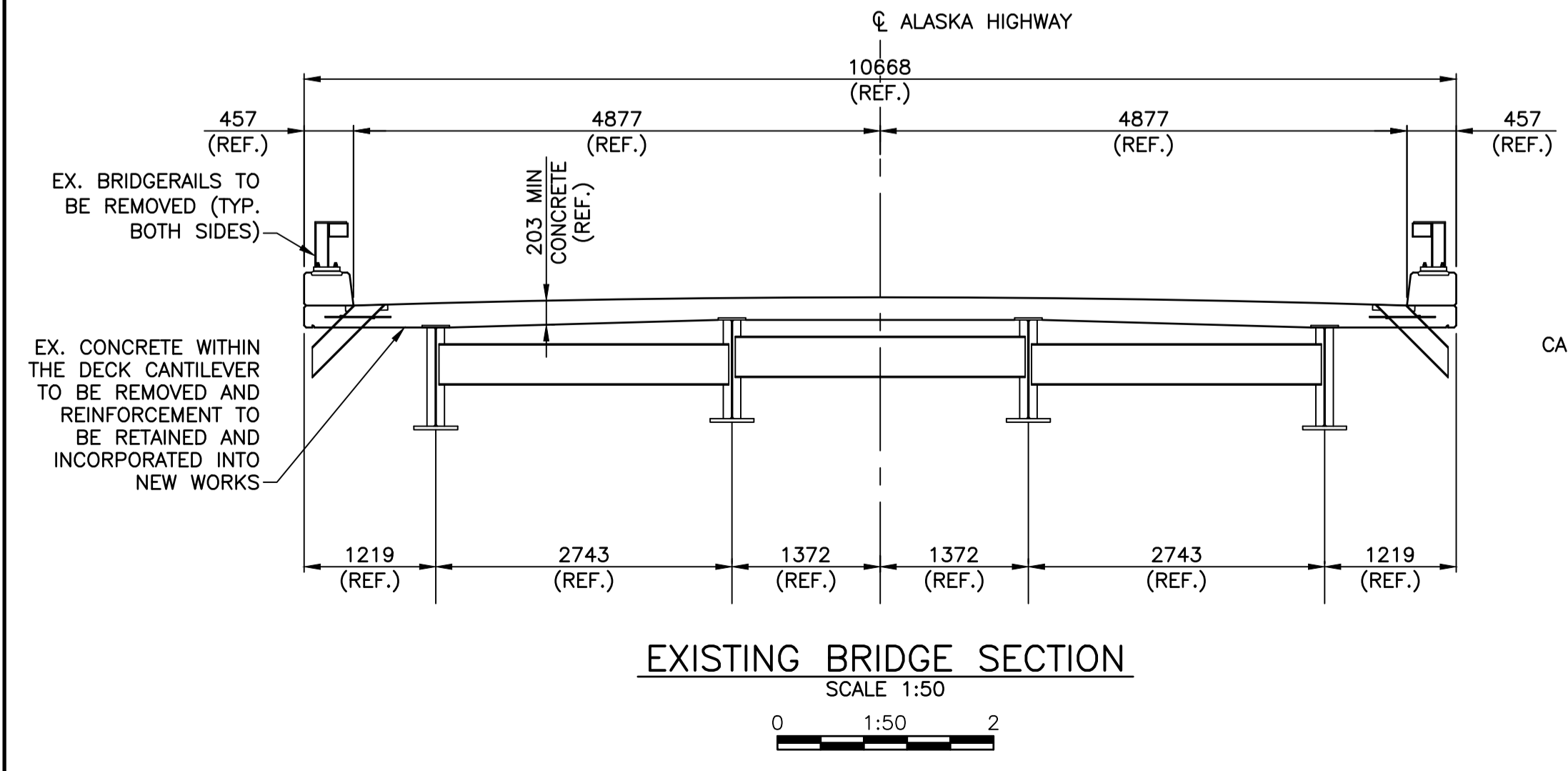
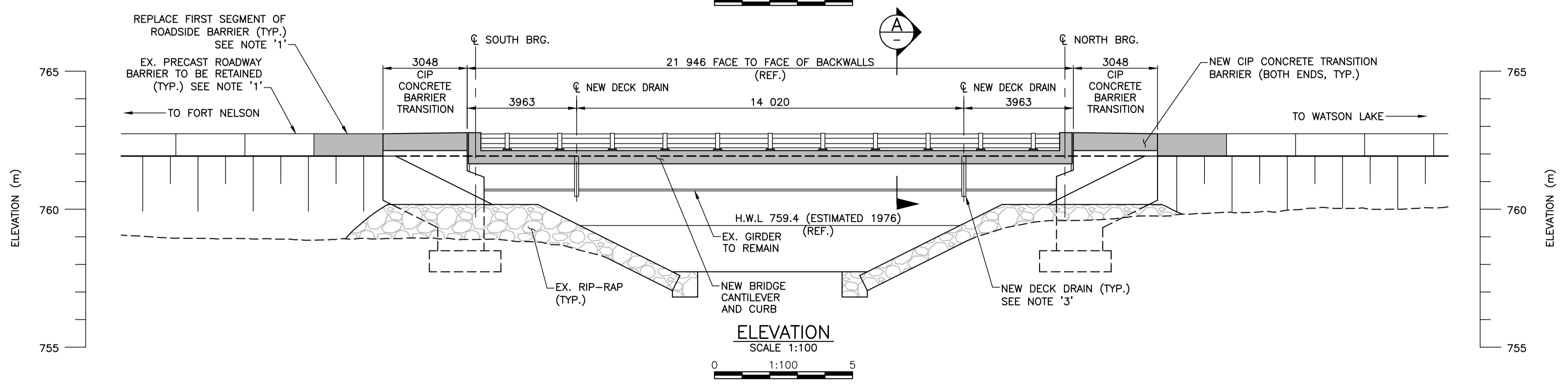
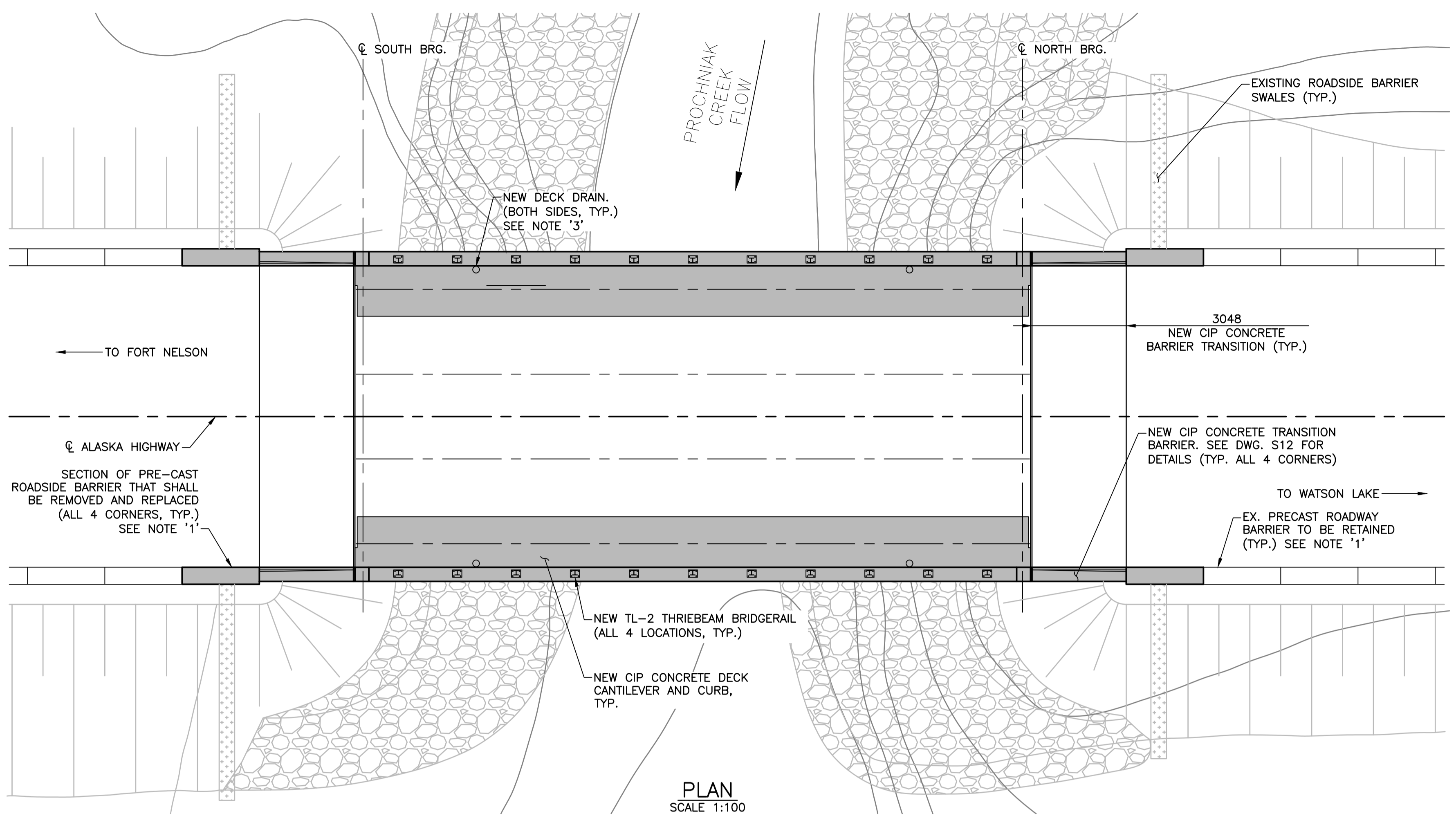
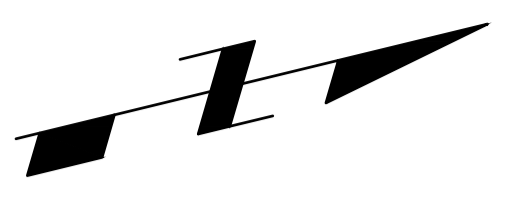
Drawing title: **PROCHNIK CREEK BRIDGE
(km 737.5)
GENERAL NOTES** Titre du dessin

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114778.002	S09 OF 15	0

LIST OF ABBREVIATIONS

APPROX.	- APPROXIMATE	LG.	- LONG
BOT.	- BOTTOM	L.W.L.	- LOW WATER LEVEL
BRG.	- BEARING	MAX.	- MAXIMUM
DWG.	- DRAWING	MIN.	- MINIMUM
c/c	- CENTER TO CENTER	NTS	- NOT TO SCALE
CIP	- CAST-IN-PLACE	PL.	- PLATE
CL	- CENTRELINE	REF.	- REFERENCE
C.J.	- CONSTRUCTION JOINT	REINF.	- REINFORCEMENT
c/w	- COMPLETE WITH	THK.	- THICK
EX.	- EXISTING	T.O.	- TOP OF
GALV.	- GALVANIZED	TYP.	- TYPICAL
H.W.L.	- HIGH WATER LEVEL	U.N.O.	- UNLESS NOTED OTHERWISE

DATE: 2021-06-22 - 2:57pm (harry.yu) - 19M-01601-06 - Kledo and Prochniak Barriers (02 - Prochniak Creek Bridge) 02 Drawings\S09 - General Notes.dwg



- NOTES:**
- EXISTING SEGMENT OF ROADSIDE BARRIER DIRECTLY BEHIND PROPOSED CIP BARRIER TRANSITION SHALL BE REMOVED AND DISPOSED OF OFF-SITE. FOLLOWING CONSTRUCTION OF CIP BARRIER TRANSITION NEW CIP ROADSIDE BARRIER SHALL BE CAST BETWEEN CIP BARRIER AND EXISTING ROADSIDE BARRIER. NEW CIP ROADSIDE BARRIER SHALL BE CONSTRUCTED AS PER DETAILS FROM DWG. S15 (TYPICAL ALL 4 CORNERS OF THE BRIDGE).
 - EROSION REPAIR WORK DESCRIPTION:
 - REMOVE LOOSE MATERIAL AROUND THE ERODED PART OF GRANULAR MATERIAL WITHIN THE ROADWAY SHOULDERING (NOT TO EXCEED 1m³. ACTUAL QUANTITY TO BE DETERMINED BY CONTRACTOR ON SITE). SIDE SLOPES OF THE EXCAVATION/HOLE SHALL NOT BE STEEPER THAN 2:1.
 - FILL IN THE HOLE WITH NEW GRANULAR MATERIAL AND COMPACT TO 95% SPD (NOT TO EXCEED 1.5m³. ACTUAL QUANTITY TO BE DETERMINED BY CONTRACTOR ON SITE).
 - LEVEL THE TOP OF THE REINSTATED MATERIAL TO MATCH GRADES OF THE ADJACENT MATERIAL.
 - NEW DECK DRAIN LOCATION MAY BE LOCALLY ADJUSTED ±150mm TO AVOID CONFLICT WITH EXISTING GIRDER BRACING & DECK REINFORCEMENT.



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



Project title: **BRITISH COLUMBIA** Project

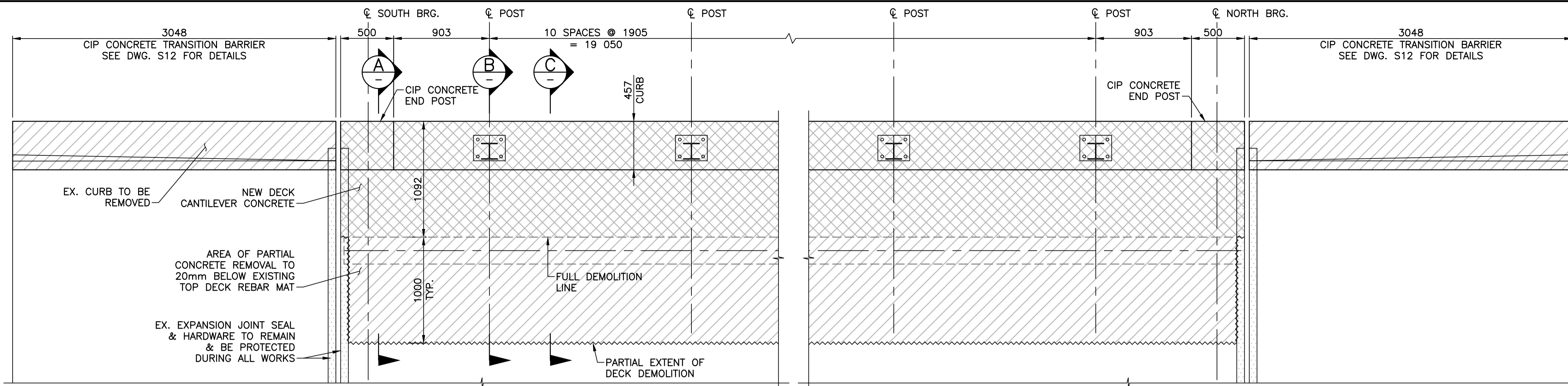
**BRIDGE RAILING UPGRADE FOR
 Km 509.1 KLEDO RIVER BRIDGE AND
 Km 737.5 PROCHNIK CREEK BRIDGE
 ALASKA HWY**

