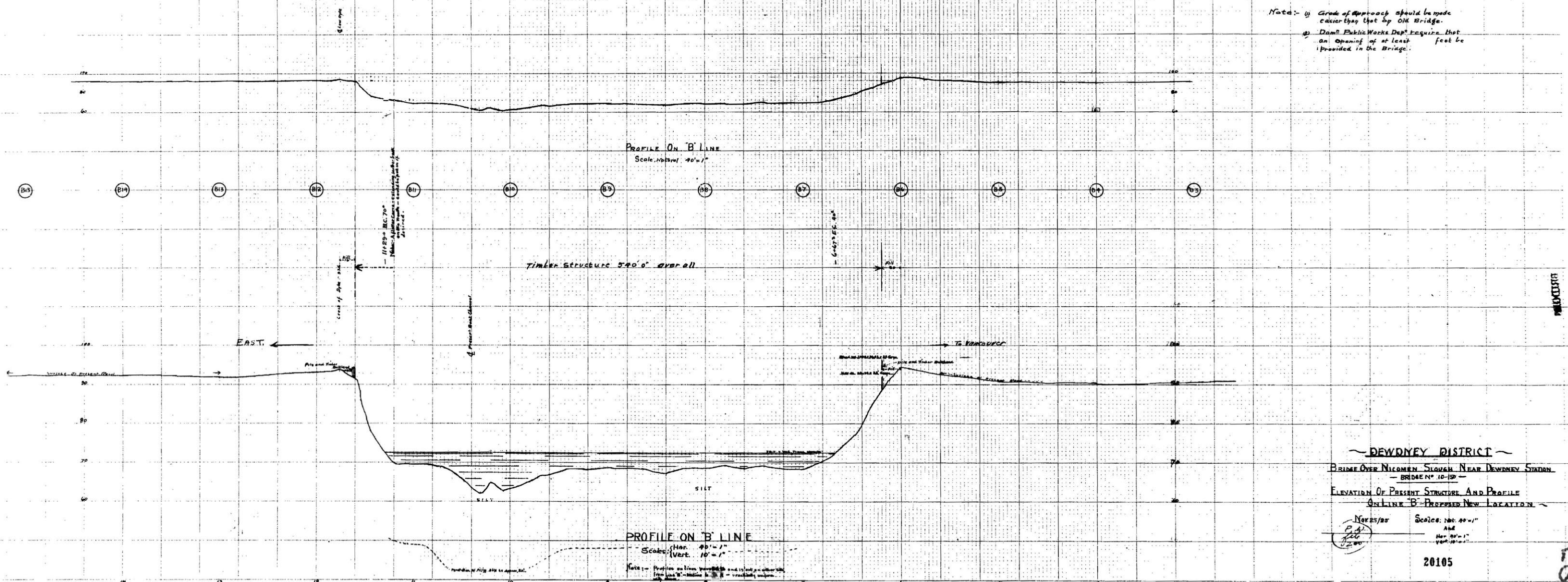


Note: 1) Grade of Approach should be made easier than that by Old Bridge.  
 2) Dam. Public Works Dept. require that an opening of at least 10 feet be provided in the Bridge.



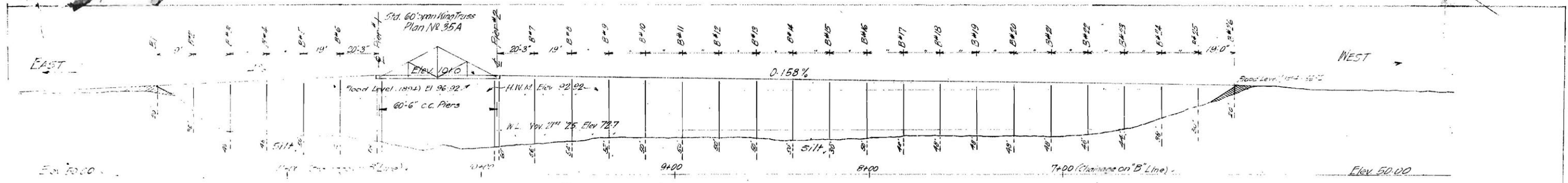
DEWDNEY DISTRICT  
 BRIDGE OVER NICOMEN SLOUGH NEAR DEWDNEY STATION  
 BRIDGE NO. 10-150  
 ELEVATION OF PRESENT STRUCTURE AND PROFILE  
 ON LINE B' - PROPOSED NEW LOCATION

NOV 25/25  
 Scales: Hor. 40' = 1" AND Vert. 10' = 1"

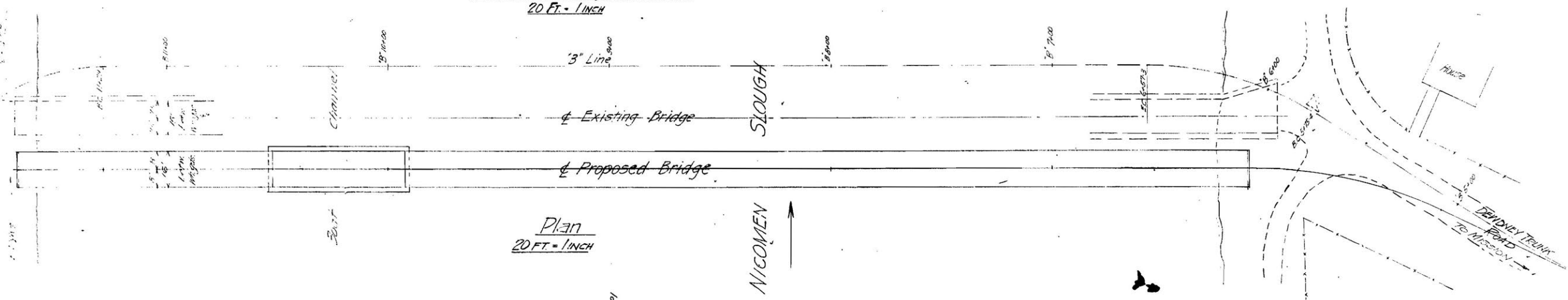
20105

596-2

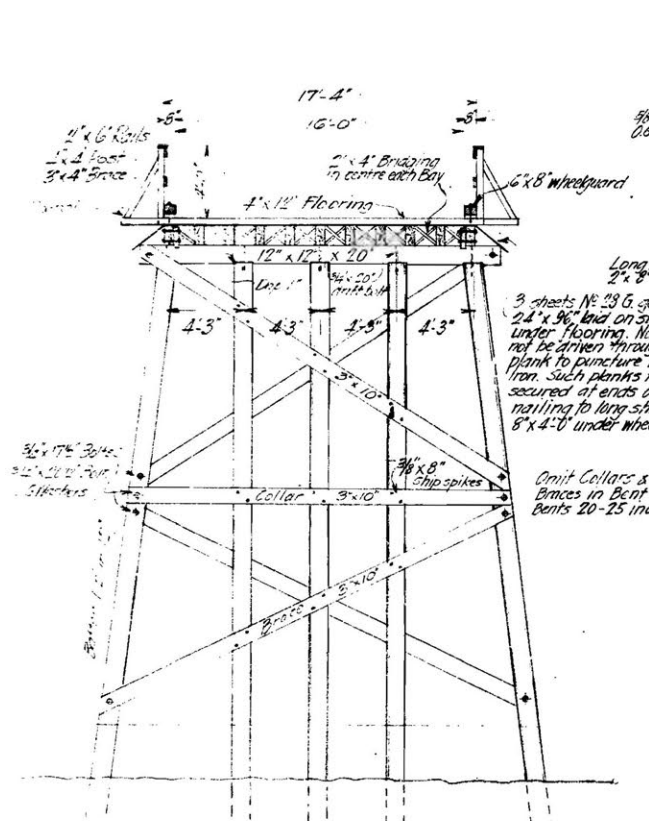
280



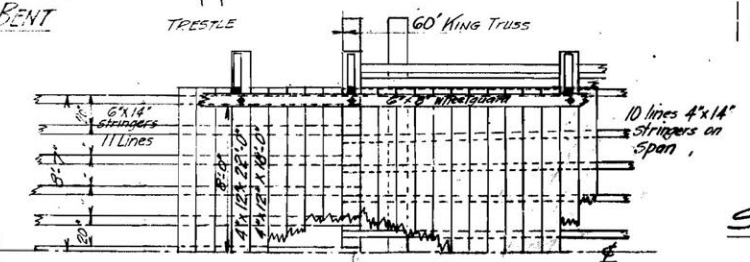
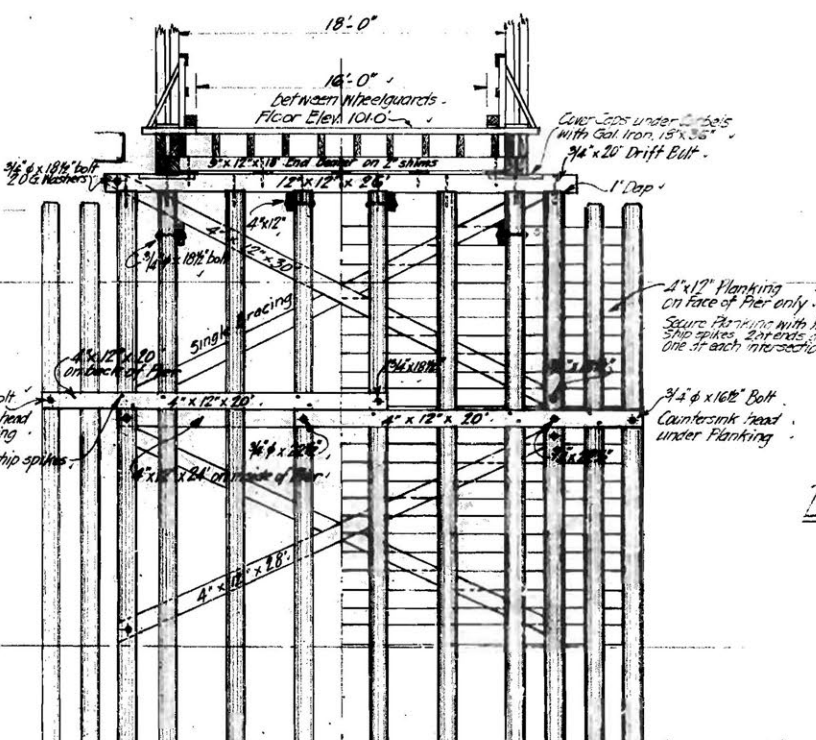
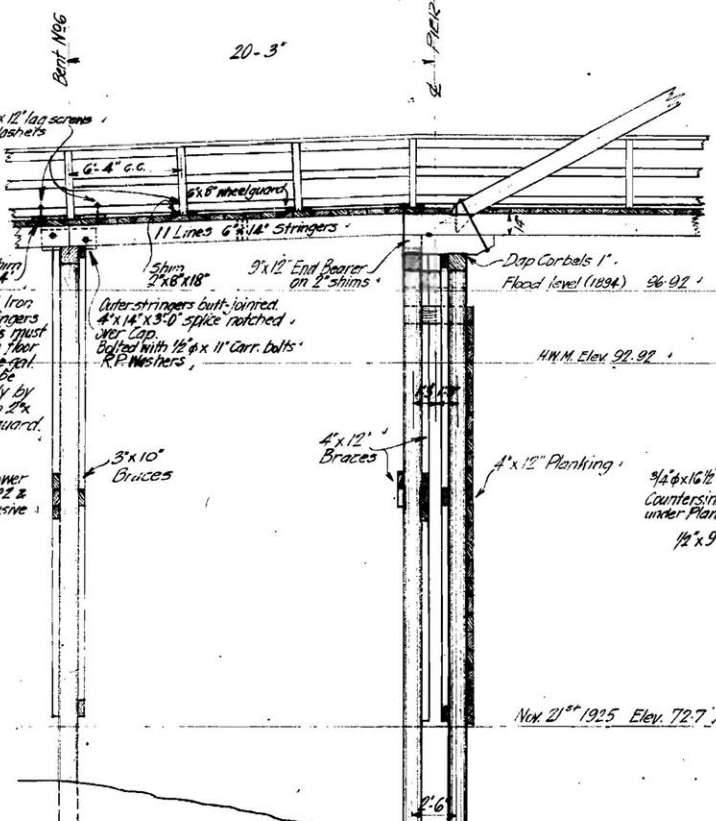
ELEVATION - looking downstream  
20 FT. = 1 INCH



Plan  
20 FT. = 1 INCH



TYPICAL TRESTLE BENT



Scale - 1/4" to 1"



PIER NO. 1  
Per No. 2 of similar construction

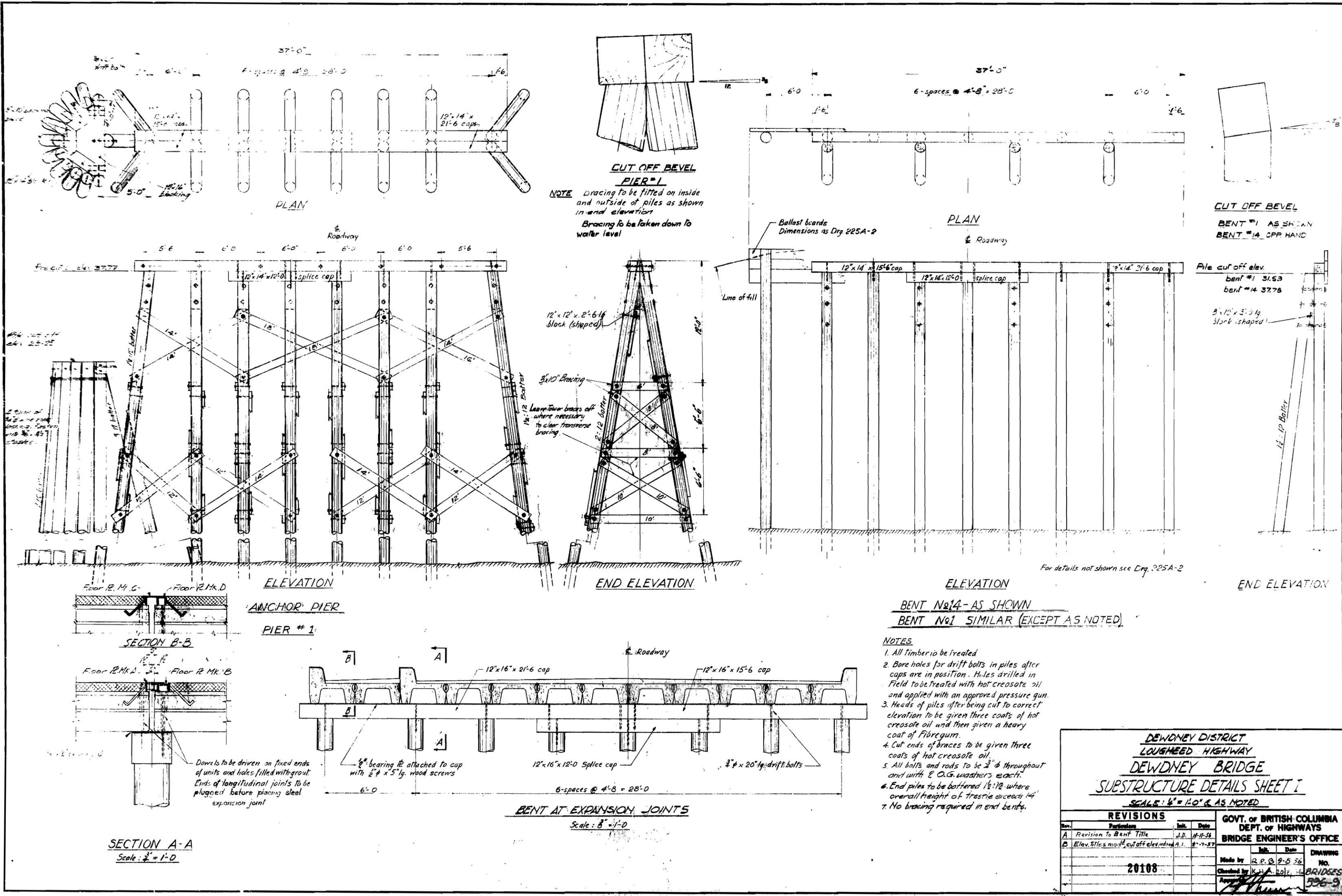
DEWDNEY DISTRICT  
DEWDNEY BRIDGE NO. 10-150  
OVER NICOMEN SLOUGH  
Scales as noted.

596-3

20106

GOVERNMENT OF BRITISH  
COLUMBIA  
DEPARTMENT OF PUBLIC  
WORKS  
Drawing No. 596-3  
Made by C.H.S.  
Traced by G.M.D.  
Checked by G.M.D.





**DEWDNEY DISTRICT  
LOUGHMEED HIGHWAY  
DEWDNEY BRIDGE  
SUBSTRUCTURE DETAILS SHEET I**

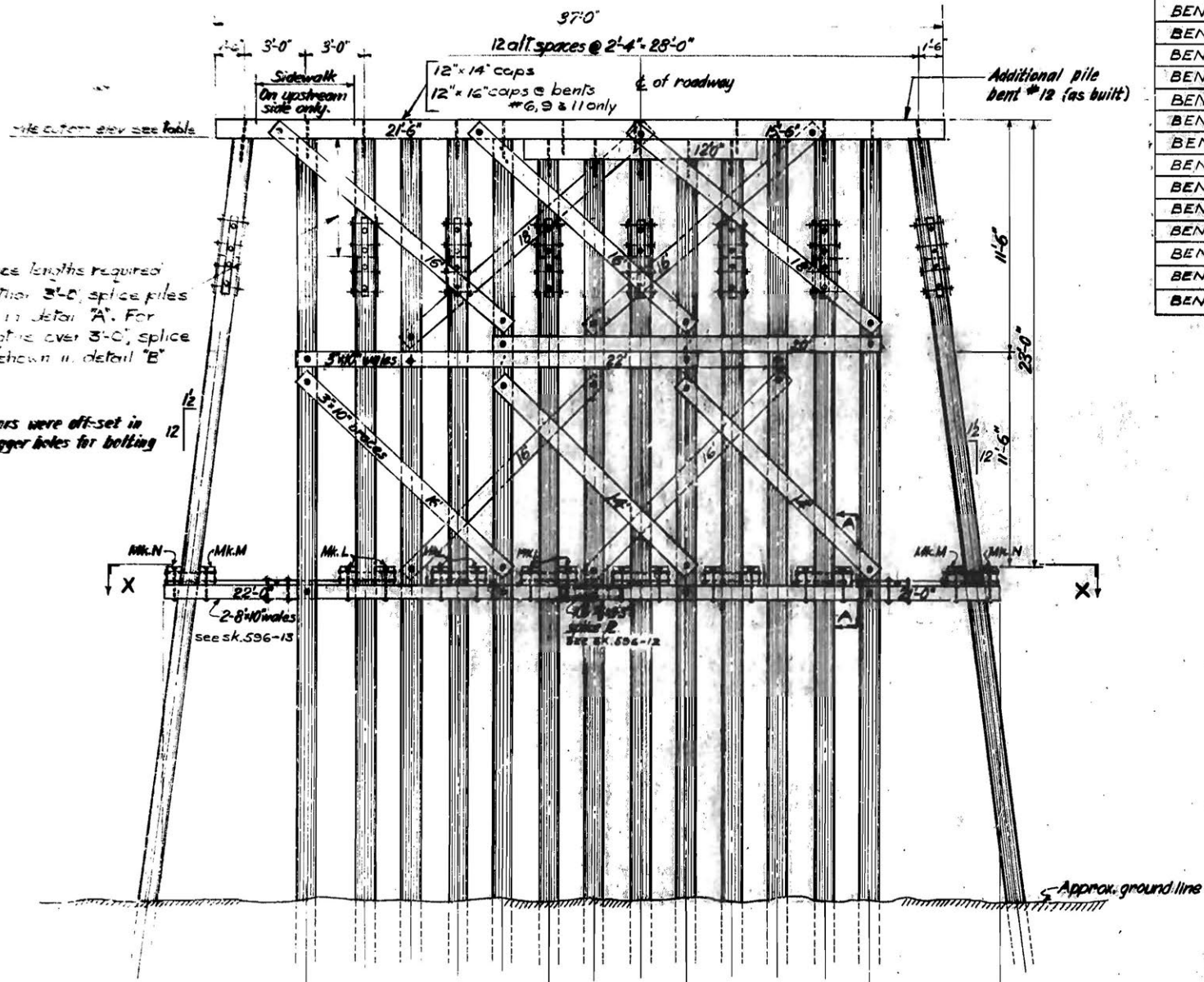
SCALE: 3/4" = 1'-0" & AS NOTED

REVISIONS			
Rev.	Description	Iss.	Date
A	Revision to Bent Title	J.D.	11-11-56
B	Elev. titles modified, cut off elev. added A.I.	J.D.	11-7-57

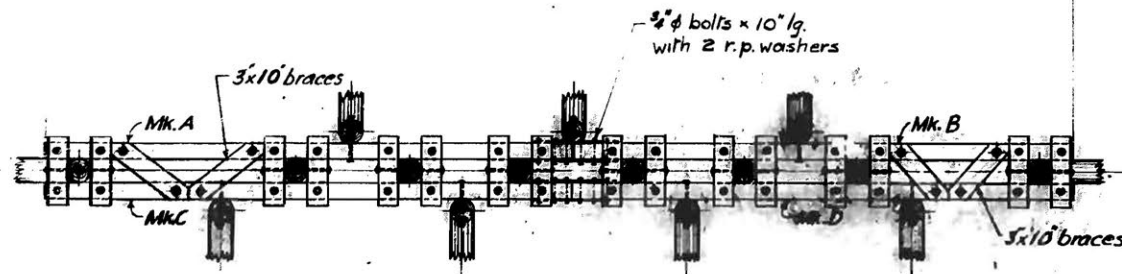
20108		GOVT. OF BRITISH COLUMBIA DEPT. OF HIGHWAYS BRIDGE ENGINEER'S OFFICE
Made by Checked by Approved by	R.P.S. 9-6-56 K.H. 10/2/56 	DRAWING No. BRIDGES 596-9







ELEVATION OF BENT # 2 TO #13 (INCL)

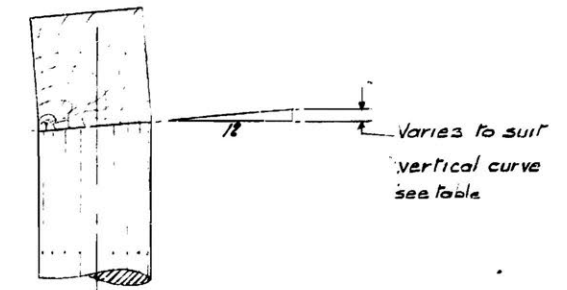


SECTION X-X

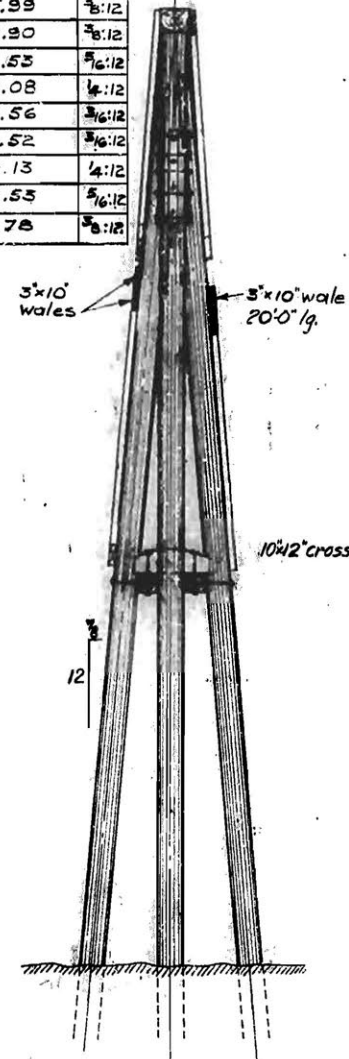
Where splice lengths required are less than 3'-0", splice piles as shown in detail "A". For splice lengths over 3'-0", splice piles as shown in detail "B".

As built:  
All splice bars were off-set in order to stagger holes for bolting purposes.

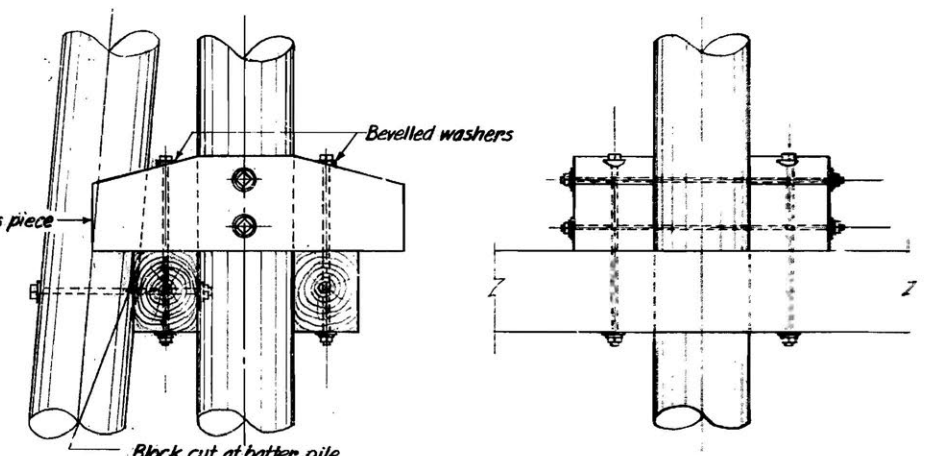
BENT NO	ELEVATION	Slope of cut off to suit Vert. Curve
BENT #1	31.88	3/8:12
BENT #2	32.55	3/8:12
BENT #3	33.42	3/8:12
BENT #4	34.29	3/8:12
BENT #5	35.16	3/8:12
BENT #6	35.99	3/8:12
BENT #7	36.90	3/8:12
BENT #8	38.53	3/8:12
BENT #9	39.08	1/2:12
BENT #10	39.56	3/16:12
BENT #11	39.52	3/16:12
BENT #12	39.13	1/4:12
BENT #13	38.53	3/16:12
BENT #14	37.78	3/8:12



CUT OFF BEVEL



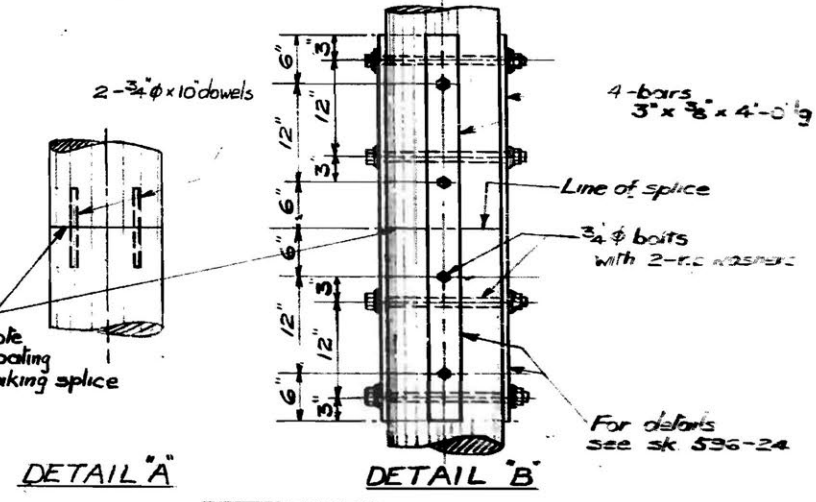
END ELEVATION



SECTION A-A  
Scale: 1/4" = 1'-0"

FRONT ELEVATION

Treat cut faces with 3 coats of hot creosote oil & apply generous coating of fibregum before making splice



DETAIL A

PILE SPLICES

- NOTES
- All timber to be treated.
  - All bolts to be 3/4" with 2-O.G. w.s. except as noted.
  - Iron fastenings to be galvanized.
  - All caps supplied cut to correct length.
  - Bracing cut in field as required.

**DEWDNEY DISTRICT  
LOUGHED HIGHWAY  
DEWDNEY BRIDGE  
SUBSTRUCTURE DETAILS SHEET III**

SCALE: 1/4" = 1'-0" & AS NOTED

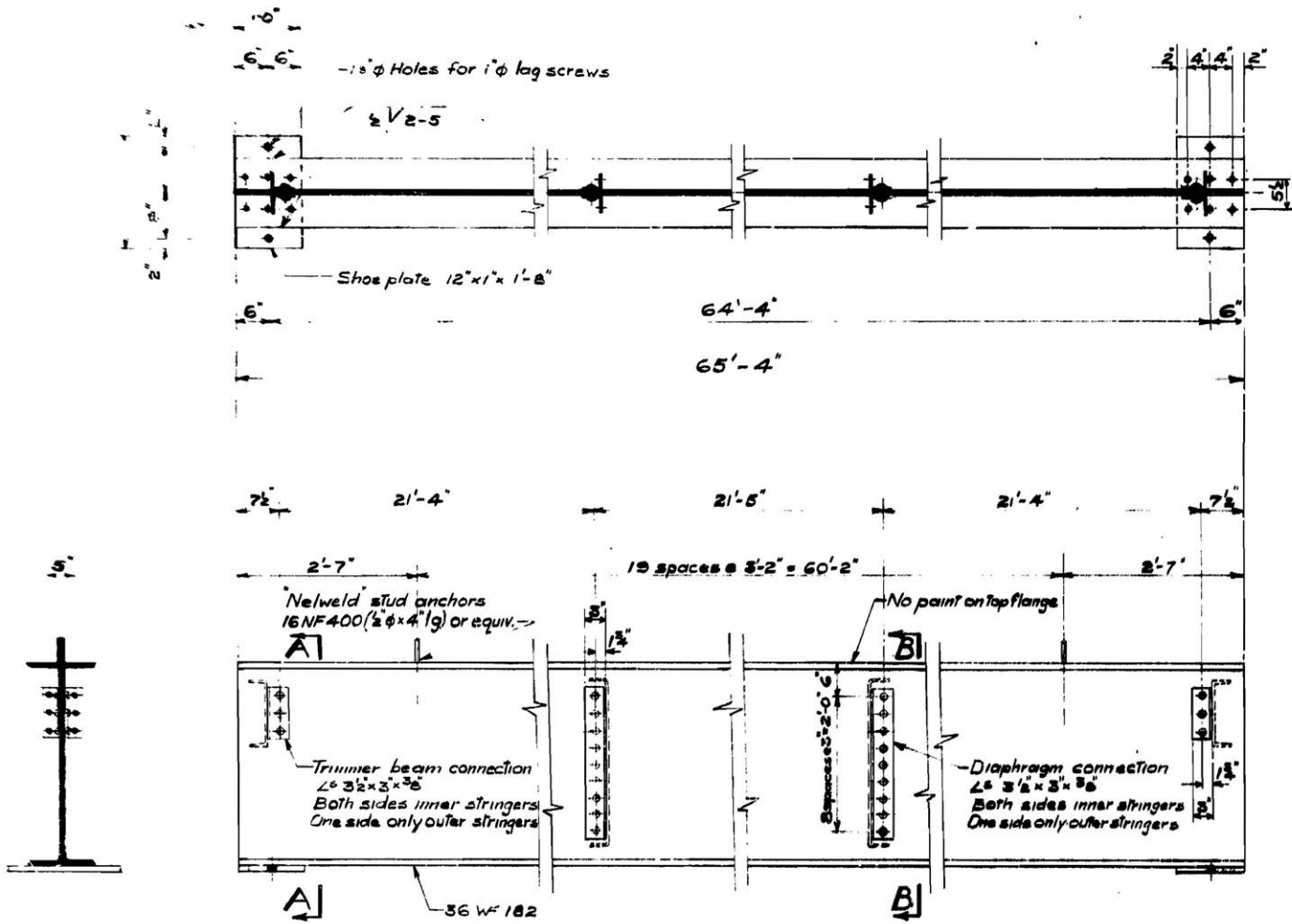
REVISIONS		
No.	Description	Date
A	General Revisions	11/25
B	As-built information added	6/1/50

20110

GOVT. of BRITISH COLUMBIA  
DEPT. of HIGHWAYS  
BRIDGE ENGINEERS OFFICE

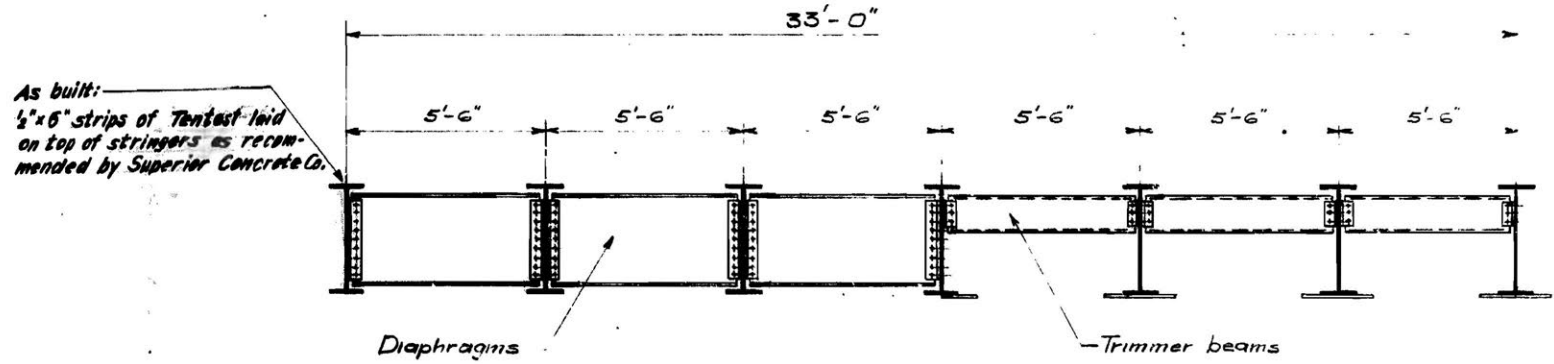
Drawn by: P.P.  
Checked by: L.G.A.  
Approved: [Signature]

536-15



SECTION A-A

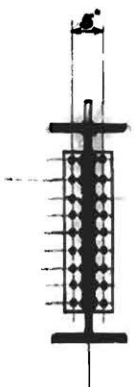
STRINGER



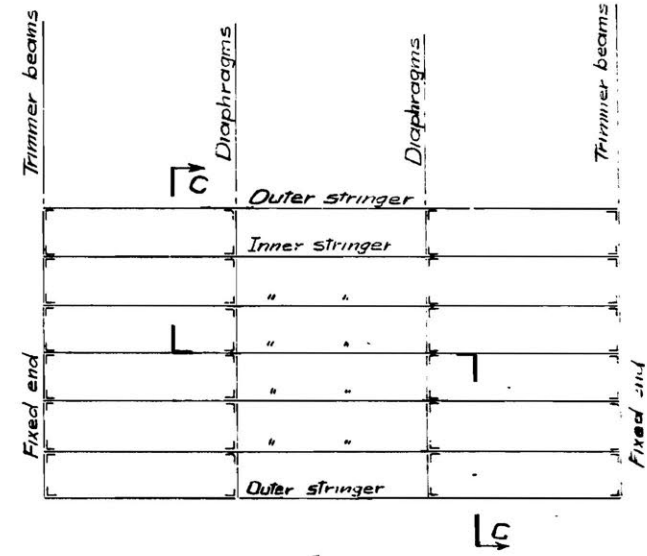
SECTION C-C

Scale 3/8" = 1'-0"

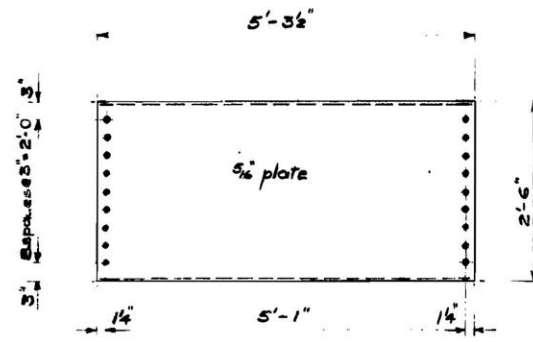
FIELD BOLTS 10% added  
317 3/4" φ 1 1/4" lg  
Complete with 1 nut & 1 pl. washer each.



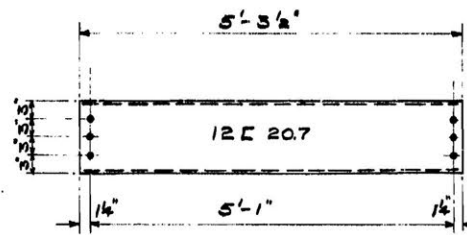
SECTION B-B



STEELWORK ASSEMBLY



DIAPHRAGM



TRIMMER BEAM

- NOTES**
1. Rivets 3/4" φ. Open holes 1 3/8" φ. Field conns. bolted
  2. Paint all steelwork one shop coat red lead
  3. Shoe plates may be welded to stringers instead of riveted as shown. In either case underside of plate must be flat.

Estimated weight of steelwork = 88900 lbs.

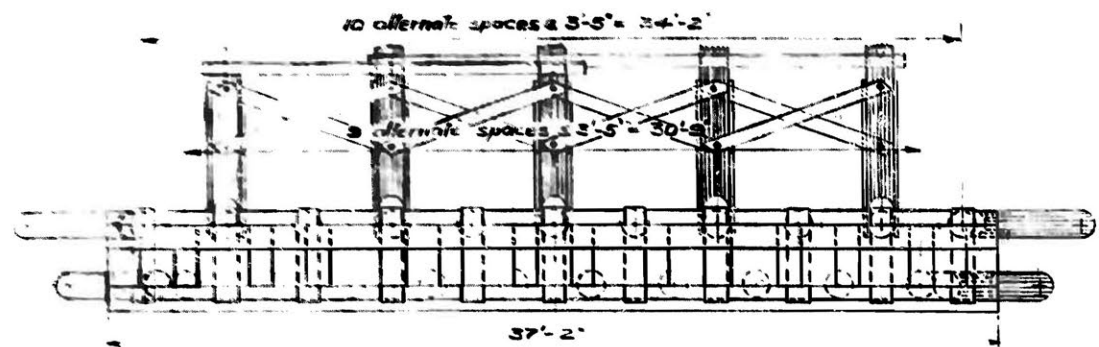
FOR AS BUILT DETAILS  
SEE SHOP DRAWING

**DEWDNEY DISTRICT  
LOUGHEED HIGHWAY  
DEWDNEY BRIDGE  
STEELWORK DETAILS  
SCALE 3/8" = 1'-0" & AS NOTED**

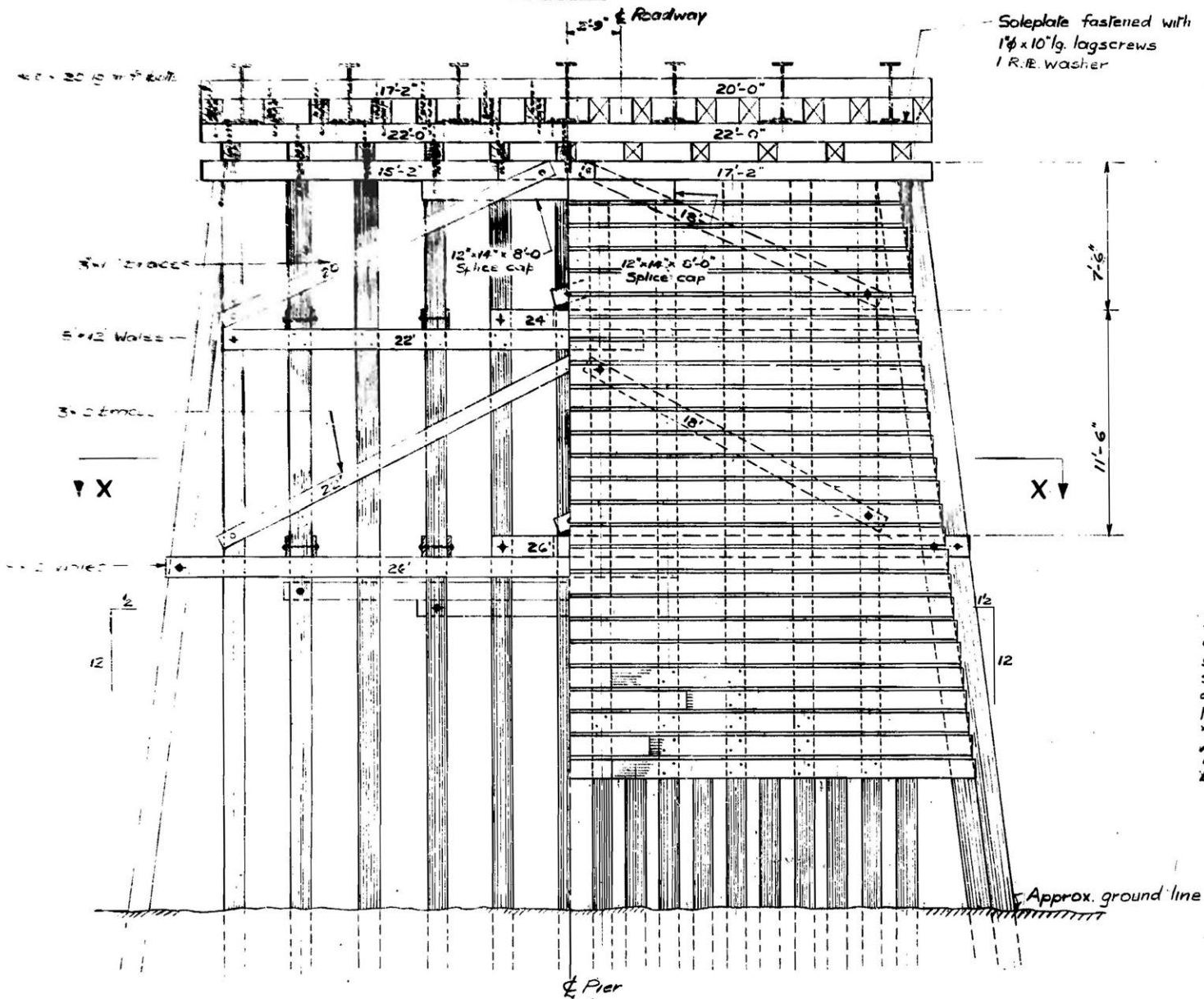
REVISIONS				GOVT. OF BRITISH COLUMBIA DEPT. OF HIGHWAYS BRIDGE ENGINEER'S OFFICE			
No.	Description	Date	By	No.	Date	By	Checked
1	As-built information added	1/1/54					
20111							

596-17



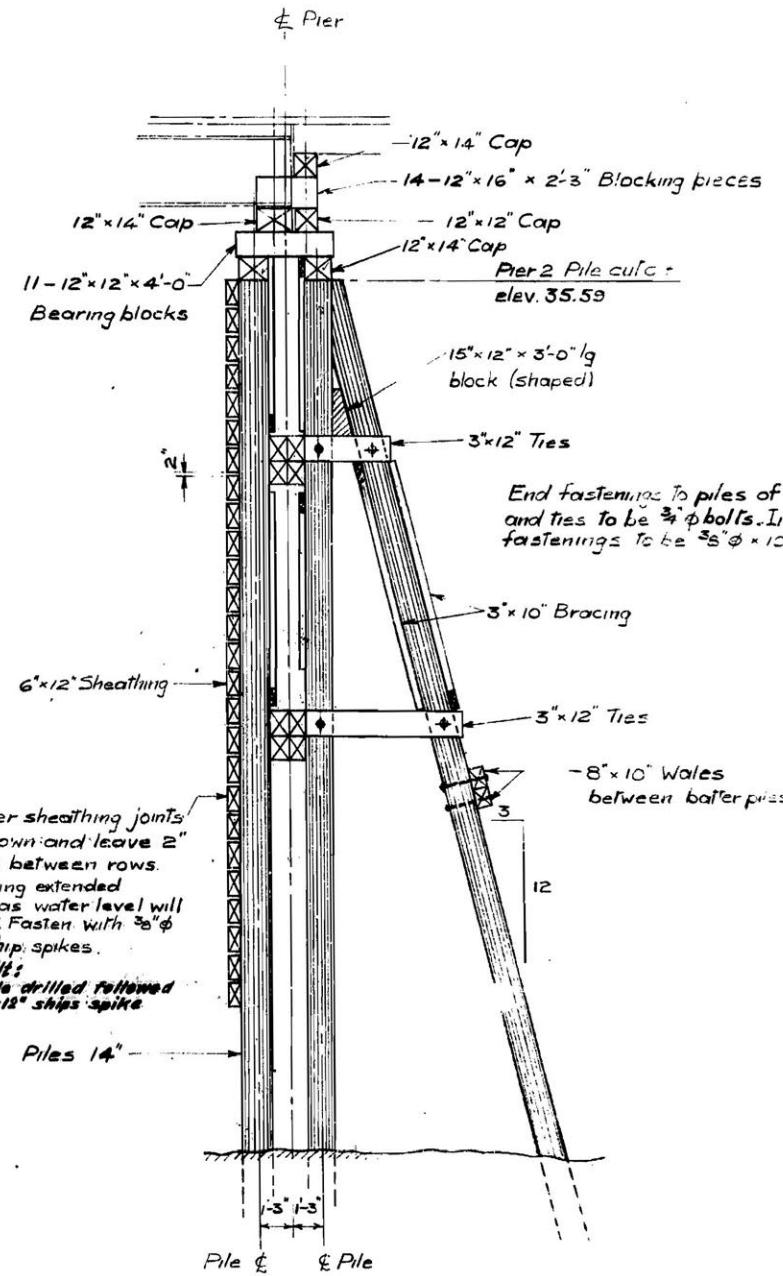


PLAN



SECTION X-X

PIERS #2 & #3 AS SHOWN

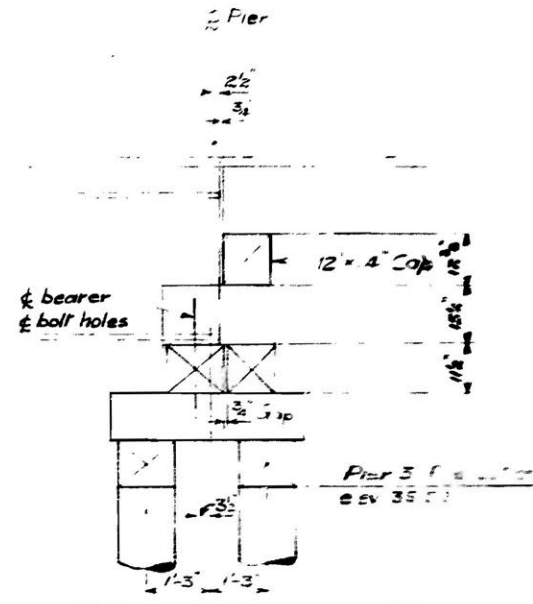


Stagger sheathing joints as shown and leave 2" space between rows. Sheathing extended as low as water level will permit. Fasten with 3/8" x 10" ship spikes.