Designed by: **A. KANSAL** Conçu par
 Drawn by: **S. HUNG** Dessiné par
 Approved by: **J. DONIC/M. BOWSER** Approuvé par
 PWSCC Project Manager: **R. HAGHIGHI** Administrateur de Projets TPSGC
 Drawing title: **PROCHNIK CREEK BRIDGE (km 737.5) GENERAL ARRANGEMENT** Titre du dessin

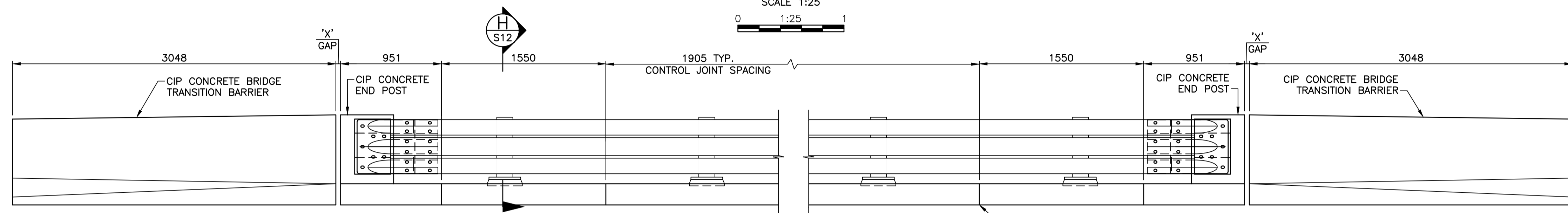
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114778.002	S10 OF 15	0

DATE: 2021-06-22 2:57pm (harry.yu) - KleDO and Prochniak Creek Bridge 02 Drawings\S10 - General Arrangement.dwg
 LAYOUT GENERAL ARRANGEMENT





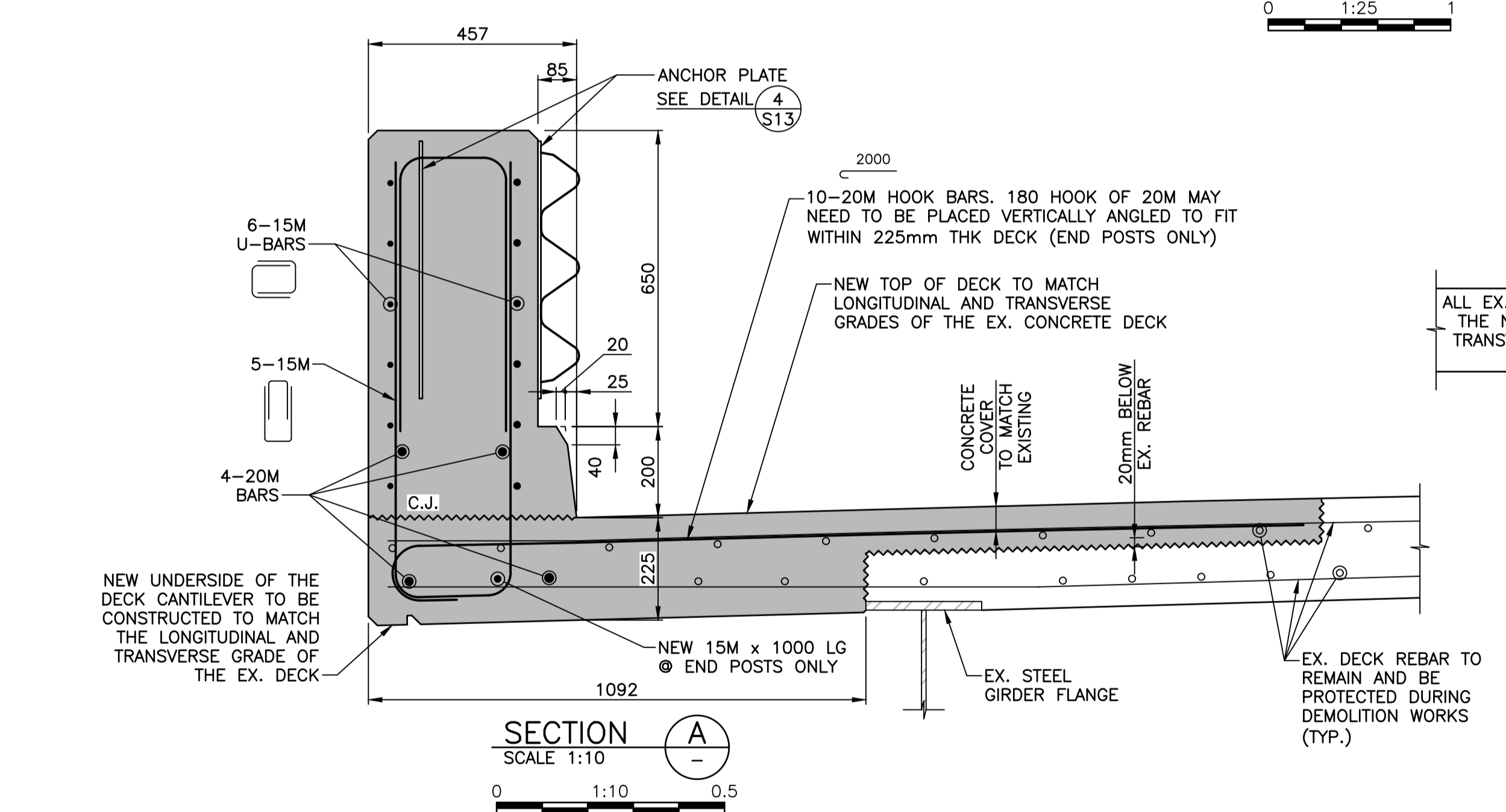
PLAN - NEW BRIDGERAIL AND CONCRETE REMOVAL
SCALE 1:25



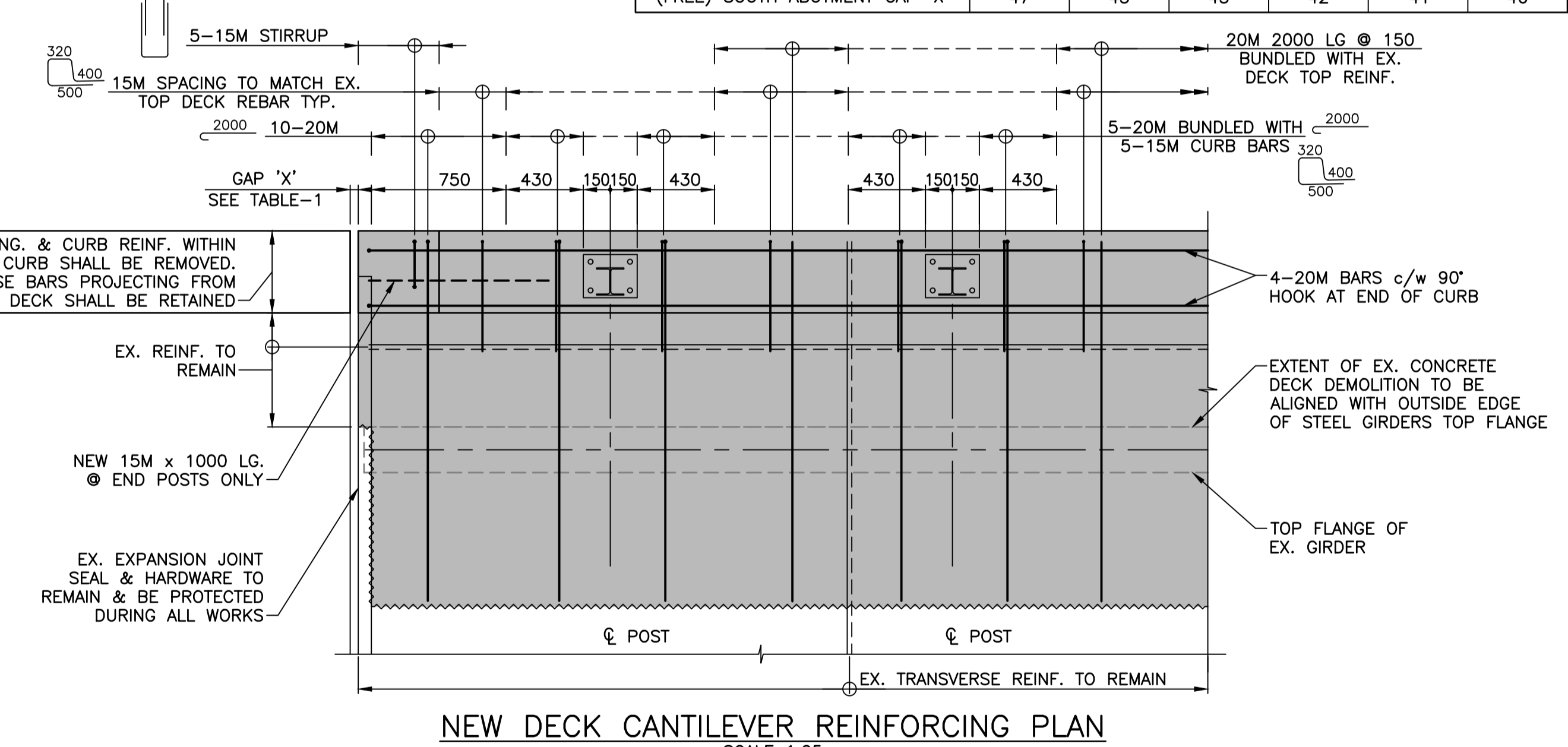
ELEVATION - CURB CONTROL JOINTS
SCALE 1:25

TABLE 1 - 'X' GAP DIMENSIONS (mm)

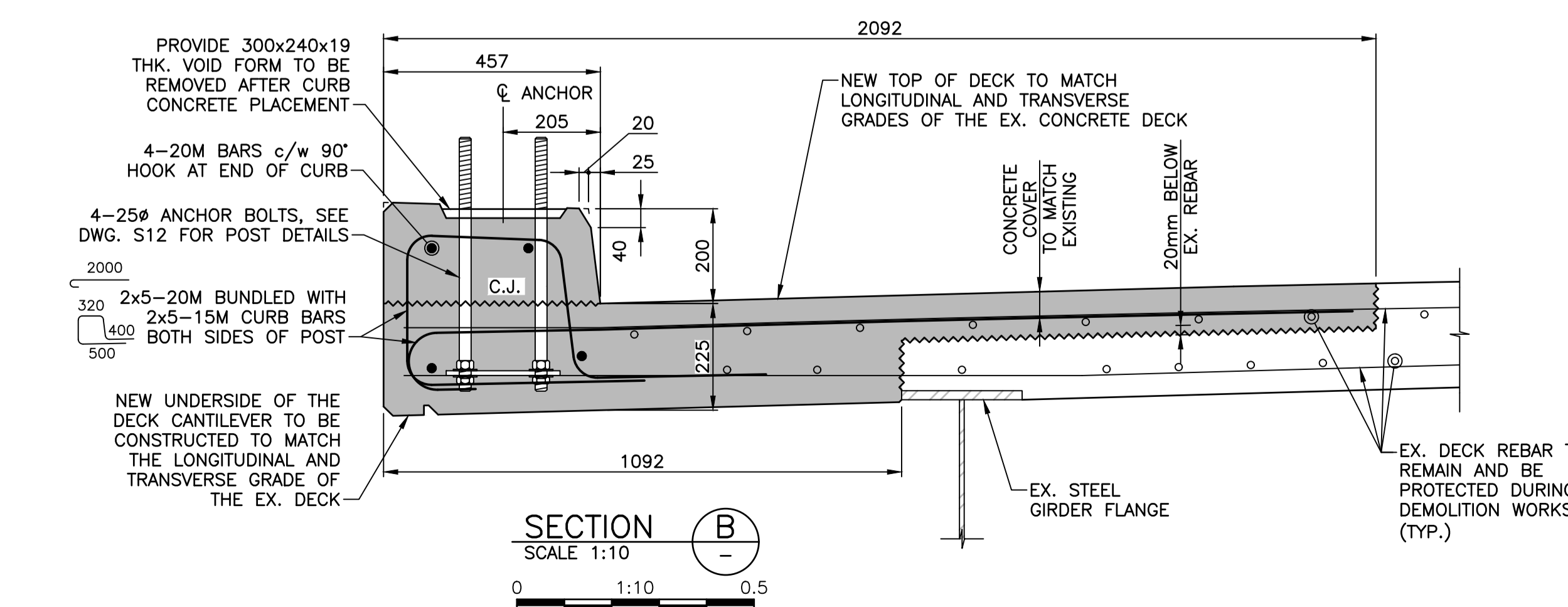
AMBIENT GIRDER TEMP (C°)	-15	-5	0	5	10	15
(FIXED) NORTH ABUTMENT GAP 'X'	45	45	45	45	45	45
(FREE) SOUTH ABUTMENT GAP 'X'	47	45	43	42	41	40