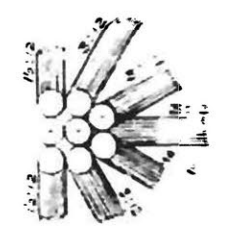
As built: 4" hole drilled followed by 3" x 18" ship spike

NOTES

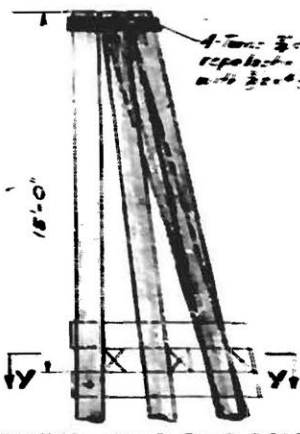
1. All timber to be treated except sheathing.
2. Bore holes for drift bolts in piles after caps are in position. Holes drilled in field to be treated with hot creosote oil and applied with an approved pressure gun.
3. The heads of piles after being cut to the correct elevation to be given three coats of hot creosote oil and then given a heavy coat of Fibregum.
4. Cut ends of bracing and sheathing to be given three coats of hot creosote oil.
5. All bolts and rods to be 3/4" throughout: 2-0.6 washers with each bolt and rod.



DETAIL AT TOP OF PIER #3



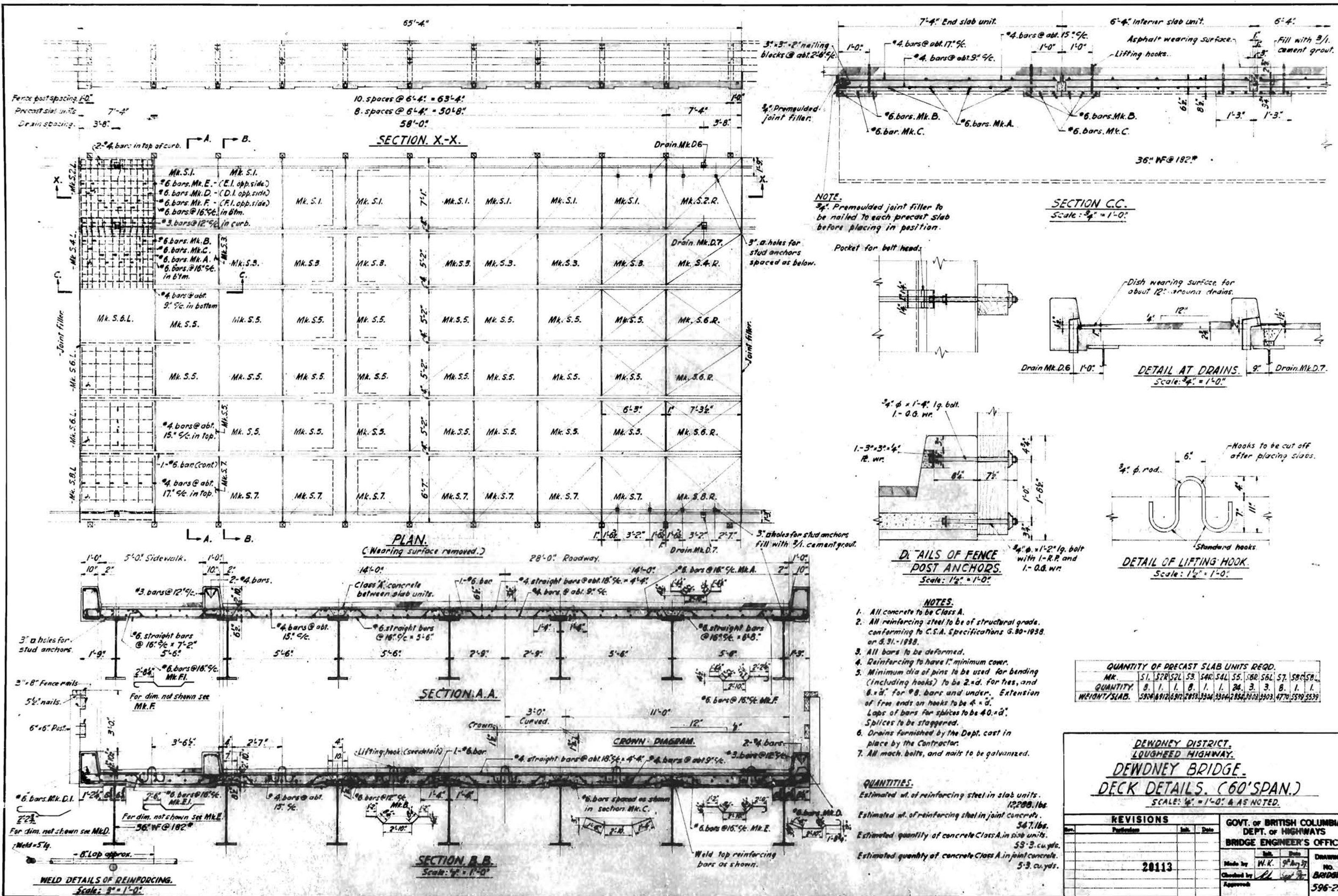
PLAN



DETAIL OF 8 PILE DOLPHIN

DEWDNEY DISTRICT  
LOUGHEED HIGHWAY  
DEWDNEY BRIDGE  
SUBSTRUCTURE DETAILS SHEET IV  
SCALE 1/2" = 1'-0" AND AS NOTED

REVISIONS		GOVT. OF BRITISH COLUMBIA DEPT. OF HIGHWAYS BRIDGE ENGINEER'S OFFICE	
No.	Description	Date	By
20112			



10. spaces @ 6'-4" = 63'-4"  
 8. spaces @ 6'-4" = 50'-8"  
 58'-0"

**SECTION X-X**

**PLAN**  
 (Wearing surface removed.)

**SECTION A.A**

**SECTION A.B**  
 Scale: 1/2" = 1'-0"

**NOTE.**  
 3/4" Premoulded joint filler to be nailed to each precast slab before placing in position.

**SECTION C.C.**  
 Scale: 3/4" = 1'-0"

**DETAIL AT DRAINS**  
 Scale: 1/4" = 1'-0"

**DETAILS OF FENCE POST ANCHORS**  
 Scale: 1/2" = 1'-0"

**DETAIL OF LIFTING HOOK**  
 Scale: 1/2" = 1'-0"

**NOTES.**

- All concrete to be Class A.
- All reinforcing steel to be of structural grade, conforming to C.S.A. Specifications G.30-1938 or G.31-1938.
- All bars to be deformed.
- Reinforcing to have 1" minimum cover.
- Minimum dia of pins to be used for bending (including hooks) to be 2nd. for ties, and 6th. for 8. bars and under. Extension of free ends on hooks to be 4 x d. Splices to be staggered.
- Drains furnished by the Dept. cast in place by the Contractor.
- All mach. bolts, and nails to be galvanized.

**QUANTITIES.**

Estimated wt. of reinforcing steel in slab units. 12200 lbs.  
 Estimated wt. of reinforcing steel in joint concrete. 547 lbs.  
 Estimated quantity of concrete Class A in slab units. 58-3 cu. yds.  
 Estimated quantity of concrete Class A in joint concrete. 5-3 cu. yds.

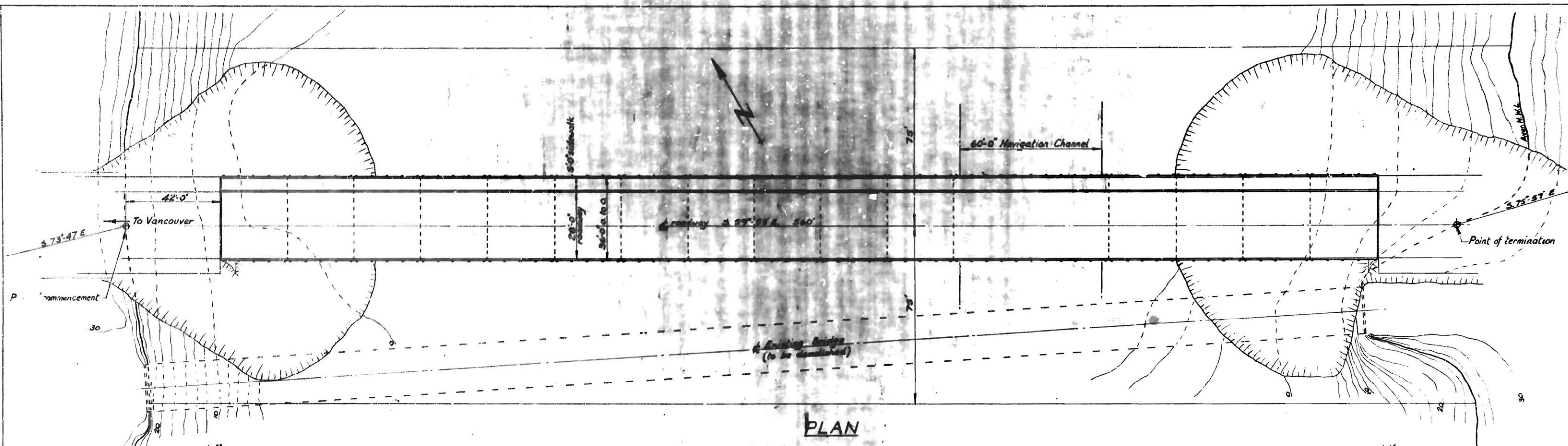
QUANTITY OF PRECAST SLAB UNITS REQD.											
Mk.	S1.	S2R	S2L	S3.	S4R	S4L	S5.	S6R	S6L	S7.	S8.
QUANTITY	8	1	1	8	1	1	24	3	3	8	1
WEIGHT/SLAB.	5904	6912	6912	2093	3324	3364	2854	3303	3303	4770	5519

**DEWDNEY DISTRICT,**  
**LOUGHED HIGHWAY,**  
**DEWDNEY BRIDGE.**  
**DECK DETAILS. (60' SPAN.)**  
 SCALE: 1/4" = 1'-0" & AS NOTED.

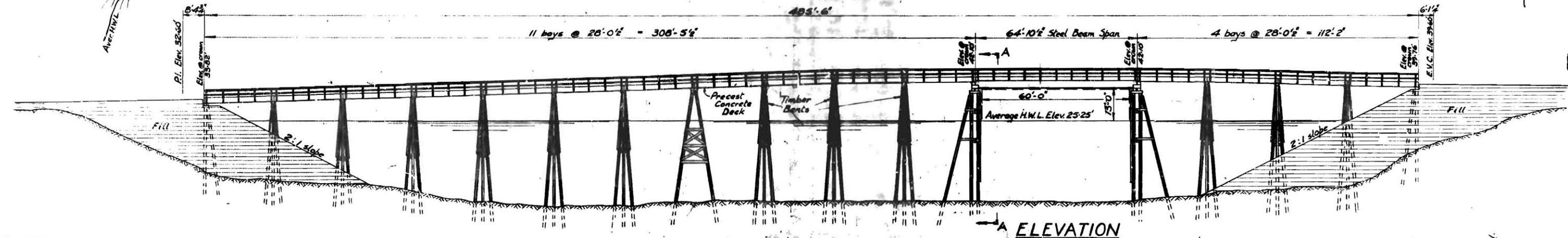
REVISIONS			GOVT. OF BRITISH COLUMBIA DEPT. OF HIGHWAYS BRIDGE ENGINEER'S OFFICE		
No.	Description	Iss.	Date	Iss.	Date
20113				W.K.	9th Aug 37
				Checked by	
				Approved	

DRIVING NO. 596-23.

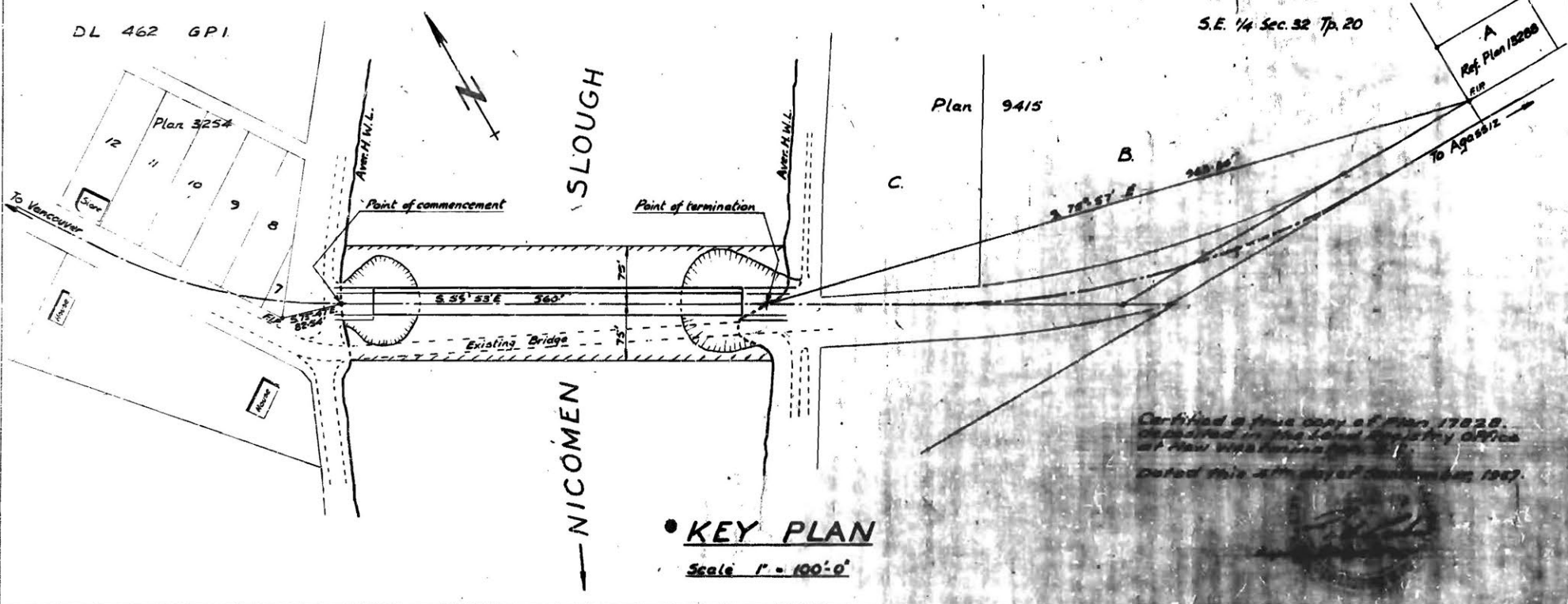




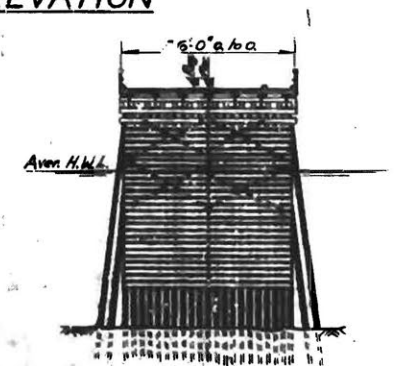
**PLAN**



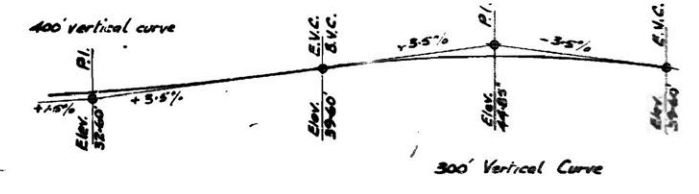
**ELEVATION**



**KEY PLAN**  
Scale 1" = 100'-0"



**SECTION A-A**



**VERTICAL CURVE DIAGRAM**

Datum : Geodetic

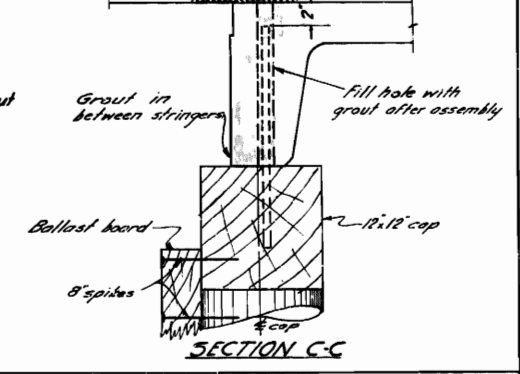
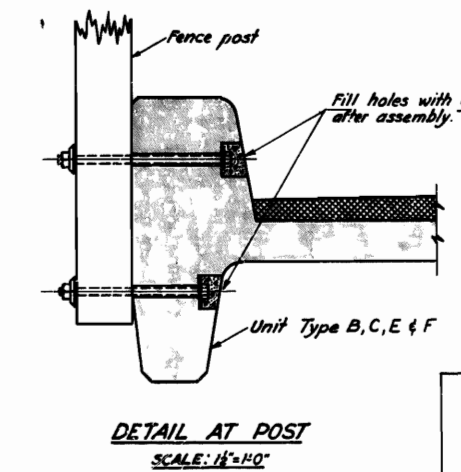
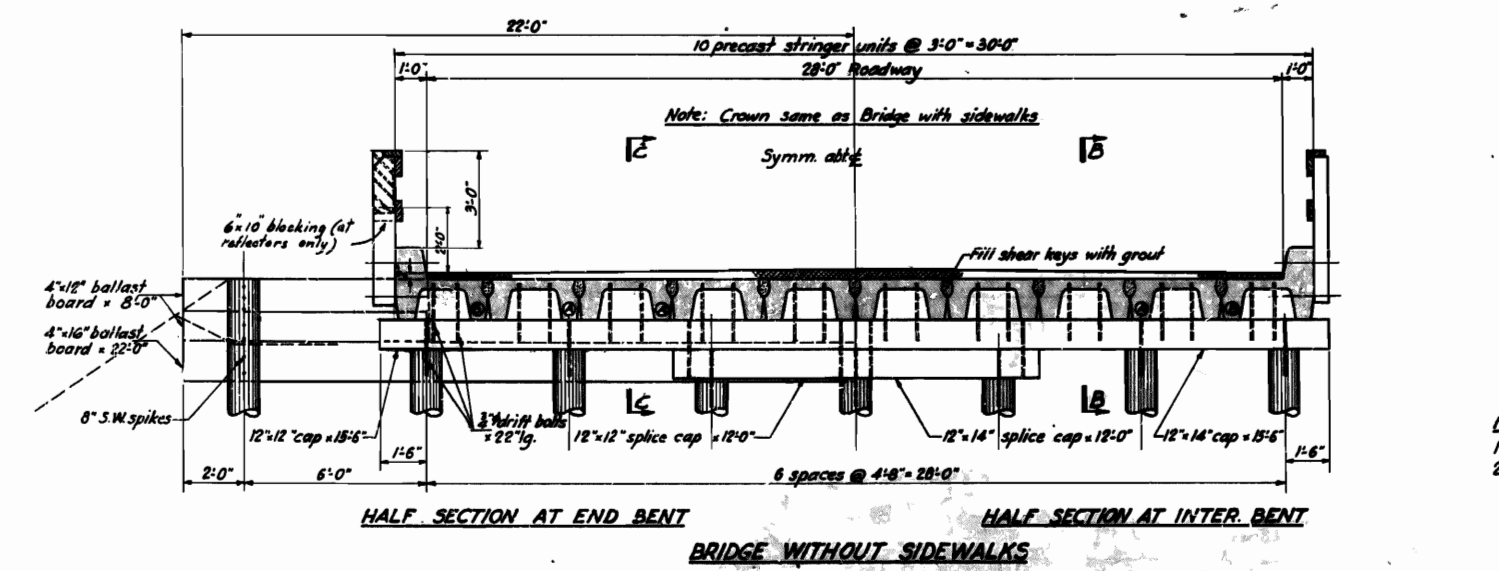
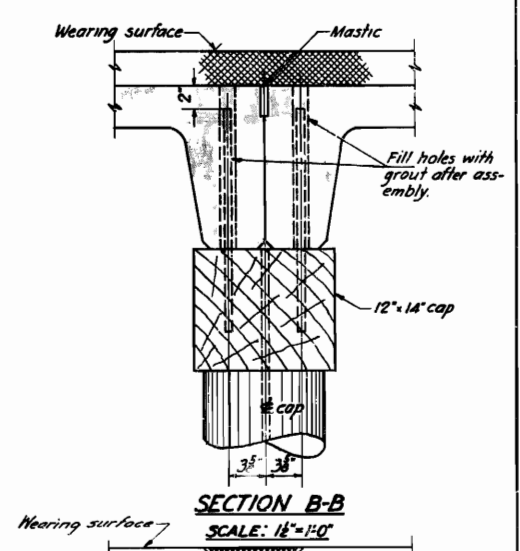
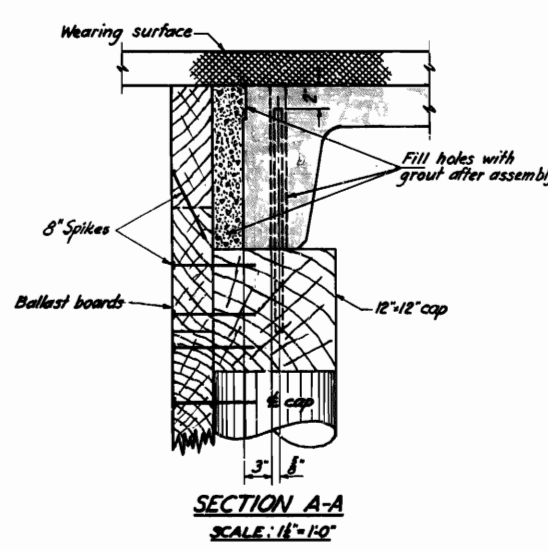
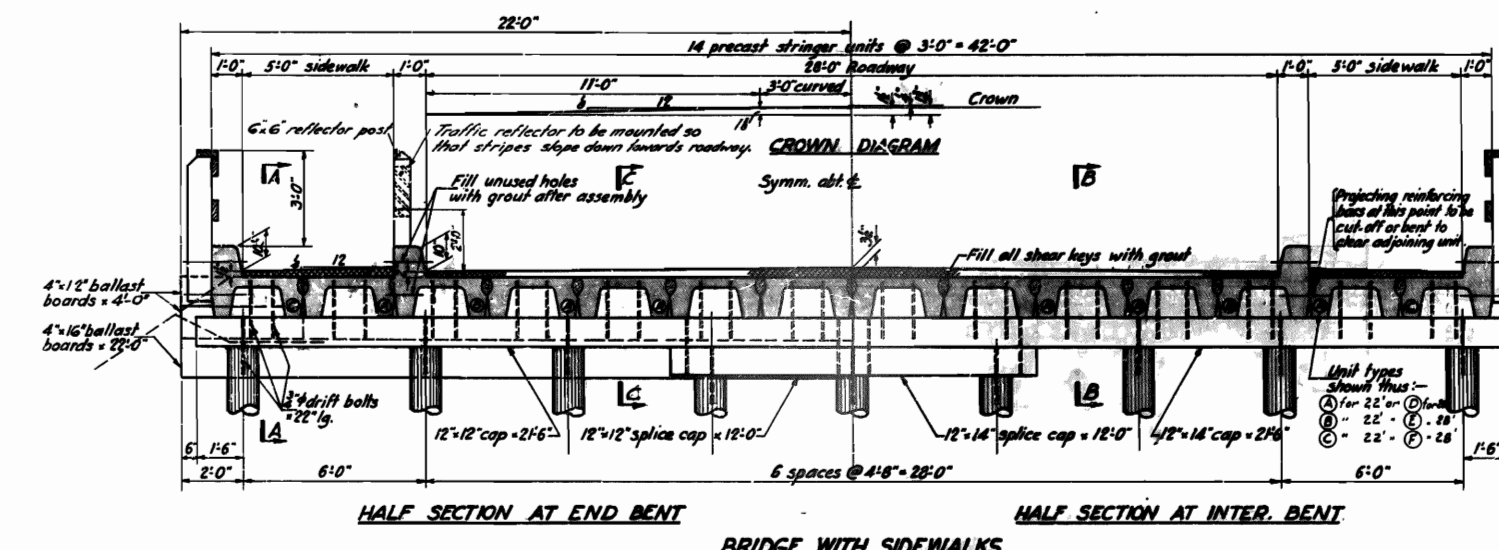
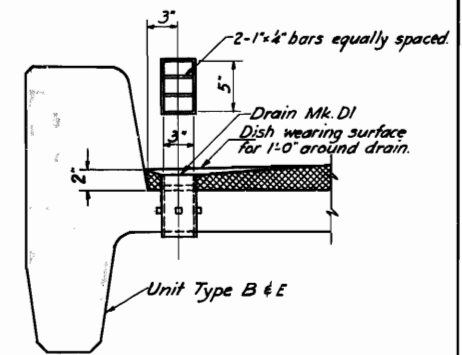
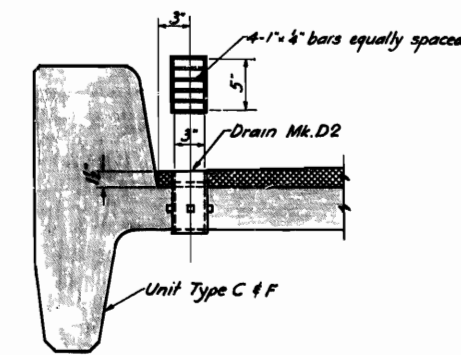
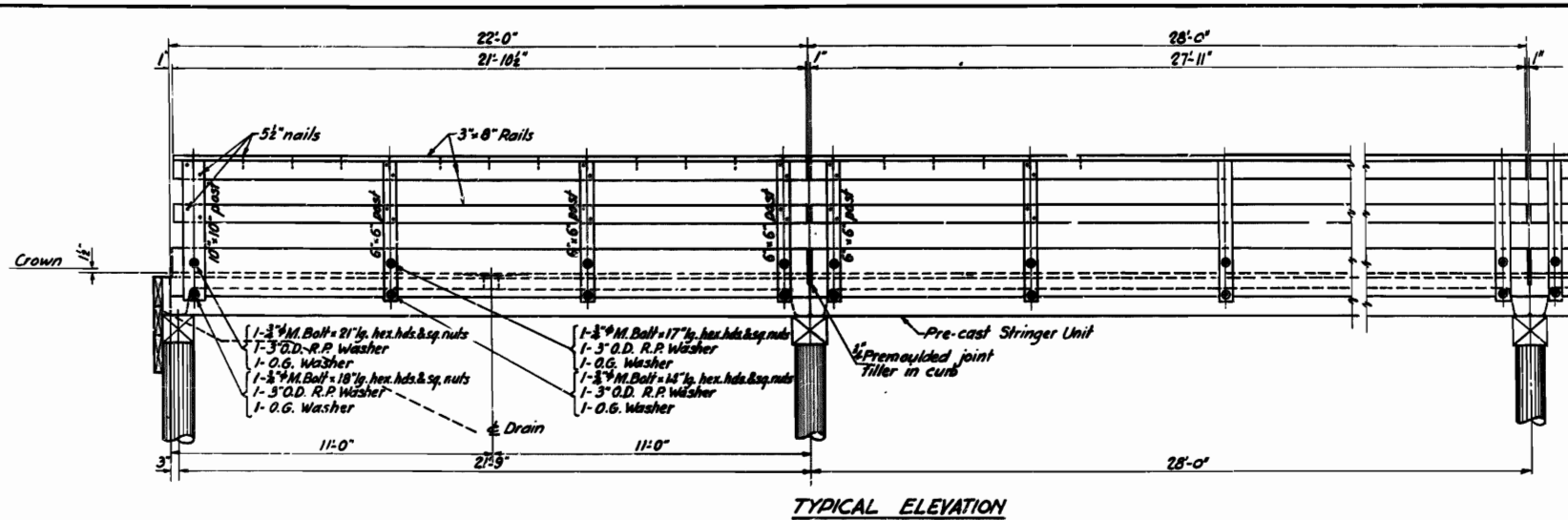
**DEWDNEY DISTRICT  
LOUGHEED HIGHWAY  
DEWDNEY BRIDGE  
LAYOUT & KEY PLAN  
SCALE 1" = 20'-0" & AS NOTED**

**17828**

Registered in the Land Registry  
Office of the Registrar, B.C.  
this 4th day of August, 1957.  
A. H. [Signature]  
Registrar

REVISIONS			GOVT. OF BRITISH COLUMBIA DEPT. OF HIGHWAYS BRIDGE ENGINEER'S OFFICE
Particulars	Init.	Date	
20114			Made by: J.M.N. 6/28/57 Checked by: [Signature] 7/2/57 Approved: [Signature] No. BRIDGES 596-20

Certified a true copy of Plan 17828.  
Registered in the Land Registry Office  
at New Westminster B.C.  
this 4th day of August, 1957.  
Date of this 4th day of August, 1957.



**PRECAST CONCRETE BRIDGES  
MISCELLANEOUS DETAILS**  
SCALE: 1/2" = 1'-0" AND AS NOTED

REVISIONS		INIT.	DATE
A	End Diaphragm and Wt. added	R.D.	Jan 1963
B	General revisions	DD	12/3/63

GOVT. OF BRITISH COLUMBIA  
DEPT. OF HIGHWAYS  
BRIDGE ENGINEER'S OFFICE

Made by: K.W. July 23/55  
Checked by: W.A.B. July 23/55  
Approved: [Signature]

2082-2

**NOTES:**  
1. All mach. bolts, washers and spikes to be galvanized.  
2. For details of stringer units see Dwg. No 2082-1 & 2082-4

Formerly Std Bridges 225 A - 2 A





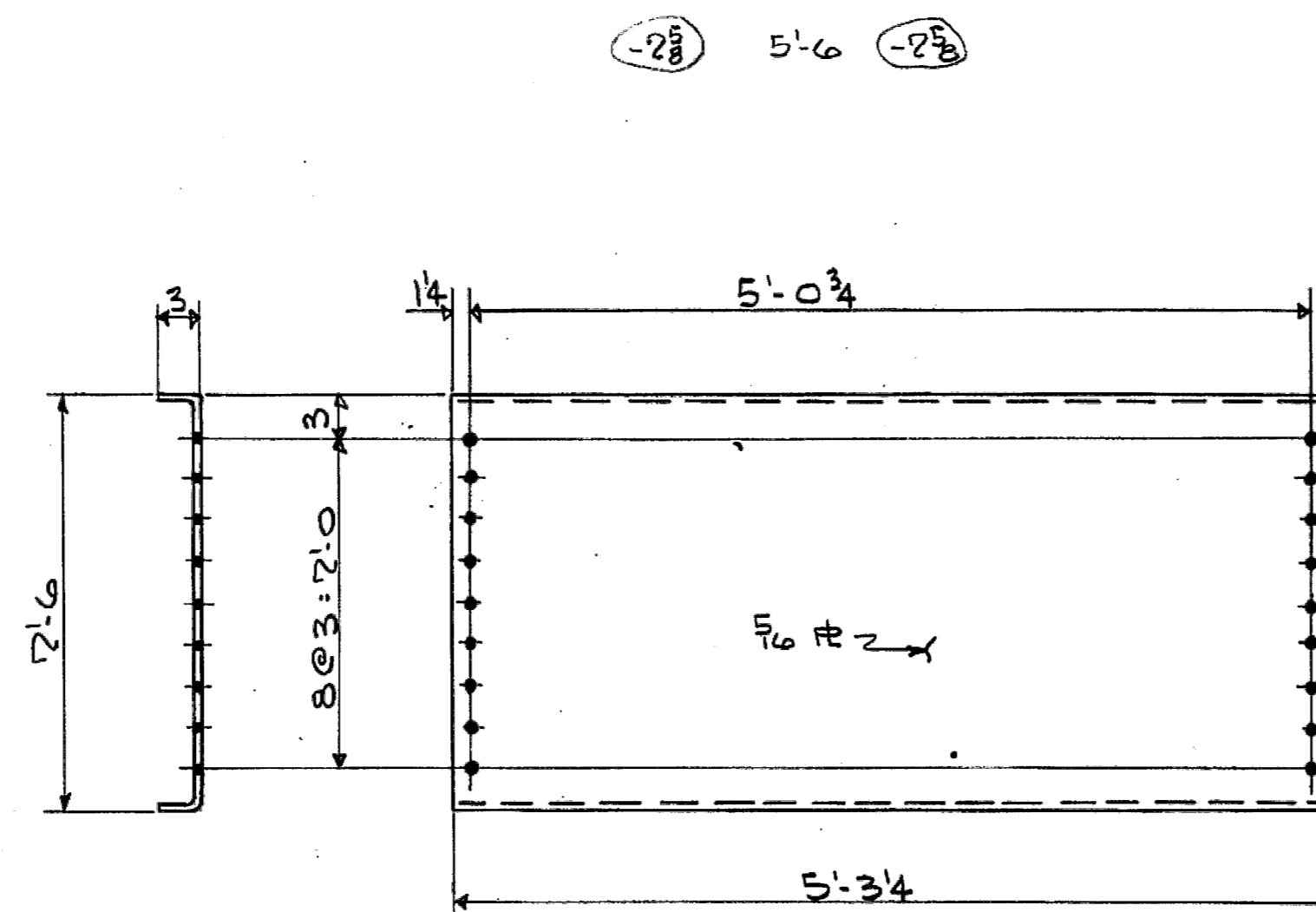
WESTERN BRIDGE AND STEEL FABRICATORS LTD.  
VANCOUVER B.C.

Bill No. 2A  
CONT. No. 3249  
W.O.  
DATE 28 Oct. 1957  
MADE BY G.T.  
CHECKED BY FS

BILL OF MATERIAL

MATERIAL FOR GOV'T. OF B.C. DEPT. OF HIGHWAYS  
DEWDNEY BRIDGE DIAPHRAGMS

MATERIAL REQUIRED FOR DRAWING NO. 2										SHIPPER'S COLUMN		SHIPPING
LINE	NO. OF PIECES	SHAPE	SIZE	LENGTH	ASSEMBLING MARKS	REMARKS	WEIGHT	ITEM NO. STOCK	NO. OF PIECES	MARK	WEIGHT	DIVISION
1												
2	12	P	34 3/4 x 7/8	5'-3 3/4"	BEND	DIAPHRAGMS	2394		12	A2	2394	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
TOTAL											2394	



12-DIAPHRAGMS-A2

RIVETS UNLESS NOTED  
OPEN HOLES 13/16 UNLESS NOTED  
PAINT 1-COAT No. 1 RED LEAD

Western Bridge and Steel Fabricators Ltd.  
VANCOUVER - CANADA

CUSTOMER GOV'T. OF B.C. DEPT. OF HIGHWAYS  
NAME OF STRUCTURE DEWDNEY BRIDGE  
LOCATION DEWDNEY B.C.  
TITLE OF DRAWING DIAPHRAGMS  
MADE BY G.T. CHECKED BY FS DATE 28 Oct. 1957  
CONTRACT 3249 W.O. EST. DWG. No. 2

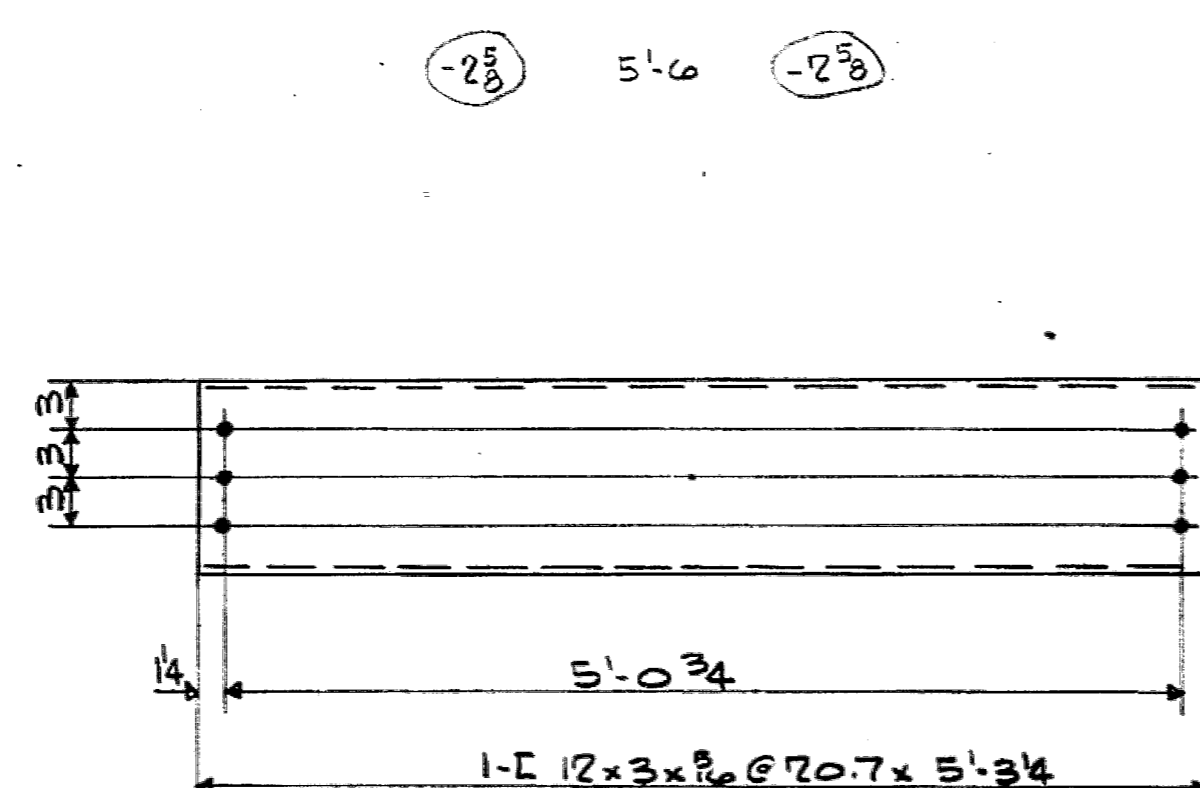
WESTERN BRIDGE AND STEEL FABRICATORS LTD.  
VANCOUVER B.C.