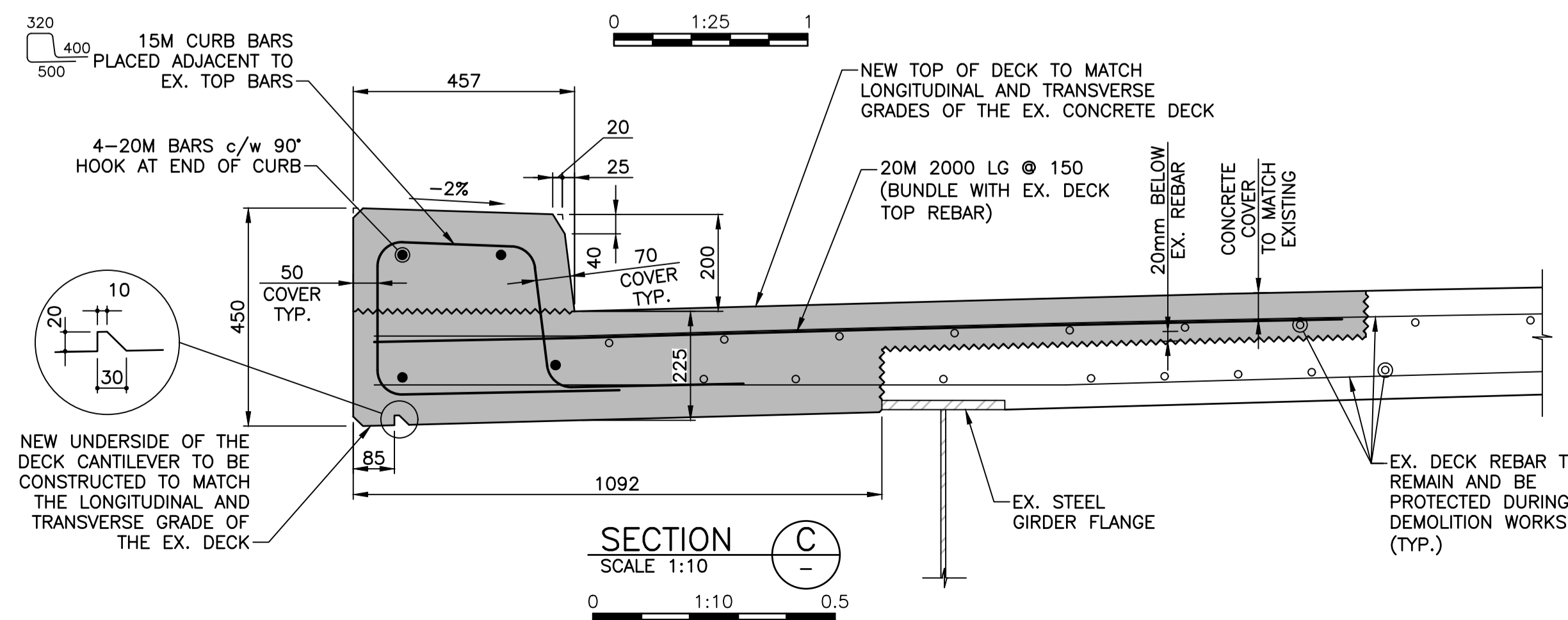
SECTION A
SCALE 1:10



NEW DECK CANTILEVER REINFORCING PLAN
SCALE 1:25



SECTION B
SCALE 1:10



SECTION C
SCALE 1:10

Revision Description Date

0	ISSUED FOR TENDER	21/06/22
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Client: client

WSP

Project title: **BRITISH COLUMBIA**

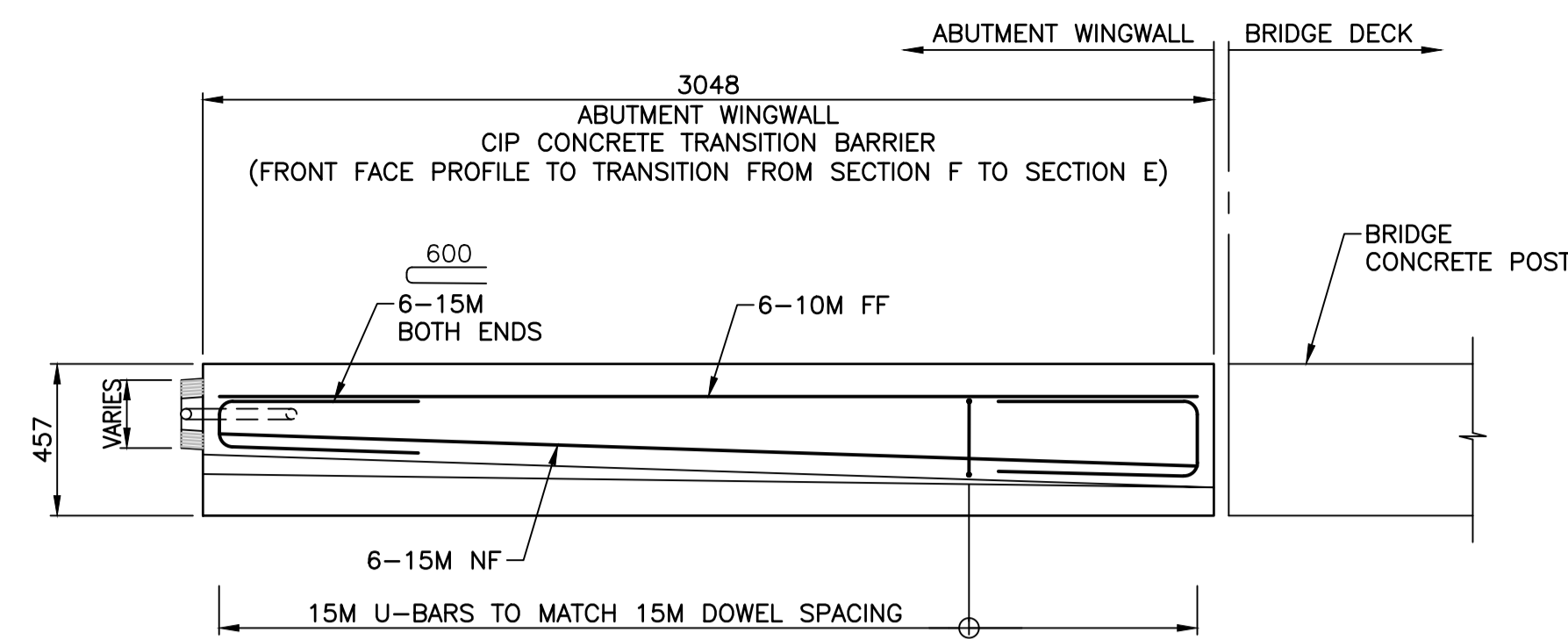
BRIDGE RAILING UPGRADE FOR Km 509.1 KLEDO RIVER BRIDGE AND Km 737.5 PROCHNIK CREEK BRIDGE ALASKA HWY

Designed by: A. KANSAL / Conçu par: A. KANSAL
Drawn by: S. HUNG / Dessiné par: S. HUNG
Approved by: J. DONIC/M. BOWSER / Approuvé par: J. DONIC/M. BOWSER
PWSCC Project Manager: R. HAGHIGHI / Administrateur de Projets TPSGC: R. HAGHIGHI

Drawing title: **PROCHNIK CREEK BRIDGE (km 737.5) DETAILS SHEET 1 OF 3**

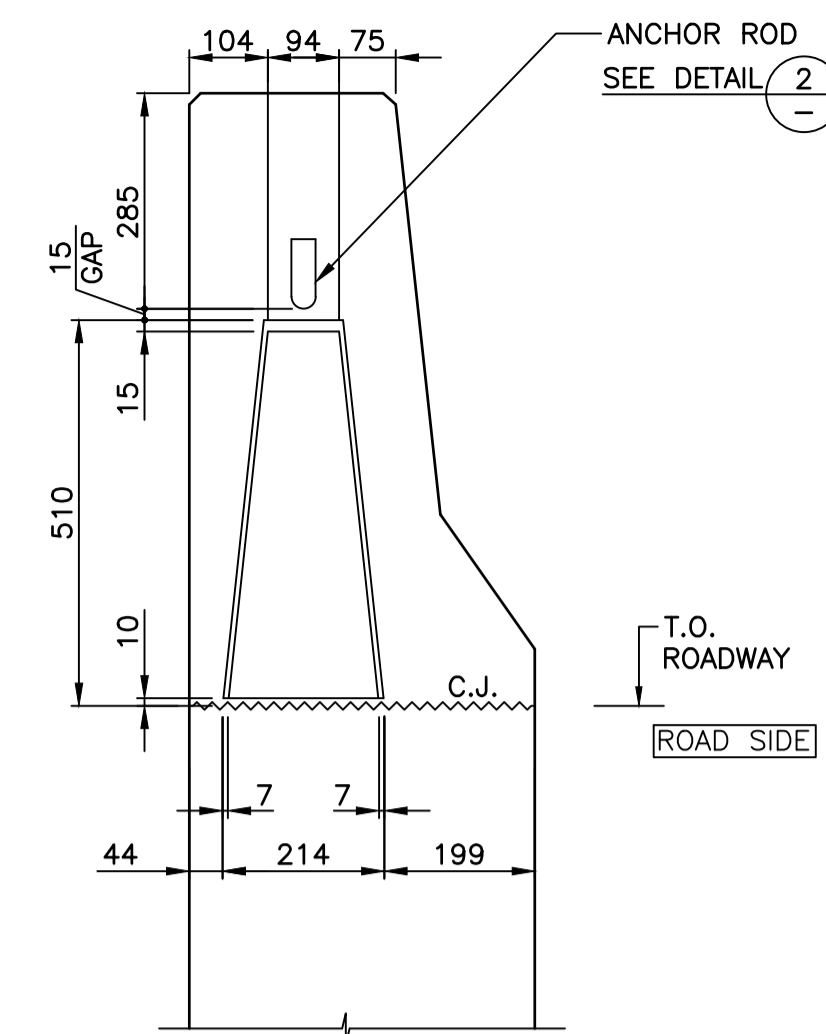
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DATE: 2021-06-22 - 2:55pm (harry.nyu) / 300003RS (19M-01601-06 - Kleado and Prochnik Creek Bridge) 02 Drawings (S11 & S12 - Details Sheets 1 to 2.dwg) LAYOUT SHEET 1



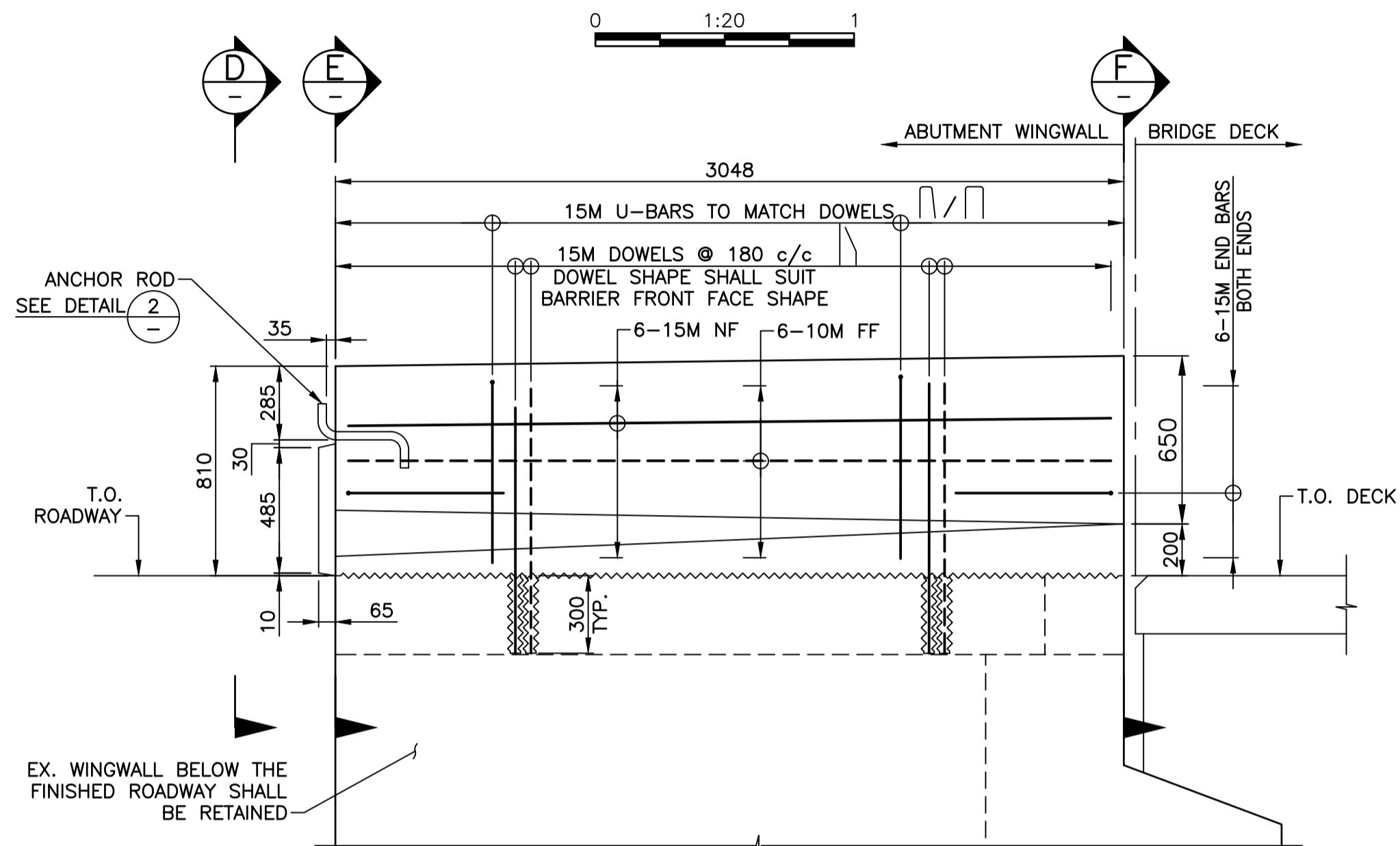
PLAN - TYPICAL BRIDGE TRANSITION BARRIER ALONG THE WINGWALL

SCALE 1:20



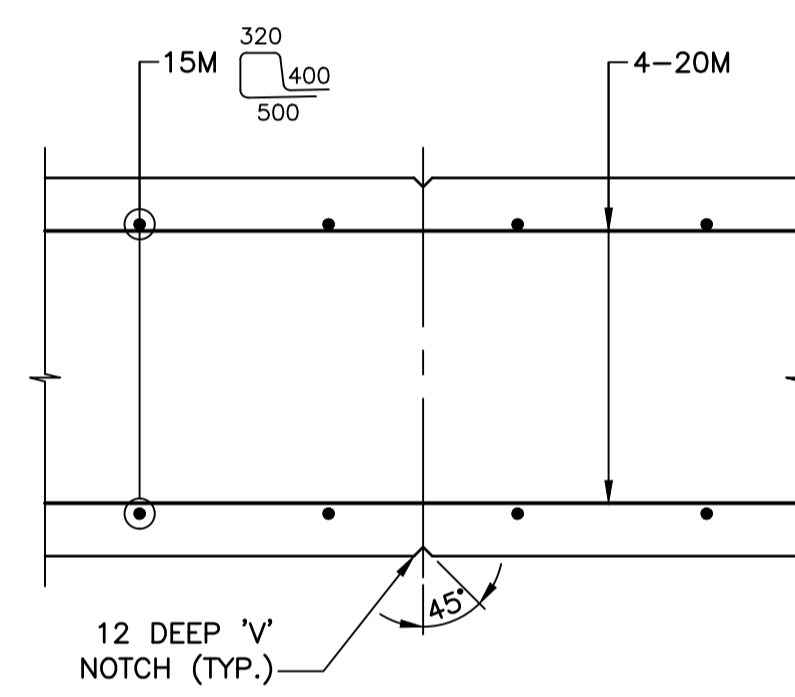
SECTION D

SCALE 1:10



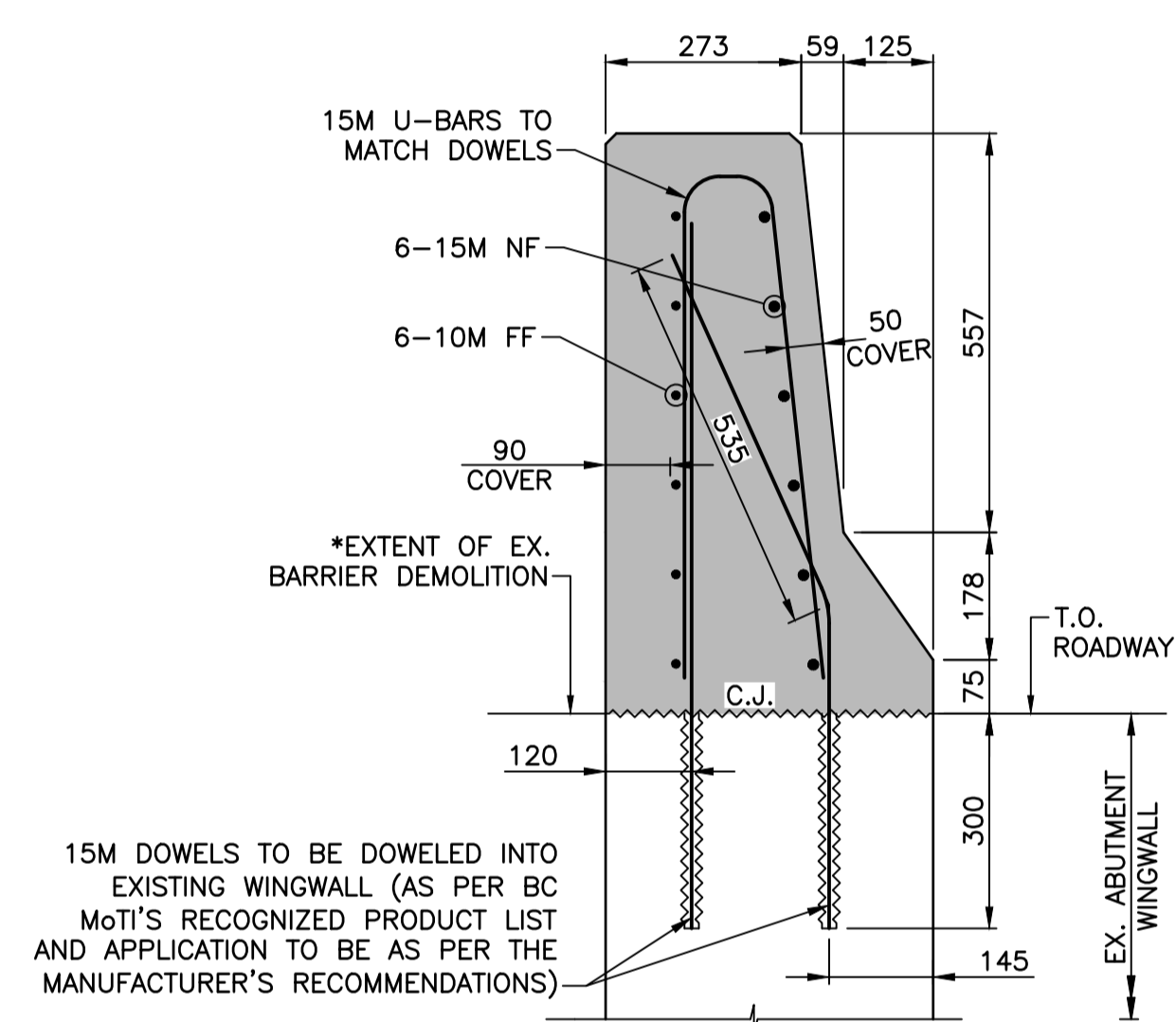
ELEVATION - TYPICAL BRIDGE TRANSITION BARRIER ALONG THE WINGWALL

SCALE 1:20



DETAIL 1

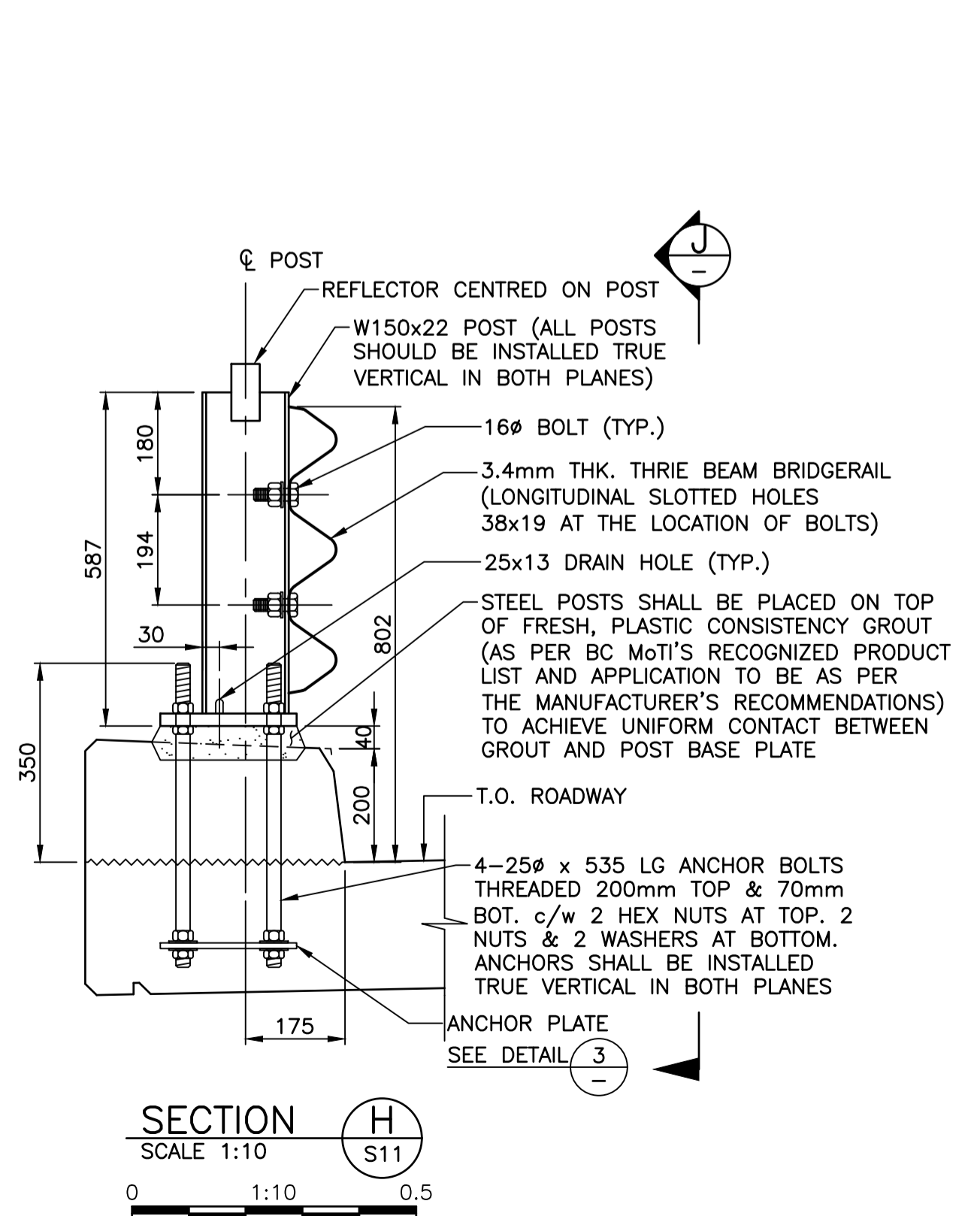
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*ALL EXISTING CURB BARS SHALL BE CUT FLUSH WITH TOP OF ROADWAY ELEVATION AS SHOWN

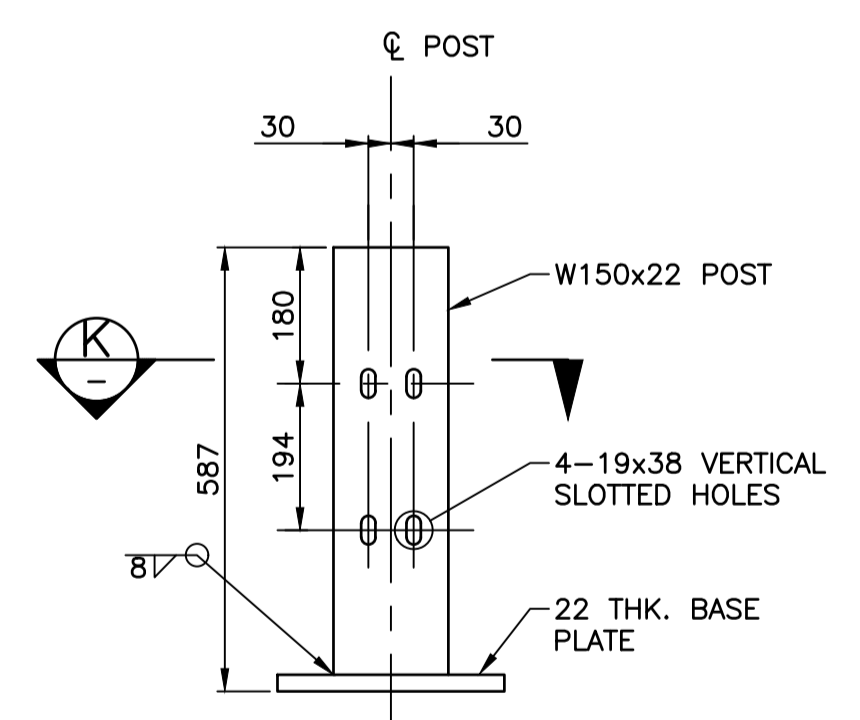
SECTION E

SCALE 1:10



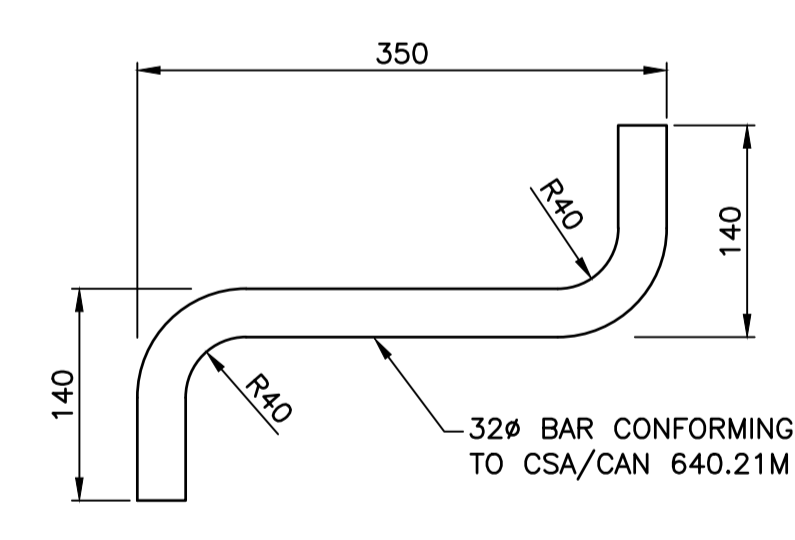
SECTION H

SCALE 1:10



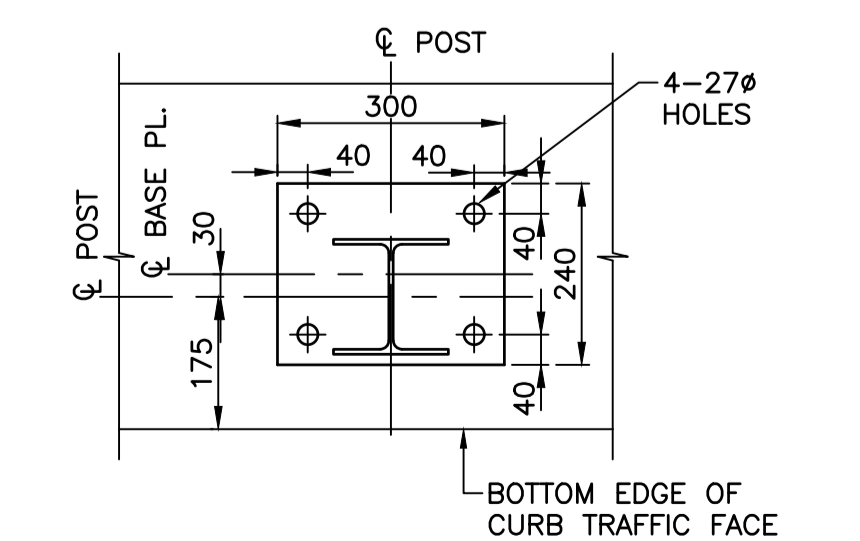
VIEW J

SCALE 1:10



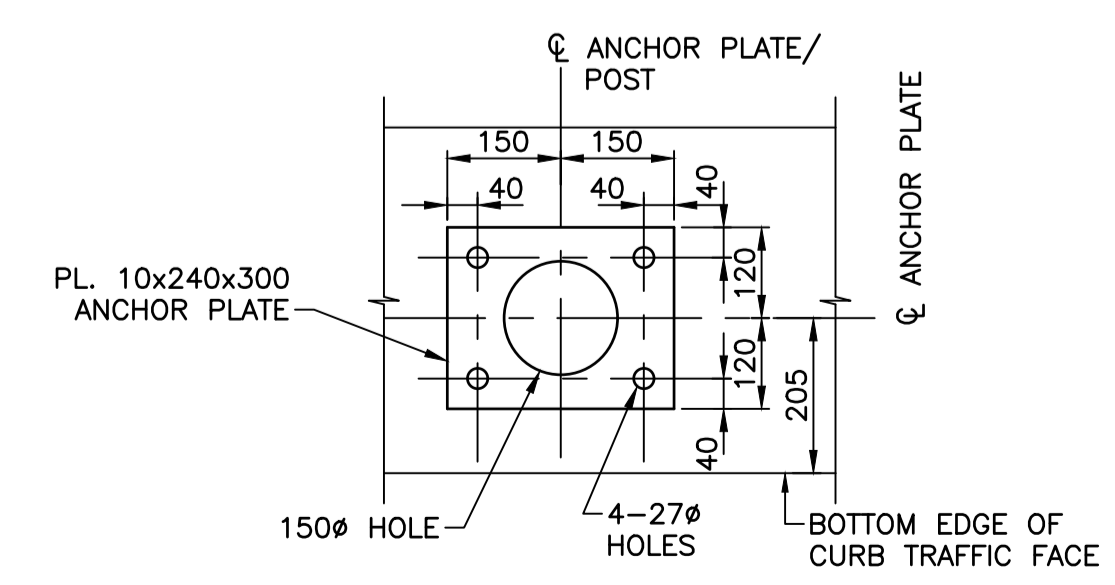
DETAIL 2

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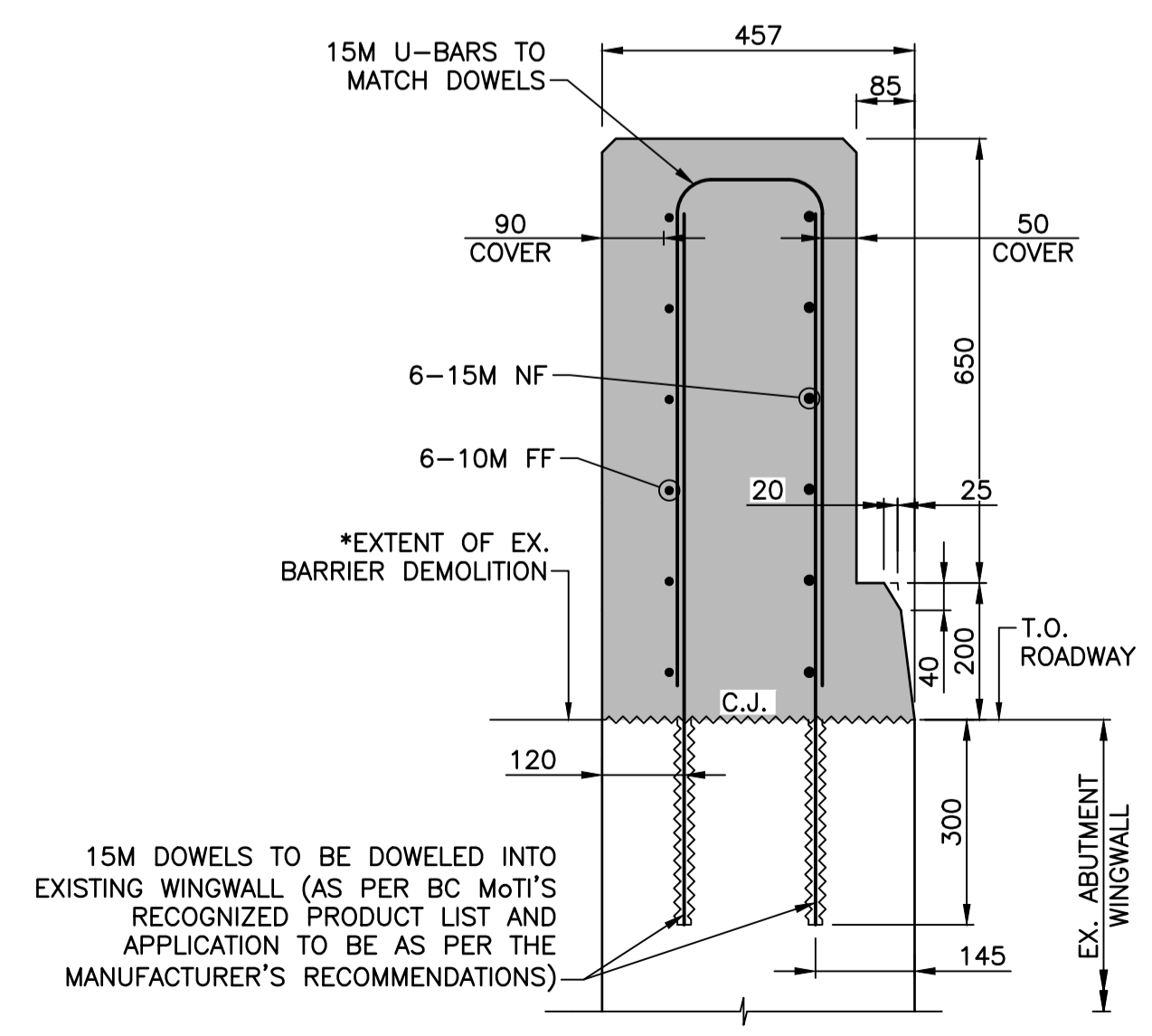
SECTION K