Bill No. 3-A (FINAL)  
CONT. No. 3249  
W.O.  
DATE 28 Oct. 1957  
MADE BY G.T.  
CHECKED BY FS

BILL OF MATERIAL

MATERIAL FOR GOV'T. OF B.C. DEPT. OF HIGHWAYS  
DEWDNEY BRIDGE TRIMMER BEAMS

MATERIAL REQUIRED FOR DRAWING NO. 3										SHIPPER'S COLUMN		SHIPPING
LINE	NO. OF PIECES	SHAPE	SIZE	LENGTH	ASSEMBLING MARKS	REMARKS	WEIGHT	ITEM NO. STOCK	NO. OF PIECES	MARK	WEIGHT	DIVISION
1												
2	12	E	12 @ 70.7	5'-3 3/4"		TRIMMER BEAMS	1209		12	A3	1209	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
TOTAL											1209	



12-TRIMMER BEAMS-A3

RIVETS UNLESS NOTED  
OPEN HOLES 3/8 UNLESS NOTED  
PAINT 1-COAT No. 1 RED LEAD

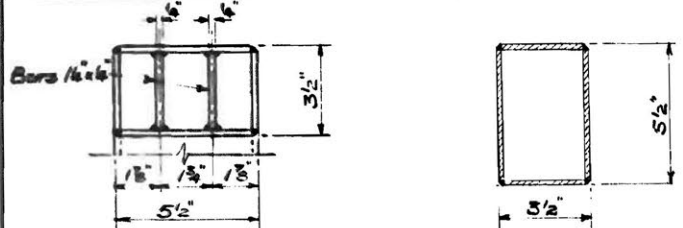
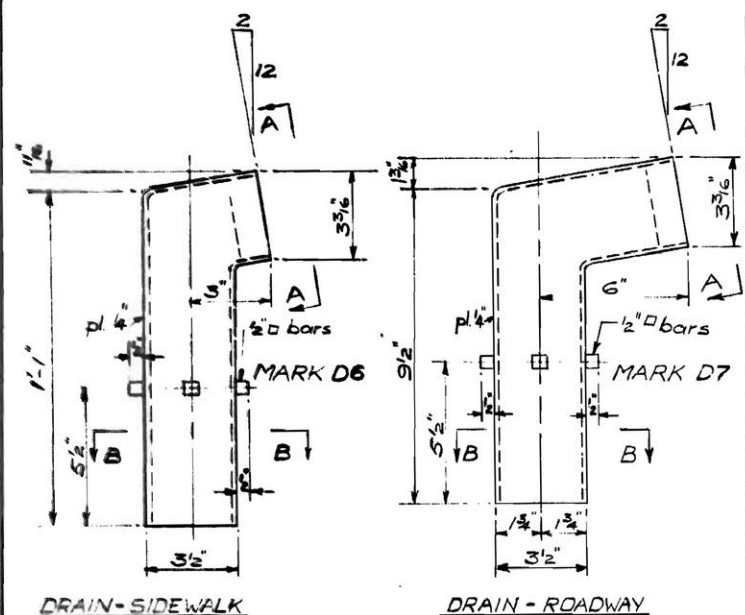
Western Bridge and Steel Fabricators Ltd.  
VANCOUVER - CANADA 54332

CUSTOMER GOV'T. OF B.C. DEPT. OF HIGHWAYS  
NAME OF STRUCTURE DEWDNEY BRIDGE  
LOCATION DEWDNEY B.C.  
TITLE OF DRAWING TRIMMER BEAMS  
MADE BY G.T. CHECKED BY FS DATE 28 Oct. 1957  
CONTRACT 3249 W.O. EST. DWG. No. 3 (FINAL)









DRAIN SIDEWALK MK D6 (WEIGHT 185<sup>#</sup>) 2-REQ'D  
 ROADWAY MK D7 ( " 200<sup>#</sup>) 4-REQ'D

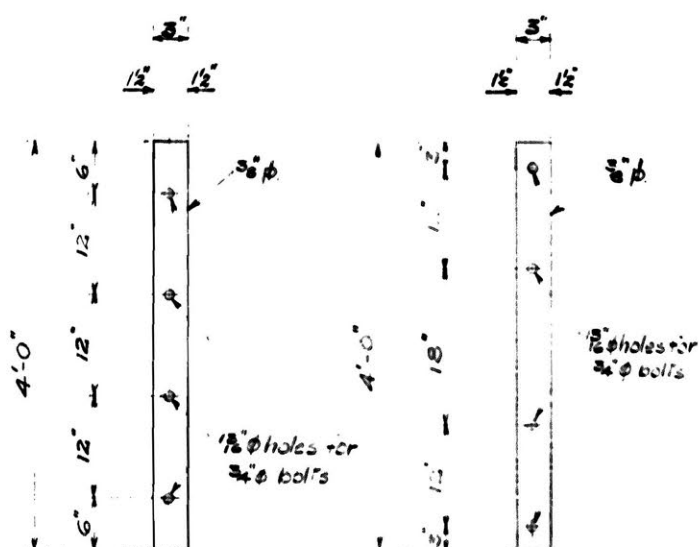
NOTE: All welds 1/4" fillets  
 Galvanize drains after fabrication

GOVT. OF BRITISH COLUMBIA, DEPT. OF HIGHWAYS  
 BRIDGE ENGINEER'S OFFICE

DEWDNEY DISTRICT  
 LOUGHEED HIGHWAY  
 DEWDNEY BRIDGE  
 DETAIL OF DRAINS (60' SPAN)

Made by	Checked by
Int. Date	Int. Date
AI Aug 12/24	Exp 2/24

S. K.  
 BRIDGES  
 596-21



SPLICE PLATE 52 REQ'D  
 SPLICE PLATE 52 REQ'D

Total Wt. 1600 Lbs

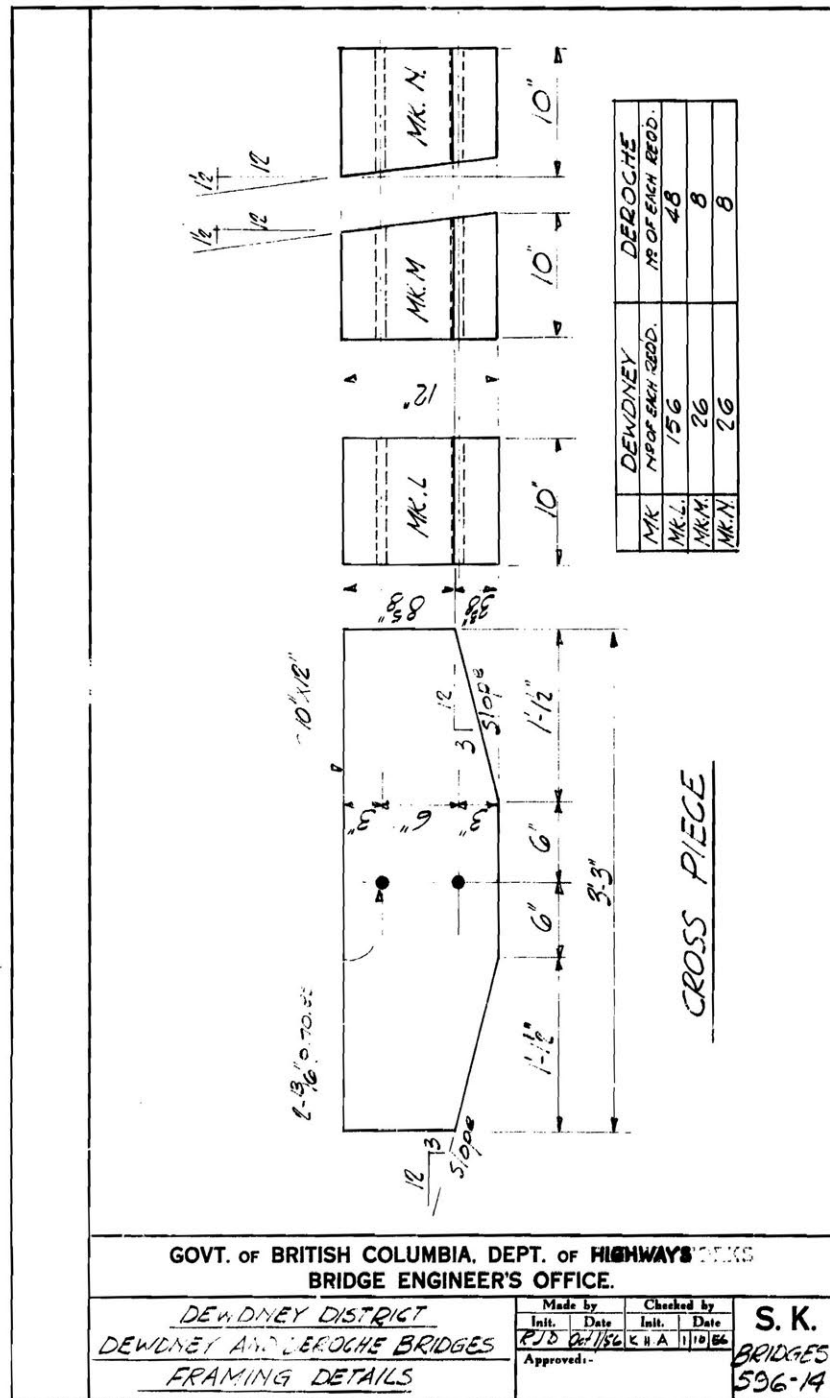
GOVT. OF BRITISH COLUMBIA, DEPT. OF HIGHWAYS  
 BRIDGE ENGINEER'S OFFICE

DETAIL OF FILE NO. 596-21  
 FOR BENTS # 2 TO # 7  
 DEWDNEY BRIDGE

Made by	Checked by
Int. Date	Int. Date
AI Aug 12/24	Exp 2/24

S. K.  
 596-24

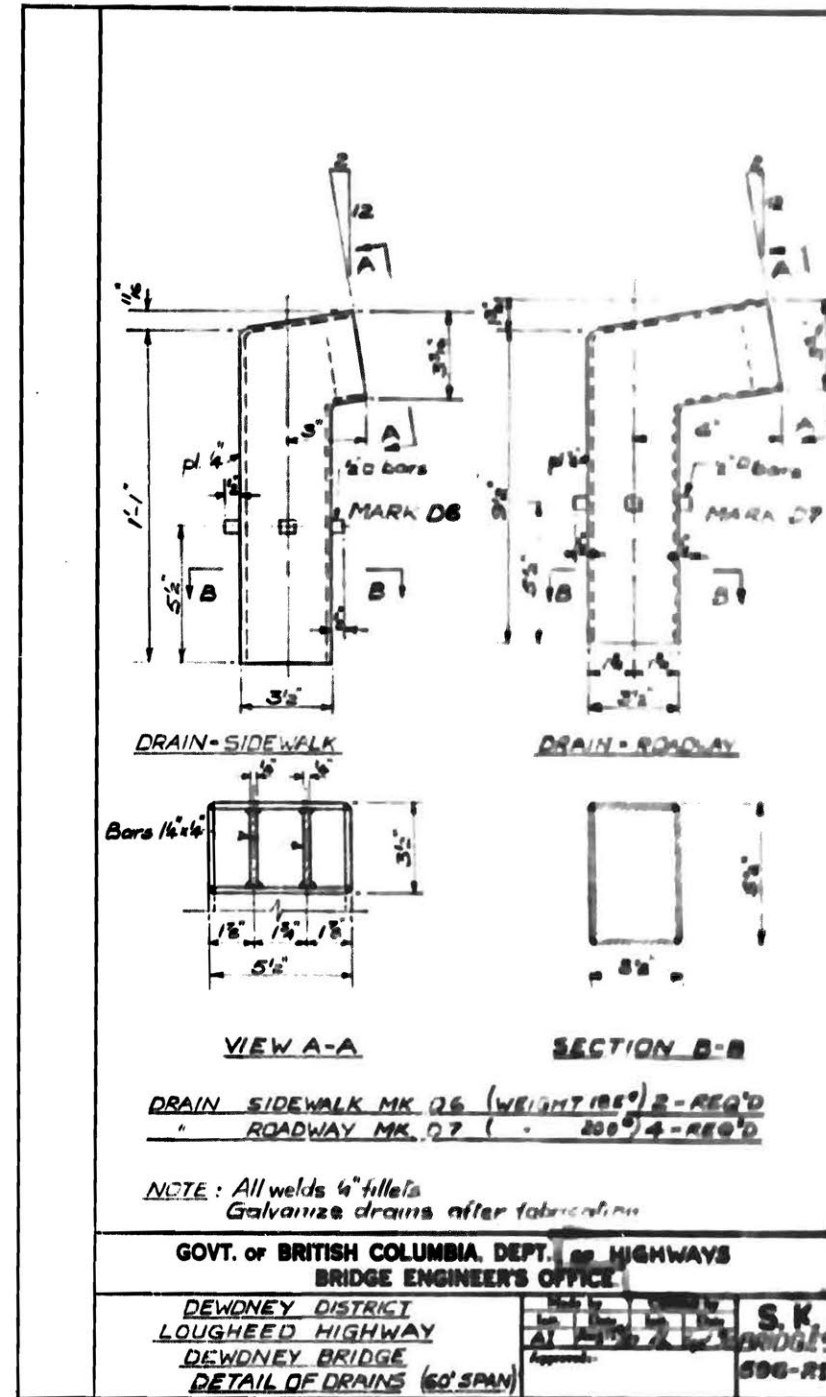




GOVT. OF BRITISH COLUMBIA, DEPT. OF HIGHWAYS  
BRIDGE ENGINEER'S OFFICE.

DEWDNEY DISTRICT  
DEWDNEY AND DEROCHE BRIDGES  
FRAMING DETAILS

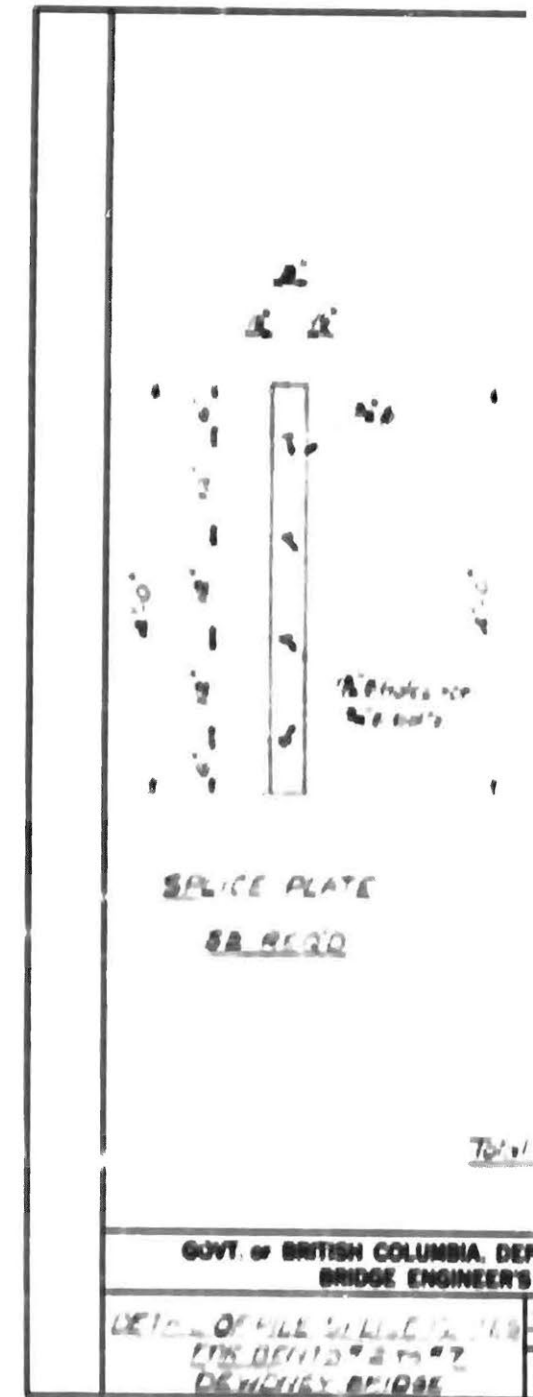
Made by  
Init. Date  
RJD 02/18/66  
Checked by  
Init. Date  
S. K. 11/10/66  
S. K.  
BRIDGES  
596-14



GOVT. OF BRITISH COLUMBIA, DEPT. OF HIGHWAYS  
BRIDGE ENGINEER'S OFFICE

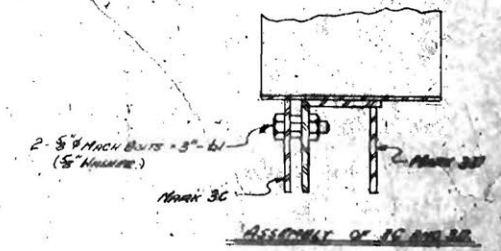
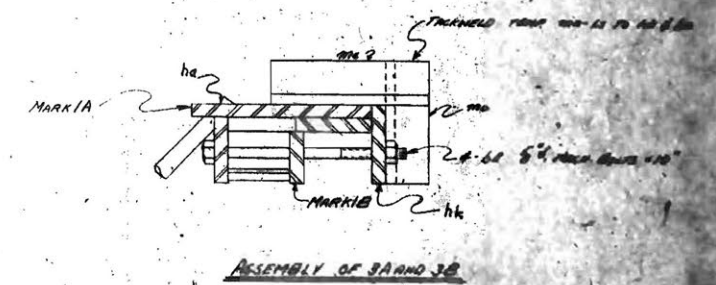
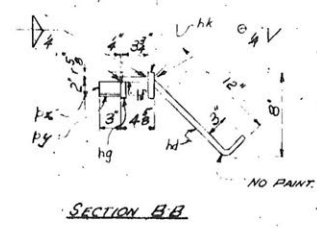
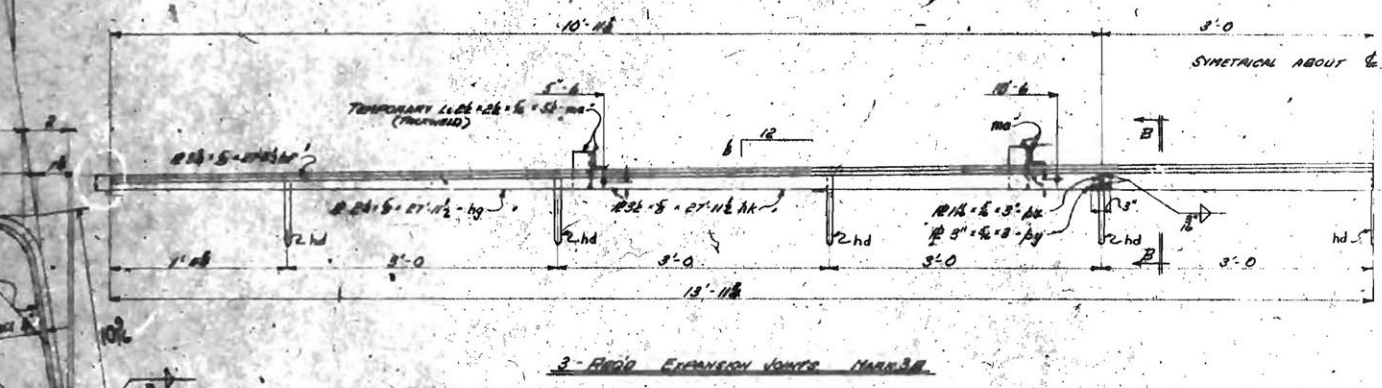
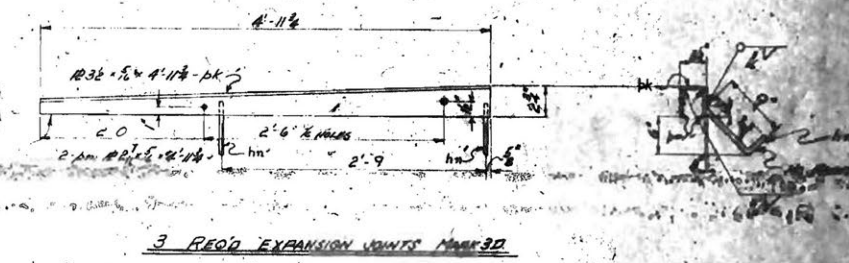
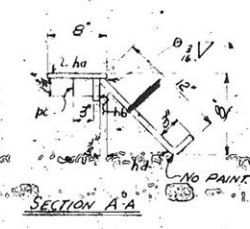
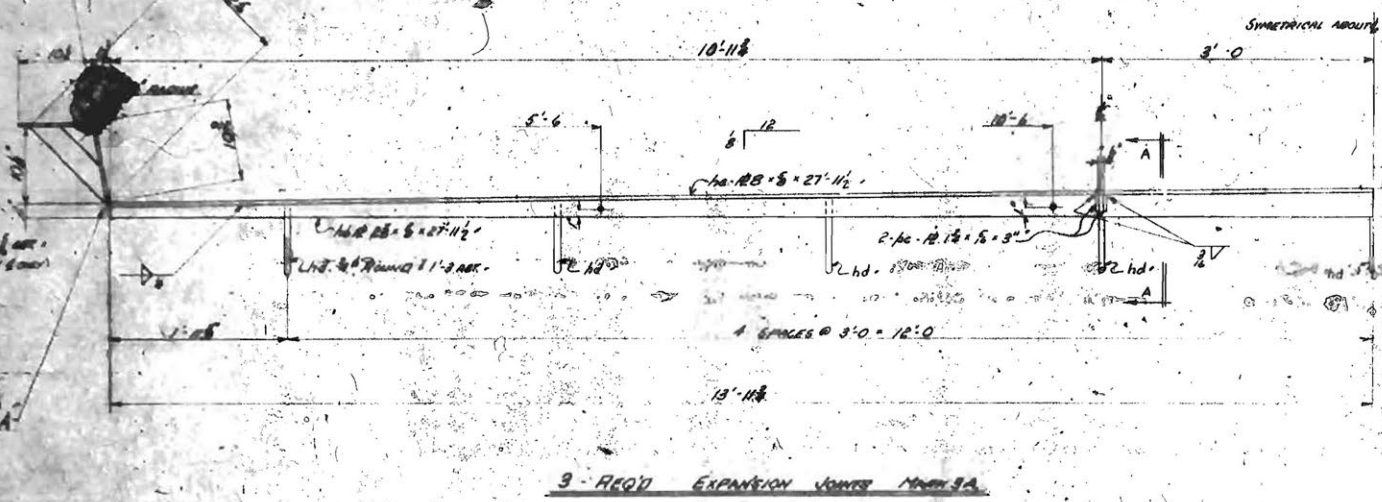
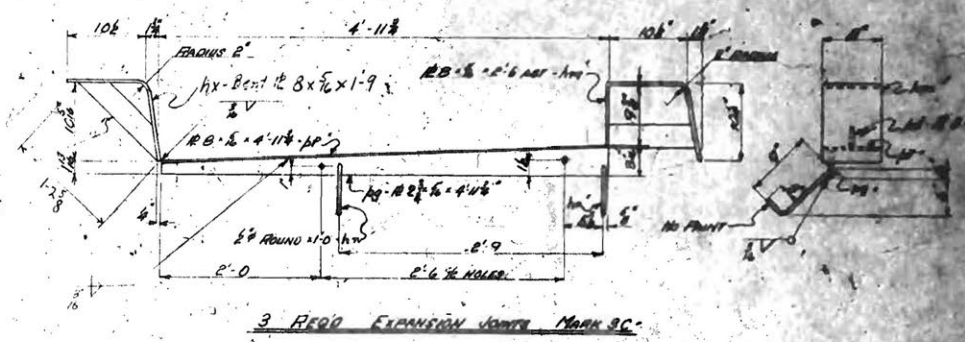
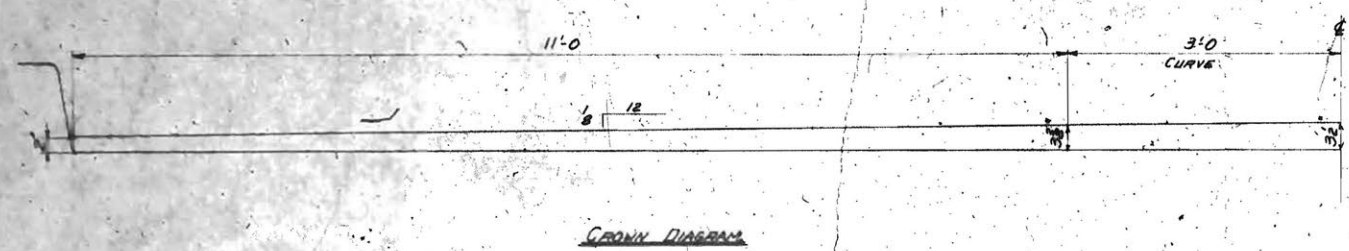
DEWDNEY DISTRICT  
LOUGHEED HIGHWAY  
DEWDNEY BRIDGE  
DETAIL OF DRAINS (60' SPAN)

Made by  
Init. Date  
S. K. 11/10/66  
S. K.  
BRIDGES  
596-14



GOVT. OF BRITISH COLUMBIA, DEPT. OF HIGHWAYS  
BRIDGE ENGINEER'S OFFICE

DETAIL OF SPICE PLATE FOR  
THE DRAINS 2 TO 7  
DEWDNEY BRIDGE



OFFICE COPY

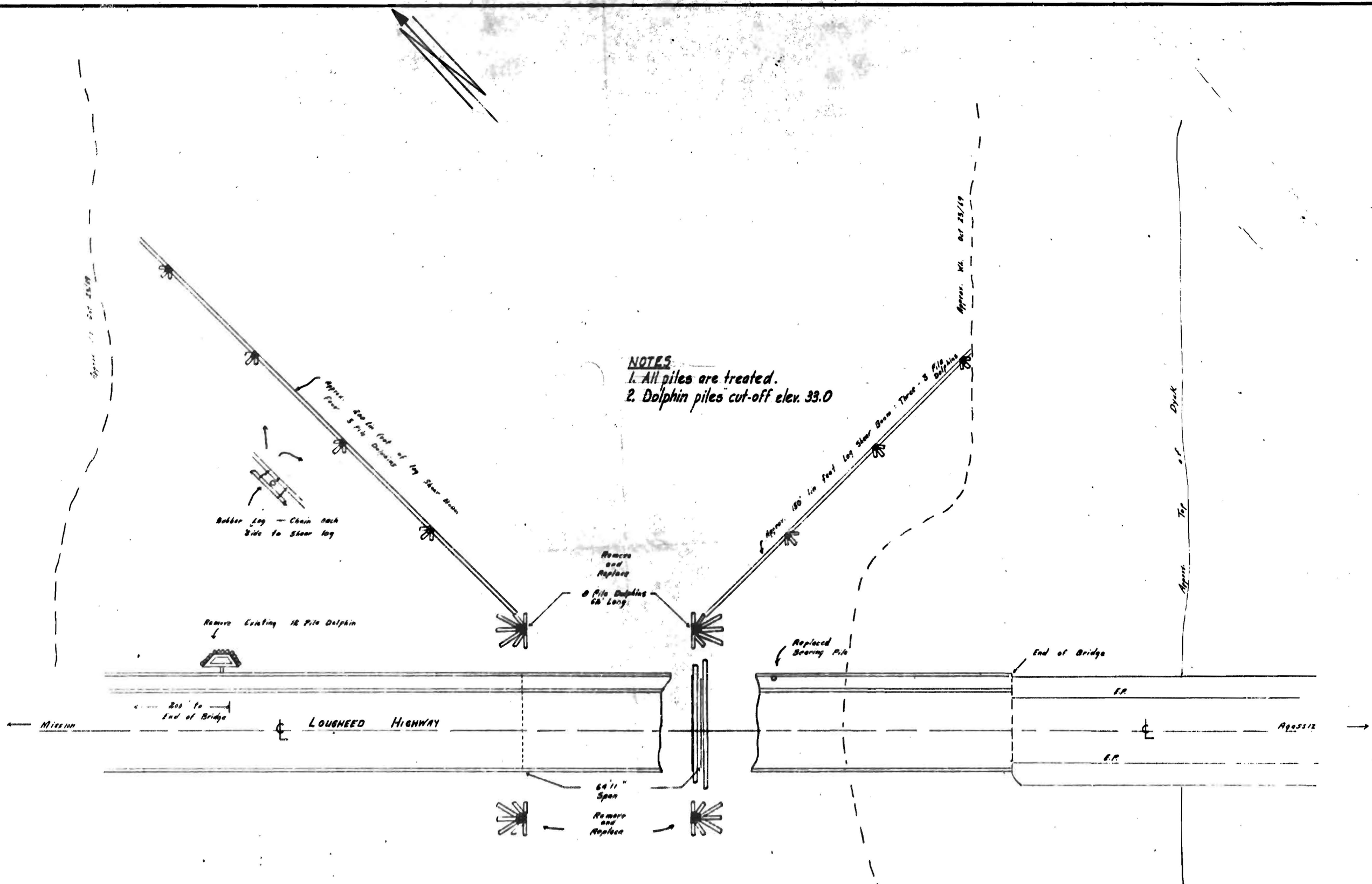
97885

MATERIAL ON LOOSE BILL No. 34  
 SPECIFICATION DEPARTMENT OF HIGHWAYS  
 CONNECTIONS WELDED  
 OPEN HOLES AS EXCEPT AS NOTED  
 PAINT ONE COAT COAL TAR LEAD EXCEPT AS NOTED  
 REVISIONS

DOMINION BRIDGE COMPANY LIMITED - V	
DRAWN BY	PROFESSOR
CHECKED BY	PURCHASER
APPROVED	DEPARTMENT
SCALE	DETAIL

11/2/36





**NOTES**  
 1. All piles are treated.  
 2. Dolphin piles cut-off elev. 33.0

**NOTE**  
 Protection work renewed in 1970

DEWDNEY ELECTORAL DISTRICT : PLAN OF  
~~PROPOSED~~ PROTECTION FOR DEWDNEY BRIDGE  
 REFERENCE # 596  
 Scale : 1 inch = 20 feet  
 DKO  
 January 1970

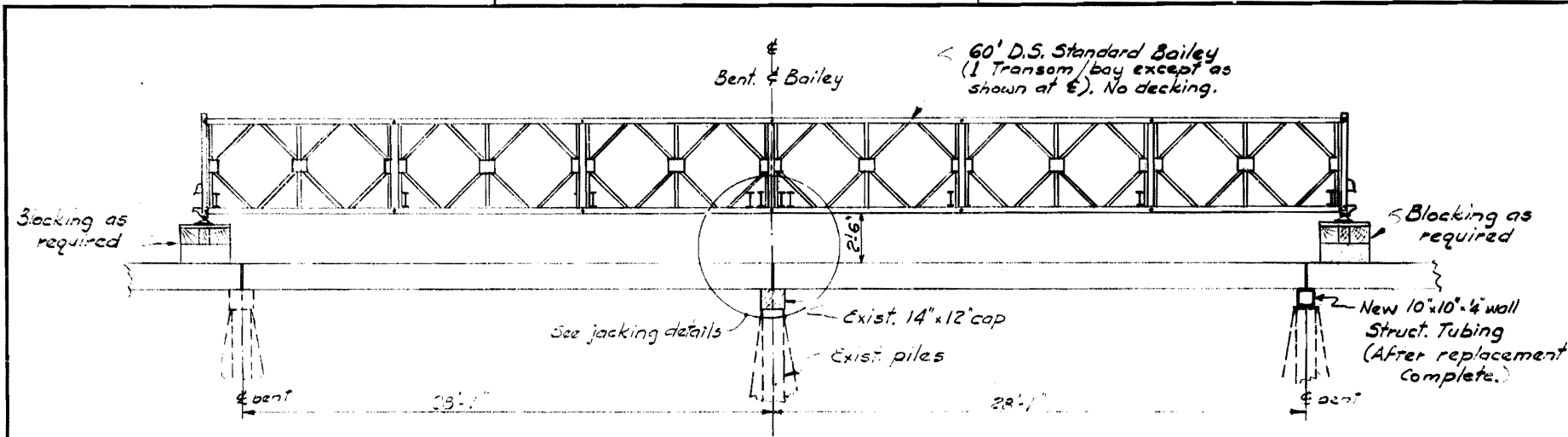
*F. Wells*  
 District Superintendent

Regional Highway Engineer

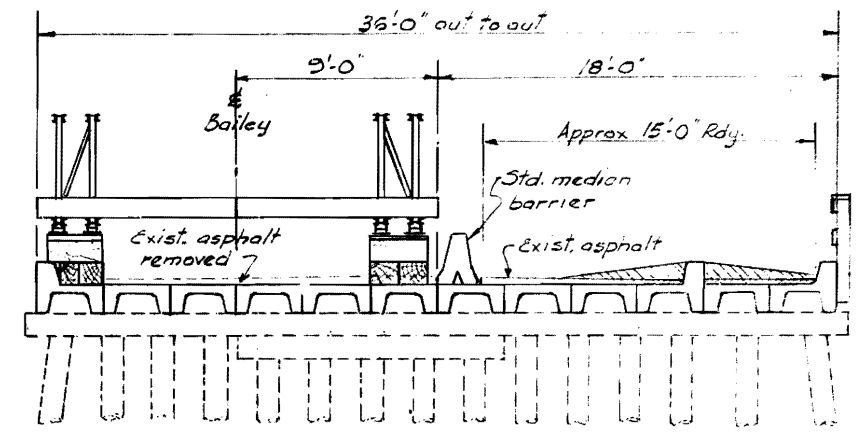
102808

BRITISH COLUMBIA DEPARTMENT OF HIGHWAYS BRIDGE DESIGN			
<b>CHILLIWACK DISTRICT</b>			
<b>LOUGHEED HIGHWAY</b>			
<b>DEWDNEY BRIDGE</b>			
<b>PROTECTION WORK</b>			
SCALE: 1 INCH = 20 FEET			DRAWING NO 596-29
DRAWN	D.K.O	Jan. 1970	

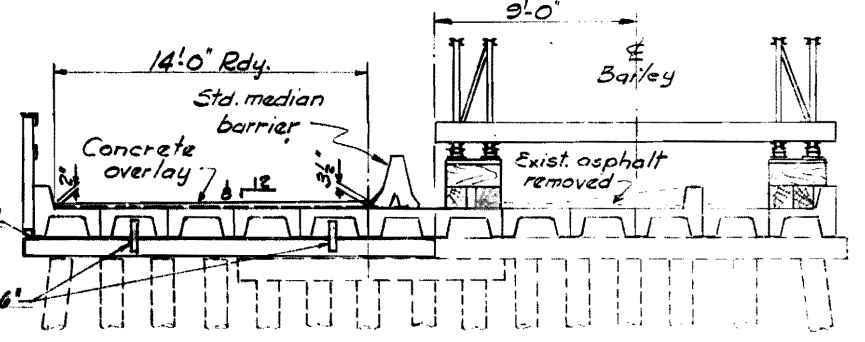
REVISIONS			
D			
C			
B			
A			



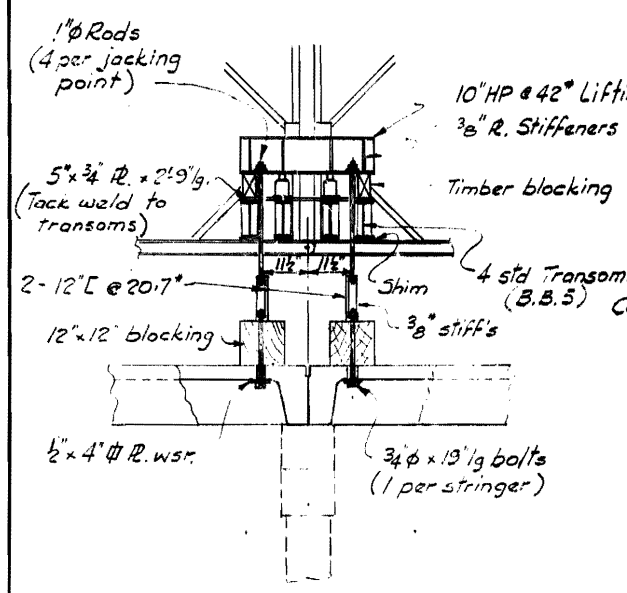
**TYPICAL SETTING OF BAILEY OVER BENT**  
4" = 1'-0"



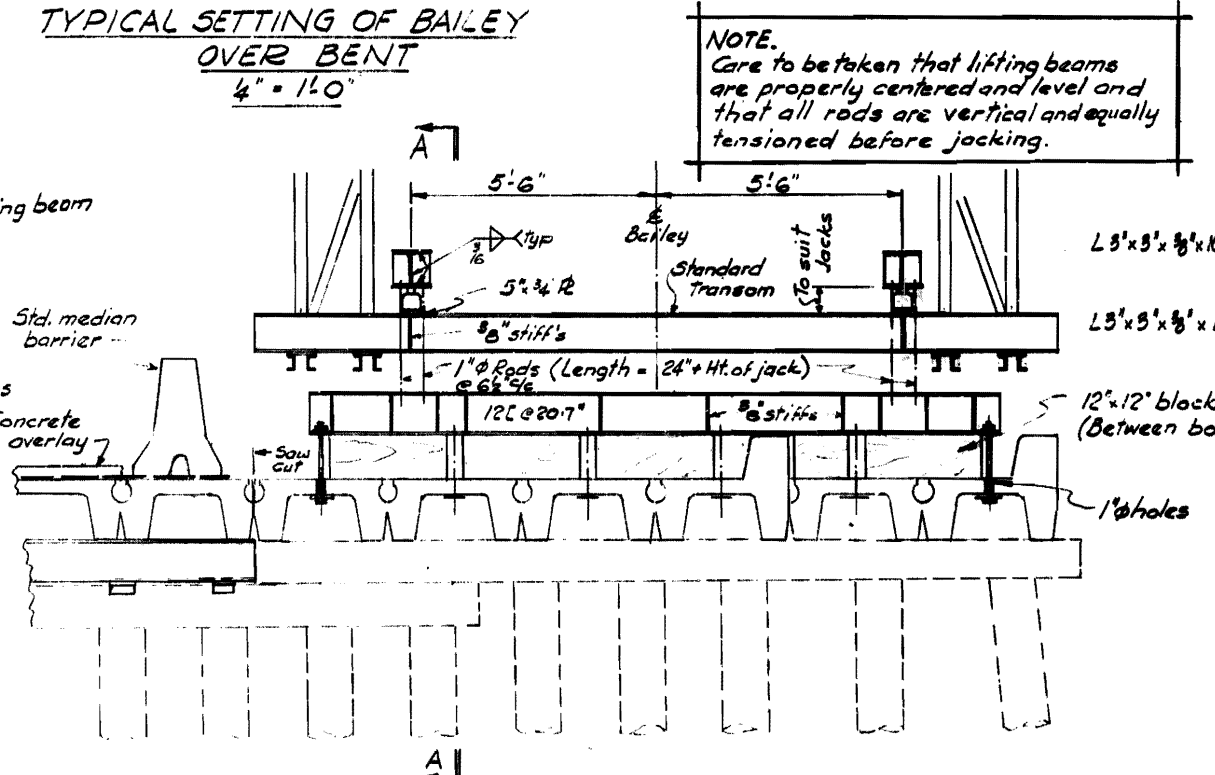
**SETTING FOR 1st HALF OF BRIDGE**  
4" = 1'-0"



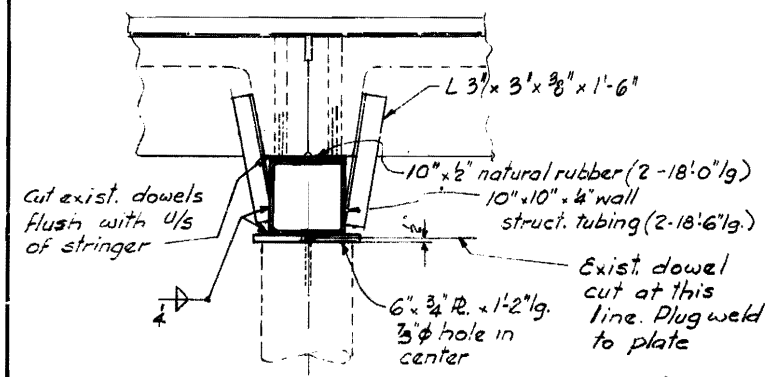
**SETTING FOR 2nd HALF OF BRIDGE**  
4" = 1'-0"



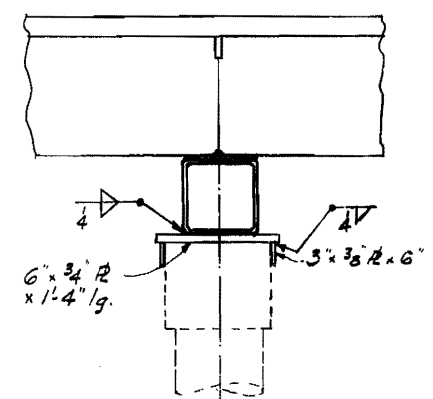
**SECTION A-A**  
1/2" = 1'-0"



**JACKING DETAILS**  
(2nd half shown - 1st half similar)  
1/2" = 1'-0"



**DETAIL OF NEW CAP ON EXISTING PILE**  
1" = 1'-0"




**DETAIL OF NEW CAP ON EXISTING BOLSTER**  
1" = 1'-0"

**General Notes:**  
1. All steel to be C.S.A. Specification G.40.21M (260W) or better.  
2. All steelwork to be painted in accordance with M.O.T.H. General Specification, Section 308.

**Note:**  
All not shown similar to cap on existing pile detail.

**REPLACEMENT OF BENT CAPS PROCEDURE**

1. Erect scaffolding at bents to enable removal and replacement of caps on side opposite sidewalk.
2. Confine traffic to sidewalk side by placing asphalt to enable traffic to straddle curb.
3. Remove asphalt from opposite lane for width of 20'-0"
4. Run diamond saw down joint between units 18'-0" from outside edges of bridge. (E of bridge, not E rdy.) Depth of cut 8" minimum.
5. Drill units at bent to accommodate lifting bolts.
6. Erect 60' D.S. standard Bailey, on timbers, to span bent as shown.
7. Erect lifting beams at Bailey mid-span over bent. Connect jacks to common pump.
8. Pressure jacks to take a max. total load of 24 tons. (Truss deflection approx. 2")
9. Cut old cap underneath on E of bridge and split away from dowels, burn off dowels as shown. Leave bolster (cap splice) in place.
10. Raise deck, if required (Max. 3"), place new section of steel caps as shown. Place bearing strip, lower deck into place and fasten as shown.
11. Repeat procedure at next bent on same side.
12. After completion of one side of bridge clean surface (if scarified, max 2") and place reinforced concrete overlay.
13. Divert traffic, repeat for other side of bridge. Weld steel caps at splice.

 GOVERNMENT OF BRITISH COLUMBIA MINISTRY OF TRANSPORTATION AND HIGHWAYS BRIDGE ENGINEERING BRANCH			
CHILLIWACK DISTRICT LOUHEED HIGHWAY DEWDNEY BRIDGE 159187 <b>REPLACEMENT OF BENT CAPS</b>			
PREPARED UNDER THE DIRECTION OF <b>T.V.E. Vickers</b> SENIOR BRIDGE DESIGN ENGINEER	DATE 12/1/51	SCALE: AS NOTED	NEG. NO. 17 13 21
APPROVED FOR USE IN CONSTRUCTION <b>S.E. Johnson</b> DIRECTOR OF BRIDGE ENGINEERING	DATE 12-27-51	EXAMINED AND ACCEPTED <b>MGE/16</b> EXECUTIVE DIRECTOR OF ENGINEERING	DRAWING NO. <b>596-30</b>
<b>REVISIONS</b>			

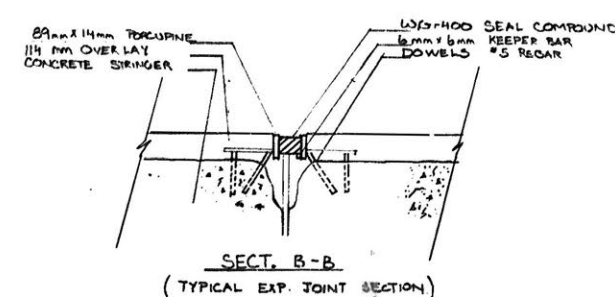
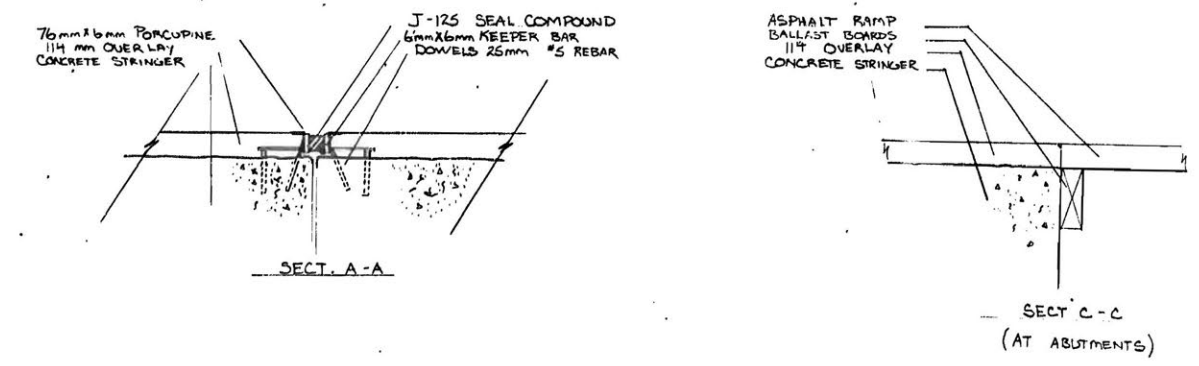
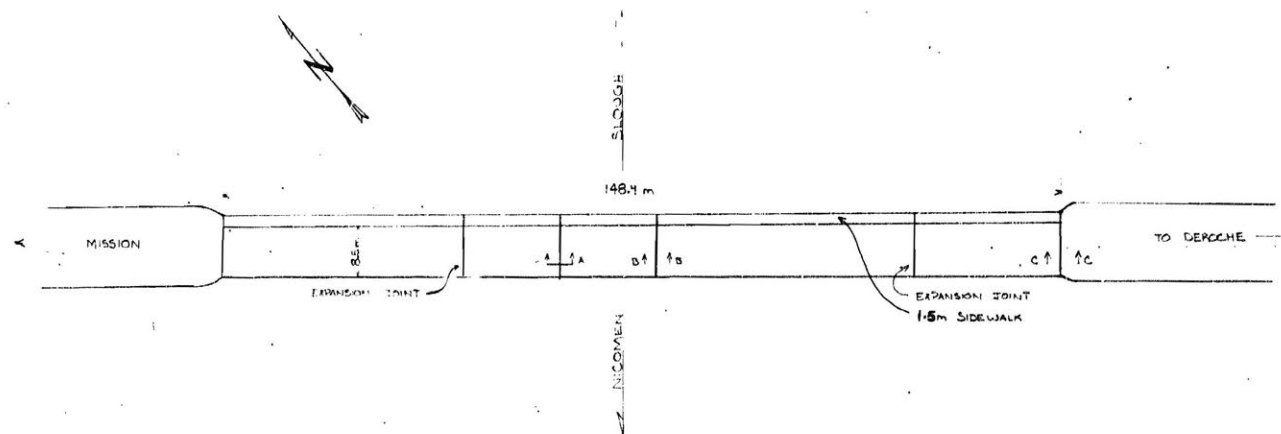


DATE WEATHER DIRECTION POUR	SEPT. 17, 1985 OVERCAST EAST						SEPT. 26, 1985 SUNNY, WARM EAST																	
	LOAD	TRUCK	METER/ct.	Cu. Yds.	SL.	AIR	LOAD	TRUCK	METER/ct.	Cu. Yds.	SL.	AIR	LOAD	TRUCK	METER/ct.	Cu. Yds.	SL.	AIR	LOAD	TRUCK	METER/ct.	Cu. Yds.	SL.	AIR
<b>FIELD DATA</b>																								
SEPT. 17/85	1	23		5.8	32	5.7	1	92		5.8	32	6.2												
LOAD #1 PROBLEMS WITH SCORED	2	28		11.6	36	-	2	46		11.6	36	-												
LOAD #3 CYLINDERS 182-186	3	93		17.4	45	5.8	3	28		17.4	36	-												
LOAD #11 CYLINDERS 186-189	4	68		23.2	45	6.1	4	68		23.2	36	6.5												
	5	23		29.0	36	-	5	92		29.0	32	-												
SEPT 26/85	6	28		34.8	36	-	6	46		34.8	36	-												
LOAD #3 CYLINDERS 202-205	7	93		40.6	32	6.0	7	28		40.6	32	-												
LOAD #9 CYLINDERS 206-209	8	68		46.4	45	-	8	58		46.4	36	6.5												
	9	23		52.2	45	-	9	92		52.2	45	-												
	10	28		58.0	36	-	10	46		58.0	32	6.1												
	11	93		63.8	36	5.7	11	28		63.8	32	-												
	12	68		69.6	45	6.2	12	68		69.6	45	-												
	13	23		75.4	36	-	13	92		75.4	36	-												
GEOTECH & PLANT																								
	SPAN No. 1						SPAN No. 2						SPAN No.						SPAN No.					