SCALE 1:10



DETAIL 3

SCALE 1:10



SECTION F

SCALE 1:10

15M DOWELS TO BE DOWELED INTO EXISTING WINGWALL (AS PER BC MOTI'S RECOGNIZED PRODUCT LIST AND APPLICATION TO BE AS PER THE MANUFACTURER'S RECOMMENDATIONS)



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



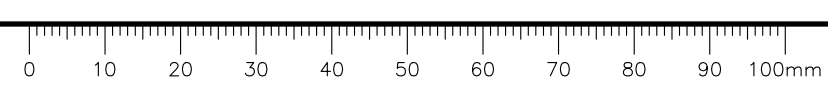
Project title: BRITISH COLUMBIA
BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY

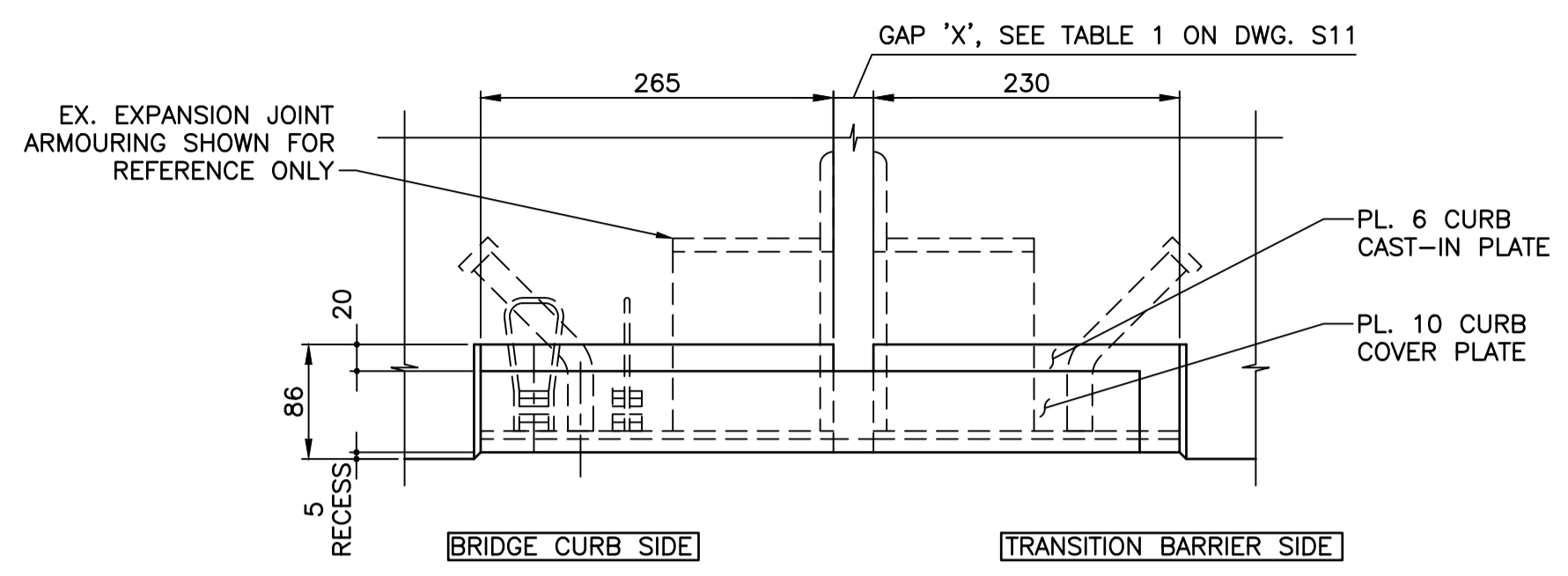
Designed by: A. KANSAL
Drawn by: S. HUNG
Approved by: J. DONIC/M. BOWSER
PWSCC Project Manager / Administrateur de Projets TPSOC
R. HAGHIGHI

Drawing title: PROCHNIK CREEK BRIDGE
(km 737.5)
DETAILS
SHEET 2 OF 3

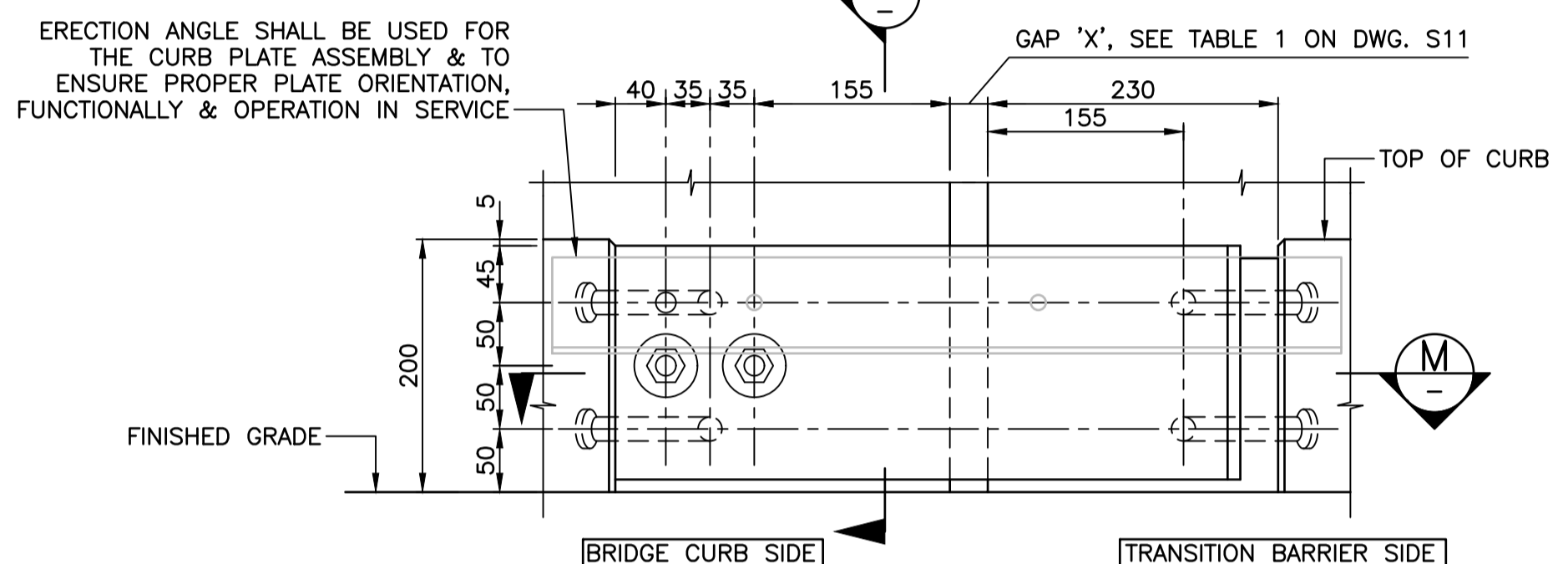
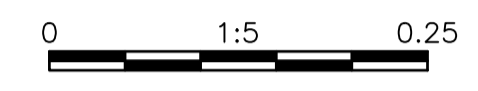
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114778.002	S12 OF 15	0

DATE: 2021-06-22 2:55pm (harry.yu) 3900193\19M-01601-06 - Kledo and Prochnik Creek Bridge\02 Drawings\S11 & S12 - Details Sheets 1 to 2.dwg LAYOUT SHEET 2

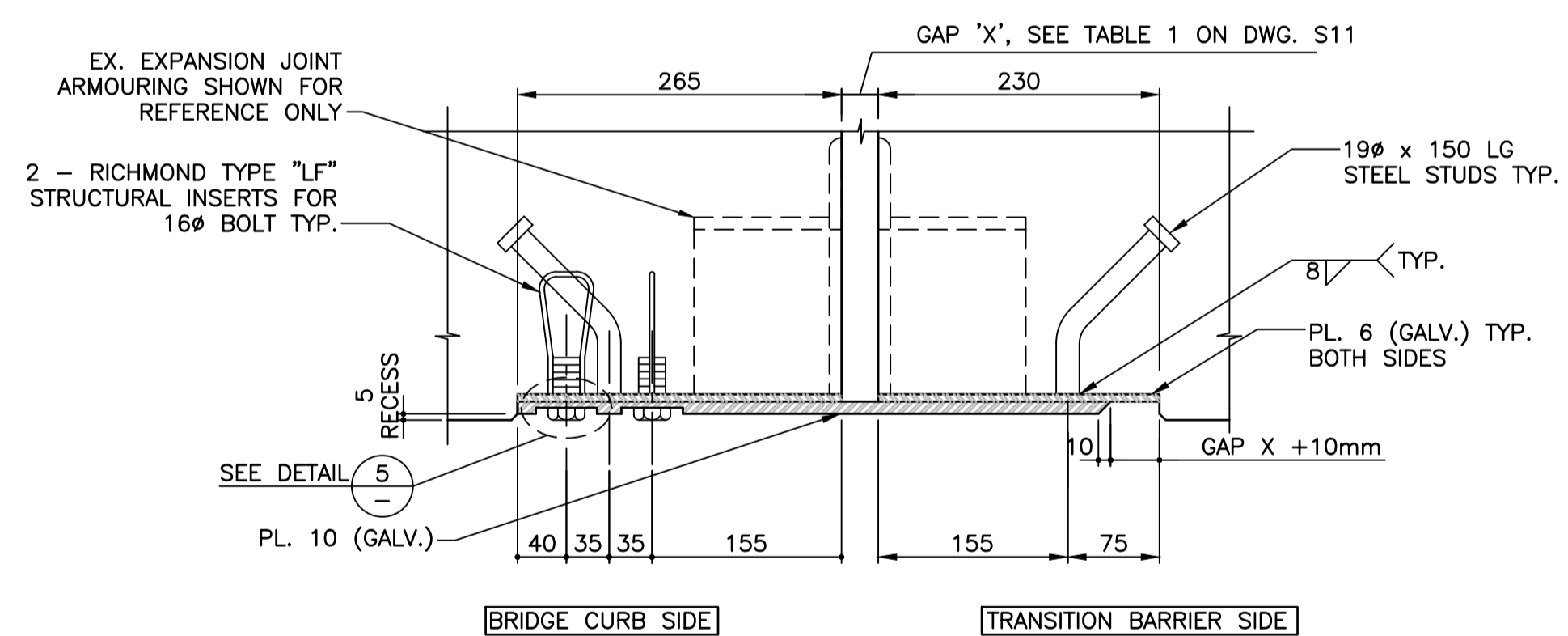




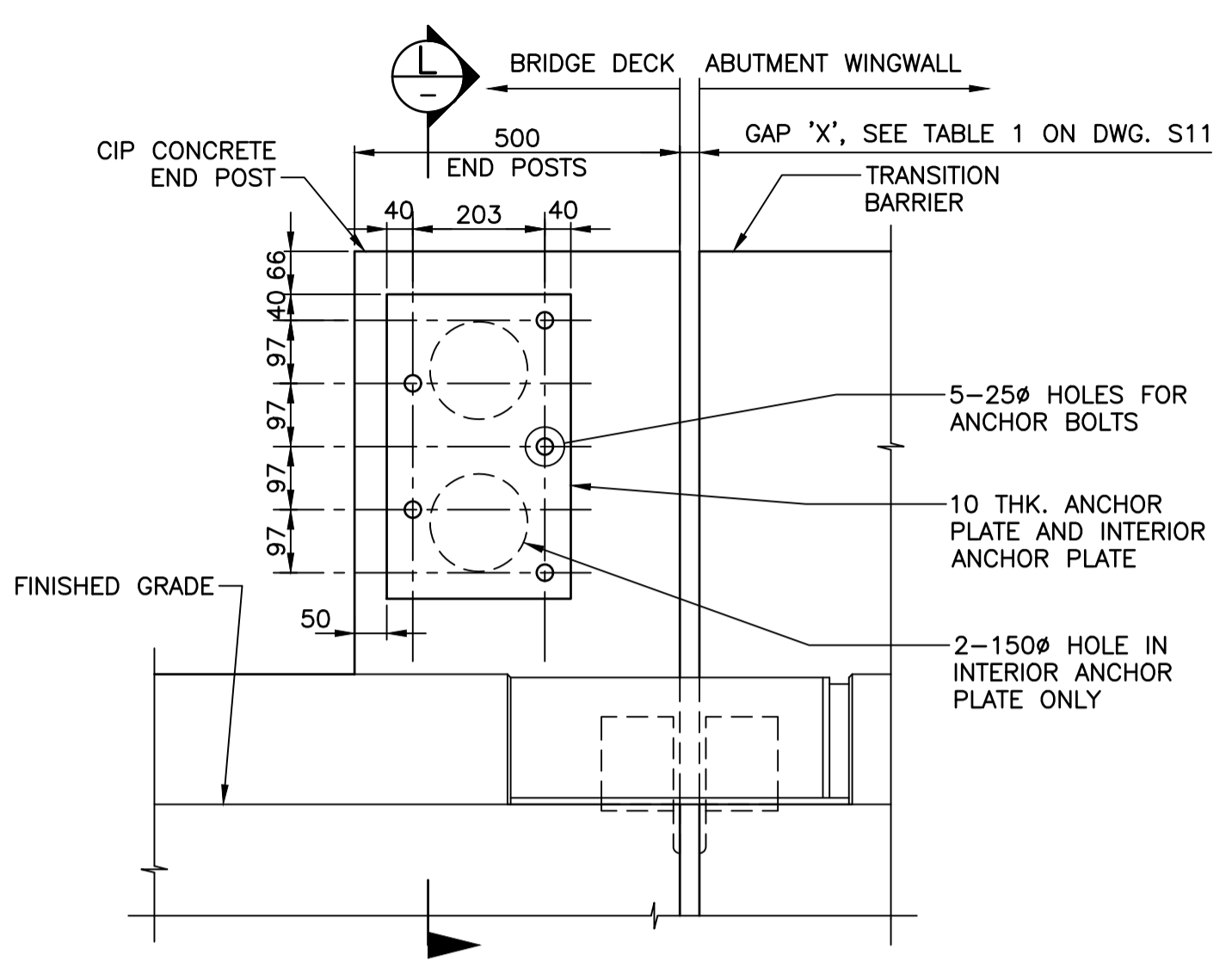
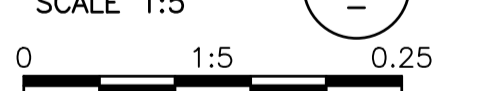
PLAN - TYPICAL CURB PLATE
SCALE 1:5



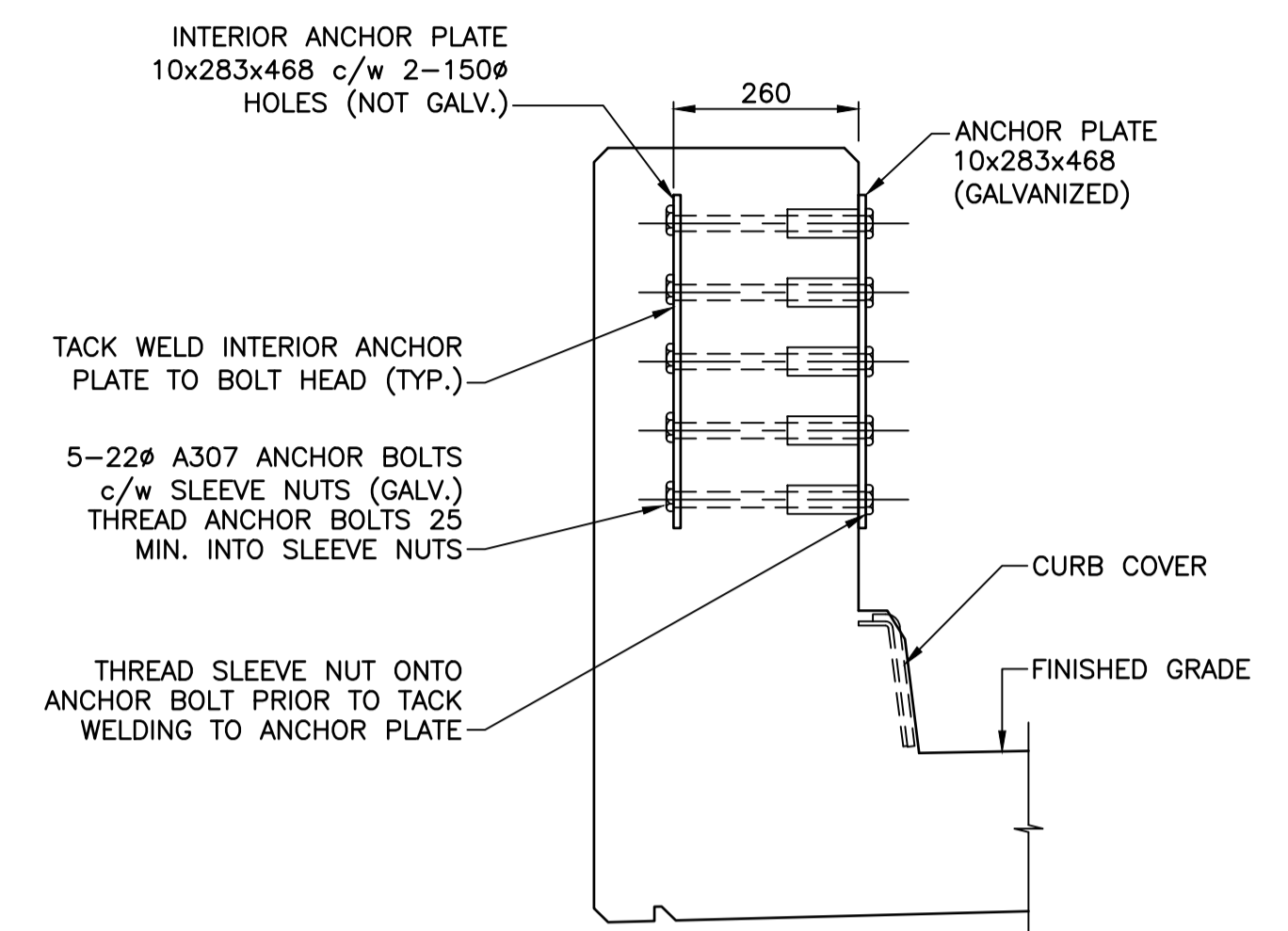
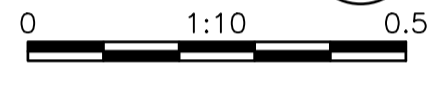
ELEVATION - TYPICAL CURB PLATE
SCALE 1:5



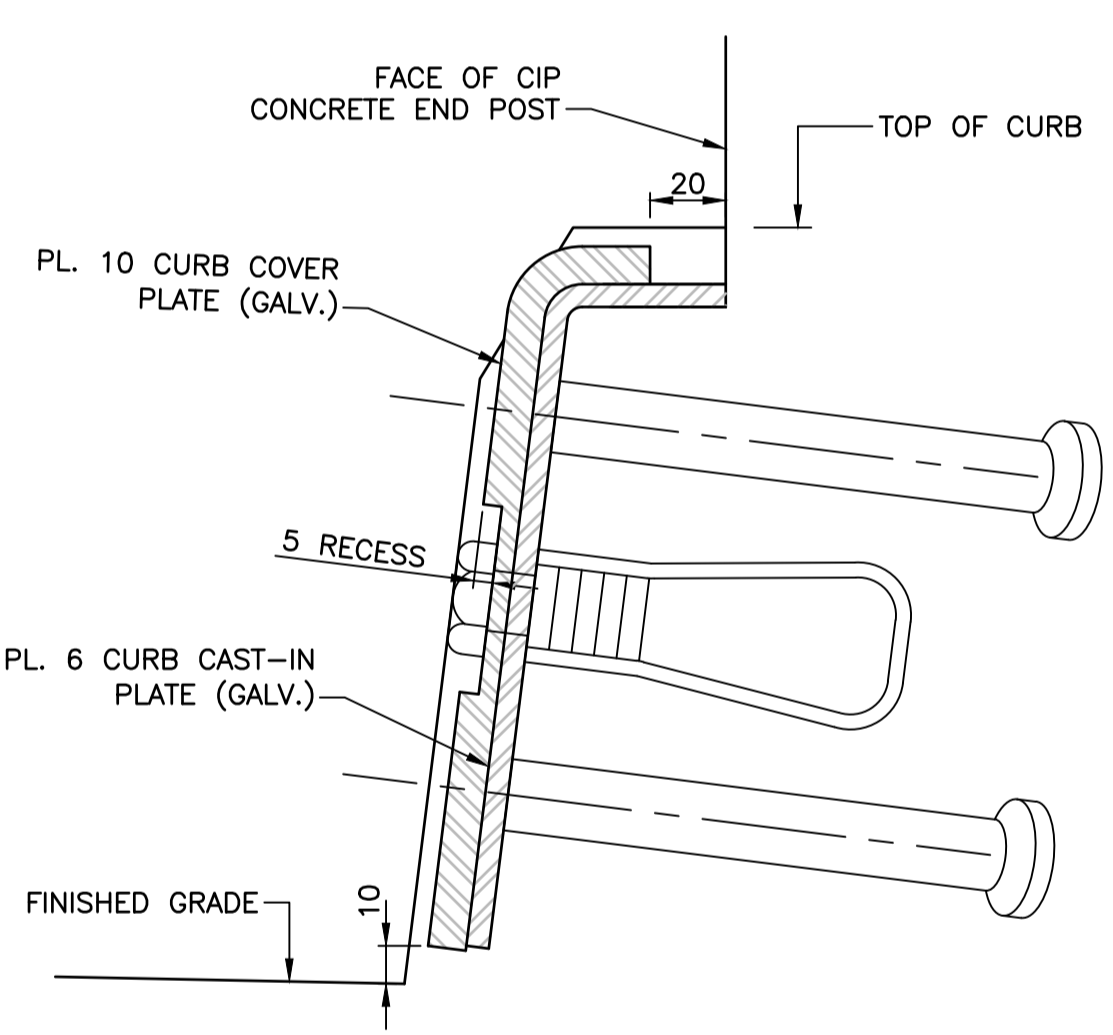
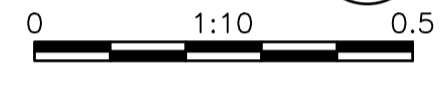
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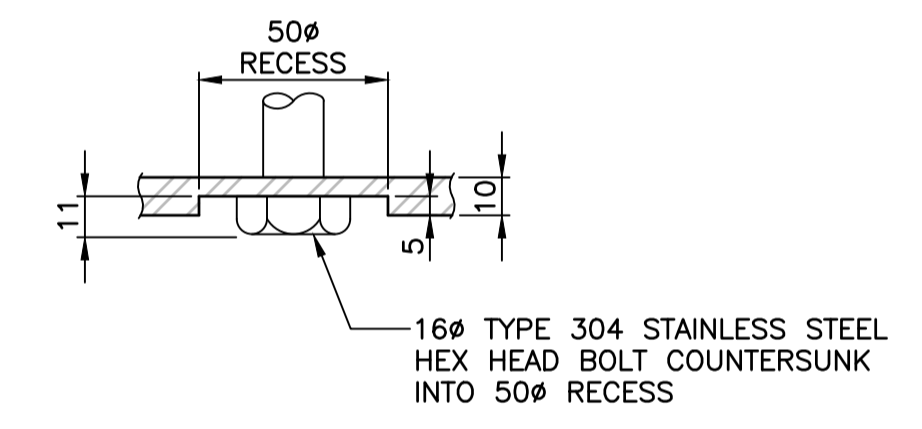
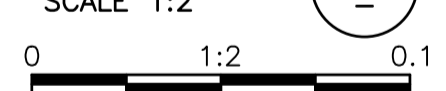
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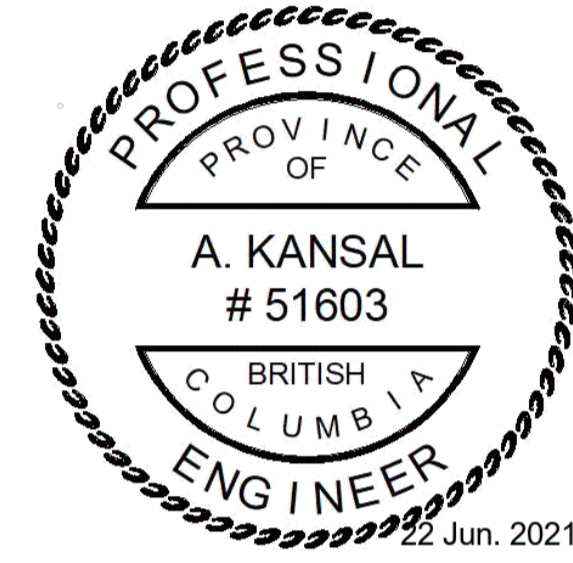
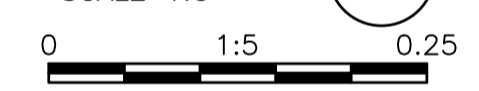
SECTION L
SCALE 1:10



SECTION N
SCALE 1:2



DETAIL 5
SCALE 1:5



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



Project title: BRITISH COLUMBIA

BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY

Designed by: A. KANSAL

Drawn by: S. HUNG

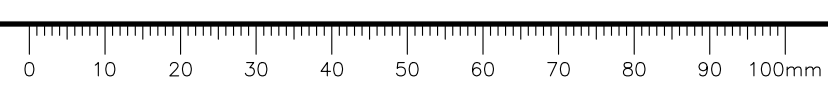
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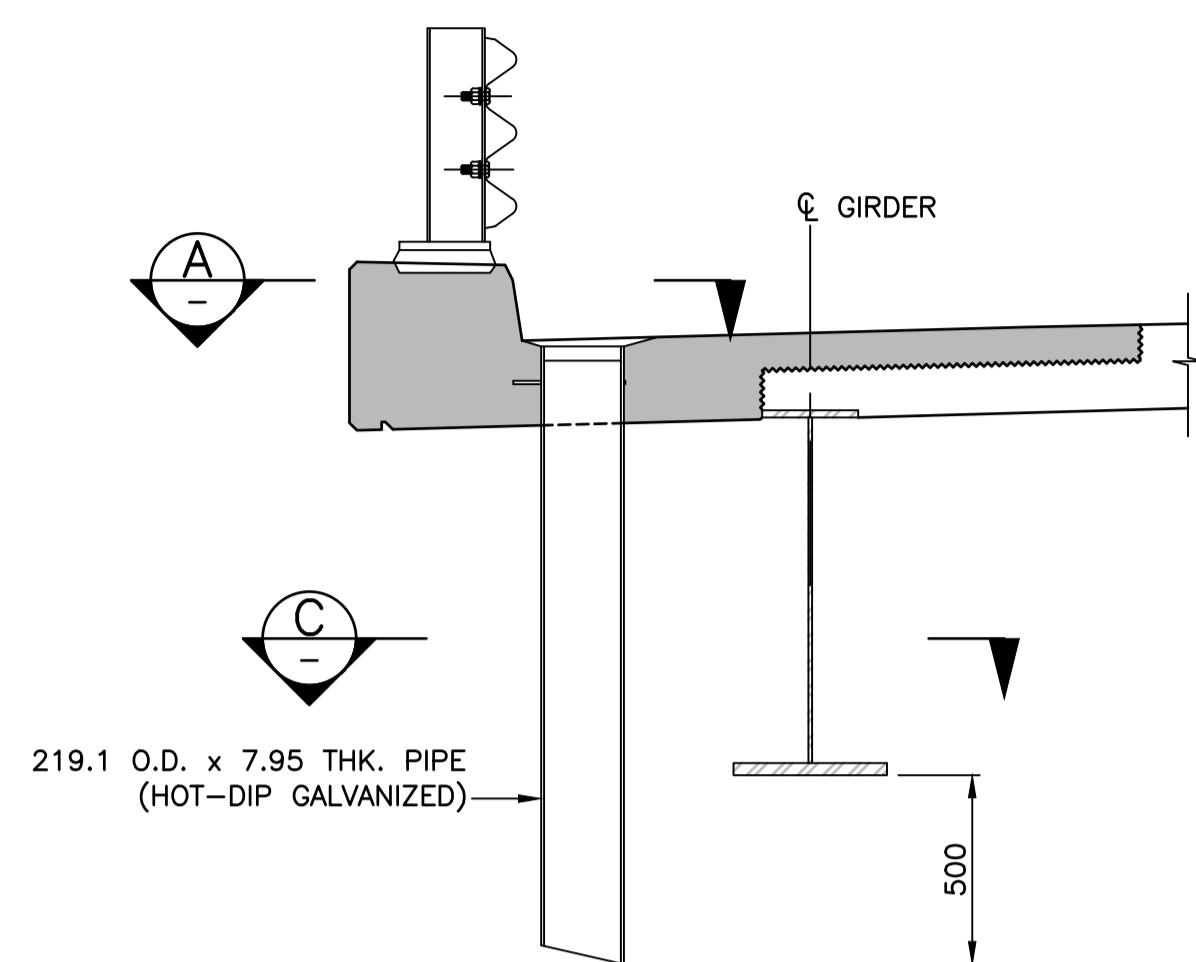
PWSCC Project Manager: R. HAGHIGHI