SPAN No. 1 TEST CYLINDERS	CYL. No.	182	183	184	185	186	187	188	189
	7 DAYS	32.3	34.0			39.2	39.9		
	28 DAYS			38.9	38.5			44.3	46.9

RE-BAR		WIREMESH		FLAT BAR			PORKYPINE		Jt. EXTRUSIONS		Jt. MATERIAL	
10mm	16mm	2 X 2	4 X 6	2 1/2"	2"	1 1/2"	3" X 1/4"	3 1/2" X 5/8"	TYPE	AMOUNT	TYPE	AMOUNT
114m	914m		690mm				18.3m	51.2m			J-125	8.6m
											LOG-400	25.6m

SPAN No. 2 TEST CYLINDERS	CYL. No.	202	203	204	205	206	207	208	209
	7 DAYS	38.3	45.7			32.7	35.5		
	28 DAYS								

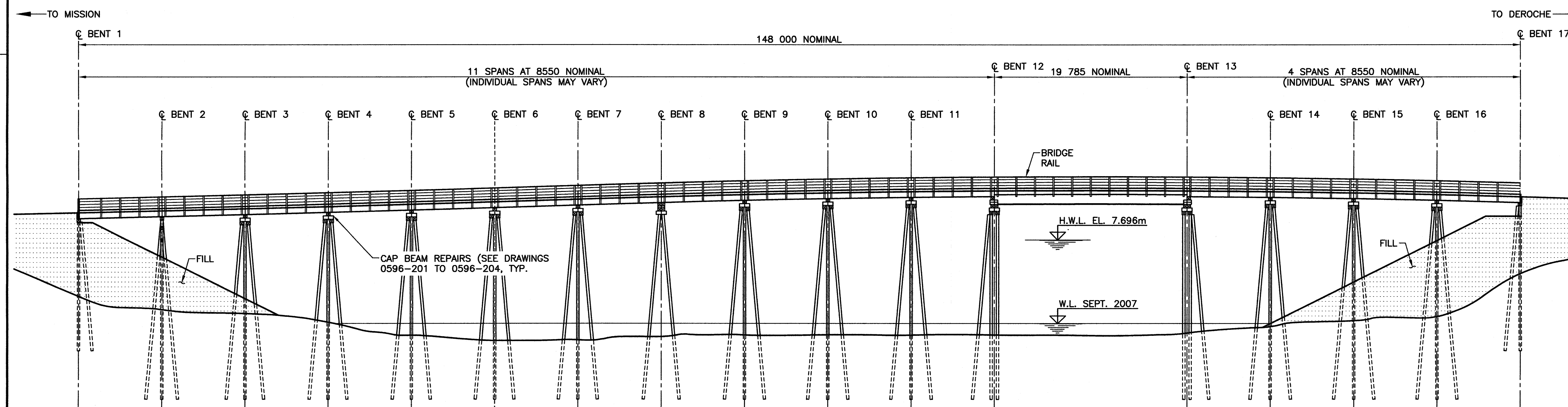
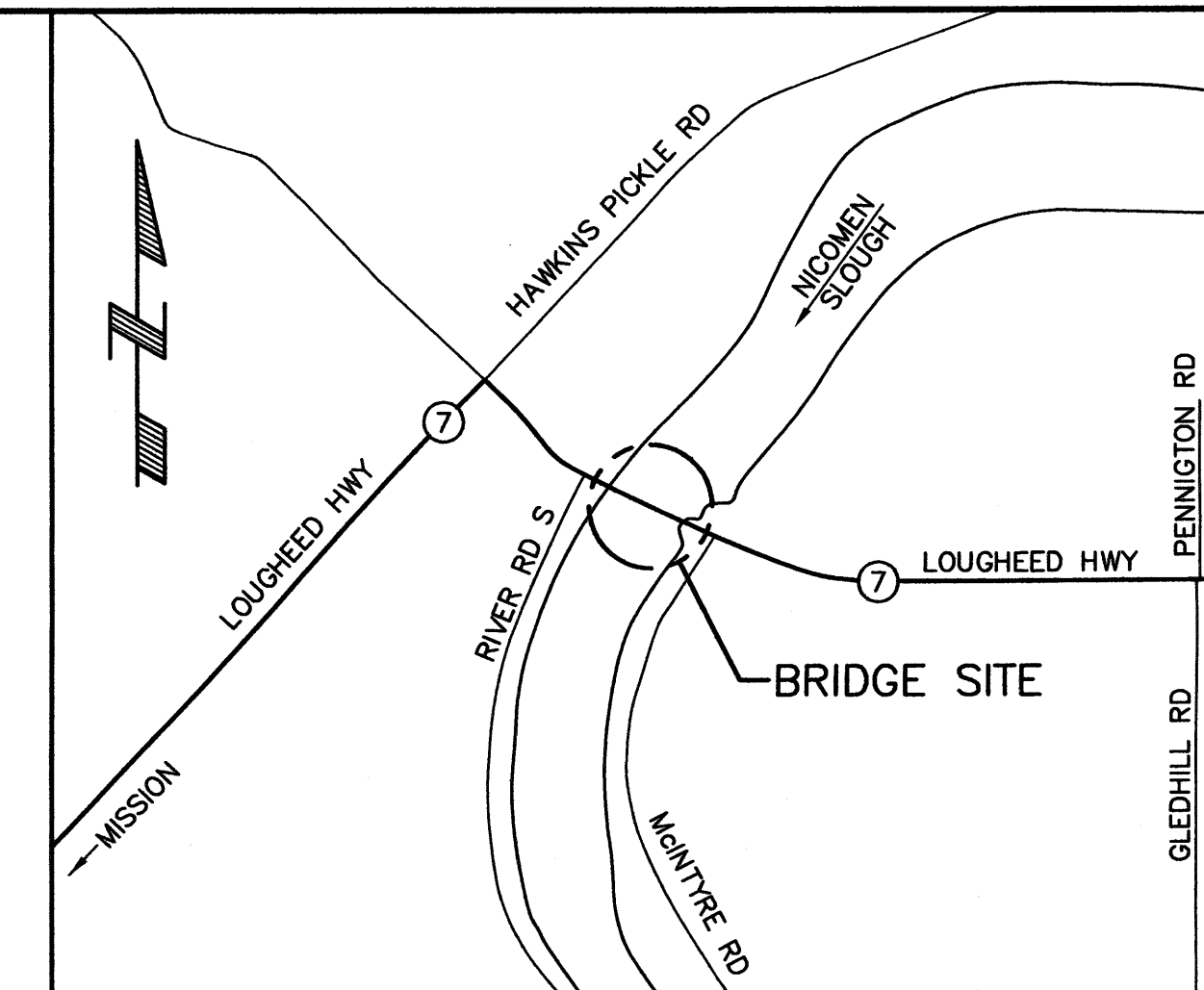
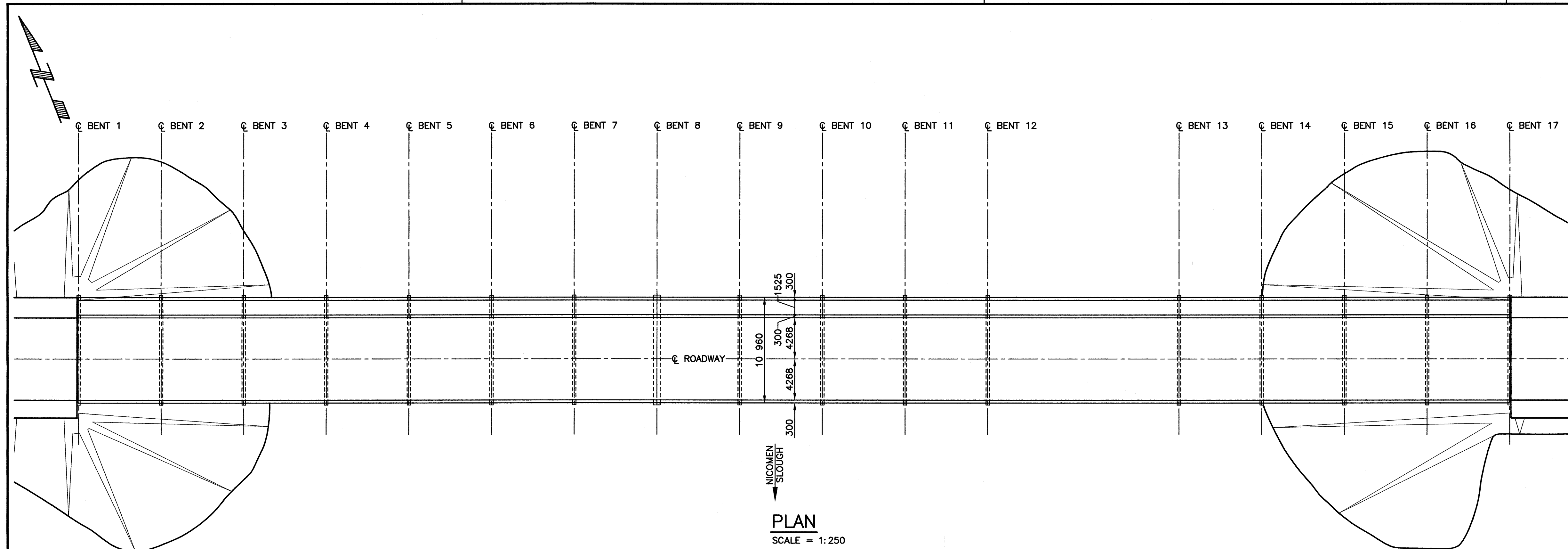


GOVERNMENT OF BRITISH COLUMBIA  
 MINISTRY OF TRANSPORTATION AND HIGHWAYS  
 BRIDGE ENGINEERING BRANCH

**DEWDNEY BRIDGE 596**  
 CHILLIWACH DISTRICT 290127  
 REBUFACING AS-BUILT.

D C B A	PREPARED UNDER THE DIRECTION OF	DATE	SCALE NOT TO SCALE	NEG No.
	SAVOR BRIDGE DESIGN ENGINEER		DRAWN K.L.K. 85-10	CHECKED
	APPROVED FOR USE IN CONSTRUCTION	DATE	EXAMINED AND ACCEPTED	DATE DRAWING NO.
REVISIONS			596-31	

CANCEL PRINTS BEARING FAULTY LETTERS



**GENERAL NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. DRAWINGS ARE BASED ON UMA/AECOM CAD DRAWINGS 0598-101 THROUGH 0598-107.
3. DRAWINGS INDICATE MODIFICATIONS THE BRIDGE DURING EMERGENCY REPAIRS FROM SEPTEMBER 18 TO 21, 2015.



Rev	Date	Description	Init

REVISIONS



Ministry of Transportation  
& Infrastructure  
South Coast Region

LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
GENERAL LAYOUT

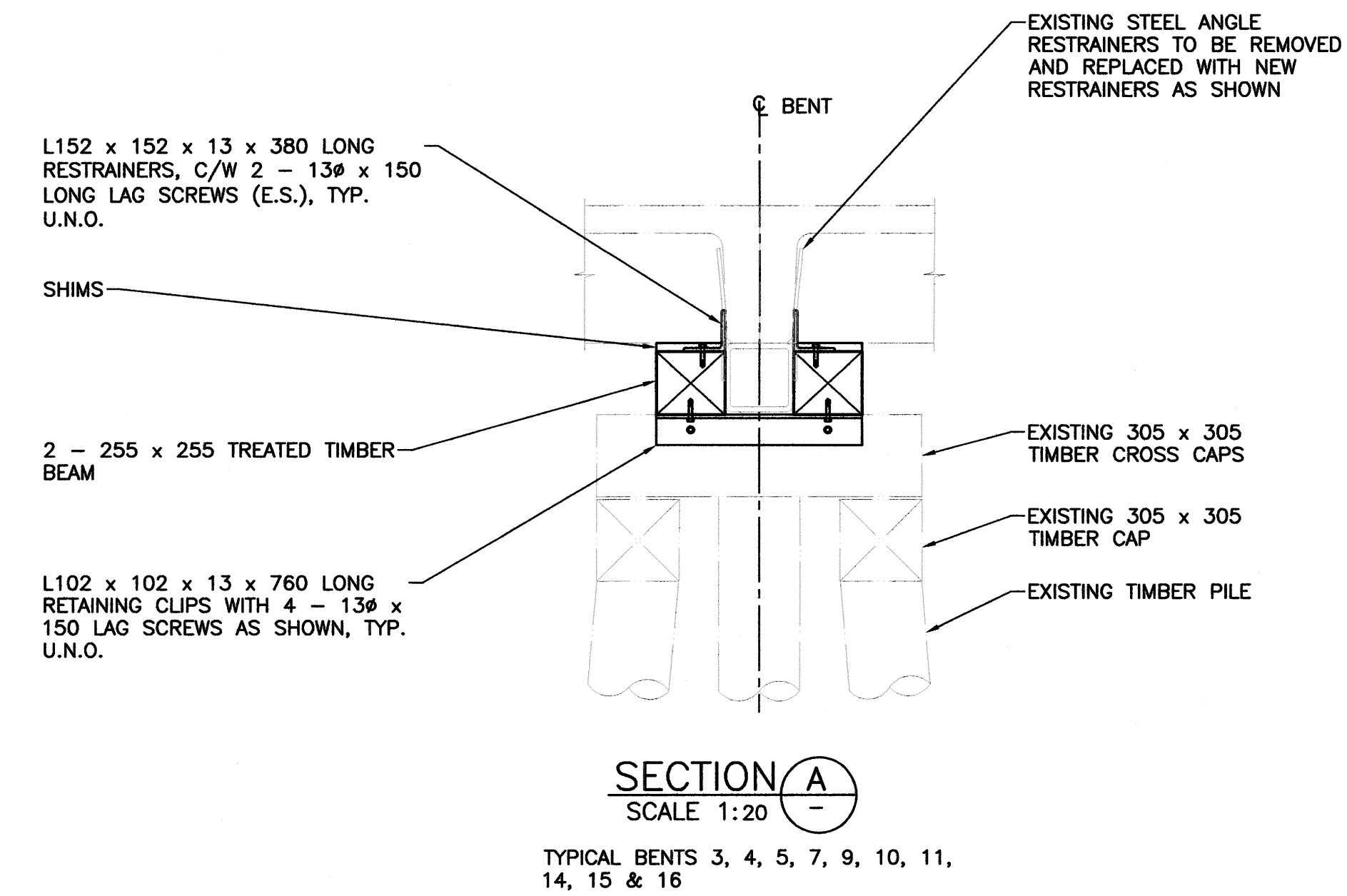
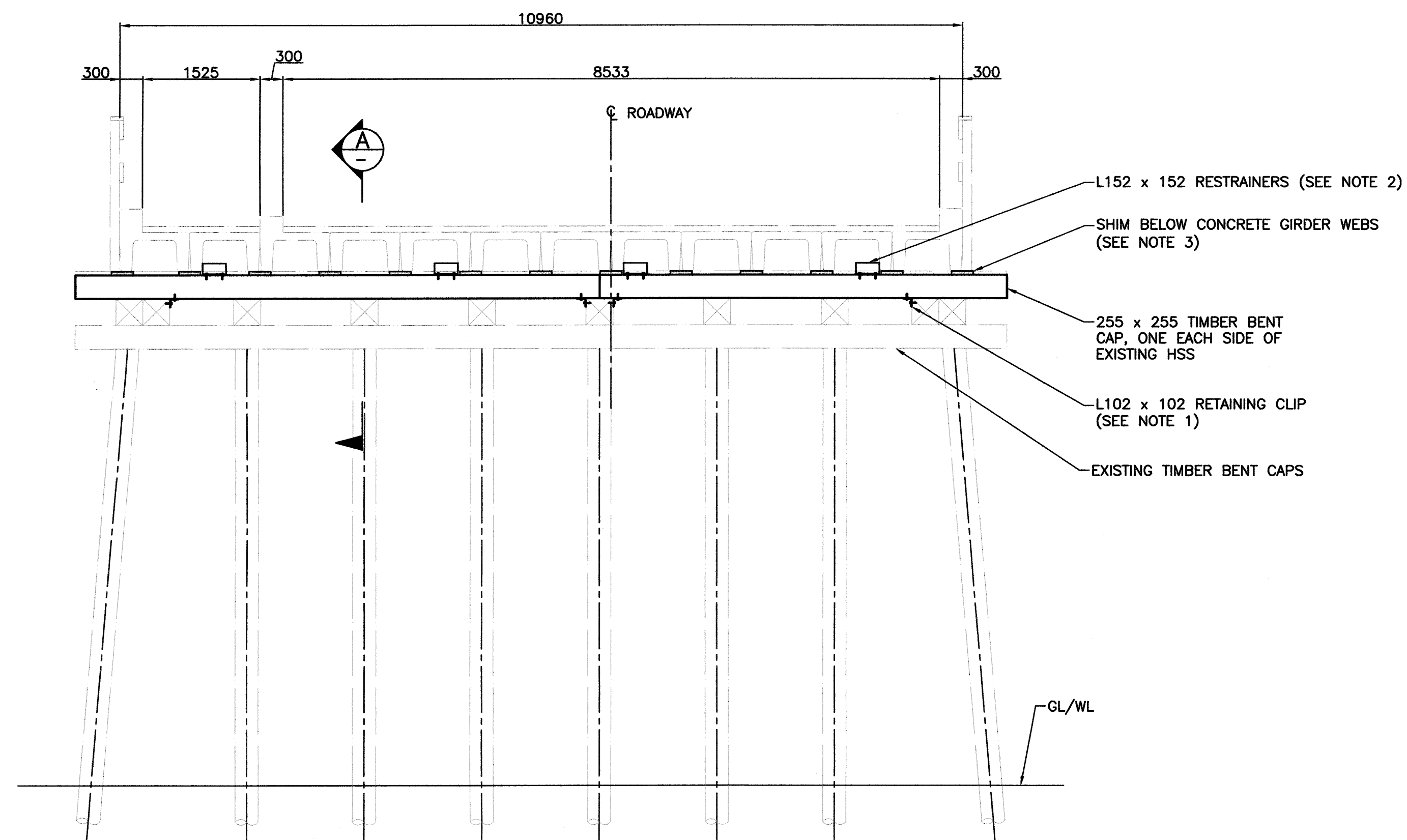
REFERENCE DRAWINGS	
DRAWING NO.	DESCRIPTION
0596-101	GENERAL LAYOUT
0596-102	BENT PLAN AND ELEVATION
0596-103	BENT PLAN AND ELEVATION
0596-104	BENT PLAN AND ELEVATION
0596-105	BENT PLAN AND ELEVATION
0596-106	BENT PLAN AND ELEVATION
0596-107	DETAILS

RECORD DRAWING

PREPARED UNDER THE DIRECTION OF	DESIGNED	B.B.	DATE SEP. 2015
B.A. HAMERSLEY	CHECKED	W.W.	DATE SEP. 2015
ENGINEER OF RECORD	DRAWN	M.B.	DATE SEP. 2015
DATE OCTOBER 09, 2015	SCALE	AS NOTED	
FILE No.	PROJECT No.	REG.	DRAWING No.
			<b>0596-200</b>

CANCEL PRINTS BEARING PREVIOUS LETTER





**TYPICAL BENT ELEVATION**  
1:50

TYPICAL BENTS 3, 4, 5, 7, 9, 10, 11,  
14, 15 & 16  
(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON  
OPPOSITE SIDE

**BENT REPAIR TABLE**

BENT NUMBER	ADDITIONAL REPAIR DETAILS
3	- REPLACE TWO EXISTING TIMBER CROSS CORBELS WITH TWO NEW TIMBER CROSS CORBELS AT THE SOUTH END. - SPLICED THIRD SET OF TIMBER BENT CAP END BEAMS AT NORTH END WITH 2 - R13 x 50 AND 130 x 150 LAG SCREWS (E.S.)
4	- SPLICED THIRD SET OF TIMBER BENT CAP END BEAMS AT NORTH END WITH 2 - R13 x 50 AND 130 x 150 LAG SCREWS (E.S.) - L152 x 152 x 9.5 x 305 LONG RETAINING ANGLES USED INSTEAD OF L152 x 152 x 13 x 380 LONG IN THE TYP. DETAIL
5	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS
7	
9	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS PROVIDED AT SPLICE LOCATION
10	- ONE ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIP PROVIDED
11	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS PROVIDED AT SPLICE LOCATION
14	- FOUR ADDITIONAL L152 x 152 x 13 BRIDGE GIRDER RESTRAINERS PROVIDED (E.S.)
15	
16	- THREE ADDITIONAL L152 x 152 x 13 BRIDGE GIRDER RESTRAINERS PROVIDED (E.S.)

**REPAIR NOTES:**

1. A MINIMUM OF 2 - L102 x 102 x 13 RETAINING CLIPS PER INDIVIDUAL LENGTH OF 255 x 255 BENT CAPS. RETAINING CLIPS TO BE INSTALLED AS CLOSE AS PRACTICAL TO BEAM ENDS, TYP. U.N.O.
2. A MINIMUM OF 4 - L152 x 152 RESTRAINER ASSEMBLIES TO BE INSTALLED EACH SIDE OF BENT SPACED EVENLY APART. EACH ASSEMBLY SHALL BEAR AGAINST A CONCRETE GIRDER WEB TO PREVENT LATERAL BRIDGE MOVEMENT (ALTERNATING WEBS).
3. SHIMS SHALL BE UHMW-PE OF VARYING THICKNESS TO ACHIEVE FULL BEARING. IN AREAS WITH LARGER GAPS, SHIMS MAY BE TREATED TIMBER BEAMS 50 x 255 OR 50 x 305.



Rev	Date	Description	Init

REVISIONS



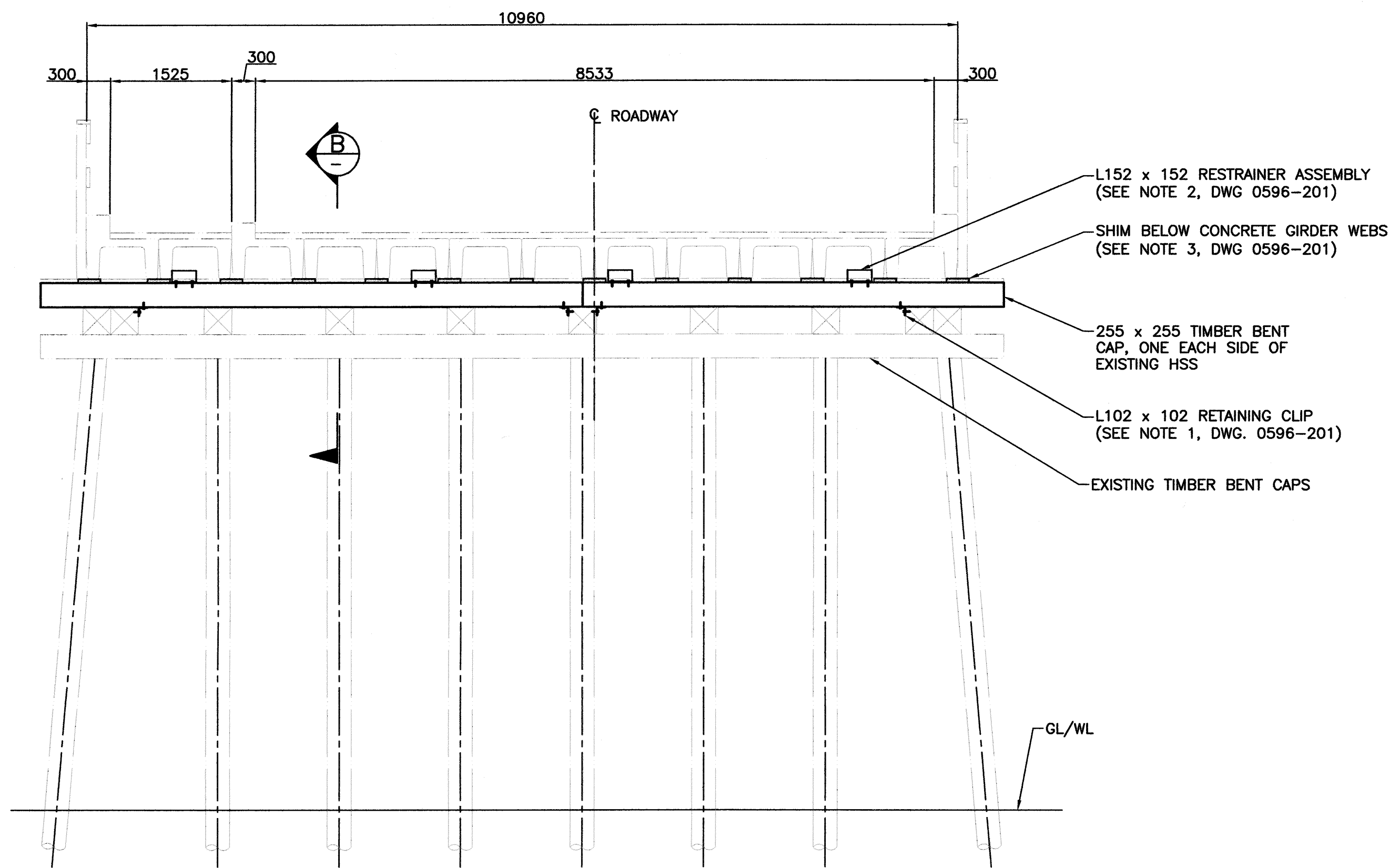
Ministry of Transportation  
& Infrastructure  
South Coast Region

LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
**DETAILS SHEET 1 OF 4**

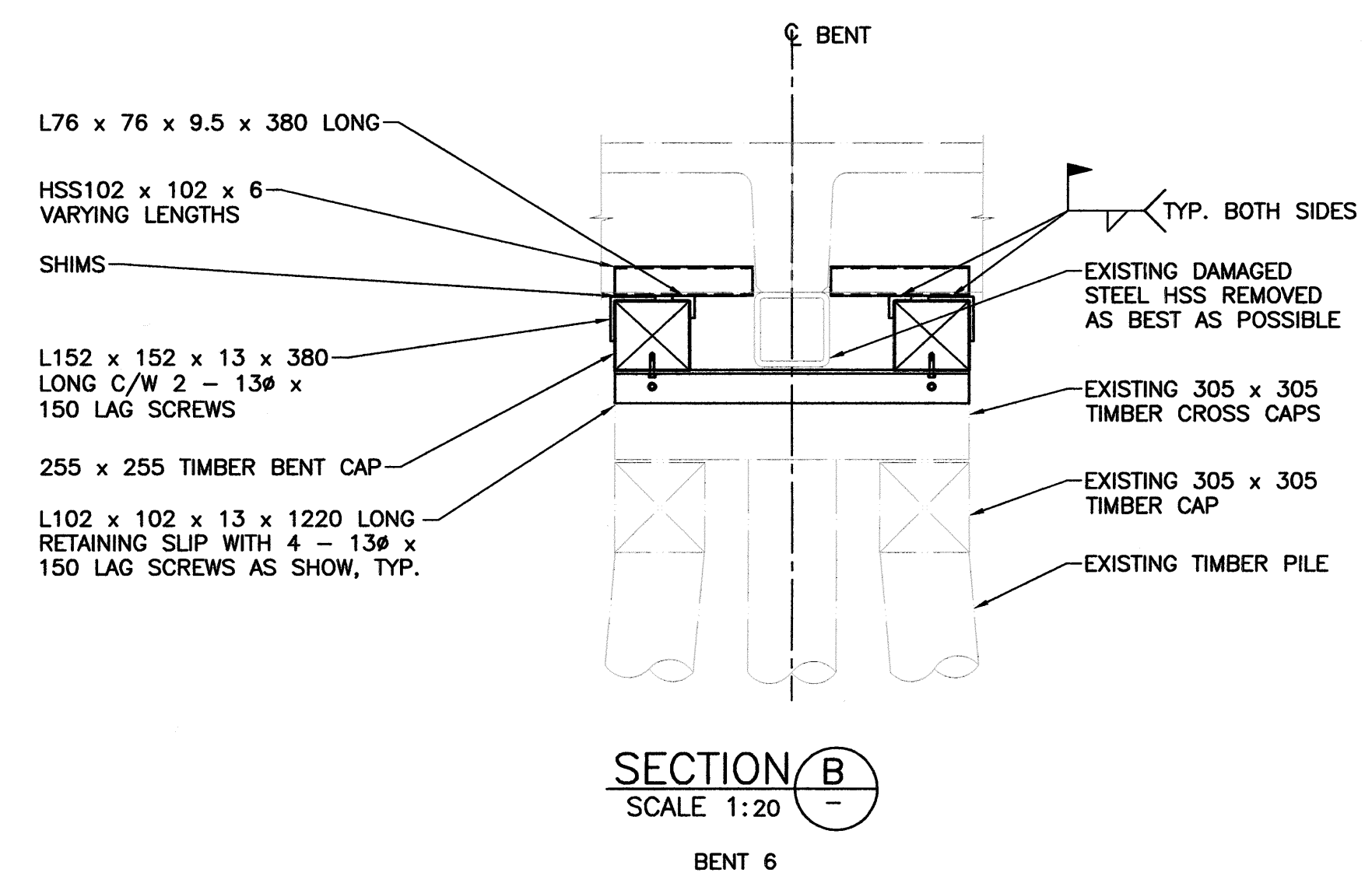
PREPARED UNDER THE DIRECTION OF  B.A. HAMERSLEY ENGINEER OF RECORD DATE OCTOBER 09, 2015	DESIGNED B.B. DATE SEP. 2015 CHECKED W.W. DATE SEP. 2015 DRAWN M.B. DATE SEP 2015 SCALE AS NOTED NEGATIVE No.	REG. No. PROJECT No. DRAWING No. <b>0596-201</b>
--	---	---

RECORD DRAWING

CANCEL PRINTS BEARING PREVIOUS LETTER



**BENT 6 ELEVATION**  
1:50  
(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE



**SECTION B**  
SCALE 1:20  
BENT 6

**NOTES:**

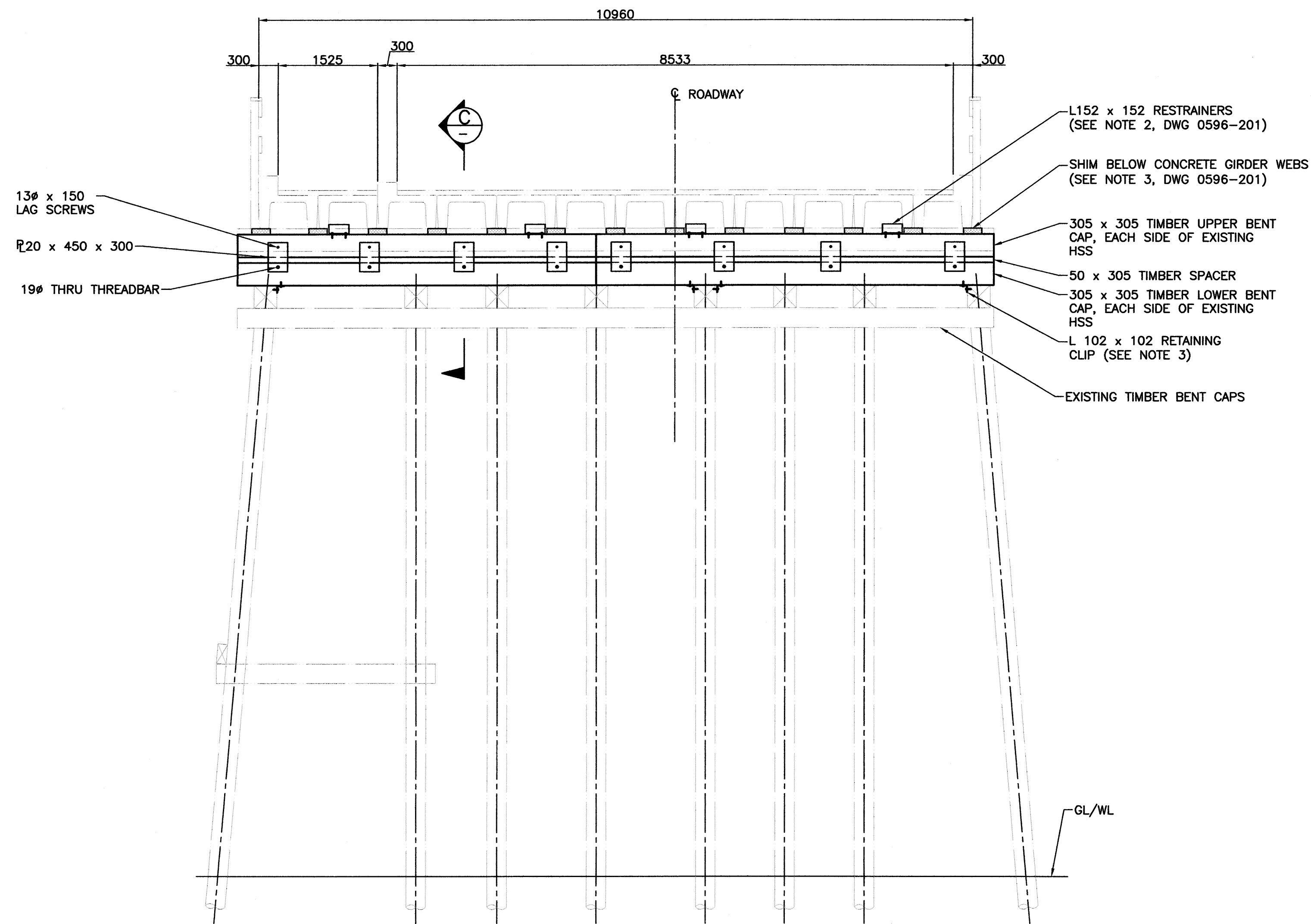
1. FOR GENERAL NOTES SEE DRAWING 0596-200.
2. FOR REPAIR NOTES SEE DRAWING 0596-201.

Rev	Date	Description	Init
REVISIONS			
		Ministry of Transportation & Infrastructure South Coast Region	
LOWER MAINLAND DISTRICT DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 <b>EMERGENCY CAP BEAM REPAIRS</b> <b>DETAILS SHEET 2 OF 4</b>			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>B.B.</u> DATE <u>SEP. 2015</u>	
B.A. HAMERSLEY		CHECKED <u>W.W.</u> DATE <u>SEP. 2015</u>	
ENGINEER OF RECORD		DRAWN <u>M.B.</u> DATE <u>SEP 2015</u>	
DATE <u>OCTOBER 09, 2015</u>		SCALE <u>AS NOTED</u>	
FILE No.	PROJECT No.	REG.	DRAWING No.
			<b>0596-202</b>

RECORD DRAWING

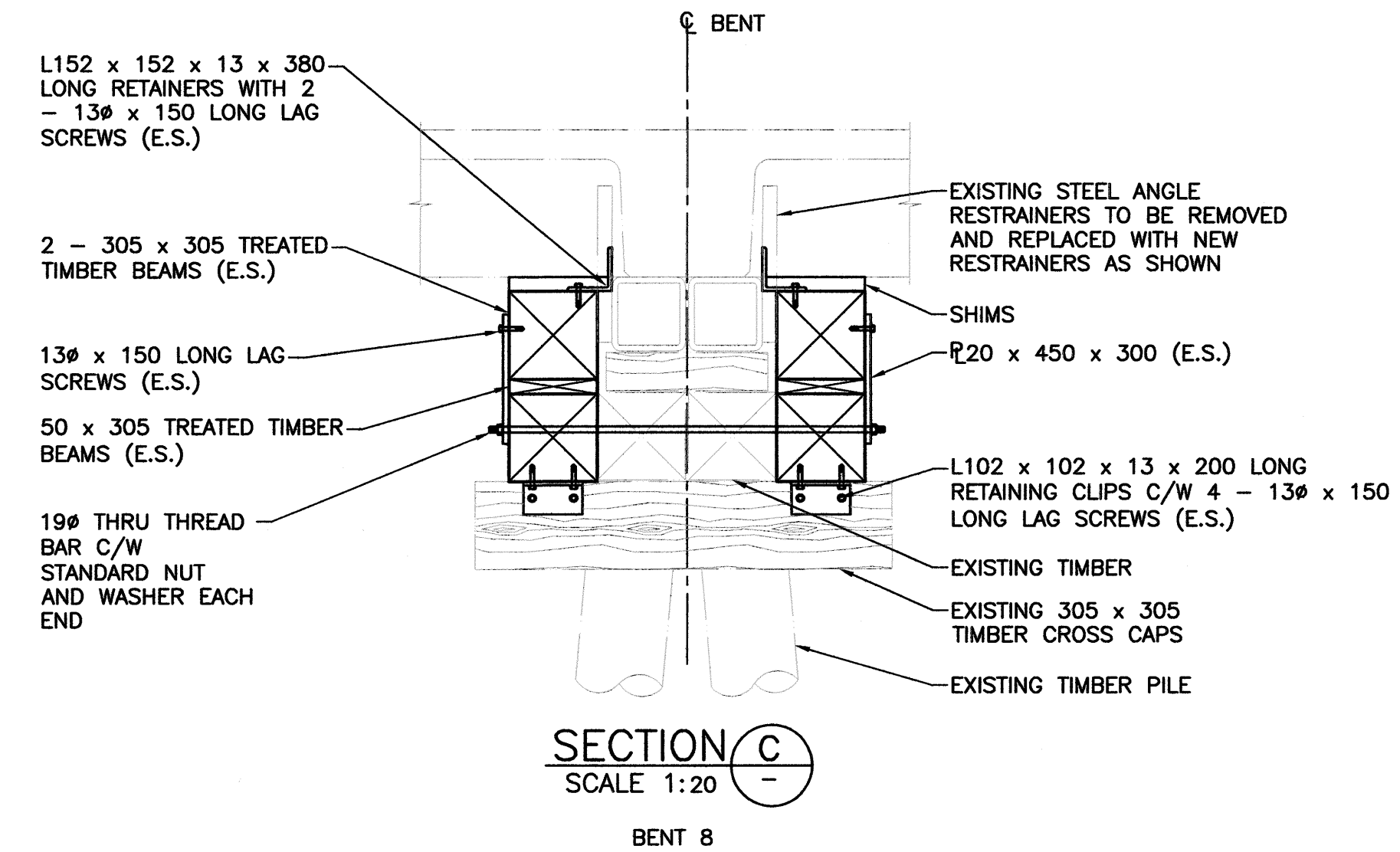
CANCEL PRINTS BEARING PREVIOUS LETTER





**BENT 8 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE



**SECTION C**  
SCALE 1:20  
BENT 8

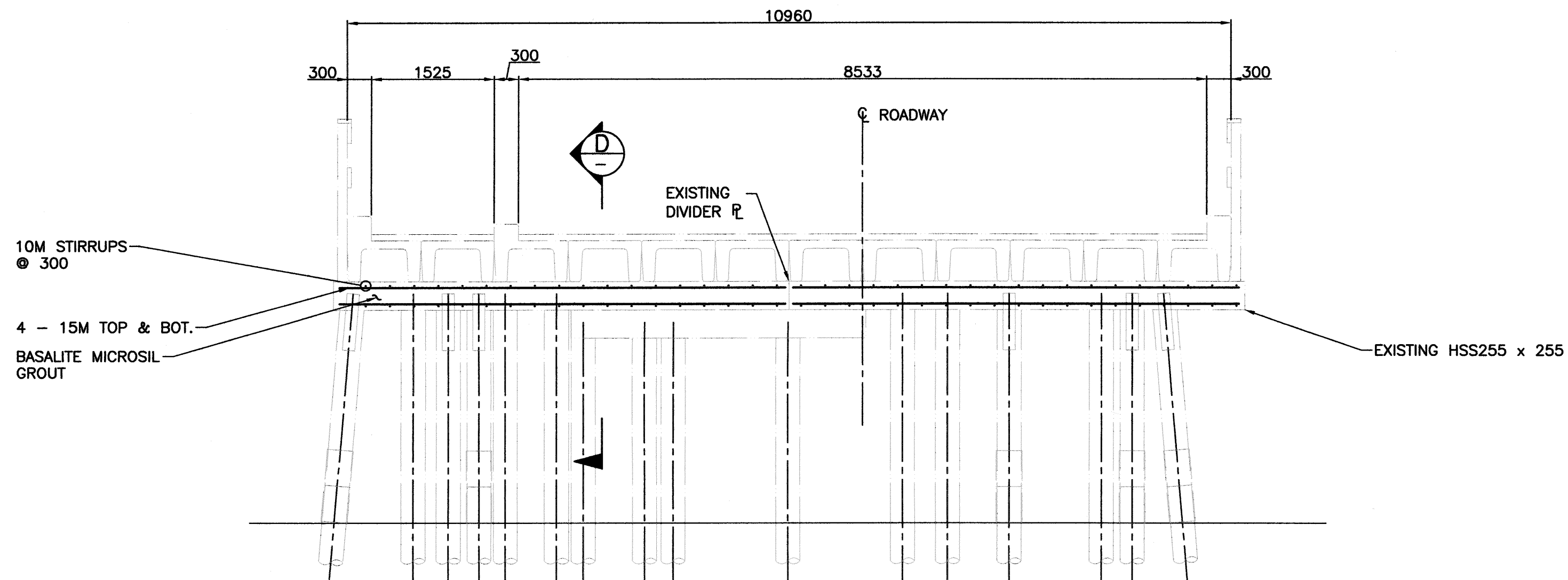
**NOTES:**

1. FOR GENERAL NOTES SEE DRAWING 0596-200.
2. FOR REPAIR NOTES SEE DRAWING 0596-201.
3. A MINIMUM OF TWO SETS OF 2 - L102 x 102 RETAINING CLIPS PER INDIVIDUAL LENGTH OF 255 x 255 BENT CAPS. RETAINING CLIPS TO BE INSTALLED AS CLOSE AS PRACTICAL TO BEAM ENDS, TYP. U.N.O.

Rev	Date	Description	Init
REVISIONS			
		Ministry of Transportation & Infrastructure South Coast Region	
LOWER MAINLAND DISTRICT DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 <b>EMERGENCY CAP BEAM REPAIRS</b> <b>DETAILS SHEET 3 OF 4</b>			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>B.B.</u> DATE <u>SEP. 2015</u>	
B.A. HAMERSLEY		CHECKED <u>W.W.</u> DATE <u>SEP. 2015</u>	
ENGINEER OF RECORD		DRAWN <u>M.B.</u> DATE <u>SEP. 2015</u>	
DATE <u>OCTOBER 09, 2015</u>		SCALE <b>AS NOTED</b>	
FILE No.	PROJECT No.	REG. No.	DRAWING No.
			<b>0596-203</b>

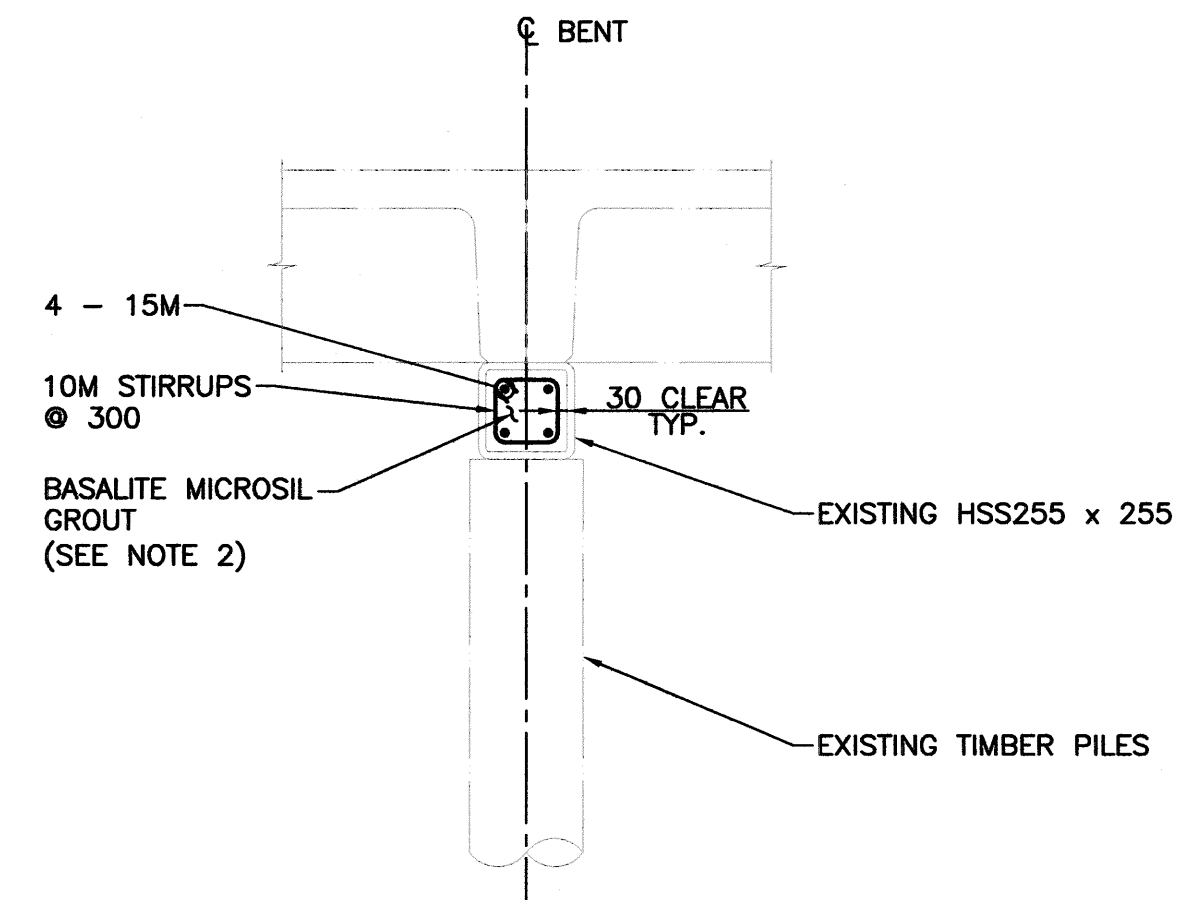
RECORD DRAWING

CANCEL PRINTS BEARING PREVIOUS LETTER



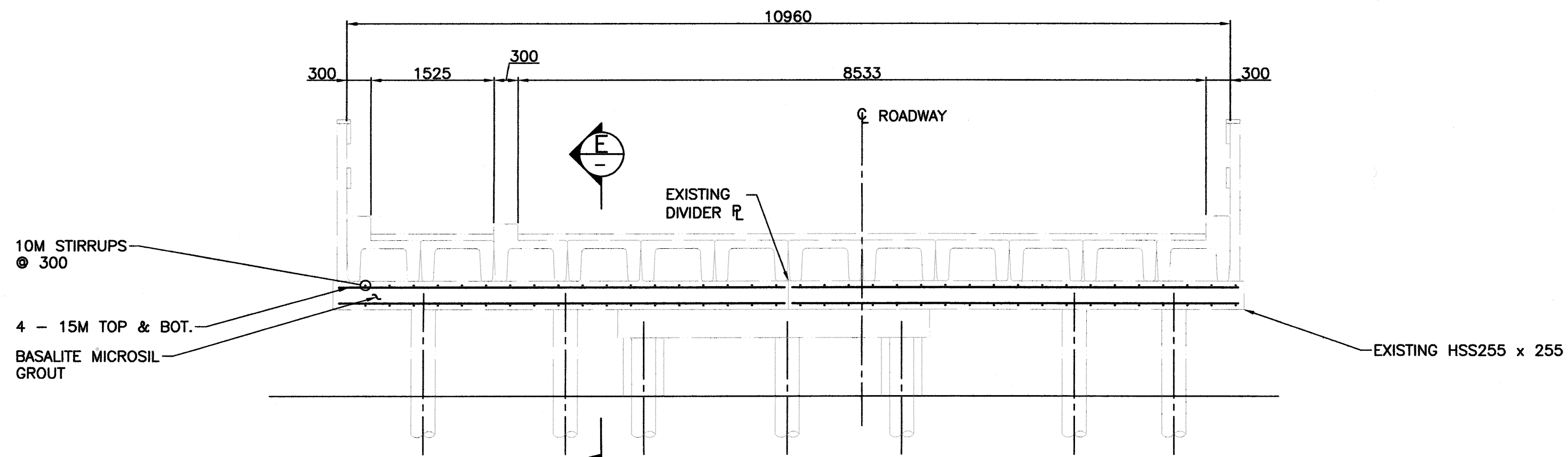
**BENT 2 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE  
(STIRRUPS NOT SHOWN FOR CLARITY)



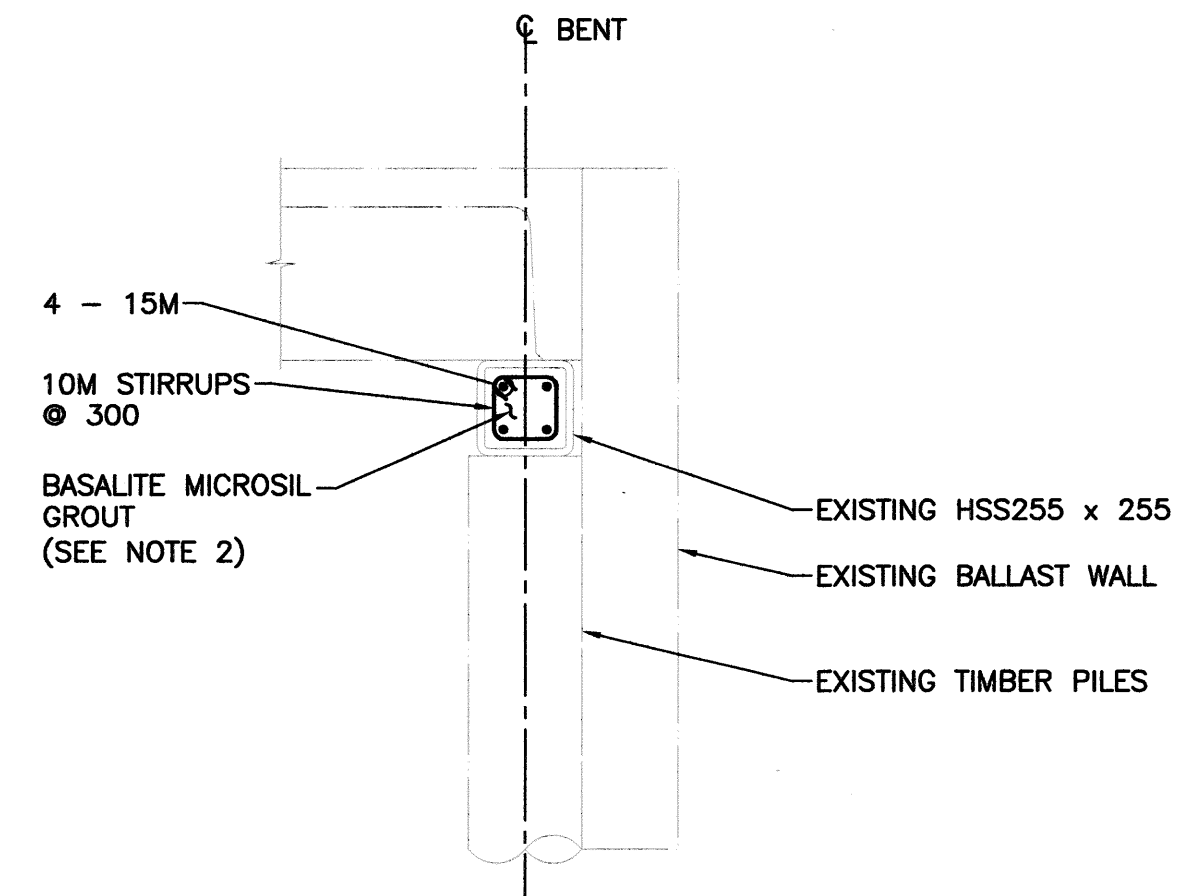
**SECTION D**  
SCALE 1:20

BENT 2



**BENT 17 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE  
(STIRRUPS NOT SHOWN FOR CLARITY)



**SECTION E**  
SCALE 1:20

BENT 17

**NOTES:**

- FOR GENERAL NOTES SEE DRAWING 0596-200.
- BASILITE MICROSIL GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 30 MPa. THREE GROUT CUBES SHALL BE TAKEN PER BENT FOR TESTING. TWO COMPRESSIVE TESTS SHALL BE COMPLETED AT 7 DAYS FOR GROUT CUBES TAKEN FOR EACH BENT TO VERIFY STRENGTH. A 3<sup>RD</sup> TEST MAY BE COMPLETED AT 28 DAYS IF REQUIRED.

Rev	Date	Description	Init

REVISIONS



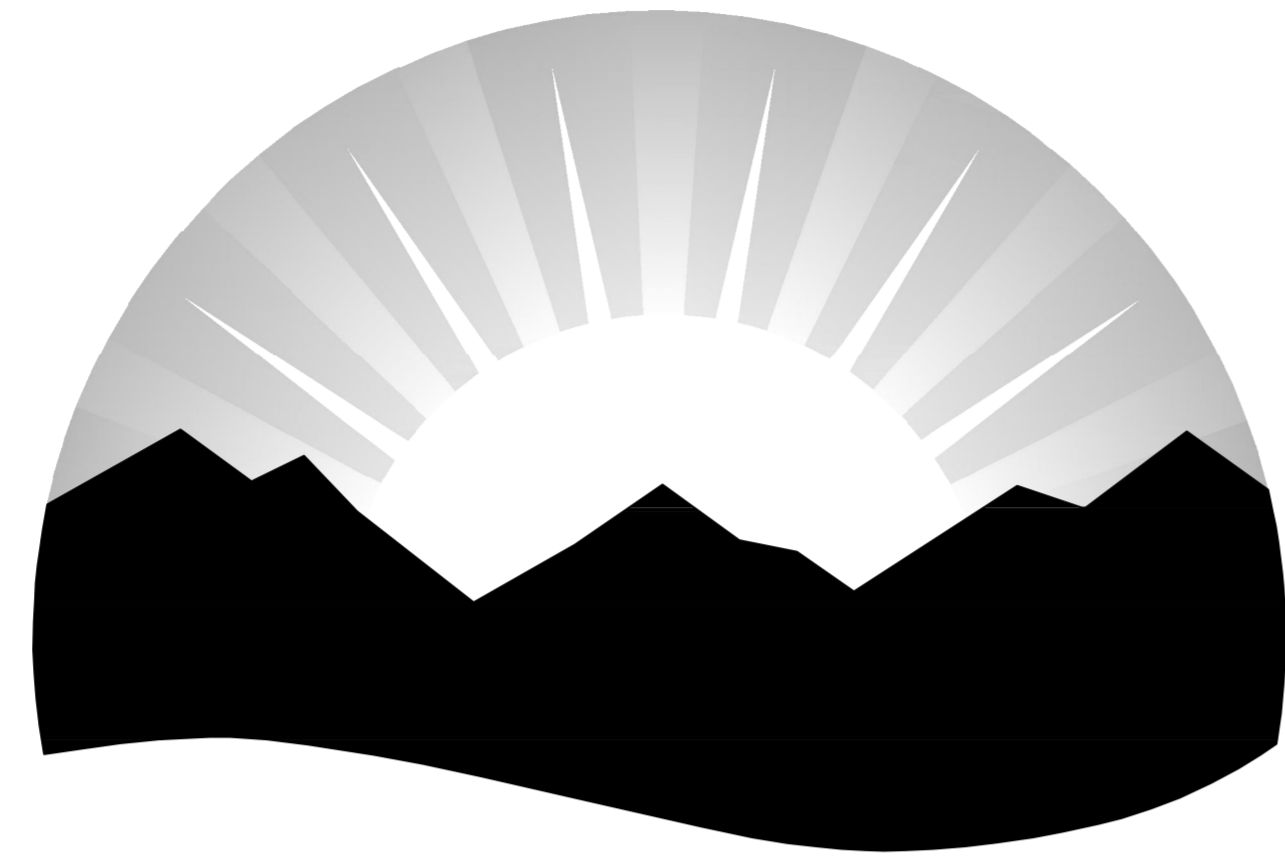
LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
**DETAILS SHEET 4 OF 4**

PREPARED UNDER THE DIRECTION OF	DESIGNED	B.B.	DATE SEP. 2015
	CHECKED	W.W.	DATE SEP. 2015
B.A. HAMERSLEY	DRAWN	M.B.	DATE SEP. 2015
ENGINEER OF RECORD	SCALE AS NOTED		
DATE OCTOBER 09, 2015	REG.	DRAWING No.	NEGATIVE No.
FILE No.	PROJECT No.	REG.	DRAWING No.
			<b>0596-204</b>

RECORD DRAWING

CANCEL PRINTS BEARING PREVIOUS LETTER

H-308-11-(6)-07



BRITISH  
COLUMBIA

Ministry of Transportation

Bridge Project No. 11996 - 0001

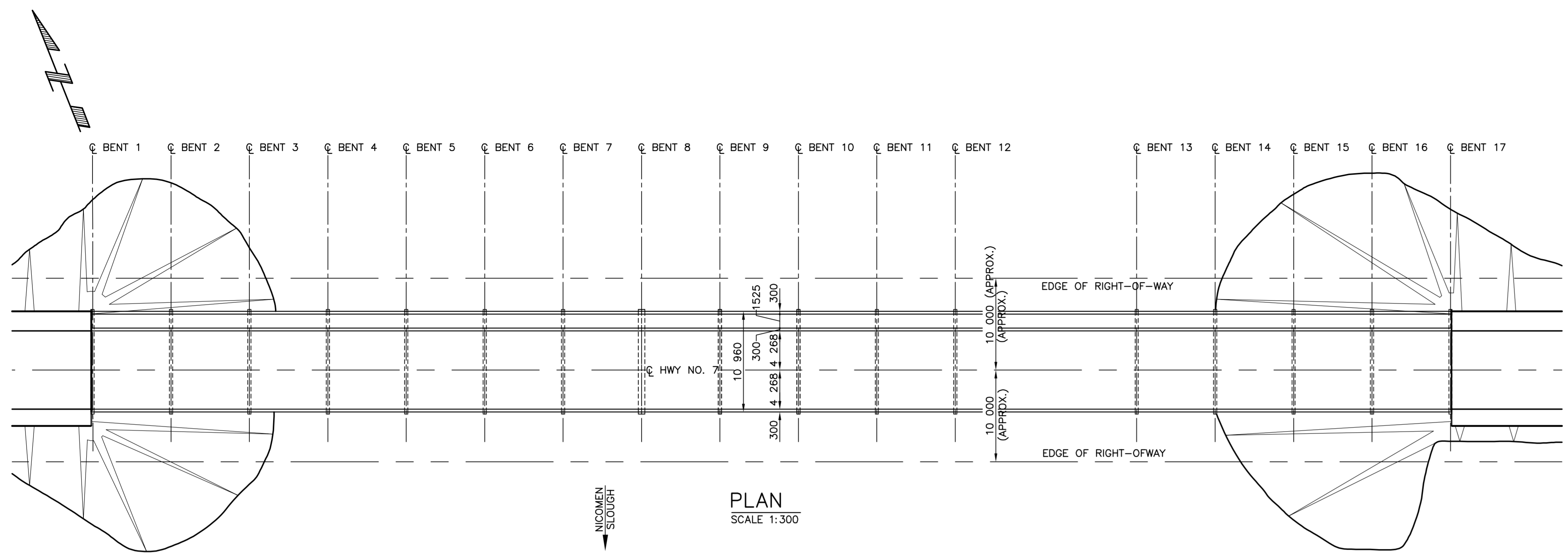
Deroche Bridge No. 0232

Dewdney Bridge No. 0596

Shook Road Bridge No. 0885

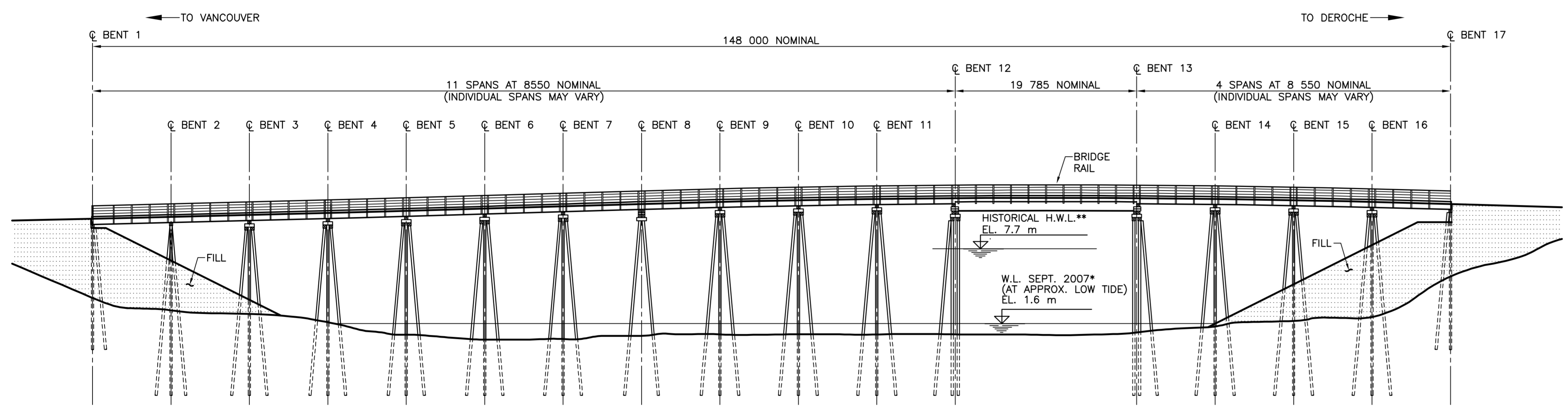
Timber Sub-Structure Rehabilitation





**GENERAL NOTES**

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- BENT SKETCHES WERE PREPARED FROM REFERENCE DRAWINGS AND PICTURES AND ARE APPROXIMATE ONLY. ALL DATA RELEVANT TO THE WORK, INCLUDING THE GROUND AND WATER LINE, PILE AND BRACING DETAILS AND OTHER STRUCTURAL DETAILS AS WELL AS TIMBER SIZES SHALL BE VERIFIED IN THE FIELD FROM MEASUREMENTS TAKEN BY THE CONTRACTOR.
- THESE REHABILITATION DRAWINGS INVOLVE INTERIM REPAIRS OF THE TIMBER SUBSTRUCTURE TO PROVIDE AN ADDITIONAL 10 YEARS OF SERVICE LIFE FOR THE SUBSTRUCTURE.
- THE REPAIRS AS OUTLINED ON THESE DRAWINGS ARE BASED ON INSPECTION OF THE BRIDGE SUBSTRUCTURE CARRIED OUT BY UMA ENGINEERING LTD IN SEPTEMBER AND DECEMBER 2007. THE LOCATIONS OF THE MEMBERS TO BE REPAIRED AND THE PILE SPLICE LOCATIONS ARE TO BE CONFIRMED IN THE FIELD WITH THE MINISTRY REPRESENTATIVE.
- THE PROPOSED REPAIR WORK AND REPLACEMENT PROCEDURES ARE BELIEVED TO BE CONSTRUCTIBLE. THE CONTRACTOR SHALL SUBMIT HIS OWN PROPOSED DETAILED WORK PLAN TO THE MINISTRY REPRESENTATIVE FOR REVIEW PRIOR TO COMMENCING ANY PHYSICAL WORK. THIS WORK PLAN SHALL INCLUDE THE FOLLOWING:
  - A DETAILED SEQUENCE OF CONSTRUCTION, FROM MOBILIZATION TO DEMOBILIZATION, COMPLETE WITH SCHEDULE.
  - TRAFFIC ACCOMMODATION PLAN AND ENVIRONMENTAL MANAGEMENT PLAN.
  - LOCATION OF ALL TEMPORARY SUPPORTS.
  - JACKING PROCEDURE.
  - PROCEDURES FOR REPLACING SUBSTRUCTURE COMPONENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY SUPPORT SYSTEMS AND JACKING PROCEDURES TO COMPLETE THE WORK AND SHALL SUBMIT A WORK PLAN TO THE MINISTRY REPRESENTATIVE FOR REVIEW PRIOR TO COMMENCING ANY PHYSICAL WORK. THIS WORK PLAN SHALL BE STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA AND WITH EXPERIENCE IN THIS TYPE OF WORK.
- THE CONTRACTOR IS REMINDED THAT THE NATURE OF THE EXISTING STREAMBED IS LIKELY TO BE SOFT AND THAT PLACEMENT OF TEMPORARY SHORING ON THE STREAMBED OR ON GRADE WILL REQUIRE AN ADEQUATE FOOTING MAT TO ENSURE STABILITY AND LIMIT SETTLEMENT DURING JACKING OPERATIONS.
- SUBSTRUCTURE BENTS ARE NUMBERED CONTINUOUSLY FROM WEST TO EAST WITH BENT 1 BEING THE WEST ABUTMENT. PILES AND CROSS BLOCKS IN THE BENTS ARE NUMBERED FROM LEFT TO RIGHT WHILE LOOKING IN THE EASTERLY DIRECTION.
- TIMBER FOR CAPS AND CROSS BLOCKS SHALL BE DOUGLAS FIR OR PACIFIC COAST HEMLOCK CONFORMING TO STRESS GRADE "SELECT - STRUCTURAL POSTS AND TIMBER" (NLGA PARAGRAPH 131a). THE TIMBER SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE MINISTRY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTIONS 903 AND 904 AND SHALL BE PRESSURE TREATED IN ACCORDANCE WITH SECTION 908.
- TIMBER PILES SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE MINISTRY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 906 AND SHALL BE PRESSURE TREATED IN ACCORDANCE WITH SECTION 908.
- ALL STEEL PLATE AND STRUCTURAL SHAPES SHALL CONFORM TO CSA G40.21 300W EXCEPT THAT PIPE STEEL MATERIAL SHALL CONFORM TO ASTM A53.
- BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 911.13 OF THE CURRENT EDITION OF THE MINISTRY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- DIMENSIONS SHOWN FOR TIMBER CAPS, CROSS BLOCKS AND PILES ARE NOMINAL, ACTUAL DIMENSIONS MAY VARY.
- LAG SCREWS TO BE INSTALLED BY PRE-DRILLING A LEAD HOLE OF 60-75% OF BOLT DIAMETER FOR THE THREADED PORTION AND A COUNTERBORE FOR THE UNTHREADED PORTION OF SAME SIZE AS BOLT DIAMETER.



**WORK LIST**

- BENT 2 REPLACE PILES 1, 3, 4, 13, 15, 16 FROM CAP TO GROUNDLINE
- BENT 3 REPLACE CROSS-BLOCKS 1 TO 5.
- BENT 3 ROW 1 REPLACE PILE 4 FROM SUB-CAP TO 600 mm ABOVE GROUNDLINE
- BENT 3 ROW 2 REPLACE PILE 1 TO 1500 mm BELOW CROSS-BLOCK
- BENT 3 ROW 3 REPLACE SOUTH HALF OF CAP
- BENTS 4 TO 7 REPLACE CROSS-BLOCKS AND PILES:  
SEE DWG NO 0596-103 'BENT REPAIR TABLE' FOR DETAILS.
- BENT 8 REPLACE 133 x 387 CROSS-BLOCK BELOW STEEL CAP
- BENT 8 REPLACE PILE 1 IN BOTH ROWS TO 600 mm ABOVE LOWER HORIZONTAL BRACE
- BENT 8 ROW 2 REPLACE TOP DIAGONAL BRACE FROM PILES 5 TO 8
- BENT 9 TO 11 REPLACE CROSS-BLOCKS, PILE AND BRACING:  
SEE DWG NO 0596-103 'BENT REPAIR TABLE' FOR DETAILS.
- BENT 12 REPLACE CROSS-BLOCKS 2, 3, AND 8
- BENT 12 ROW 1 REPLACE PILES 2 AND 5 TO 600 mm ABOVE WATERLINE
- BENT 12 ROW 2 REPLACE PILE 1 TO 600 mm ABOVE HORIZONTAL BRACE
- BENT 12 ROW 3 ADD APPROXIMATELY 4000 mm OF TREATED TIMBER SHEETING
- BENT 13 ROW 1 REPLACE PILES 2 AND 7 TO 600 mm ABOVE LOWER HORIZONTAL BRACE
- BENT 13 ROW 3 REPLACE PILE 1 AND 2 TO 600 mm ABOVE THE WATERLINE
- BENT 13 ROW 1 ADD APPROXIMATELY 4000 mm OF TREATED TIMBER SHEETING
- BENT 14 & 15 REPLACE CROSS-BLOCKS AND PILE  
SEE DWG NO 0596-103 'BENT REPAIR TABLE' FOR DETAILS.
- BENT 16 ROW 1 REPLACE TIMBER CAP

**ELEVATION**  
SCALE 1:300

\* REFER TO SPECIAL PROVISIONS FOR HISTORIC INFORMATION ON DAILY FLUCTUATIONS OF WATER LEVEL. (AFFECTED BY TIDES AND RUNOFF)

\*\* HISTORICAL H.W.L. FROM ORIGINAL REFERENCE DRAWINGS. ACTUAL MAXIMUM RECORDED WATER LEVELS HAVE BEEN HIGHER.

NOTE:  
AS-BUILT DETAILS MAY VARY FROM THOSE ON REFERENCE DRAWINGS

REFERENCE DRAWINGS			
DRAWING NO.	DESCRIPTION	DRAWING NO.	DESCRIPTION
596-8D	LAYOUT AND KEY PLAN	596-23	DECK DETAILS
596-9B	PIER #1	596-29	PROTECTION WORKS
596-11	EXPANSION JOINT DETAILS	596-30	REPLACEMENT OF BENT CAPS
596-15B	SUBSTRUCTURE DETAILS SHEET III	596-31	RESURFACING AS BUILT
596-20	LAYOUT AND KEY PLAN	596-32	TEMPORARY CROSS-BLOCK REPAIRS
596-17A	STEELWORK DETAILS	7 SKETCHES	BILL OF MATERIAL
596-19A	PIERS 2 AND 3	14 SKETCHES	RECORD OF PILE DRIVING

DRAWINGS INDEX	
DRAWING NO.	DESCRIPTION
0596-101	GENERAL LAYOUT
0596-102	BENT PLAN AND ELEVATION
0596-103	BENT PLAN AND ELEVATION
0596-104	BENT PLAN AND ELEVATION
0596-105	BENT PLAN AND ELEVATION
0596-106	BENT PLAN AND ELEVATION
0596-107	DETAILS

Consultant Logo  
**UMA | AECOM**

Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA

**REVISIONS**

**BRITISH COLUMBIA** | Ministry of Transportation  
South Coast Region

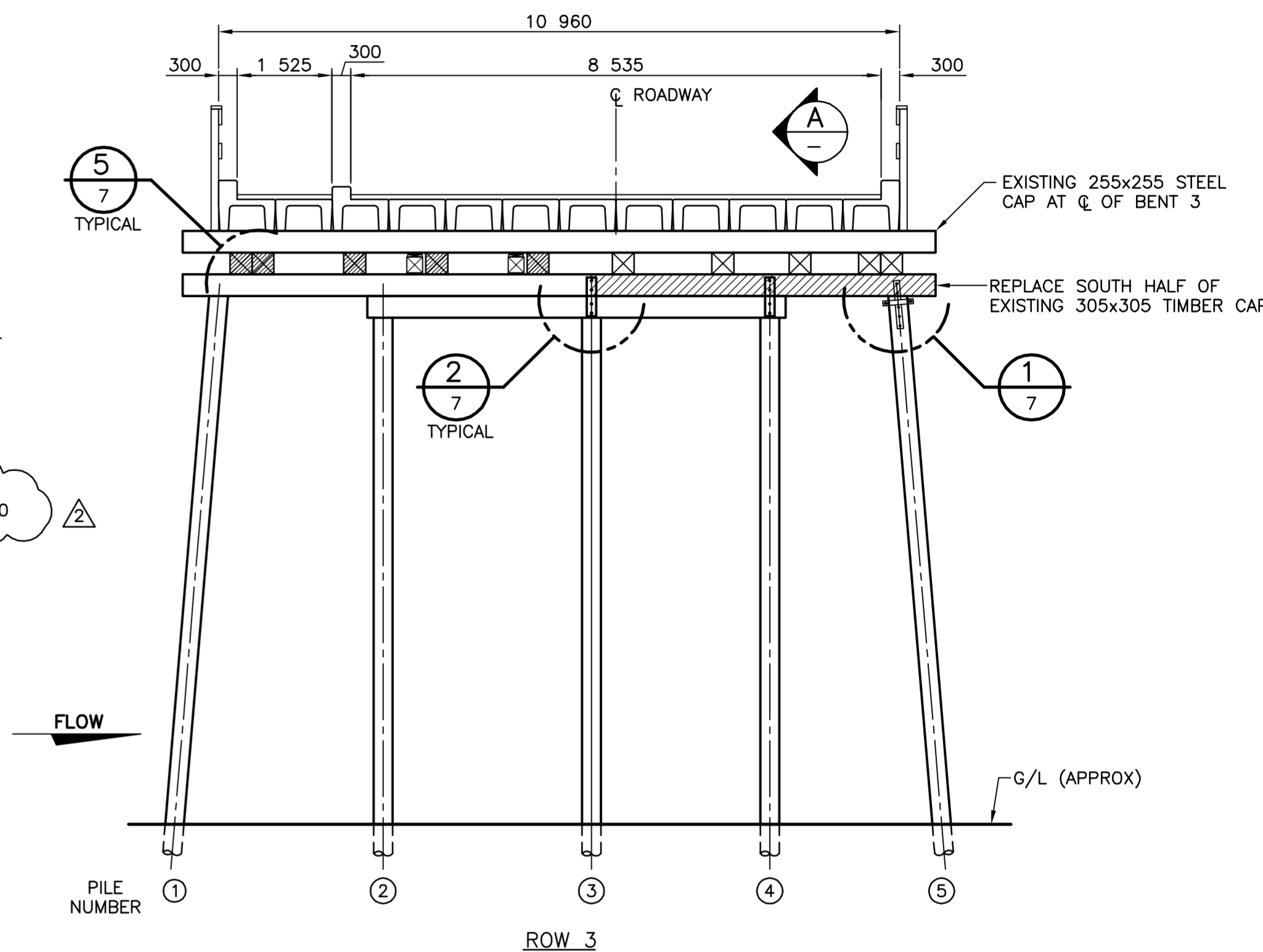
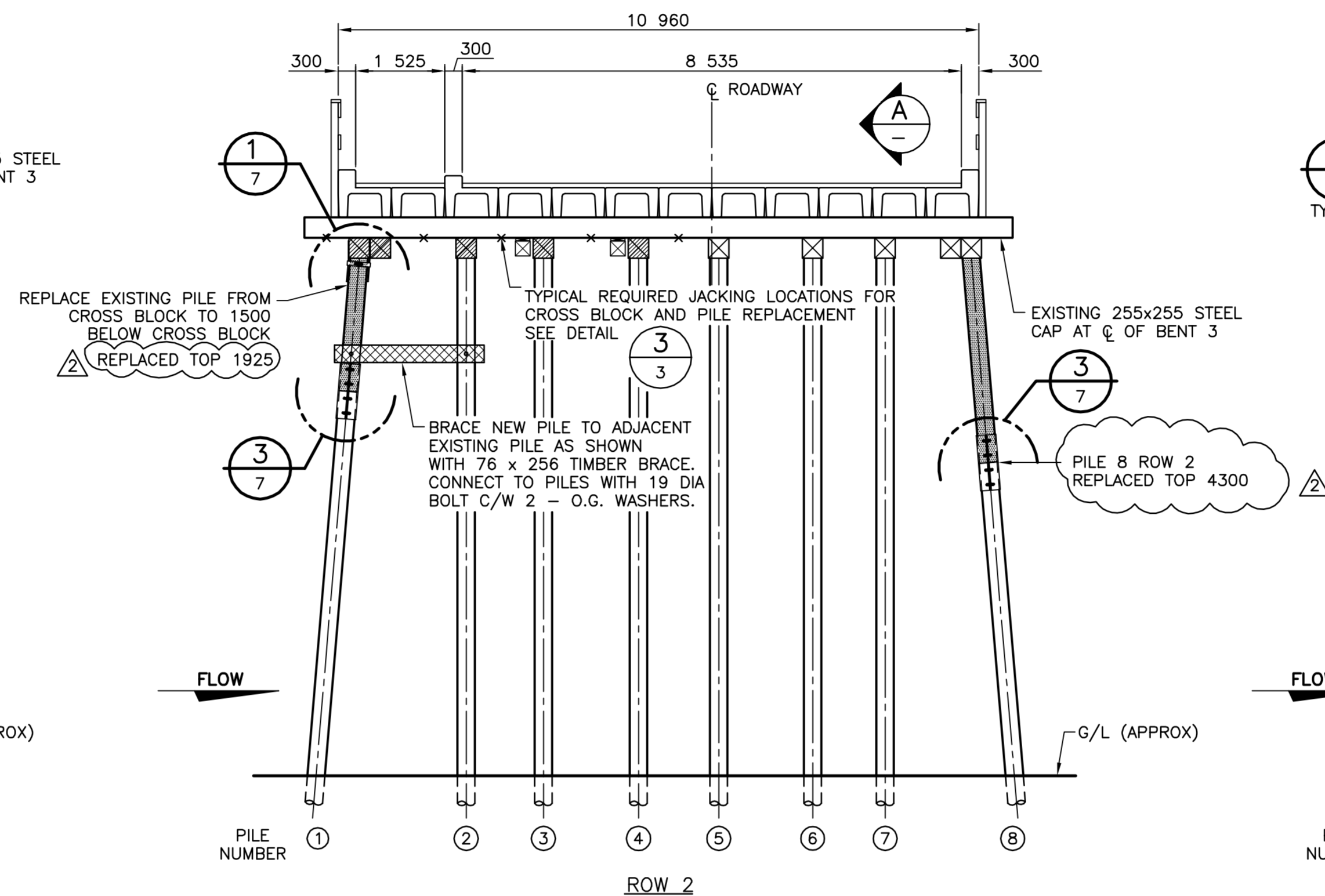
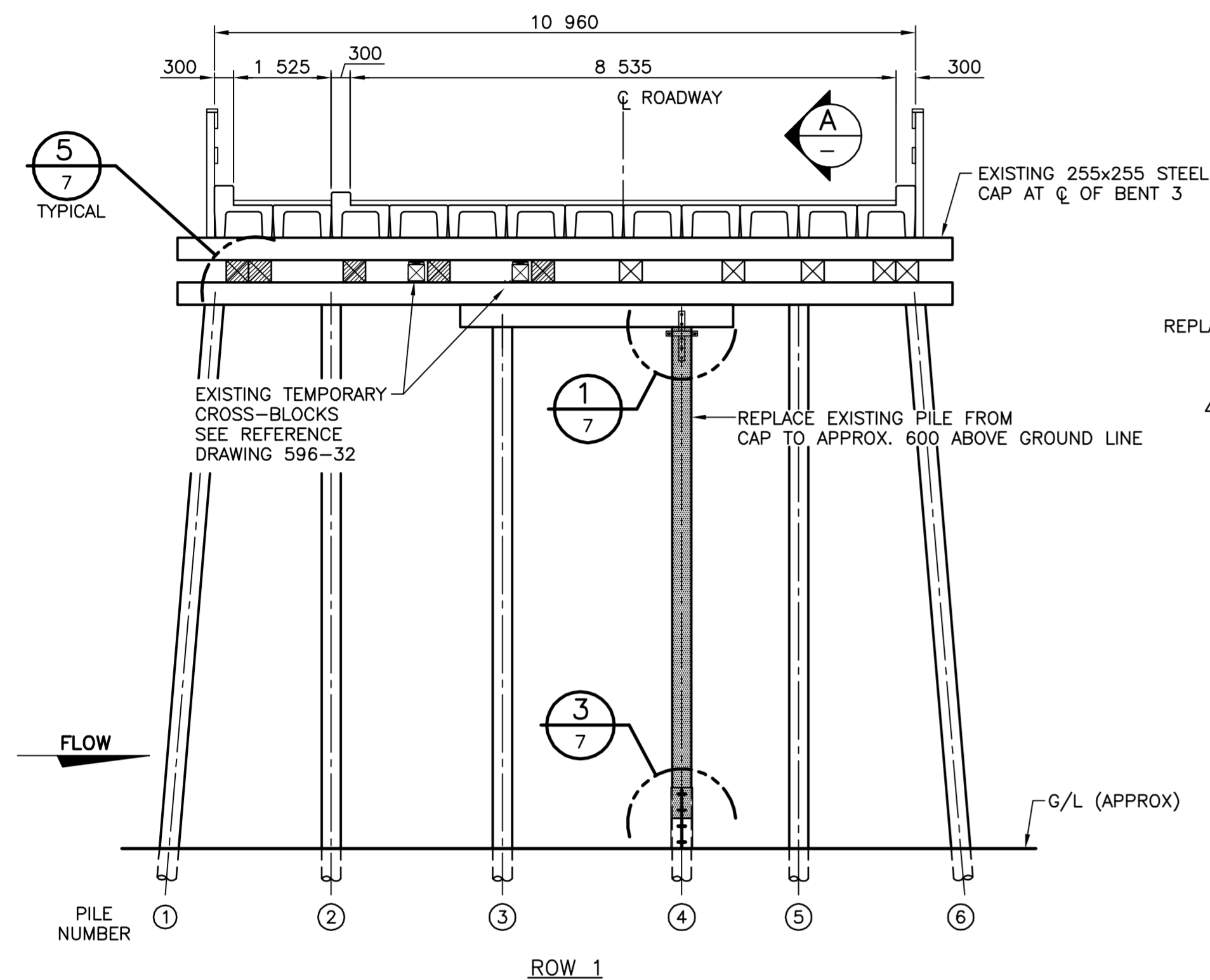
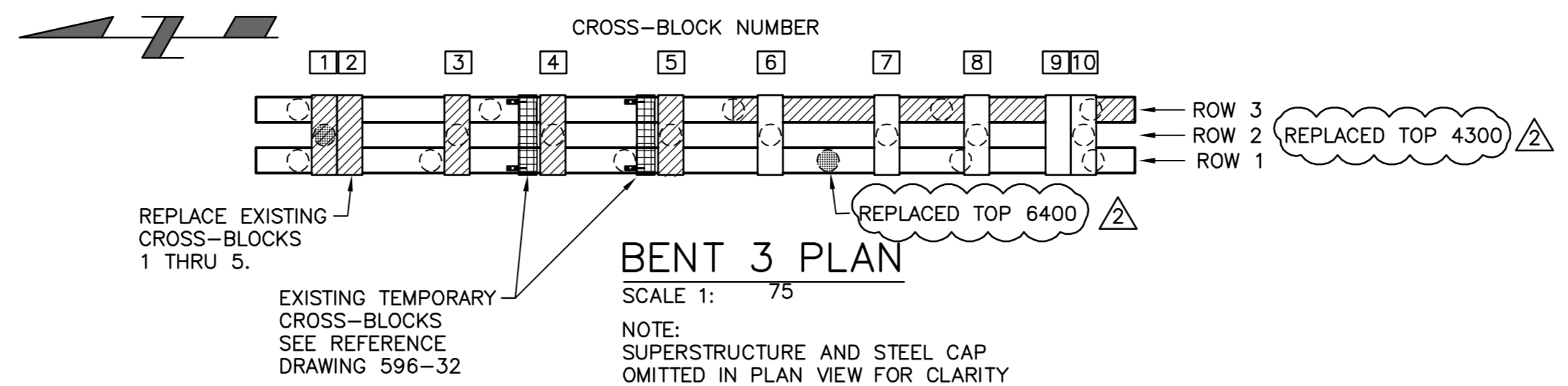
**LOWER MAINLAND DISTRICT)**  
**DEWDNEY BRIDGE No. 0596 - HIGHWAY 7**  
**SUBSTRUCTURE REHABILITATION**  
GENERAL LAYOUT

PREPARED UNDER THE DIRECTION OF	DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>
ENGINEER OF RECORD	CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>
DATE	DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>
FILE No.	SCALE AS NOTED
0596	NEGATIVE No.
PROJECT No.	REG.
11996-0001	DRAWING No.
1	0596-101
2	