Drawing title: PROCHNIK CREEK BRIDGE (km 737.5) DETAILS SHEET 3 OF 3

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114778.002	S13 OF 15	0

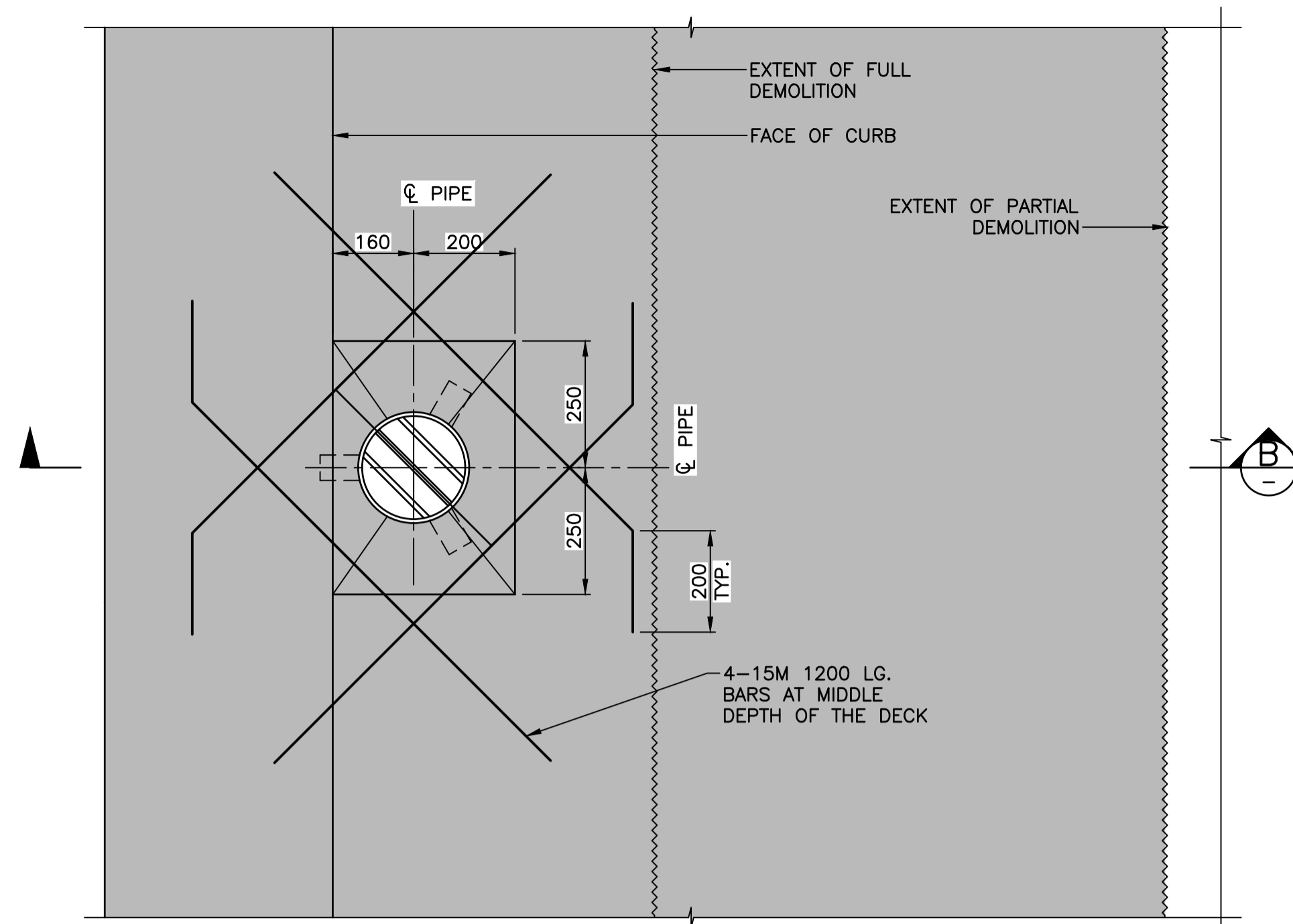
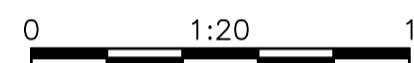
DATE: 2021-06-22 - 2:58pm - 01601-06 - Kledo and Prochniak Barriers\02 - Prochniak Creek Bridge\02 Drawings\S13 - Details Sheets 3.dwg
LAYOUT DETAILS - SHEET 3





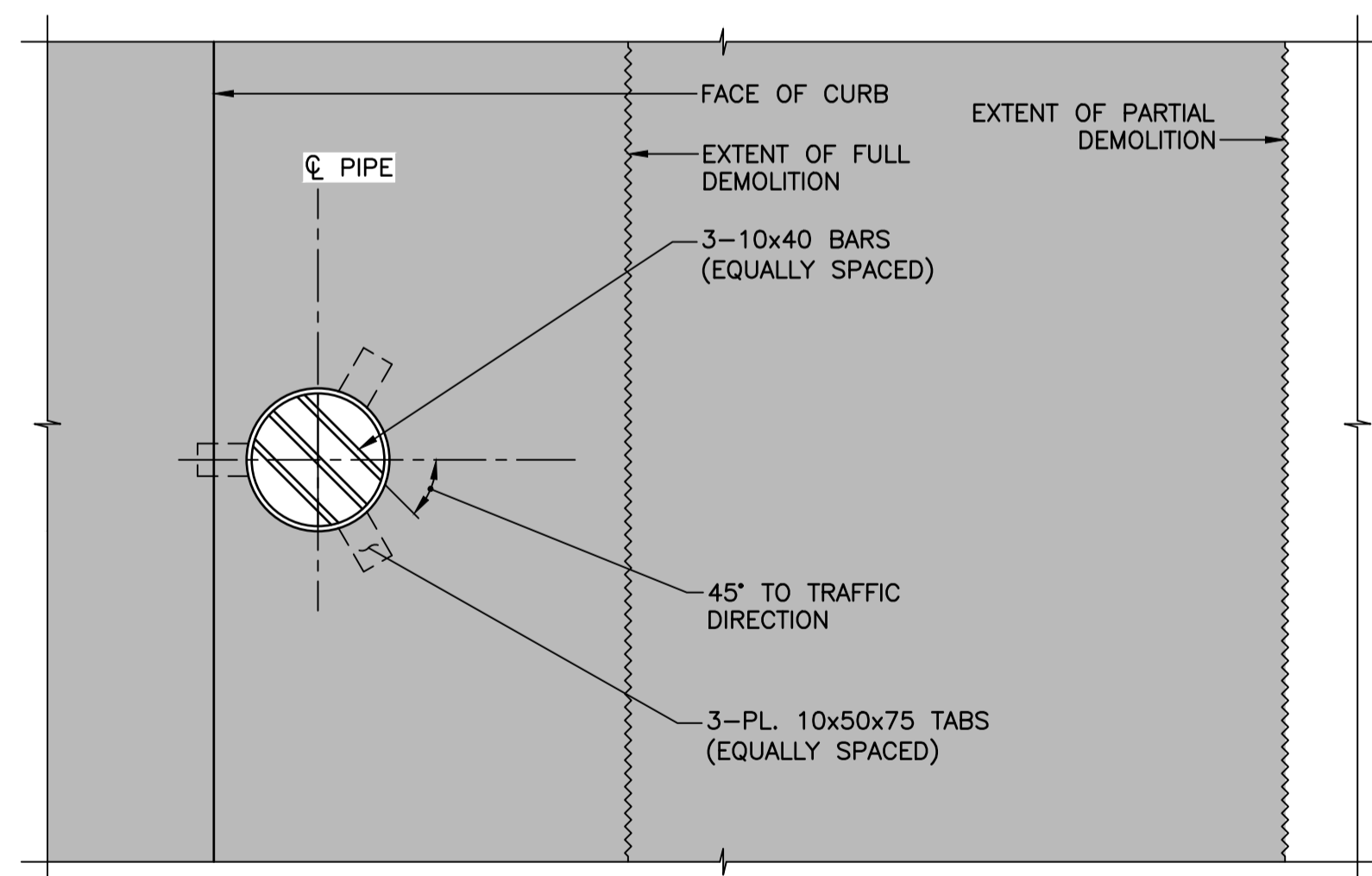
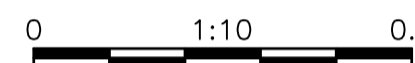
ELEVATION – TYPICAL DRAIN

SCALE 1:20



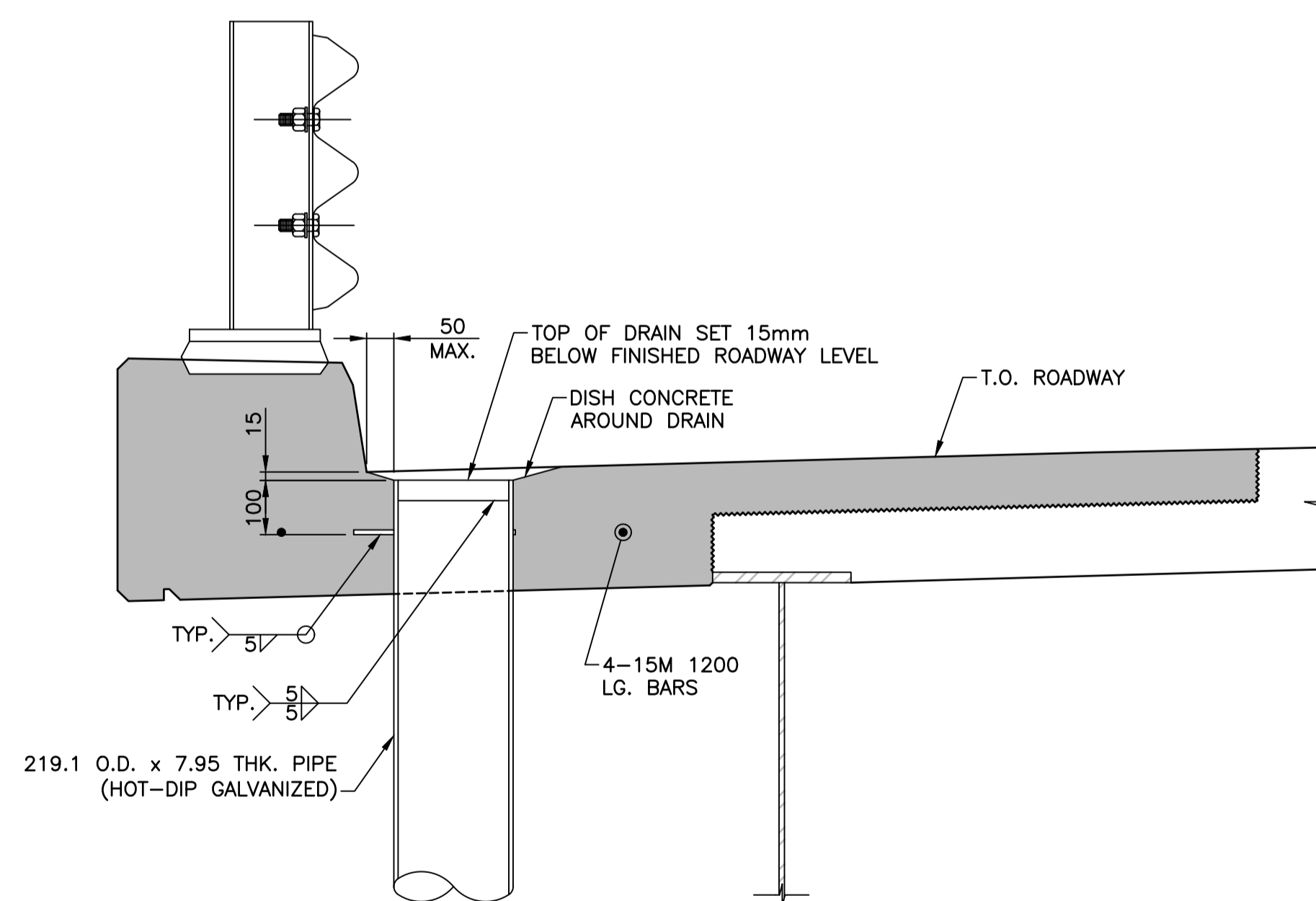
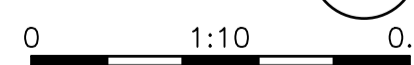
PLAN – TYPICAL DRAIN

SCALE 1:10



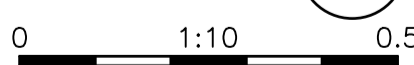
SECTION A

SCALE 1:10



SECTION B

SCALE 1:10



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22

Client: client



Project title: BRITISH COLUMBIA

BRIDGE RAILING UPGRADE FOR
Km 509.1 KLEDO RIVER BRIDGE AND
Km 737.5 PROCHNIK CREEK BRIDGE
ALASKA HWY

Designed by: A. KANSAL / Conçu par

Drawn by: S. HUNG / Dessiné par

Approved by: J. DONIC/M. BOWSER / Approuvé par

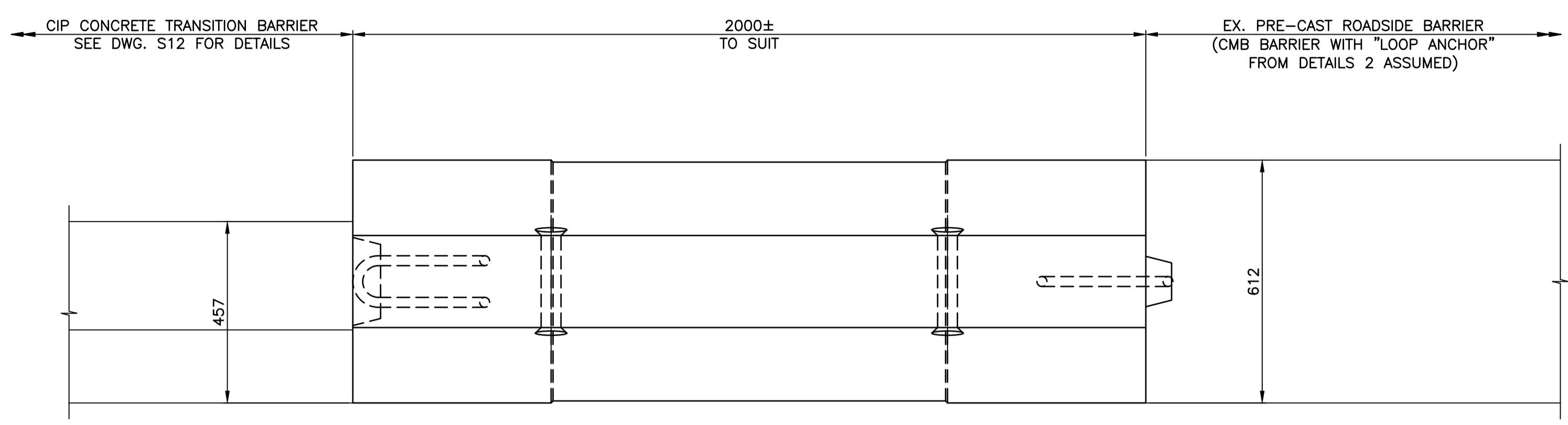
PWSC Project Manager / Administrateur de Projets TPSOC
R. HAGHIGHI