07-JUL-2010

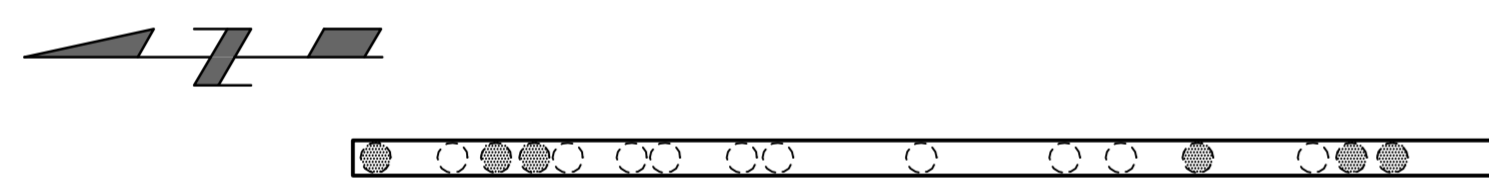
CANCEL PRINTS BEARING PREVIOUS LETTER



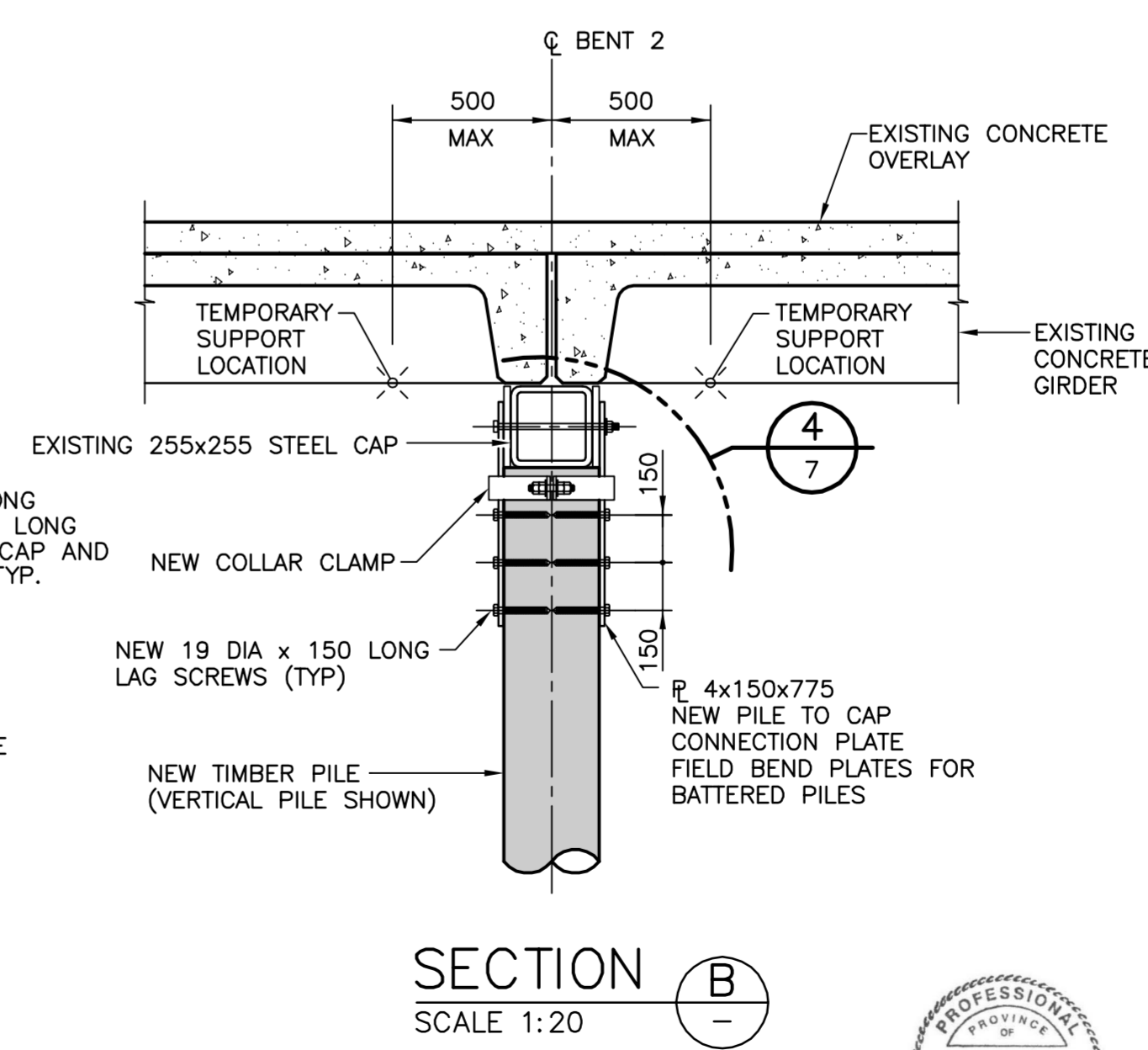
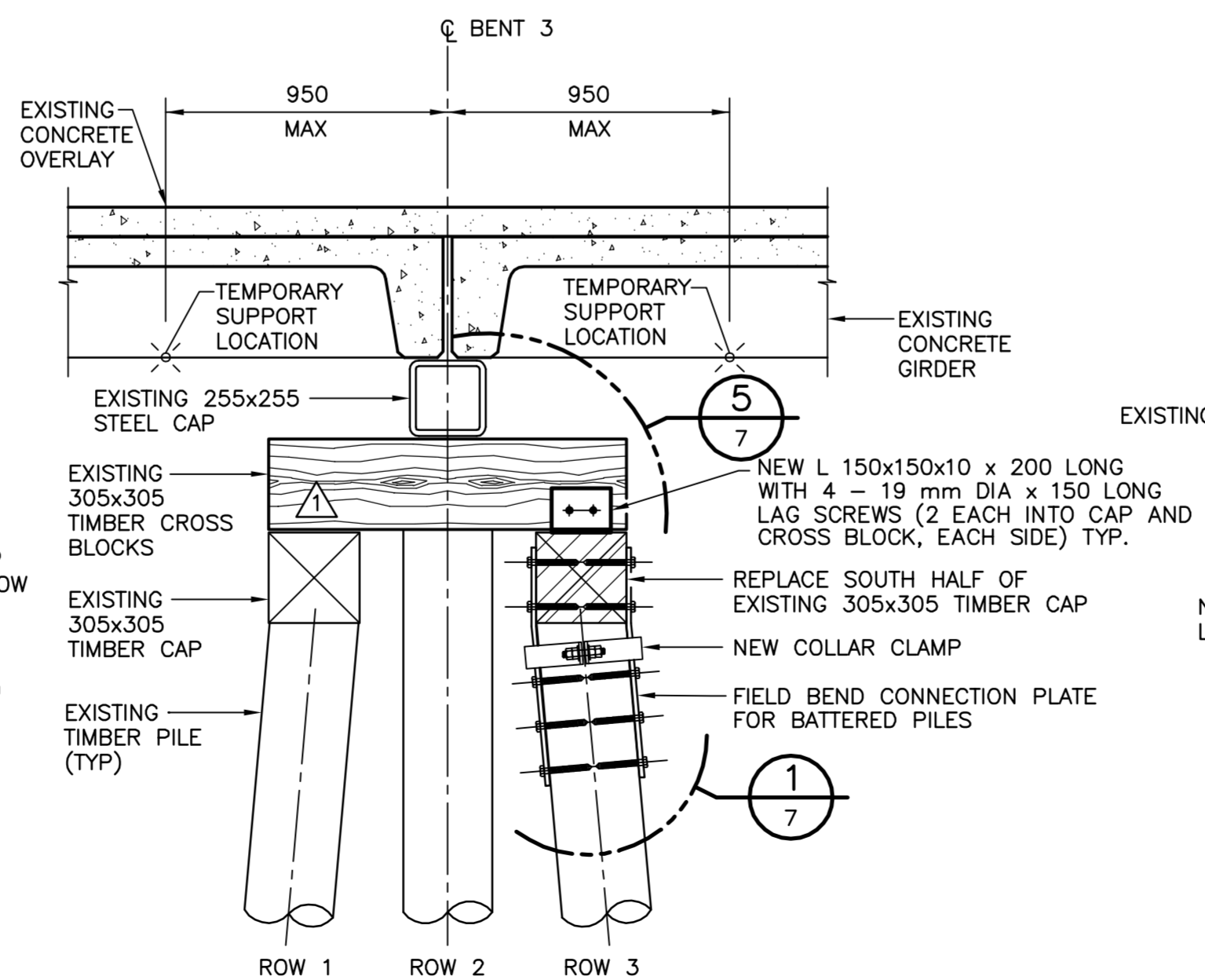
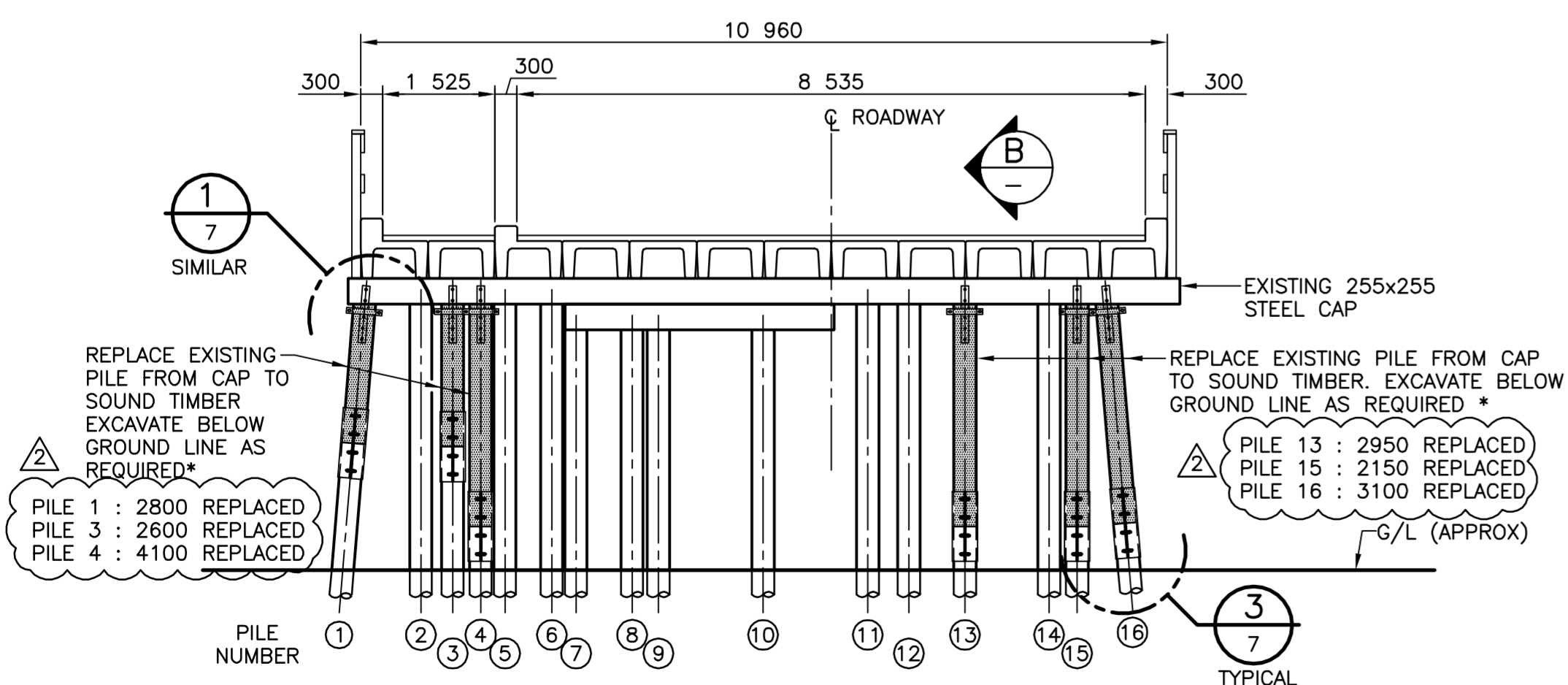


**BENT 3 ELEVATION**  
SCALE 1:75 (LOOKING EAST)  
NOTE:  
FOR CONNECTION DETAILS FOR  
PILES, CAP AND CROSS BLOCKS, SEE DRAWING 0596-107

- LEGEND:**
- PILES FOR REPLACEMENT
  - CAPS OR CROSS BLOCKS FOR REPLACEMENT
  - TEMPORARY CROSS BLOCKS
  - NEW BRACING



**BENT 2 PLAN**  
SCALE 1:75  
NOTE:  
SUPERSTRUCTURE OMITTED  
IN PLAN VIEW FOR CLARITY



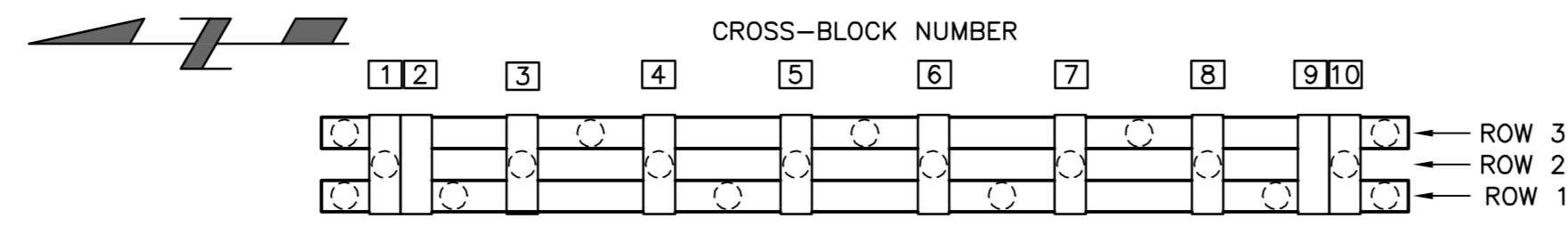
**BENT 2 ELEVATION**  
SCALE 1:75 (LOOKING EAST)

\* IF THE DEPTH OF EXCAVATION REQUIRED IS GREATER THAN 600 REVIEW IN THE FIELD WITH THE MINISTRY REPRESENTATIVE



Consultant Logo			
<b>UMA   AECOM</b>			
Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA
REVISIONS			
		<b>Ministry of Transportation</b> South Coast Region	
<b>LOWER MAINLAND DISTRICT</b> DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 SUBSTRUCTURE REHABILITATION BENT PLAN AND ELEVATION			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>	
ENGINEER OF RECORD		CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>	
DATE		DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>	
FILE No.	PROJECT No.	REG.	DRAWING No.
0596	11996-0001	1	0596-102
		NEGATIVE No.	

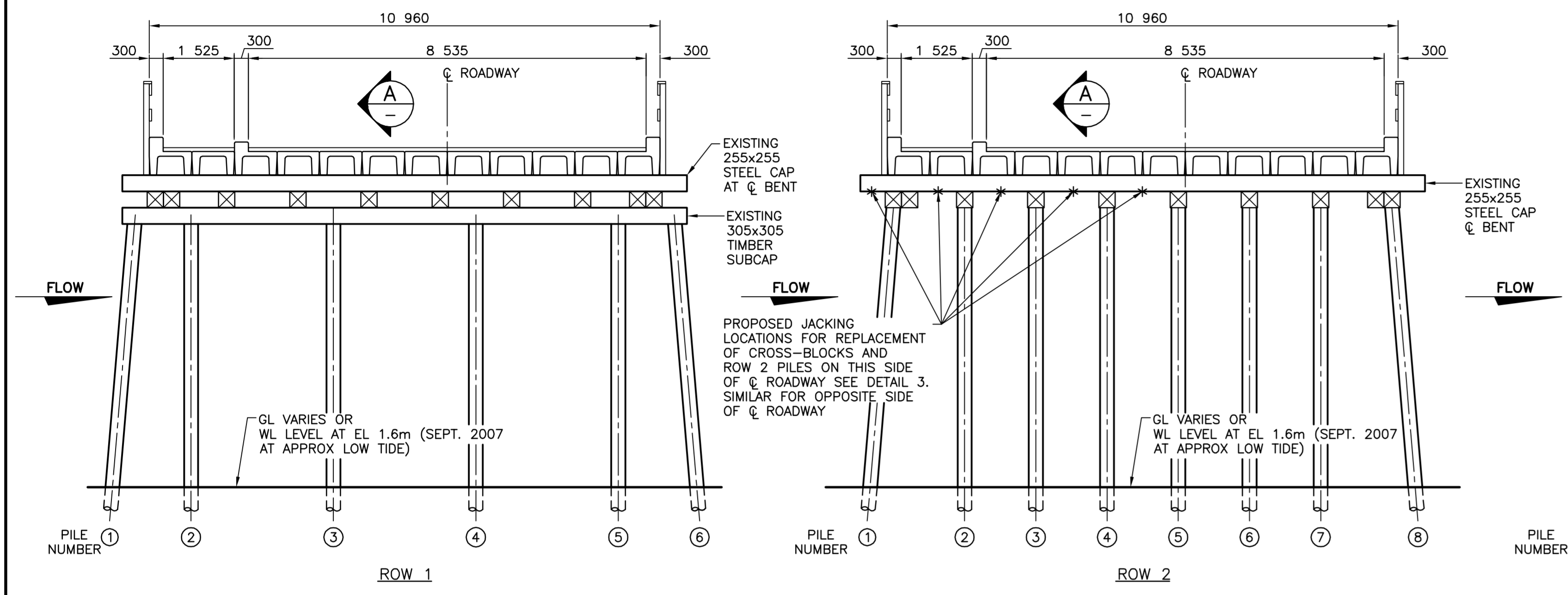




**TYPICAL BENT PLAN**

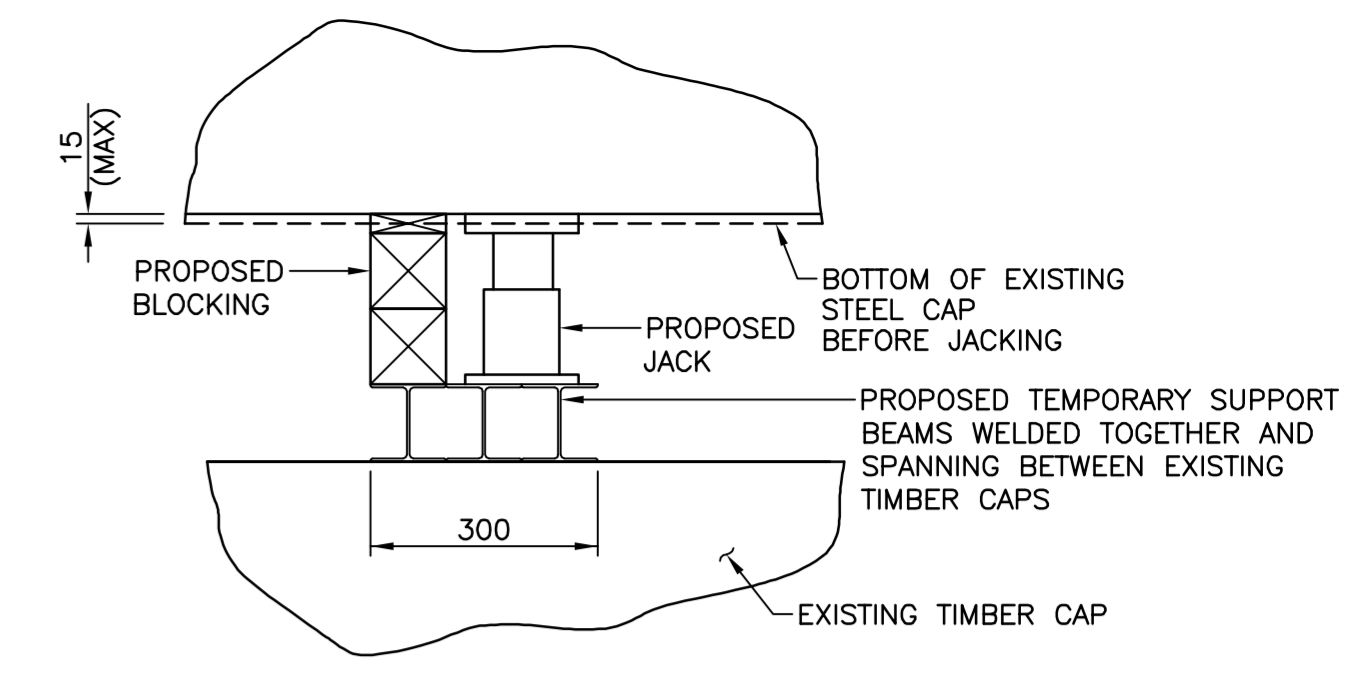
SCALE 1:75  
(TYPICAL FOR BENT 4,5,6,7,9,10,11,14 AND 15)

NOTE:  
SUPERSTRUCTURE AND STEEL CAP  
OMITTED IN PLAN VIEW FOR CLARITY



**TYPICAL BENT ELEVATION**

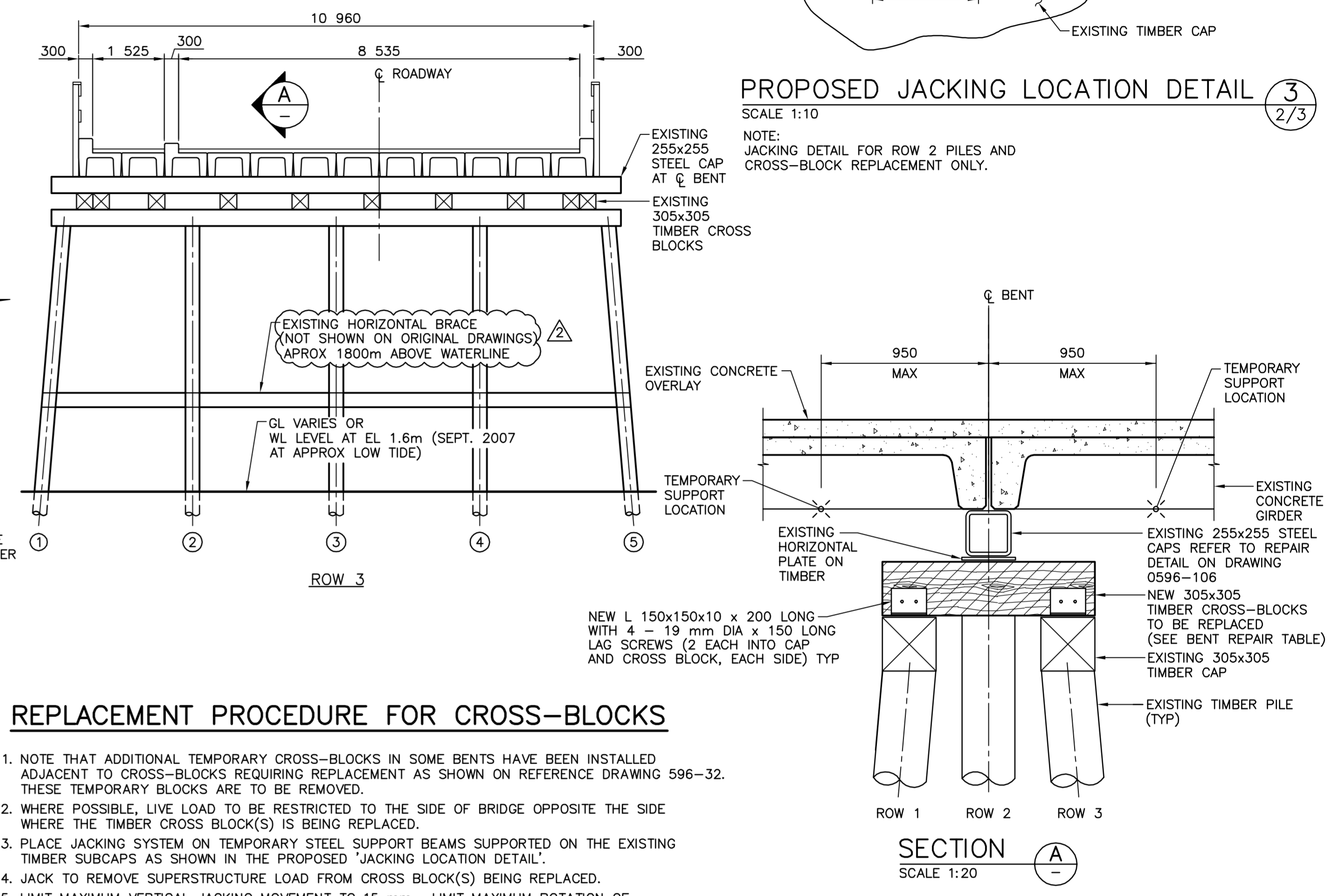
SCALE 1:75 (LOOKING EAST)  
(TYPICAL FOR BENT 4,5,6,7,9,10,11,14 AND 15)



**PROPOSED JACKING LOCATION DETAIL**

SCALE 1:10

NOTE:  
JACKING DETAIL FOR ROW 2 PILES AND  
CROSS-BLOCK REPLACEMENT ONLY.



**REPLACEMENT PROCEDURE FOR CROSS-BLOCKS**

- NOTE THAT ADDITIONAL TEMPORARY CROSS-BLOCKS IN SOME BENTS HAVE BEEN INSTALLED ADJACENT TO CROSS-BLOCKS REQUIRING REPLACEMENT AS SHOWN ON REFERENCE DRAWING 596-32. THESE TEMPORARY BLOCKS ARE TO BE REMOVED.
- WHERE POSSIBLE, LIVE LOAD TO BE RESTRICTED TO THE SIDE OF BRIDGE OPPOSITE THE SIDE WHERE THE TIMBER CROSS BLOCK(S) IS BEING REPLACED.
- PLACE JACKING SYSTEM ON TEMPORARY STEEL SUPPORT BEAMS SUPPORTED ON THE EXISTING TIMBER SUBCAPS AS SHOWN IN THE PROPOSED "JACKING LOCATION DETAIL".
- JACK TO REMOVE SUPERSTRUCTURE LOAD FROM CROSS BLOCK(S) BEING REPLACED.
- LIMIT MAXIMUM VERTICAL JACKING MOVEMENT TO 15 mm. LIMIT MAXIMUM ROTATION OF SUPERSTRUCTURE IN THE TRANSVERSE DIRECTION TO 6 mm PER 1000 mm OF DECK. PROFILE OF DECK IN THE TRANSVERSE DIRECTION SHALL BE MAINTAINED FLAT IF JACKING FULL WIDTH OF SUPERSTRUCTURE OR IN SINGLE CURVATURE WITH THE TOP SURFACE OF THE DECK IN COMPRESSION IF JACKING ONE SIDE OF THE SUPERSTRUCTURE.
- JACKING SYSTEM TO BE BLOCKED AFTER JACKING TO PREVENT ANY MOVEMENT IF THERE IS FAILURE OF THE JACKS.
- CUT ANY DRIFT PINS OR OTHER CONNECTING DEVICES BETWEEN EXISTING STEEL CAP AND EXISTING CROSS-BLOCK(S) AS WELL AS BETWEEN EXISTING TIMBER CAPS AND EXISTING CROSS-BLOCK(S). EXISTING VERTICAL STEEL PLATES PREVENTING TRANSVERSE MOVEMENT OF THE STEEL CAP ON THE CROSS-BLOCK(S) TO REMAIN IN PLACE.
- REMOVE EXISTING TIMBER CROSS BLOCK(S) AND REPLACE WITH NEW TIMBER CROSS-BLOCK(S). CROSS-BLOCK(S) TO BE CUT FLUSH WITH OUTSIDE OF TIMBER SUBCAPS.
- ENSURE NEW CROSS-BLOCK(S) BEAR EVENLY ON CAPS AND ON CENTER ROW OF PILES. USE HARDWOOD WEDGES AS REQUIRED FOR EVEN BEARING.
- REMOVE BLOCKING AND LOWER STEEL CAP ON TO CROSS-BLOCKS. ENSURE STEEL CAP BEARS EVENLY ON ALL CROSS-BLOCKS. DRIVE IN HARDWOOD WEDGES FROM BOTH SIDES WHERE REQUIRED TO ENSURE EVEN BEARING.
- ALL HARDWOOD WEDGES TO BE SECURED IN PLACE WITH 2 - 100 mm LONG GALVANIZED SPIRAL NAILS. PRE-DRILL HOLES IN WEDGES TO PREVENT SPLITTING.
- ATTACH NEW CROSS-BLOCK(S) TO TIMBER CAPS AS SHOWN ON DRAWINGS.
- DRILL 22 mm DIA HOLES IN EXISTING HORIZONTAL STEEL PLATES UNDERNEATH STEEL CAP. USE 19 mm DIA x 150 mm LAG SCREWS (ONE SCREW EACH SIDE OF STEEL CAP) TO ATTACH THESE PLATES TO NEW CROSS-BLOCK(S).

BENT NUMBER	REPLACE CROSS-BLOCKS (BLOCK NUMBER)	REPLACE PILES (PILE NUMBER)			OTHER REPAIRS / COMMENTS
		ROW 1	ROW 2	ROW 3	
4	1, 2, 3, 4, 6, 8, 10 (SEE NOTE 7)	-	1	-	ROW 2 PILE 1: REPLACE TO WATER LINE 8800 REPLACED FROM TOP OF PILE TEMPORARY CROSS BLOCK LOCATED ADJACENT TO EXISTING CROSS BLOCK #8 TO BE REMOVED
5	1, 2, 3, 4, 5, 6, 7, 10	-	2, 6, 8	1,2	ROW 2 PILE 2 AND 8: REPLACE FROM TOP OF PILE TO LOWER HORIZONTAL BRACING PILE 2 5870 REPLACED ROW 2 PILE 6: REPLACE FROM TOP OF PILE TO WATERLINE 5870 REPLACED PILE 8 5920 REPLACED ROW 3 PILE 1: REPLACE FROM TOP OF PILE TO MARGINALLY BELOW LOWER HORIZONTAL BRACING 5640 REPLACED ROW 3 PILE 2: REPLACE FROM TOP OF PILE TO BELOW WATER LINE 6490 REPLACED TEMPORARY CROSS BLOCKS LOCATED ADJACENT TO EXISTING CROSS BLOCKS #3,4 TO BE REMOVED
6	2	6	1, 2, 4, 7, 9	-	ROW 1 PILE 6: REPLACE FROM TOP OF PILE TO LOWER HORIZONTAL BRACING 6525 REPLACED FROM TOP OF PILE ROW 2 PILES 1,2,4,7,9: REPLACE FROM TOP OF PILE TO WATERLINE ROW 2 PILE 1: TOP 8100 REPLACED ROW 2 PILE 2: TOP 5940 REPLACED ROW 2 PILE 4: TOP 5830 REPLACED ROW 2 PILE 7: TOP 5830 REPLACED ROW 2 PILE 9: TOP 8950 REPLACED
7	2, 3, 4, 10	-	1, 3, 4, 6, 7, 9	-	ROW 2 PILES 1,3,4,6,7,9: REPLACE FROM TOP OF PILE TO LOWER HORIZONTAL BRACING ROW 2 PILE 1: TOP 5830 REPLACED ROW 2 PILE 3: TOP 5830 REPLACED ROW 2 PILE 4: TOP 5820 REPLACED ROW 2 PILE 6: TOP 5825 REPLACED ROW 2 PILE 7: TOP 5825 REPLACED ROW 2 PILE 9: TOP 5900 REPLACED
9	2, 3, 4, 5, 8	-	-	-	
10	3, 4, 6, 8, 9, 10 (SEE NOTE 8)	-	-	-	ROW 1: REPLACE TOP DIAGONAL BRACE (NORTH SIDE) TEMPORARY CROSS BLOCKS LOCATED ADJACENT TO EXISTING CROSS BLOCKS #3,4,8 TO BE REMOVED
11	3, 5	-	8	1	ROW 1 PILE 1: INSTALL SHIMS UNDER CAP. REFER TO DETAIL 1 ON DRAWING 0232-103 ROW 2 PILE 8: REPLACE FROM TOP OF PILE TO HORIZONTAL BRACE 6550 REPLACED ROW 3 PILE 1: INSTALL SHIMS UNDER CAP. REFER TO DETAIL 1 ON DRAWING 0232-103 ROW 3 PILE 1: TOP 3100 REPLACED TEMPORARY CROSS BLOCKS LOCATED ADJACENT TO EXISTING CROSS BLOCK #3 TO BE REMOVED
14	1, 2, 4, 6, 7, 9, 11 (SEE NOTE 9)	-	8	-	ROW 2 PILE 8: REPLACE FROM TOP OF PILE TO HORIZONTAL BRACE ROW 3 PILE 8: 5670 REPLACED TEMPORARY CROSS BLOCKS LOCATED ADJACENT TO EXISTING CROSS BLOCKS #4,9 TO BE REMOVED
15	3, 4, 5, 7, 9, 10	-	-	-	

- NOTES:**
- FOR TIMBER PILE REPLACEMENT IN ROW 2 OF THESE BENTS THE JACKING SUPPORT SYSTEM CAN BE SIMILAR TO THE SYSTEM SHOWN FOR CROSS-BLOCK REPLACEMENT
  - FOR TIMBER PILE REPLACEMENT IN ROW 1 AND ROW 3 JACKING SUPPORT CAN BE SIMILAR TO THAT SHOWN ON DRAWING 0596-102 FOR BENT 3
  - FOR TIMBER PILE REPLACEMENTS ON BENTS 5, 6, 7, 11 AND 14 NOT REPLACED TO WATERLINE, BRACE NEW PILE TO ADJACENT EXISTING PILES USING 76x256 TIMBER AND CONNECT TO PILES USING 19 DIA BOLTS C/W 2 - O.G. WASHERS, SIMILAR TO THAT SHOWN ON DRAWING 0596-102 FOR BENT 3.
  - FOR CONNECTION DETAILS FOR PILES TO CROSS-BLOCKS OR TO CAPS SEE DRAWING 0596-107 DETAIL 1.
  - FOR CONNECTION DETAILS FOR PILE SPLICES SEE DRAWING 0596-107 DETAIL 3.
  - FOR CONNECTION DETAILS FOR CROSS-BLOCKS TO CAP CONNECTIONS, SEE DRAWING 0596-107 DETAIL 5.
  - NEW CROSS-BLOCK AT 6, AND HSS REPAIRS AT 4-6. FOR DETAILS, SEE DRAWING 0596-106.
  - HSS REPAIRS BETWEEN 7-8, 3-4, AND 8-9. FOR DETAILS, SEE DRAWING 0596-106.
  - HSS REPAIRS BETWEEN 6-7 AND 5-8. FOR DETAILS, SEE DRAWING 0596-106.

Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA

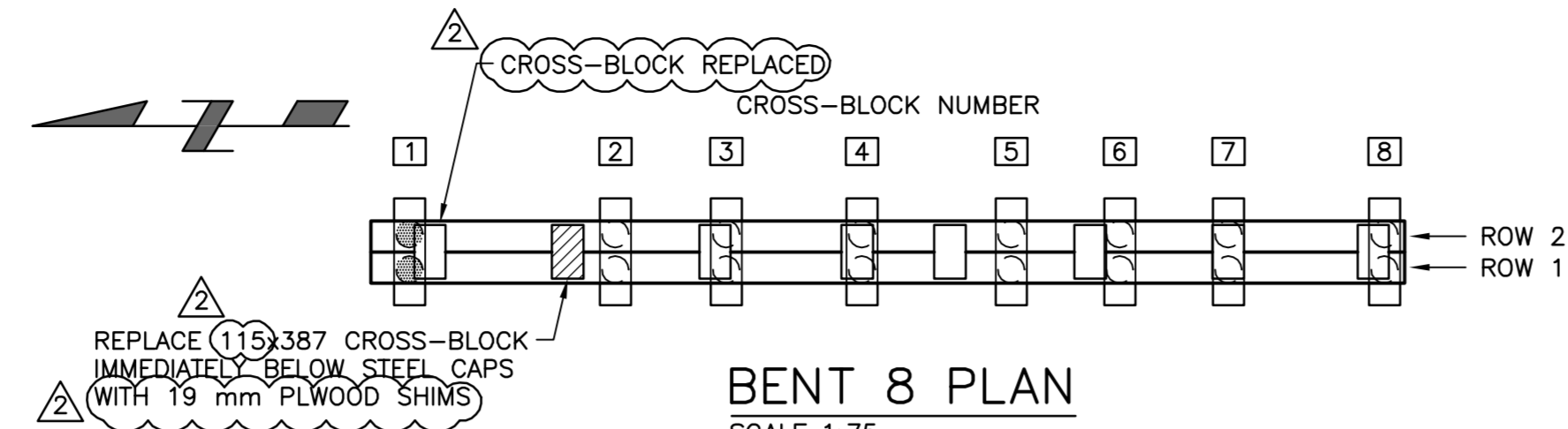
BRITISH COLUMBIA Ministry of Transportation South Coast Region

**LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
SUBSTRUCTURE REHABILITATION  
BENT PLAN AND ELEVATION**

PREPARED UNDER THE DIRECTION OF	DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>
ENGINEER OF RECORD	CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>
DATE	DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>
FILE No.	SCALE AS NOTED
0596	NEGATIVE No.
PROJECT No.	REG.
11996-0001	DRAWING No.
1	0596-103

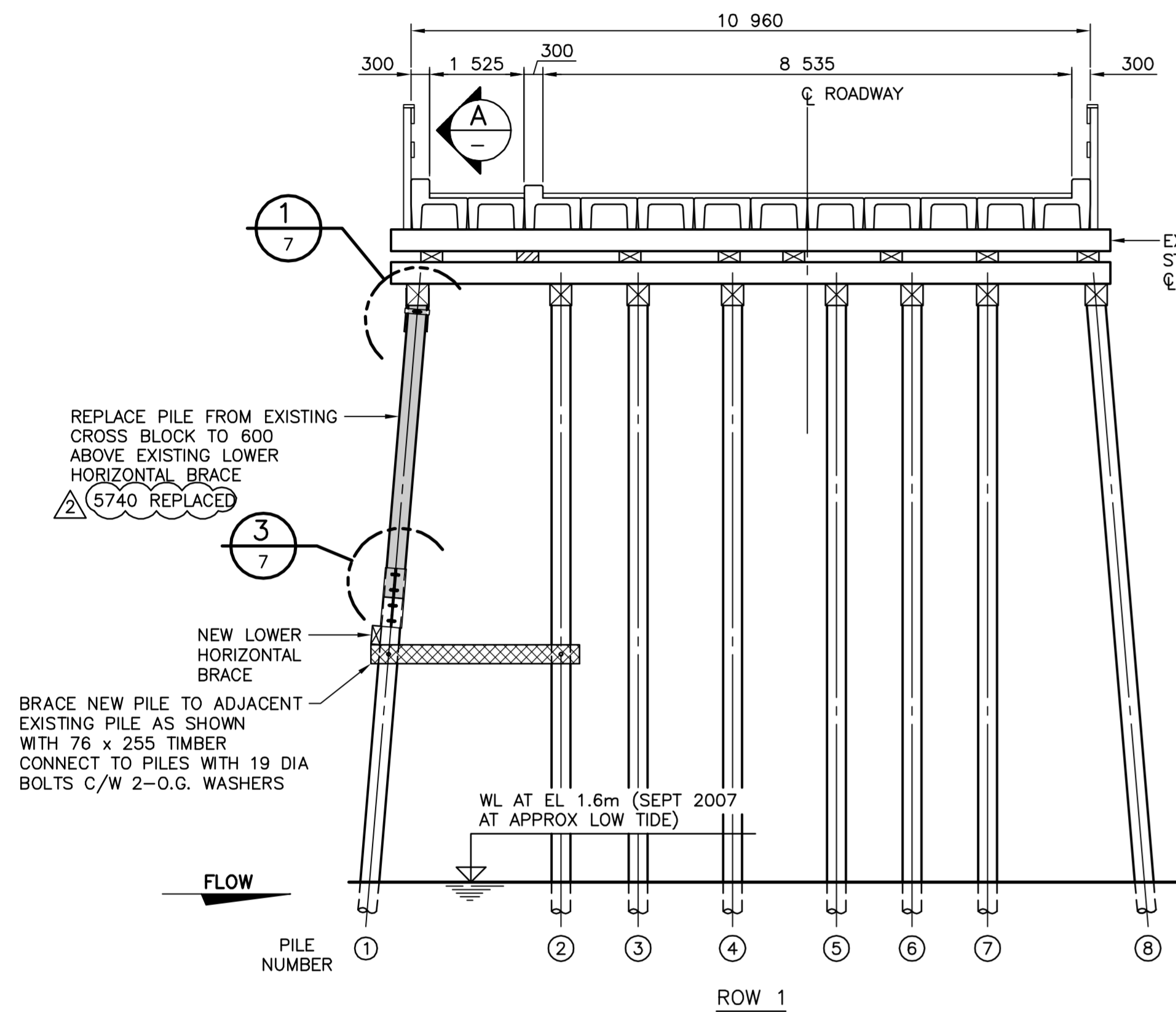






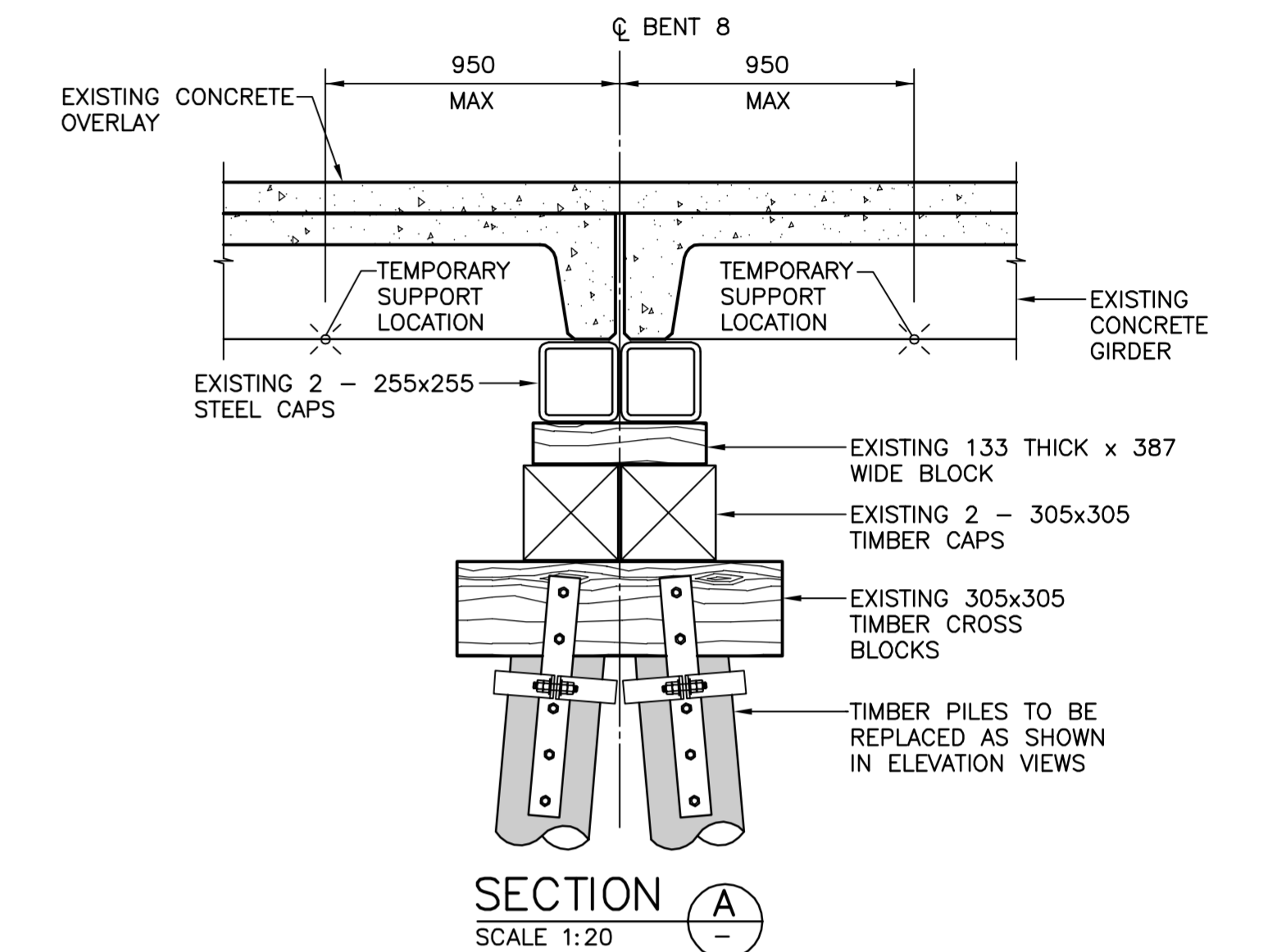
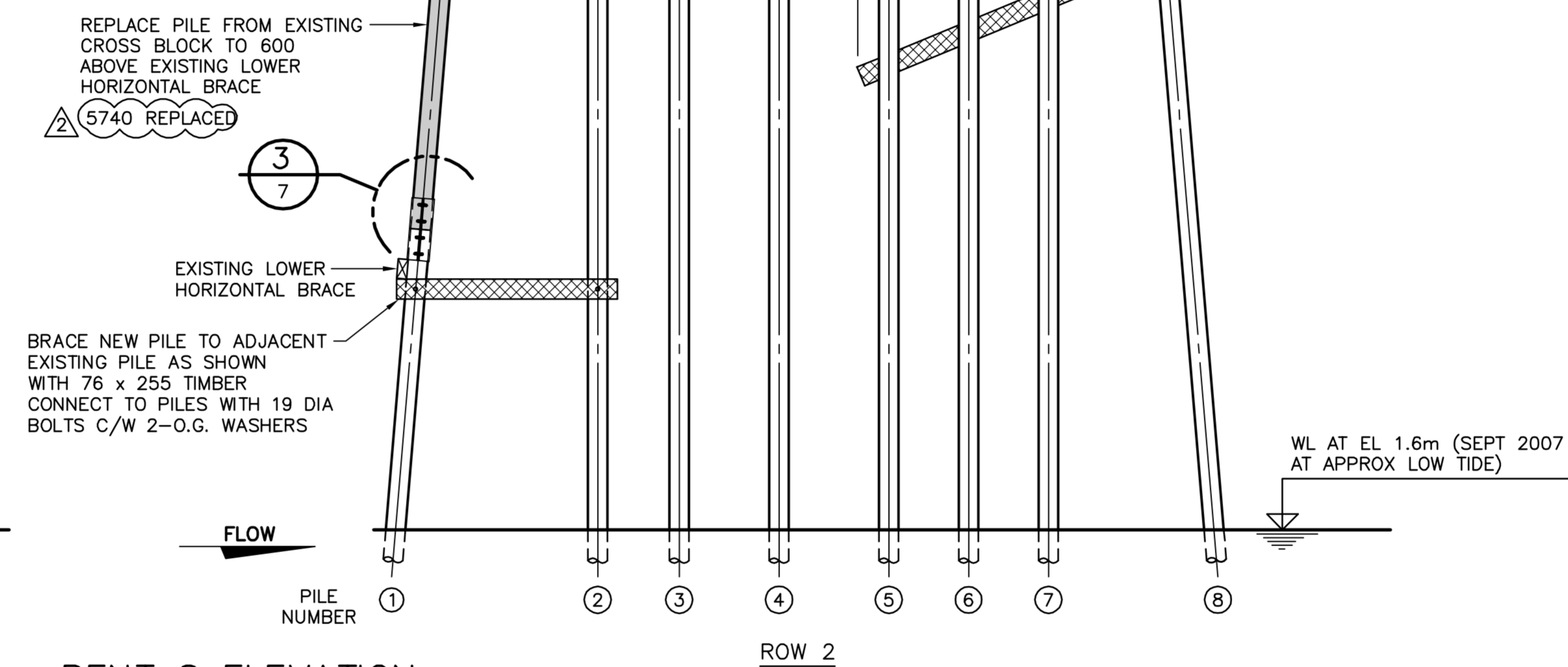
**BENT 8 PLAN**

SCALE 1:75  
 NOTE:  
 SUPERSTRUCTURE AND STEEL CAPS  
 OMITTED IN PLAN VIEW FOR CLARITY



**BENT 8 ELEVATION**  
 (LOOKING EAST)

SCALE 1:75

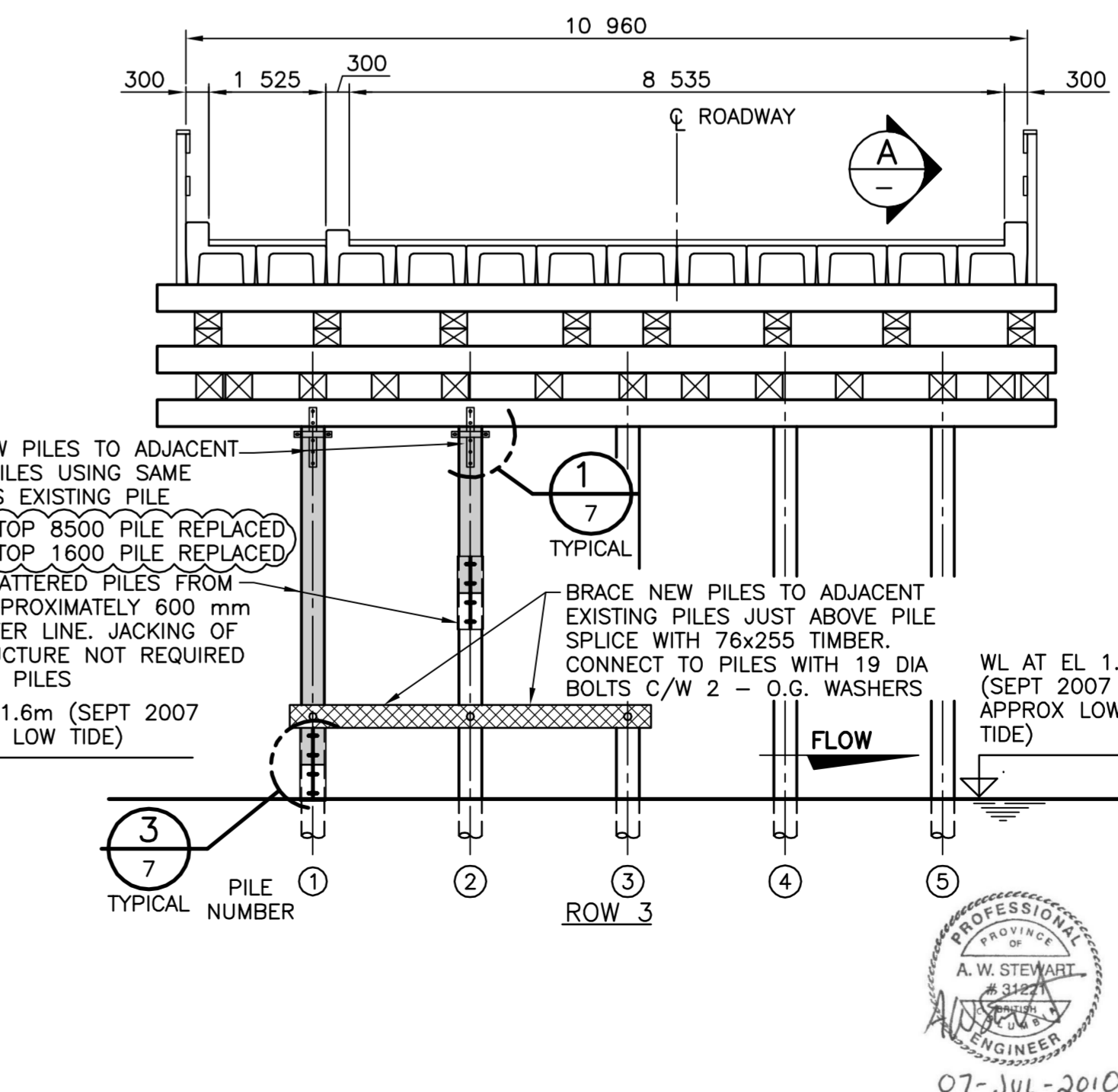
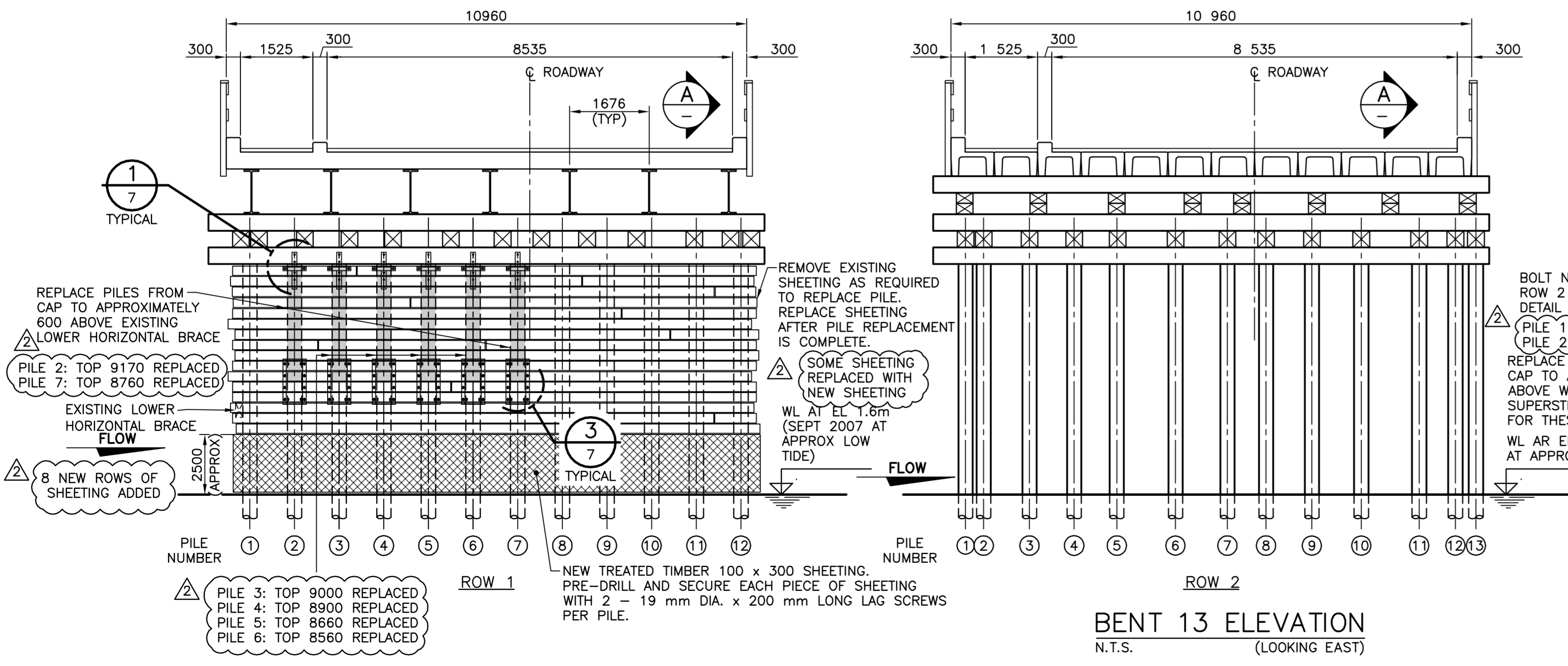
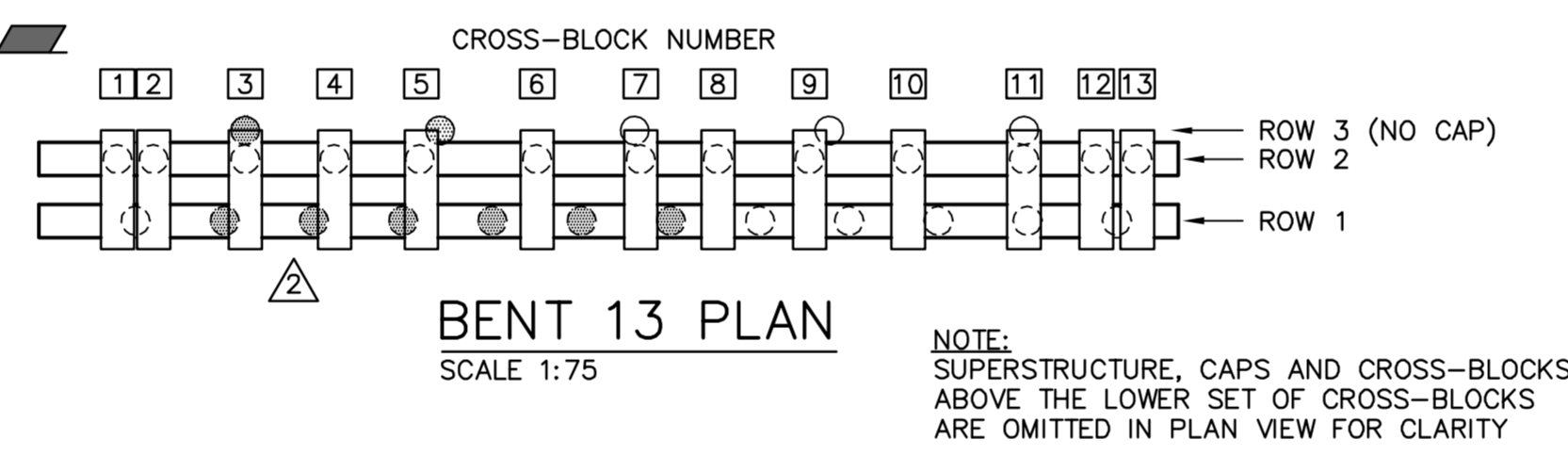
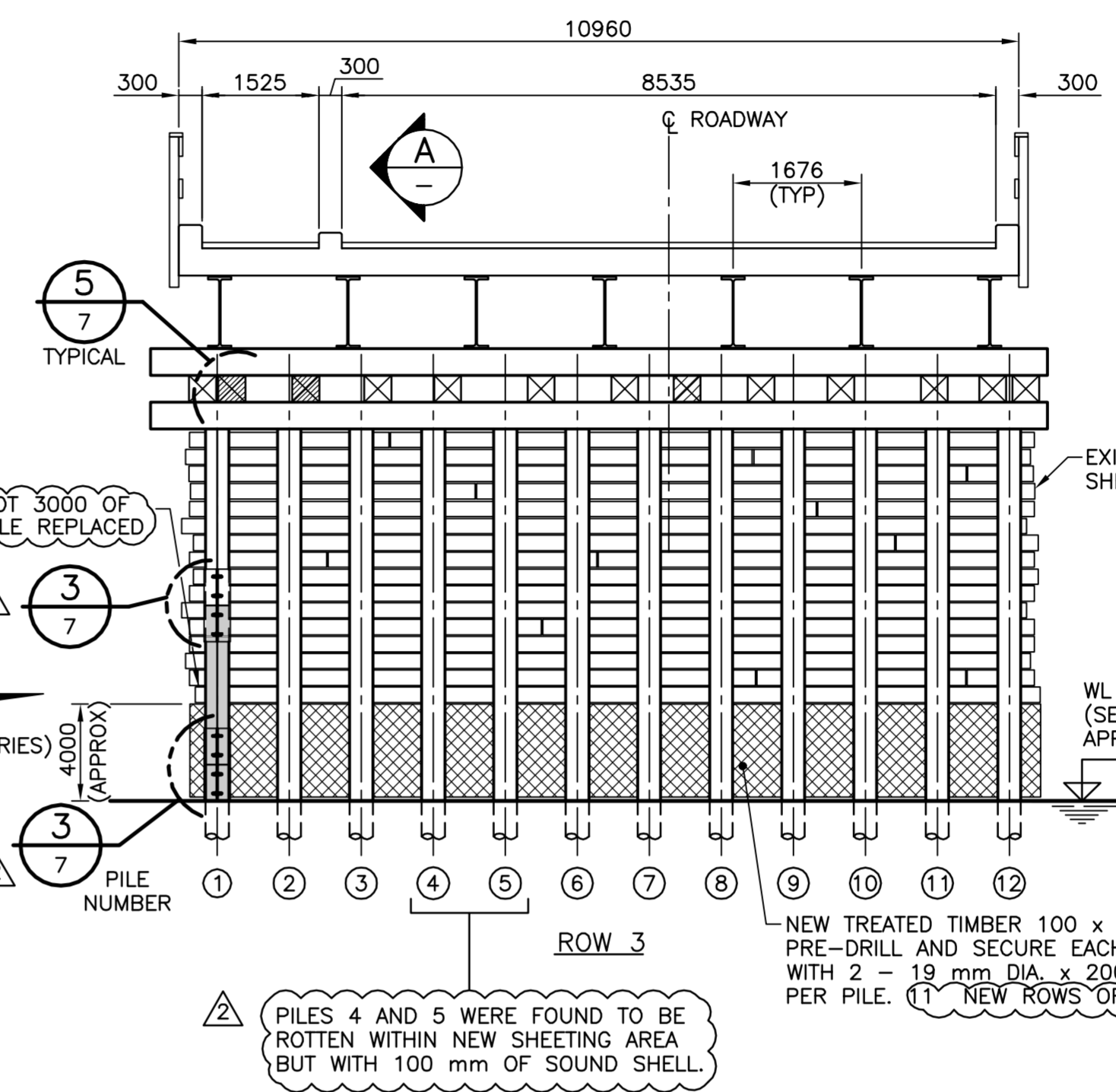
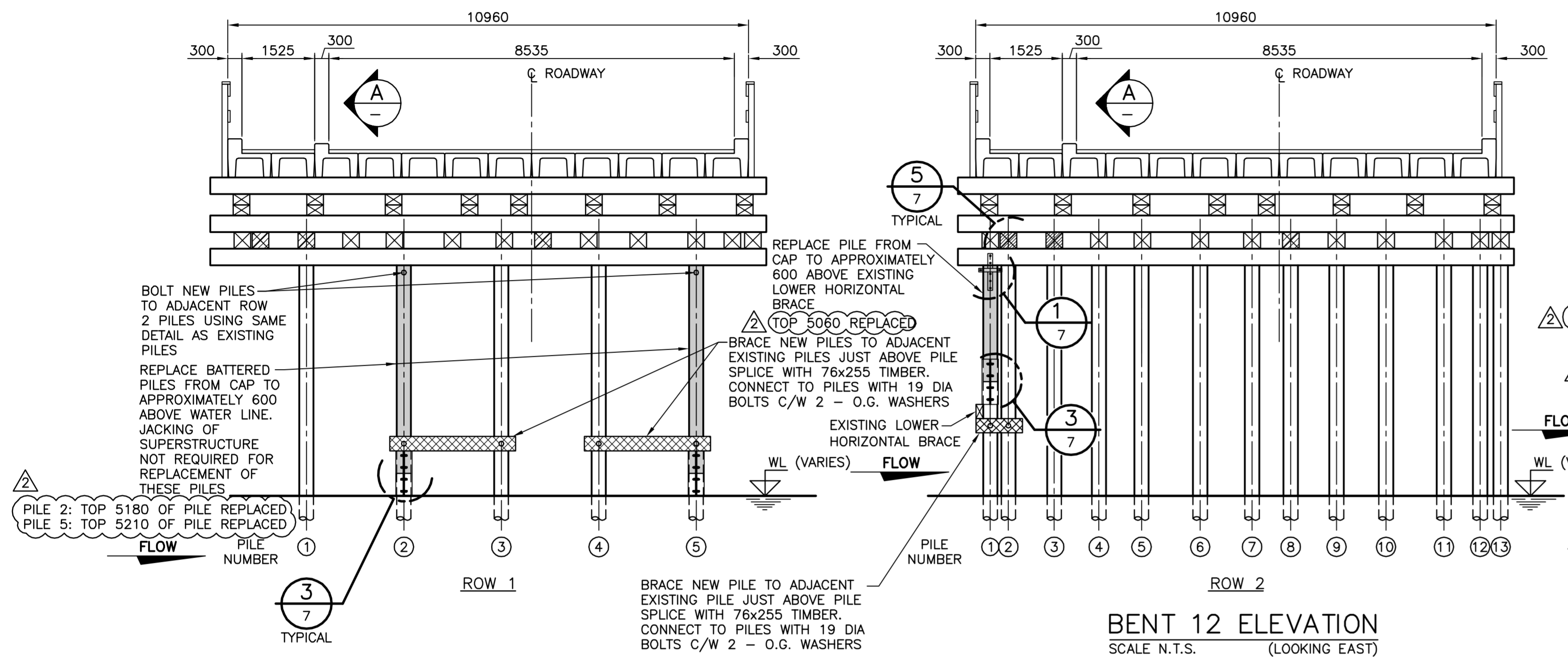
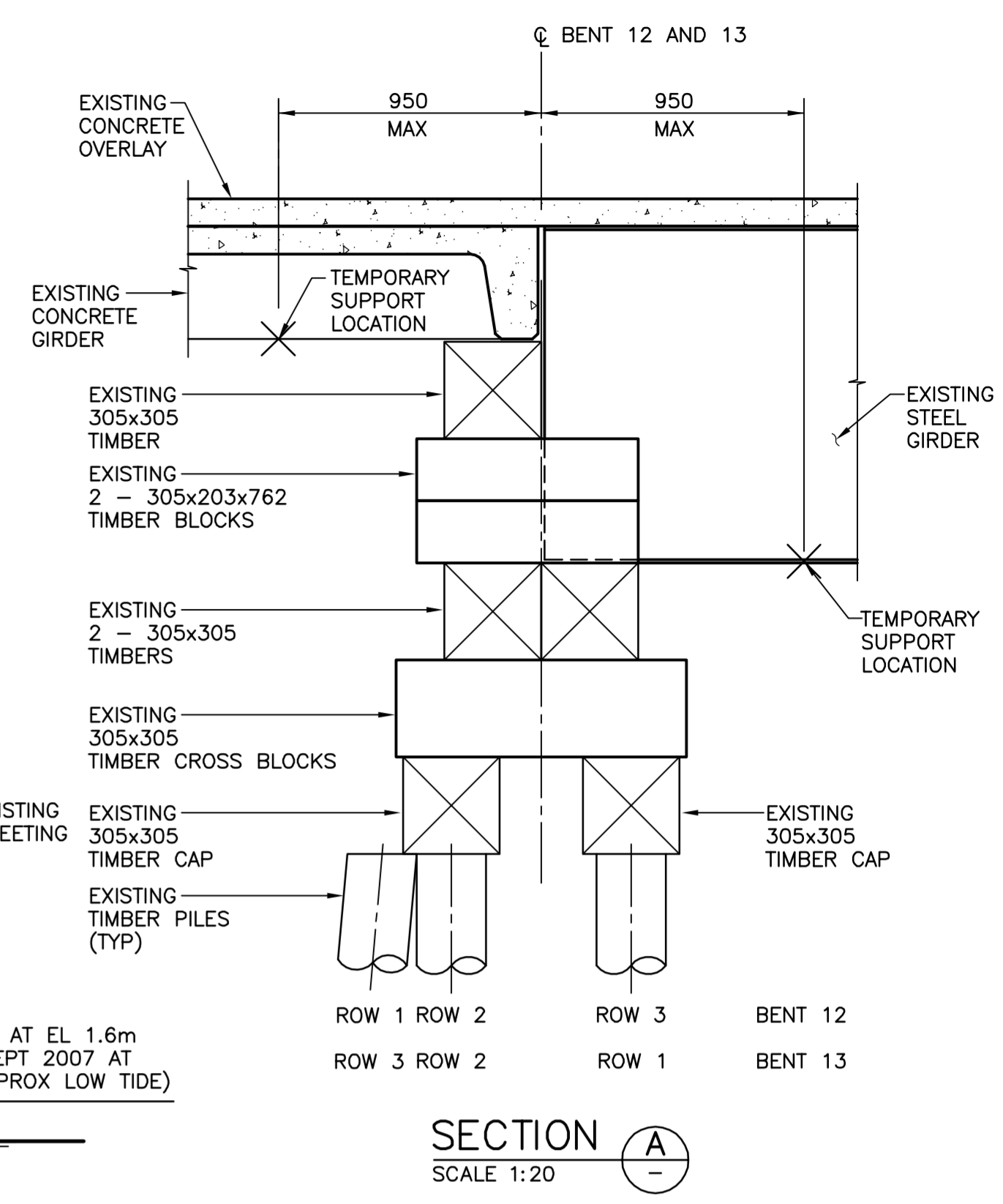
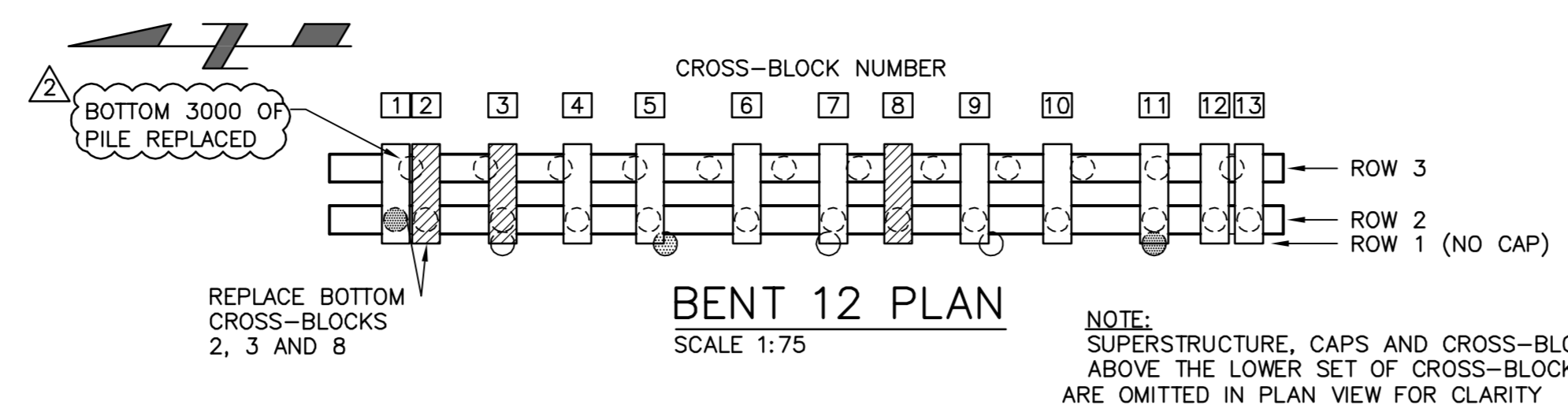


- LEGEND:**
- PILES FOR REPLACEMENT
  - CAPS OR CROSS BLOCKS FOR REPLACEMENT
  - NEW BRACING

Consultant Logo			
<b>UMA   AECOM</b>			
Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA
REVISIONS			
		<b>Ministry of Transportation</b> South Coast Region	
<b>LOWER MAINLAND DISTRICT</b> DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 SUBSTRUCTURE REHABILITATION BENT PLAN AND ELEVATION			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>	
ENGINEER OF RECORD		CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>	
DATE		DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>	
FILE No.		SCALE AS NOTED	
PROJECT No.		NEGATIVE No.	
REG.		DRAWING No.	
0596		1 0596-104	
		2	



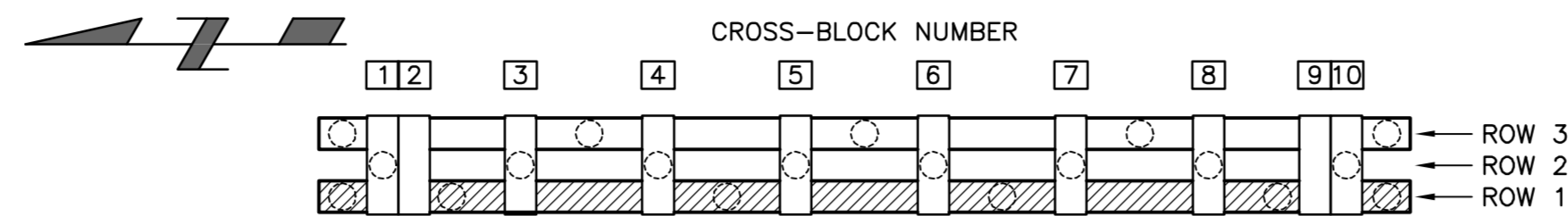




- LEGEND:**
- PILES FOR REPLACEMENT
  - CAPS OR CROSS BLOCKS FOR REPLACEMENT
  - NEW SHEETING OR BRACING

Consultant Logo			
<b>UMA   AECOM</b>			
Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA
<b>REVISIONS</b>			
		<b>Ministry of Transportation</b> South Coast Region	
<b>LOWER MAINLAND DISTRICT</b> DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 SUBSTRUCTURE REHABILITATION BENT PLAN AND ELEVATIONS			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>	
ENGINEER OF RECORD		CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>	
DATE		DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>	
FILE No.	PROJECT No.	REG.	DRAWING No.
0596	11996-0001	1	0596-105
DATE		NEGATIVE No.	
MARCH 13, 2008			
2			

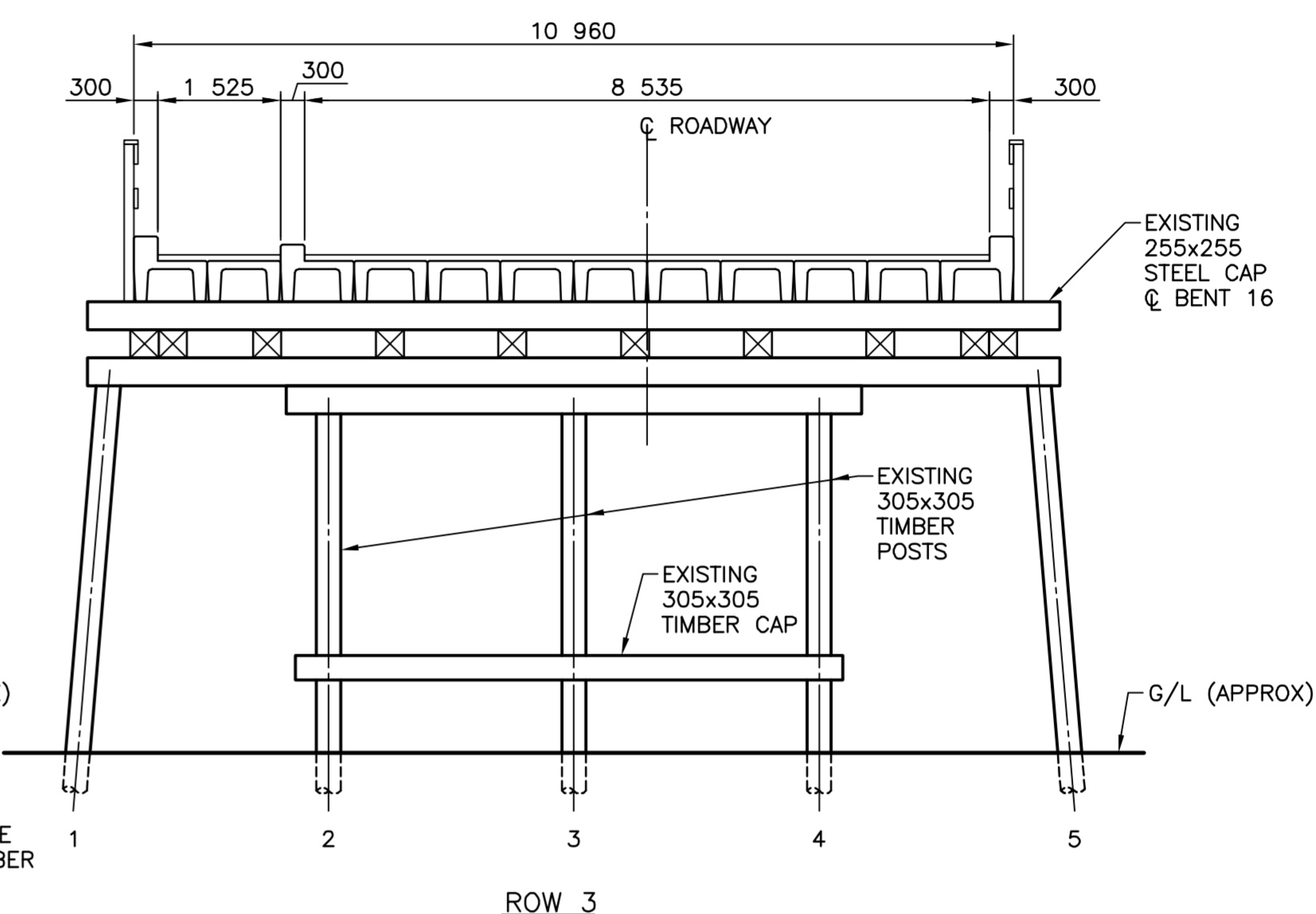
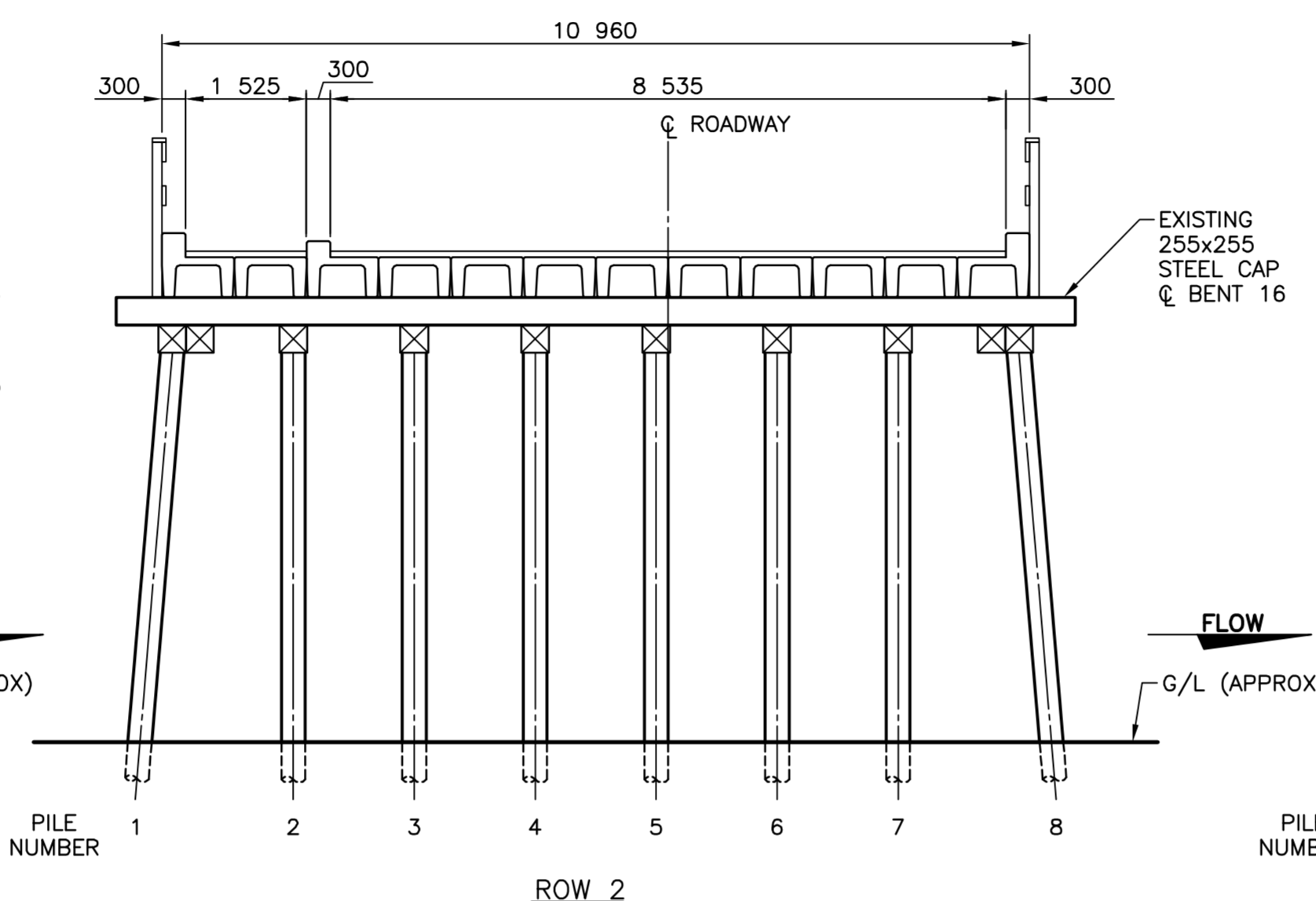
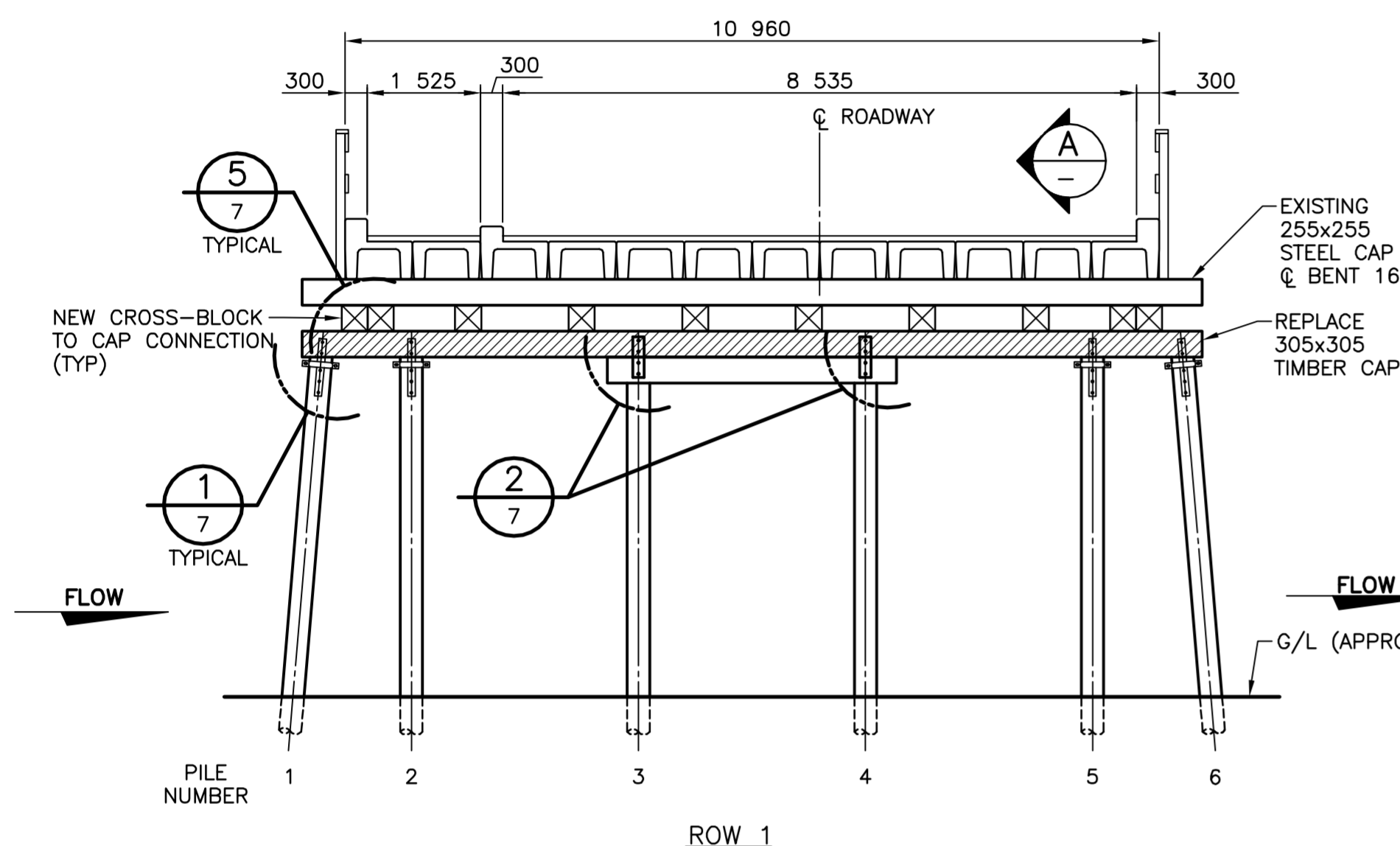




**BENT 16 PLAN**

SCALE 1:75

NOTE:  
SUPERSTRUCTURE AND STEEL CAP  
OMITTED IN PLAN VIEW FOR CLARITY



**BENT 16 ELEVATION**

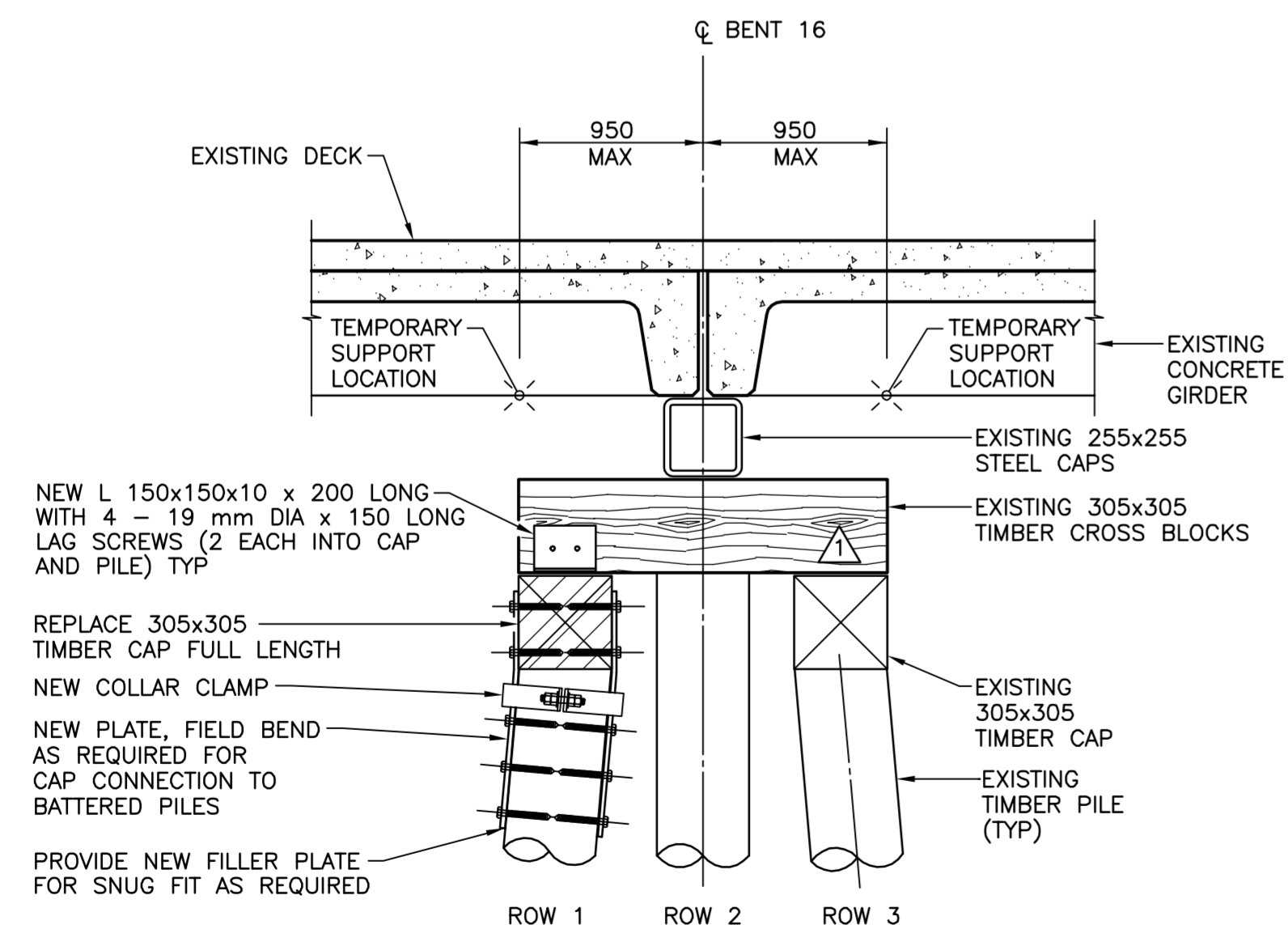
SCALE 1:75

(LOOKING EAST)