Drawing title: PROCHNIK CREEK BRIDGE (km 737.5) / Titre du dessin

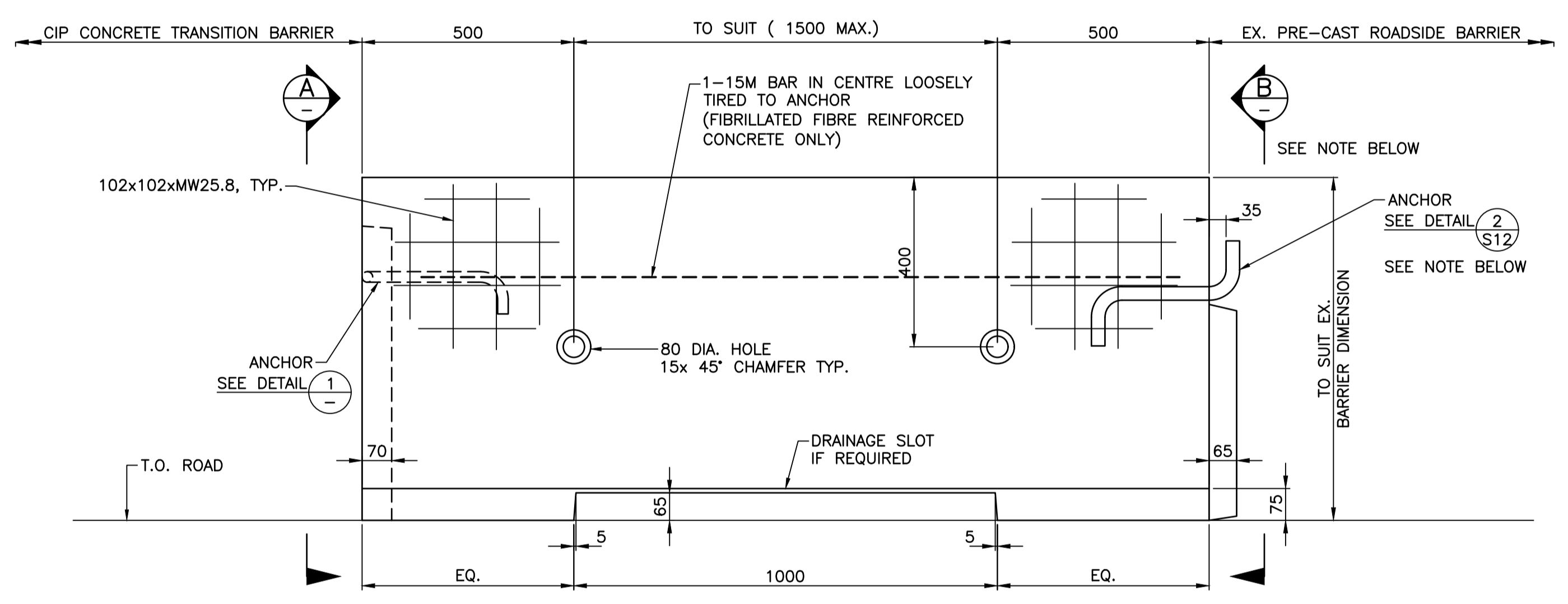
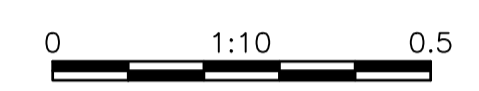
DECK DRAIN DETAILS

Project no./No. du projet: R.114778.002 / Drawing no./No. du dessin: S14 / Revision no.: 0

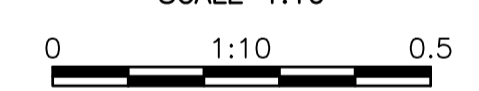
OF 15



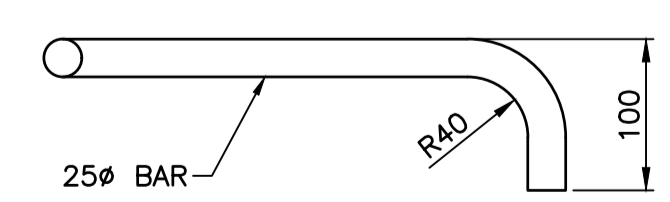
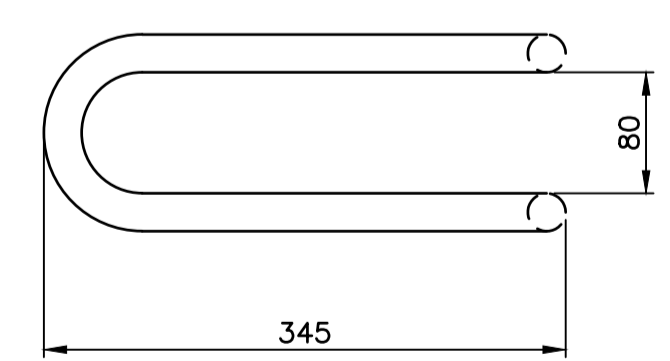
PLAN – NEW CIP CONCRETE ROADSIDE BARRIER
 SCALE 1:10



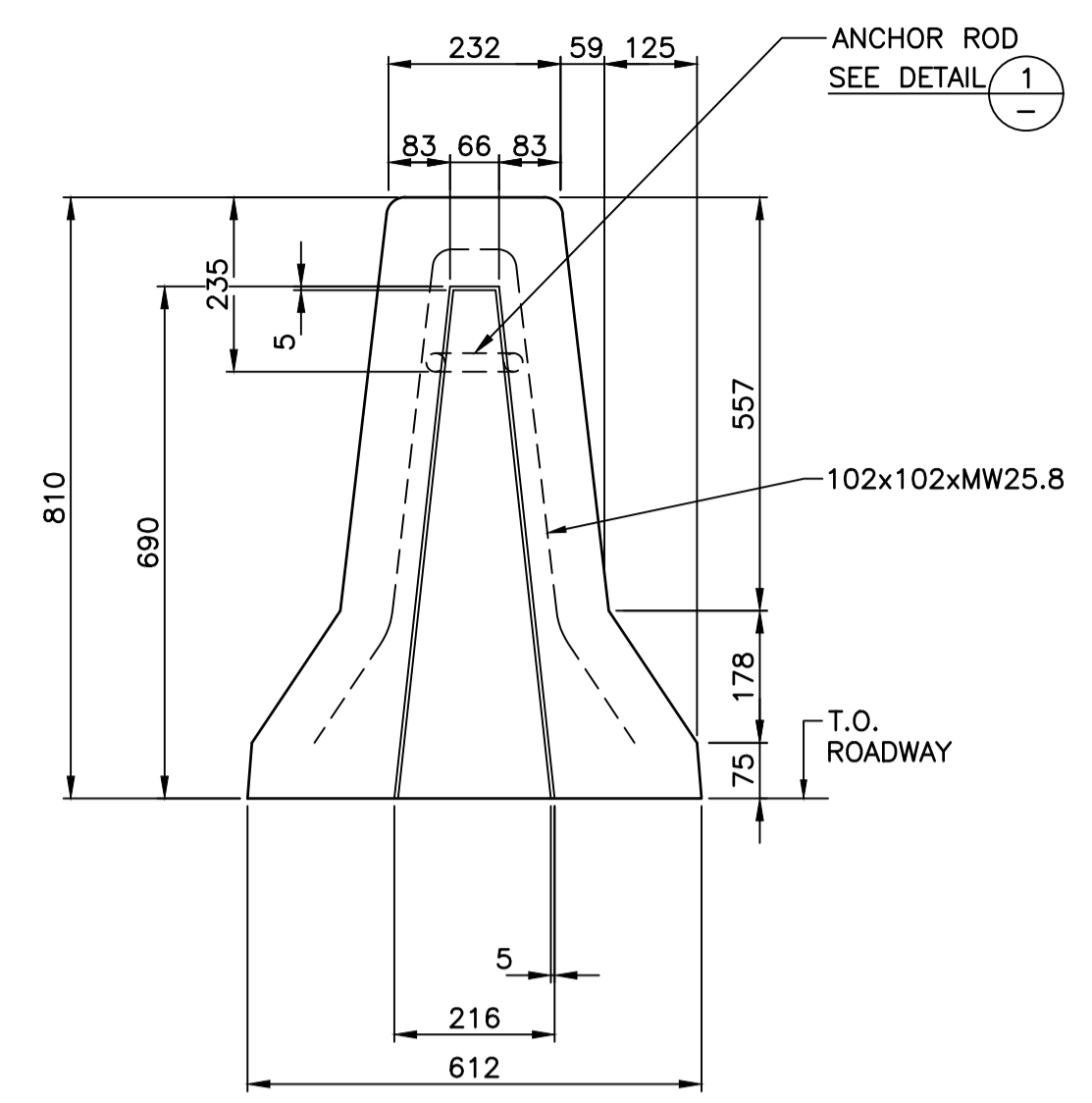
ELEVATION – NEW CIP CONCRETE ROADSIDE BARRIER
 SCALE 1:10



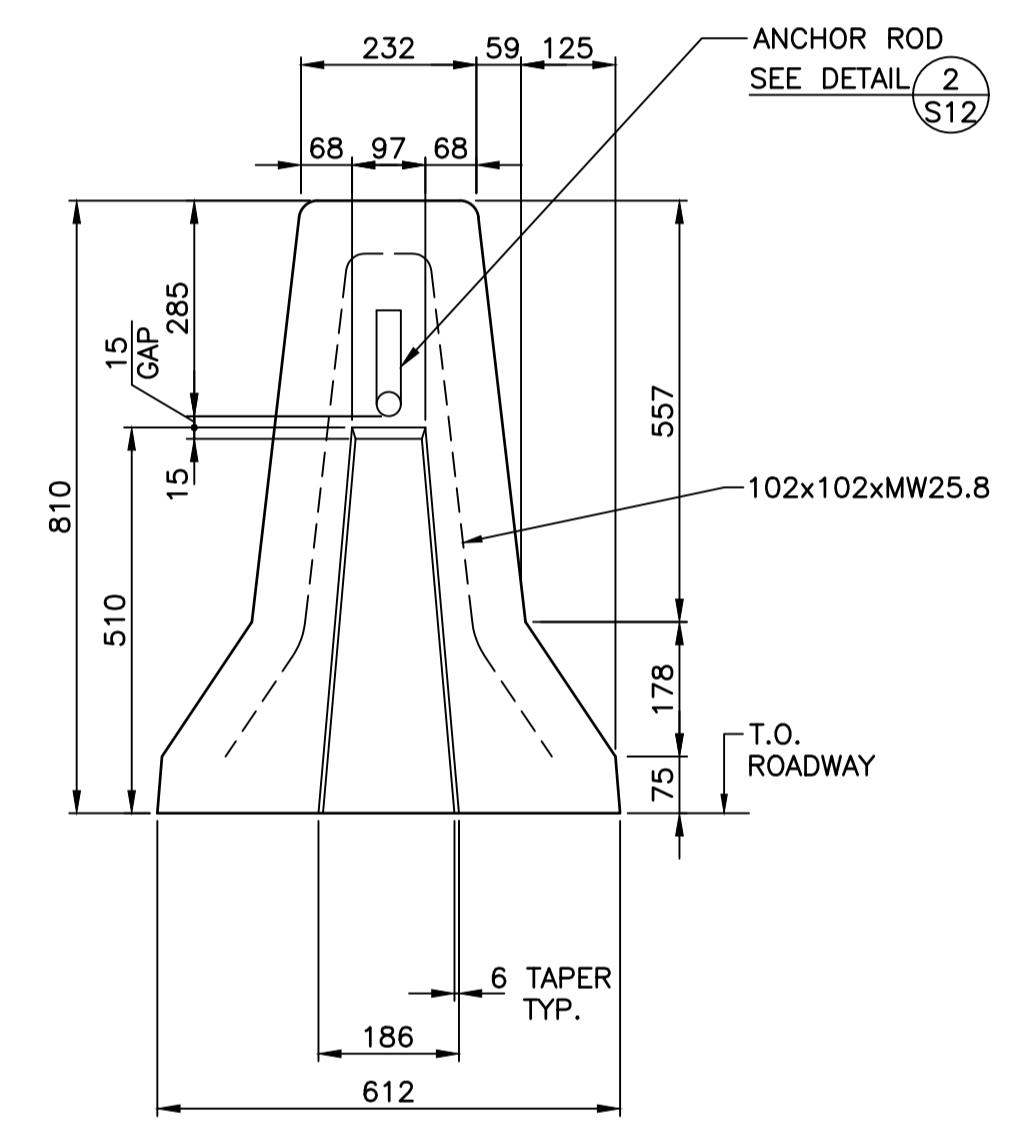
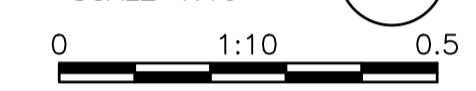
NOTE:
 BARRIER KEY AND ANCHOR DETAILS SHOWN ASSUME THAT THE EXISTING ROADSIDE BARRIER IS A PRE-CAST CMB TYPE BARRIER AND HAS ANCHOR DETAIL AS SHOWN ON SECTION A. IF EXISTING PRE-CAST ROADSIDE BARRIER HAS ANCHOR DETAIL AS PER SECTION B THE NEW CIP CONCRETE ROADSIDE BARRIER SHALL BE CONSTRUCTED TO REFLECT ANCHOR AND KEY DETAIL SHOWN ON SECTION A.



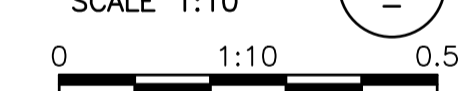
DETAIL 1
 SCALE 1:5



SECTION A
 SCALE 1:10



SECTION B
 SCALE 1:10



Revision	Description	Date
0	ISSUED FOR TENDER	21/06/22



Project title: **BRITISH COLUMBIA**

**BRIDGE RAILING UPGRADE FOR
 Km 509.1 KLEDO RIVER BRIDGE AND
 Km 737.5 PROCHNIK CREEK BRIDGE
 ALASKA HWY**

Designed by: **A. KANSAL**

Drawn by: **S. HUNG**

Approved by: **J. DONIC/M. BOWSER**

PWSSC Project Manager / Administrateur de Projets TPSOC: **R. HAGHIGHI**

Drawing title: **PROCHNIK CREEK BRIDGE
 (km 737.5)
 ROADWAY TRANSITION BARRIER**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.114778.002	S15 OF 15	0

DATE: 2021-06-22 - 2:55pm (harry.yu) - Prochnik Creek Bridge (02 Drawings) S15 - ROADWAY TRANSITION BARRIER.dwg
 LAYOUT ROADWAY TRANSITION BARRIER