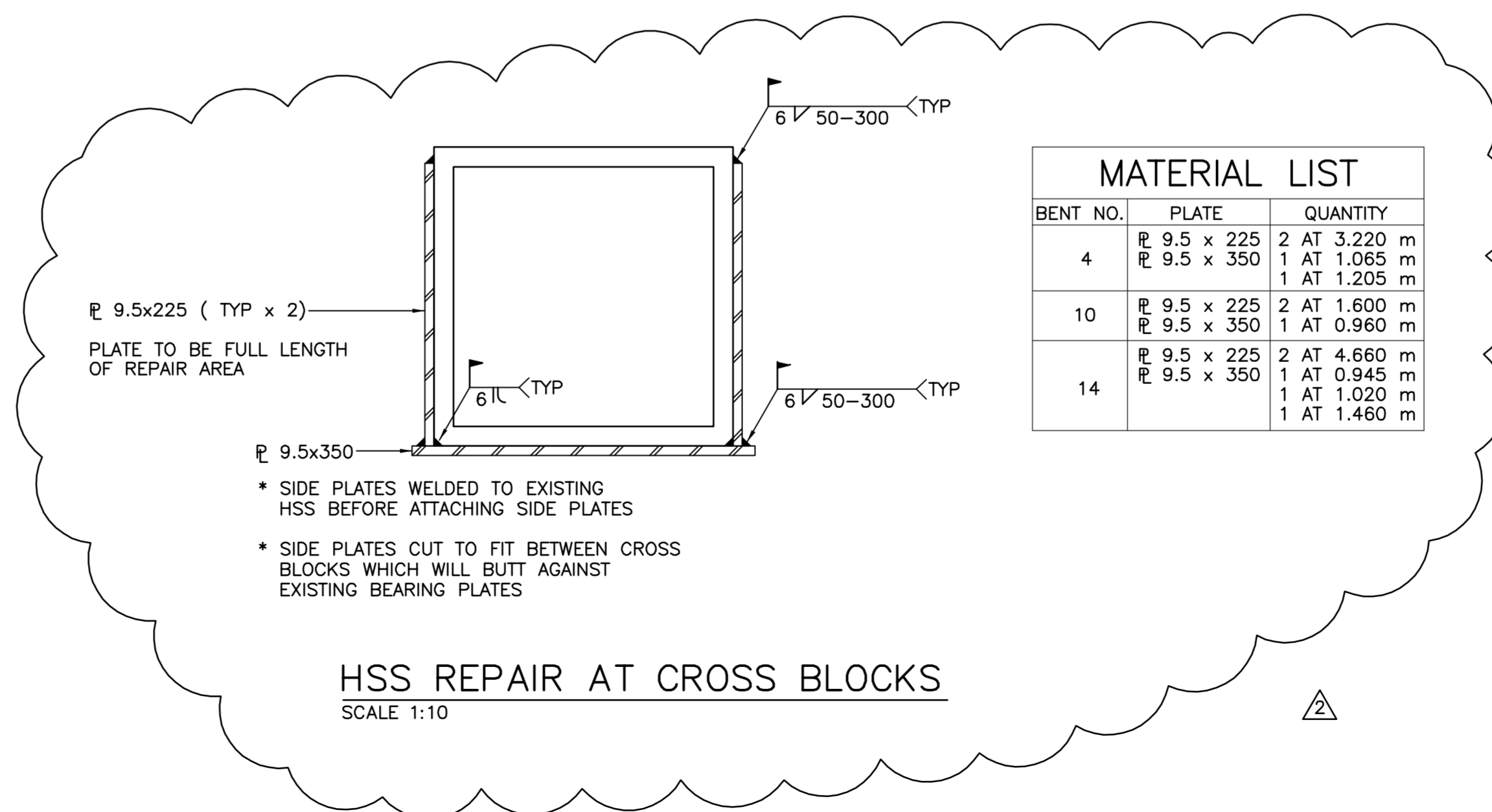
NOTE:  
FOR CONNECTION DETAILS  
FOR PILE TO CAP SEE (1/7)

**LEGEND:**

▨ CAP FOR REPLACEMENT



**SECTION A**  
SCALE 1:20



BENT NO.	PLATE	QUANTITY
4	9.5 x 225	2 AT 3.220 m
	9.5 x 350	1 AT 1.065 m
	9.5 x 350	1 AT 1.205 m
10	9.5 x 225	2 AT 1.600 m
	9.5 x 350	1 AT 0.960 m
14	9.5 x 225	2 AT 4.660 m
	9.5 x 350	1 AT 0.945 m
	9.5 x 350	1 AT 1.020 m
	9.5 x 350	1 AT 1.460 m

**HSS REPAIR AT CROSS BLOCKS**  
SCALE 1:10



Consultant Logo: **UMA | AECOM**

Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA

**REVISIONS**

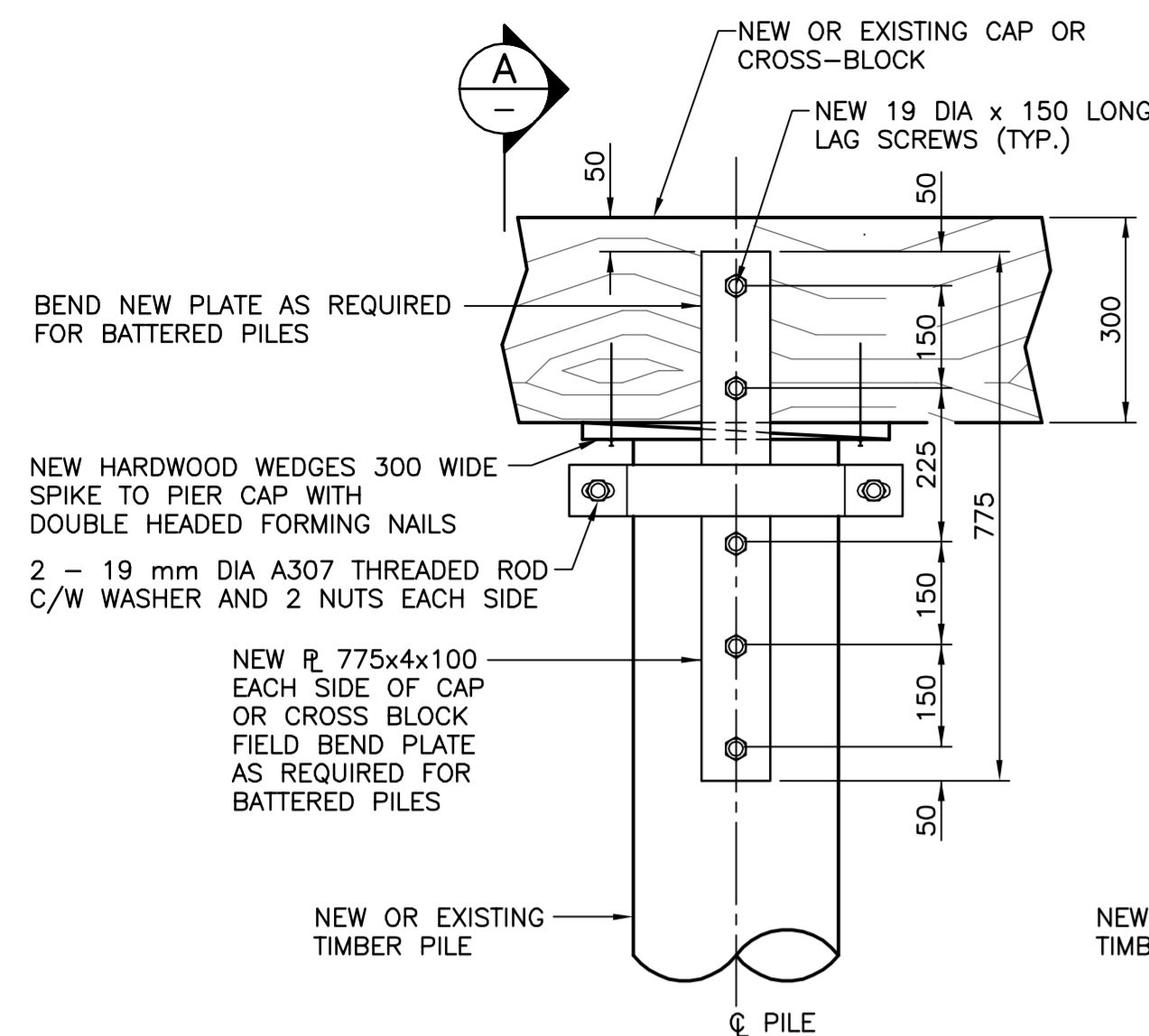
**BRITISH COLUMBIA** | Ministry of Transportation  
South Coast Region

**LOWER MAINLAND DISTRICT**  
DEWDNEY BRIDGE No. 0596 – HIGHWAY 7  
SUBSTRUCTURE REHABILITATION  
BENT PLAN AND ELEVATION

PREPARED UNDER THE DIRECTION OF	DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>
ENGINEER OF RECORD	CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>
DATE	DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>
FILE No.	SCALE AS NOTED
PROJECT No.	NEGATIVE No.
REG.	DRAWING No.
0596	11996-0001
1	0596-106

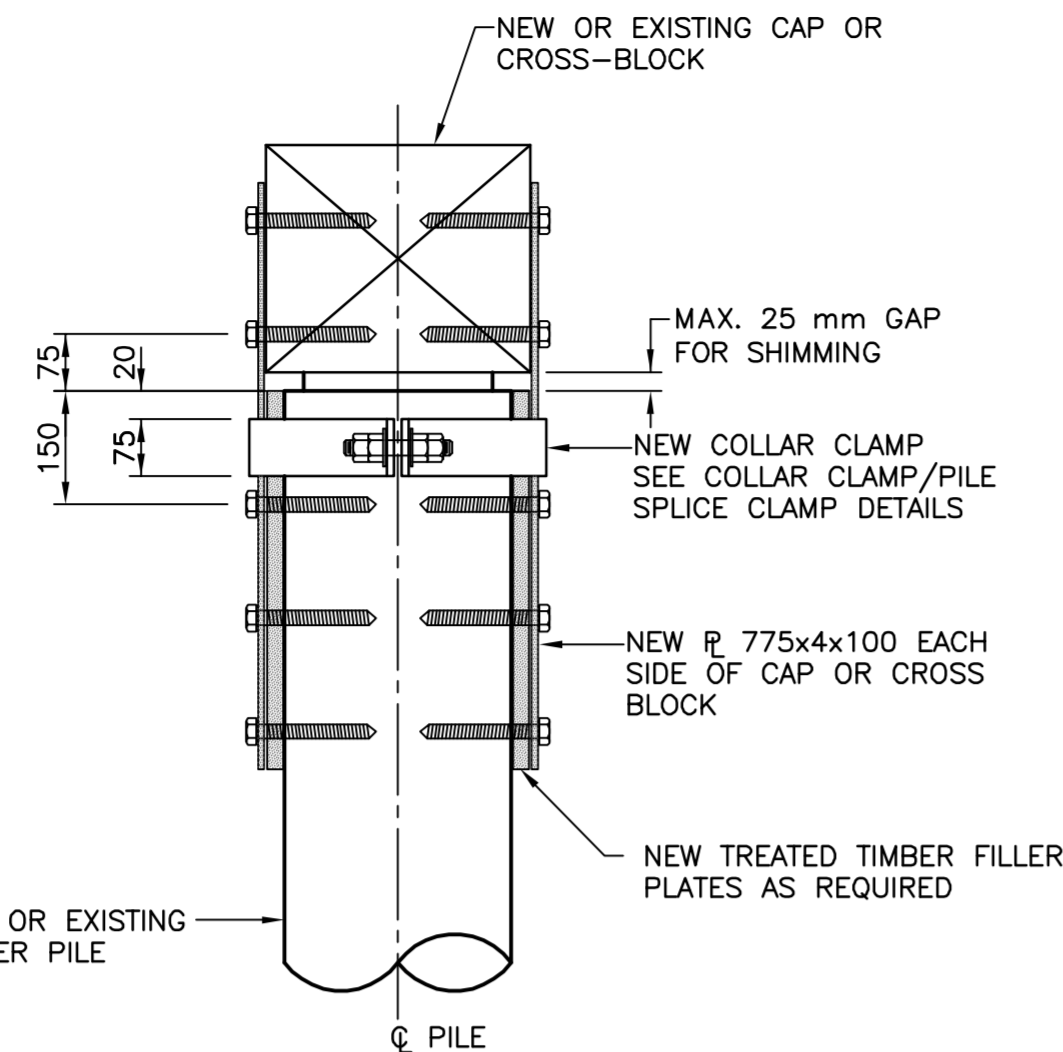
2



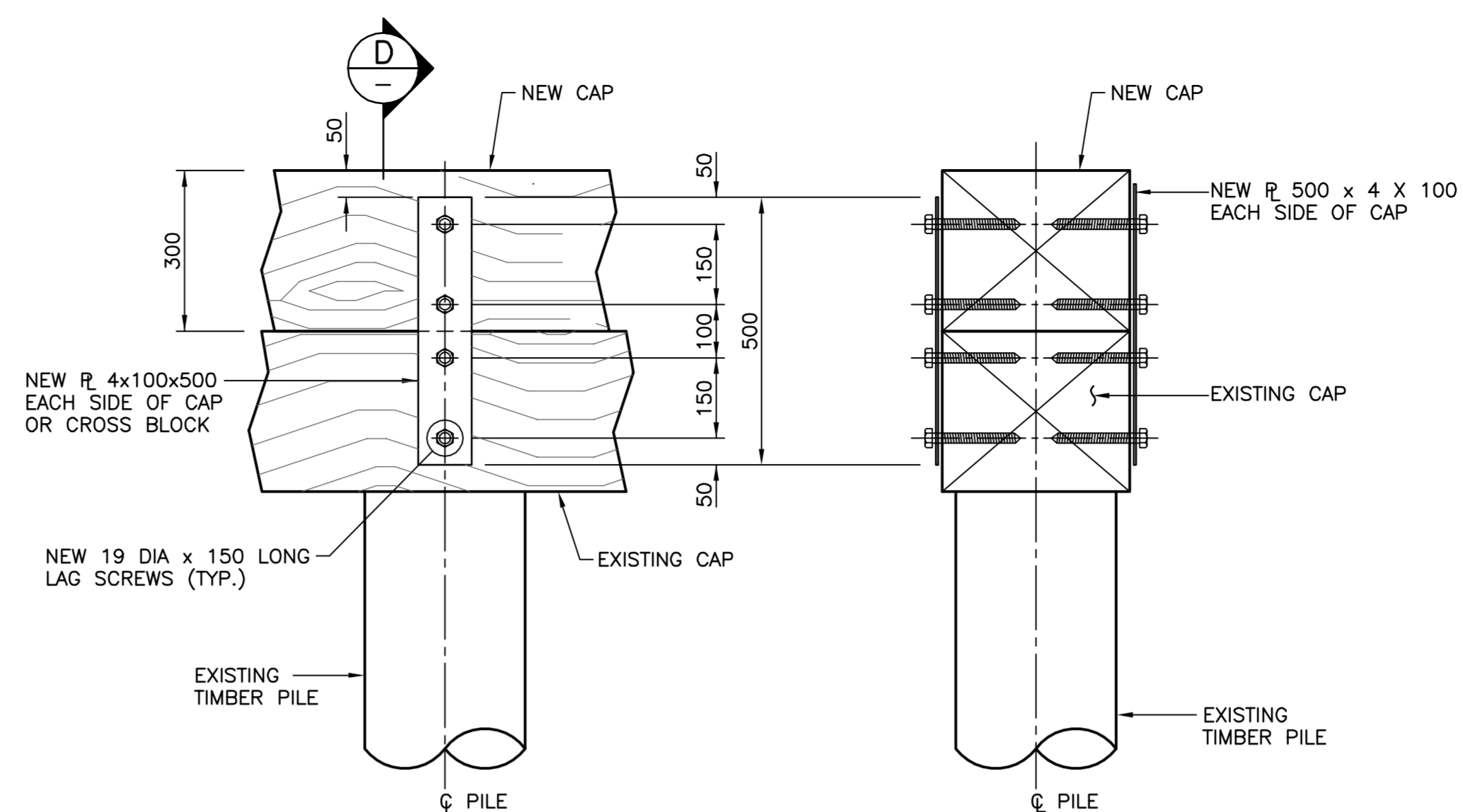


DETAIL 1  
SCALE 1:10  
2,3,4,5,6

PILE TO CAP OR CROSS BLOCK CONNECTION

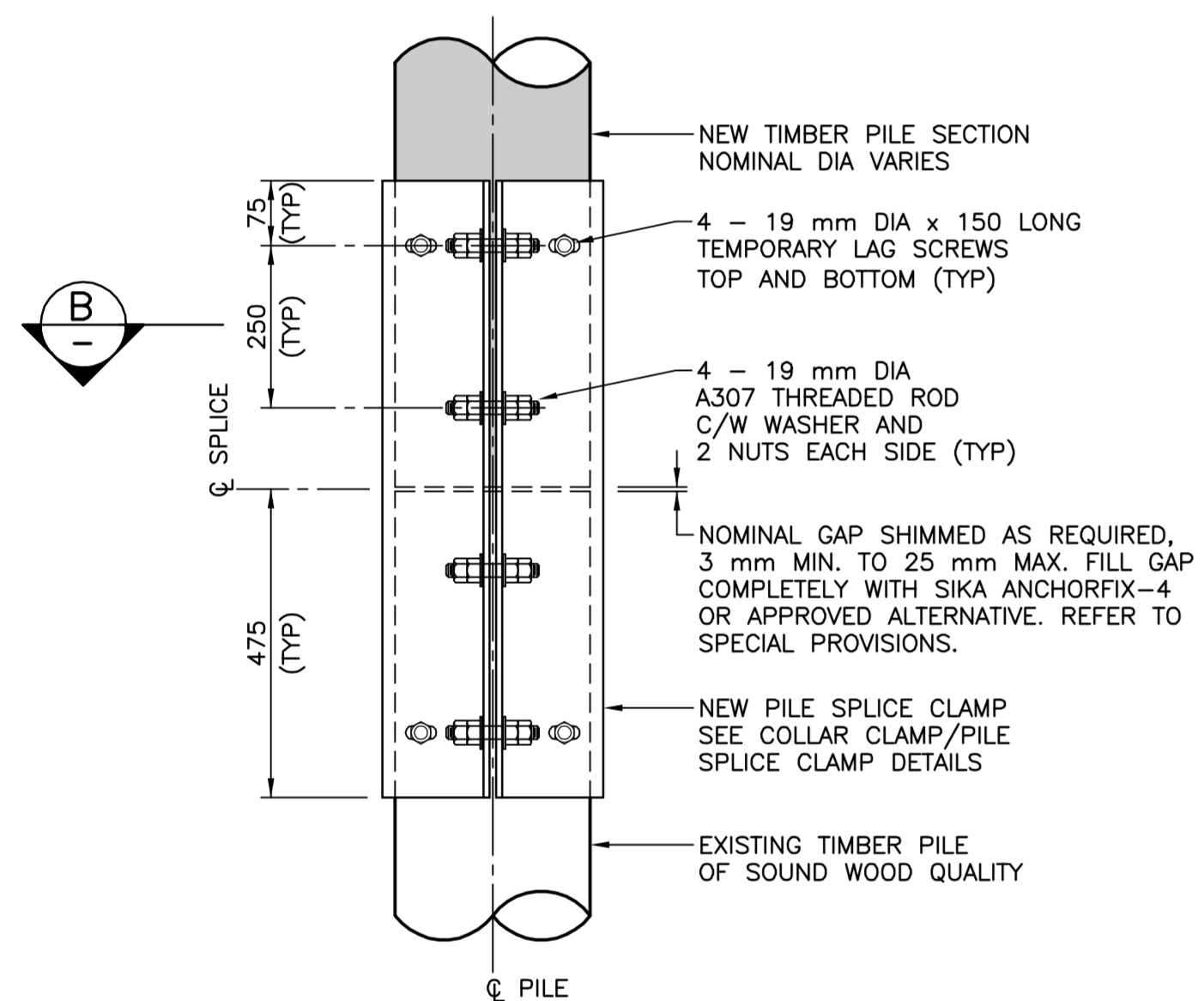


SECTION A  
SCALE 1:10



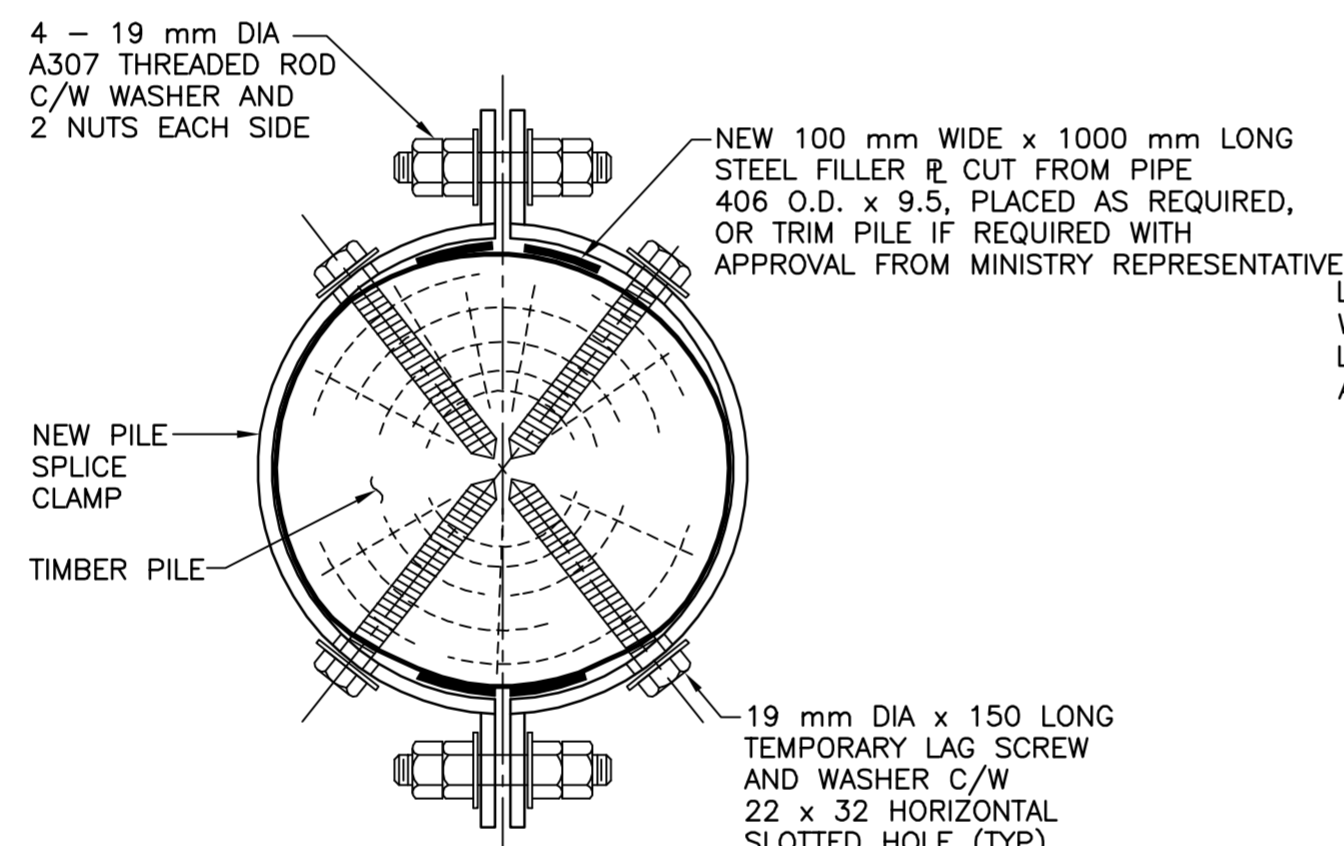
DETAIL 2  
SCALE 1:10  
2,6

CAP TO CAP CONNECTION

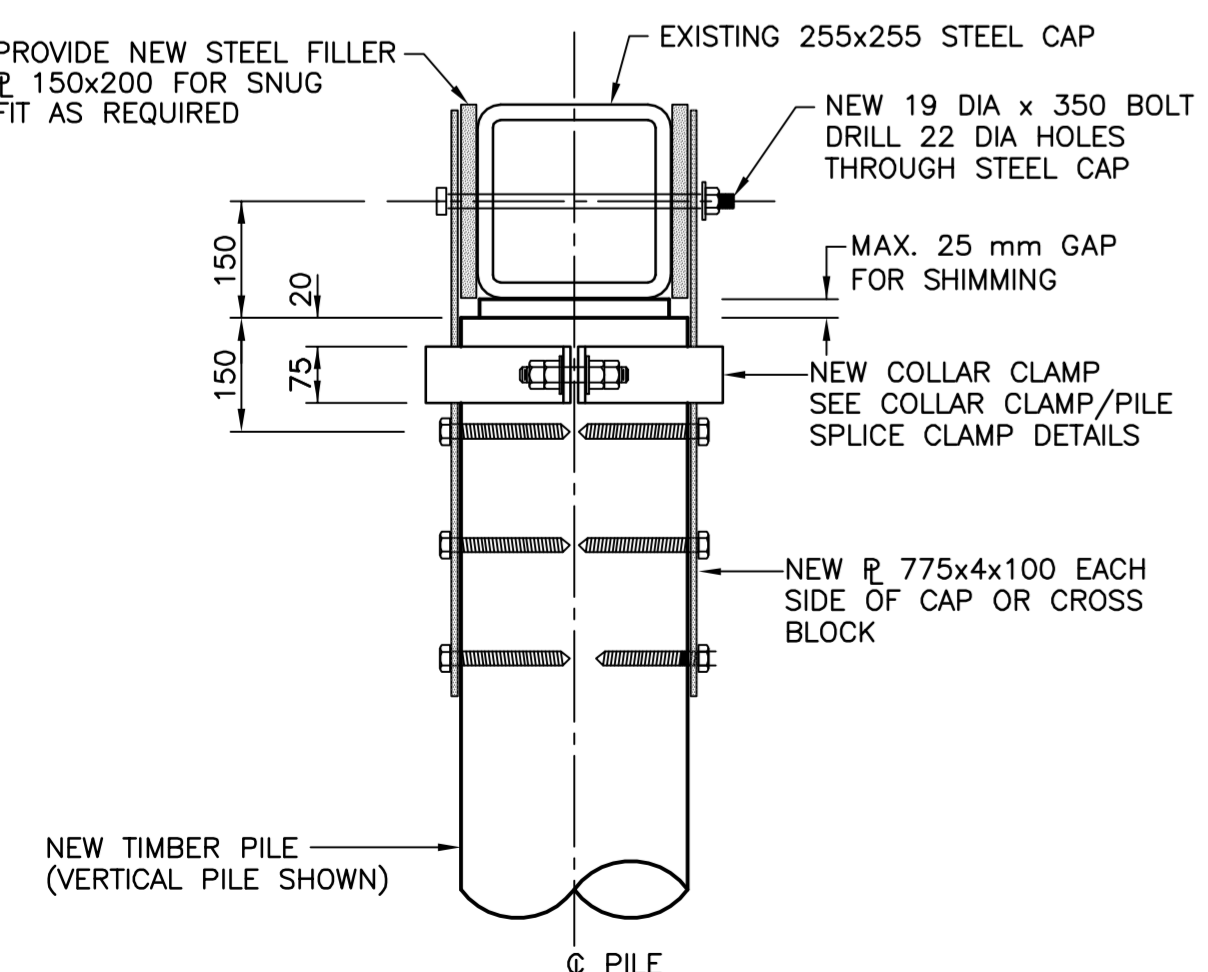


DETAIL 3  
SCALE 1:10  
2,3,4,5

PILE TO PILE SPLICE CONNECTION



SECTION B  
SCALE 1:5

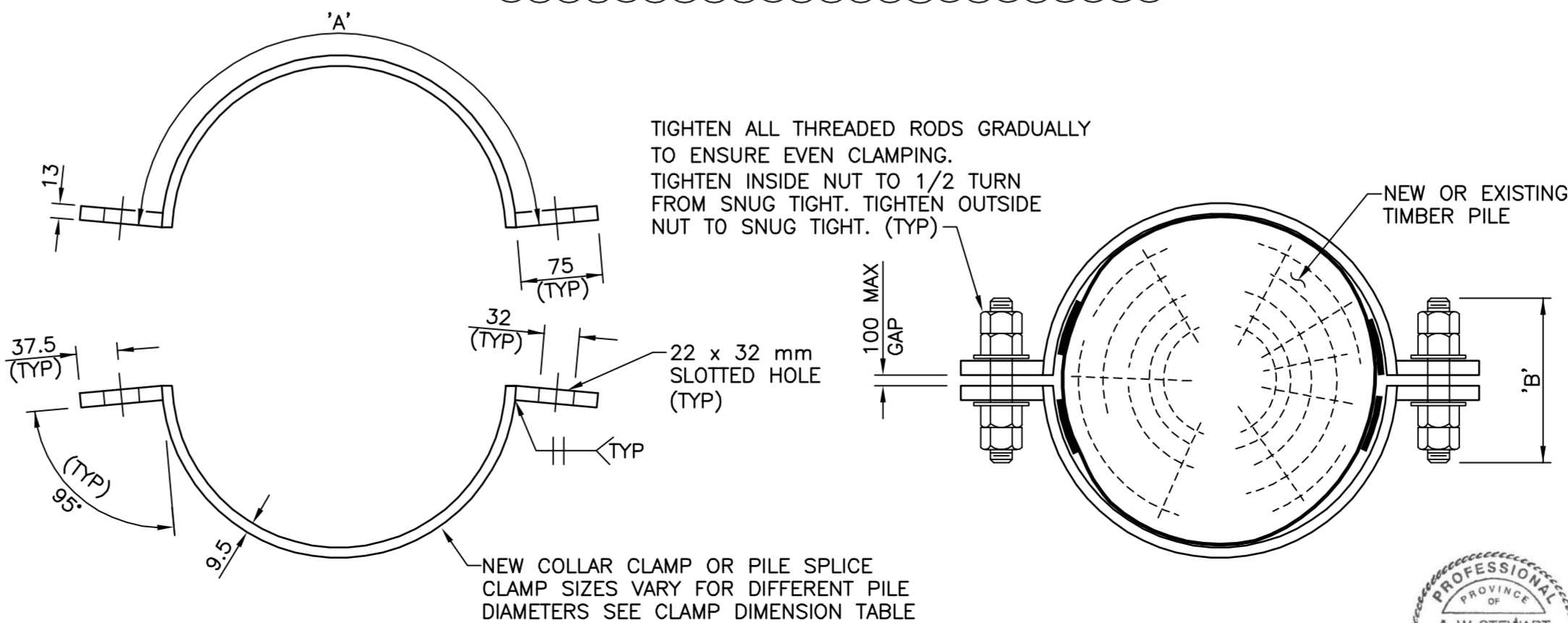


DETAIL 4  
SCALE 1:10  
2

PILE TO STEEL CAP CONNECTION

CLAMP DIMENSION TABLE			
PILE DIAMETER RANGE	PIPE LENGTH ALONG OUTSIDE CURVE 'A'	PIPE OUTSIDE DIAMETER	MINIMUM THREADED ROD LENGTH 'B'
*257 TO 318	445	406	260
318 TO 381	530	406	240
381 TO 432	615	457	220

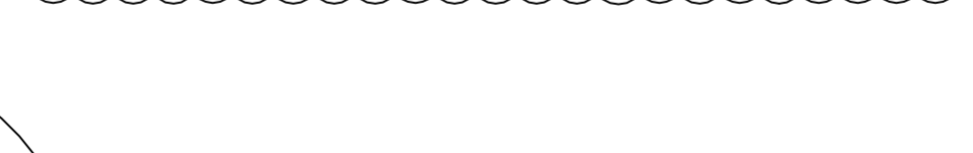
\* FILLER PLATES REQUIRED FOR SMALLER PILE DIAMETERS



COLLAR CLAMP/PILE SPLICE CLAMP DETAILS  
SCALE 1:5

CAP TO CROSS BLOCK CONNECTION

NOTE: THIS CONNECTION DETAIL ONLY APPLIES WHEN EITHER A CAP OR A CROSS BLOCK IS BEING REPLACED



DETAIL 5  
SCALE 1:10  
2,5,6

CAP TO CROSS BLOCK CONNECTION

NOTE: THIS CONNECTION DETAIL ONLY APPLIES WHEN EITHER A CAP OR A CROSS BLOCK IS BEING REPLACED



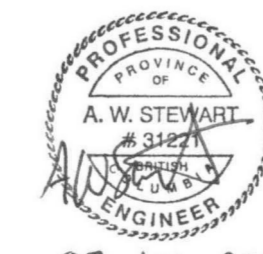
### REPLACEMENT PROCEDURE FOR TIMBER PILES

1. ONLY ONE PILE PER BENT SHALL BE REPLACED AT ANY GIVEN TIME.
2. WHERE POSSIBLE, LIVE LOAD TO BE RESTRICTED TO THE SIDE OF BRIDGE OPPOSITE THE SIDE WHERE THE PILE IS BEING REPLACED.
3. PLACE TEMPORARY SUPPORT/JACKING SYSTEM AS INDICATED ON THE DRAWINGS FOR THE PILE BEING REPLACED.
4. SURVEY ELEVATION OF CAP FOR REFERENCE PRIOR TO JACKING.
5. JACK TO REMOVE LOAD ON PILE BEING REPLACED. JACKING SYSTEM TO BE BLOCKED AFTER JACKING TO PREVENT ANY MOVEMENT IF THERE IS FAILURE OF THE JACKS.
6. LIMIT MAXIMUM VERTICAL JACKING MOVEMENT TO 15 mm. LIMIT MAXIMUM ROTATION OF SUPERSTRUCTURE IN THE TRANSVERSE DIRECTION TO 6 mm PER 1000 mm OF DECK. PROFILE OF DECK IN THE TRANSVERSE DIRECTION SHALL BE MAINTAINED FLAT OR IN SINGLE CURVATURE WITH THE TOP SURFACE OF THE DECK IN COMPRESSION.
7. CUT DRIFT PIN OR ANY OTHER CONNECTING DEVICE BETWEEN PILE CAP AND TOP OF PILE.
8. CUT BOTTOM OF PILE AS INDICATED ON DRAWINGS. PILE MUST BE CUT AT SOUND TIMBER. IF SOUND TIMBER IS NOT FOUND AT THE INDICATED PILE SPLICE LOCATION, THE PILE SHALL BE CUT AT A LOWER ELEVATION UNTIL SOUND TIMBER IS ENCOUNTERED. REFER TO NOTE 18 IF SOUND TIMBER IS NOT FOUND ABOVE LOW WATER LEVEL.
9. NEW REPLACEMENT PILE SECTION TO BE CUT TO FIT WITH ALLOWANCES FOR HARDWOOD WEDGES AS SHOWN ON DRAWINGS.
10. REPLACEMENT PILE SECTION TO BE PUT IN PLACE WITH HARDWOOD WEDGES TOP AND BOTTOM SO THAT LOAD IS TRANSFERRED INTO REPLACEMENT SECTION WHEN THE JACKING BLOCK IS RELEASED.
11. REMOVE BLOCKING AND RELEASE LOAD FROM THE JACKING SYSTEM.
12. CONFIRM LOAD TRANSFER TO REPLACEMENT PILE BY HAMMER TAPPING THE WEDGES TO ENSURE PROPER SEATING.
13. RE-SURVEY ELEVATION OF CAP AT SAME LOCATION AS IN STEP 4 TO ENSURE THE SUPERSTRUCTURE IS AT THE ORIGINAL ELEVATION AND THAT REPLACEMENT PILE IS NOT TAKING MORE OR LESS LOAD AS THE ORIGINAL PILE.
14. IF DIFFERENCE IN ELEVATION IS MORE THAN 2 mm, REMOVE THE LOAD ON THE NEW PILE SECTION BY RE-JACKING. ADJUST WEDGES AND/OR PILE LENGTH AS NEEDED. REPEAT STEPS 9 TO 14.
15. INSTALL HARDWARE FOR CONNECTING THE NEW PILE SECTION TO THE CAP OR CROSS BLOCK AS SHOWN ON THE DRAWINGS.
16. CUT OFF EXCESS HARDWOOD WEDGES FLUSH WITH FACE OF PILE AT THE PILE-TO-PILE SPLICE, AND FILL GAP WITH EPOXY AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
17. COMPLETE INSTALLATION OF SPLICE CLAMP AS SHOWN ON THE DRAWINGS AT LEAST 5 MINUTES PRIOR TO GEL TIME OF EPOXY.
18. IF SOUND TIMBER IS NOT FOUND ABOVE LOW WATER LEVEL, THE SPLICE LOCATION MUST BE DETERMINED IN A DEWATERED SITUATION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE DEWATERING METHOD WHICH MUST BE SUBMITTED TO THE MINISTRY REPRESENTATIVE FOR REVIEW BEFORE ANY DEWATERING WORK BEGINS. THE CONTRACTOR MAY PREPARE A METHOD OF REPLACING A PILE WITH A SPLICE BELOW THE LOW WATER LEVEL WITHOUT DEWATERING. HOWEVER, THE CONTRACTOR MUST SUBMIT THE ALTERNATIVE METHOD TO THE MINISTRY. ACCEPTANCE OF THIS ALTERNATIVE IS SOLELY THE DECISION OF THE MINISTRY.

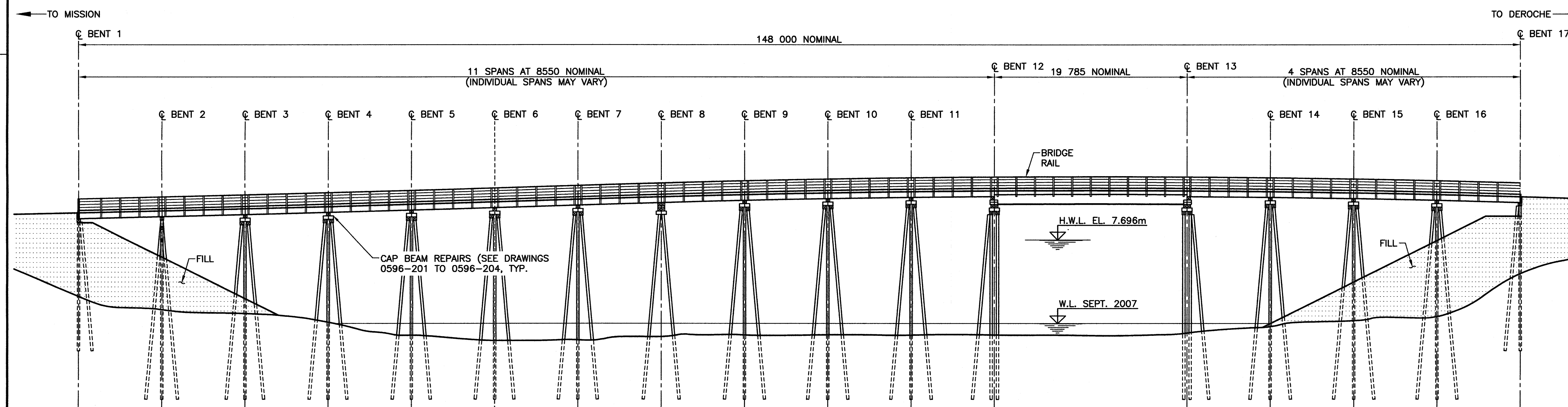
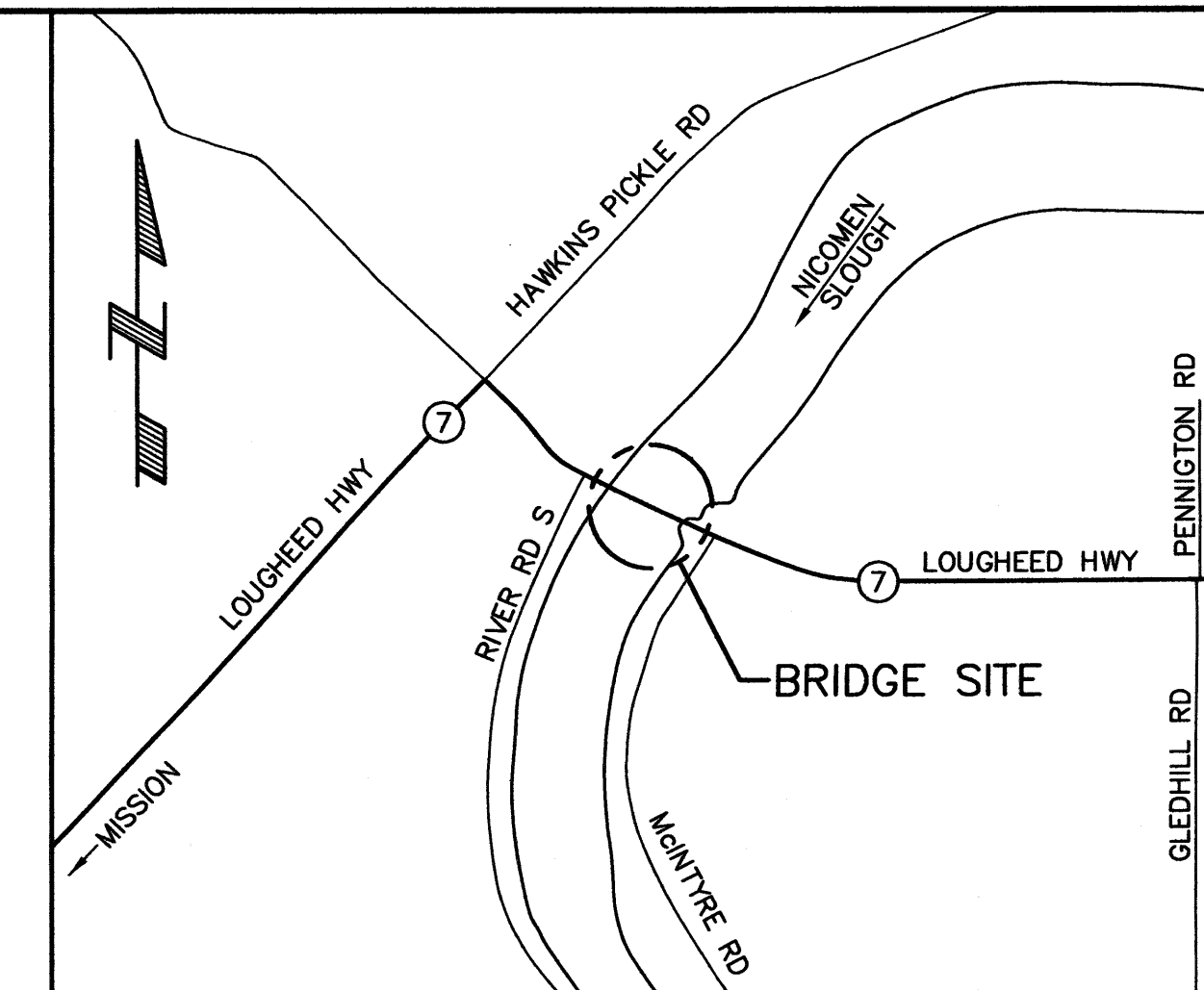
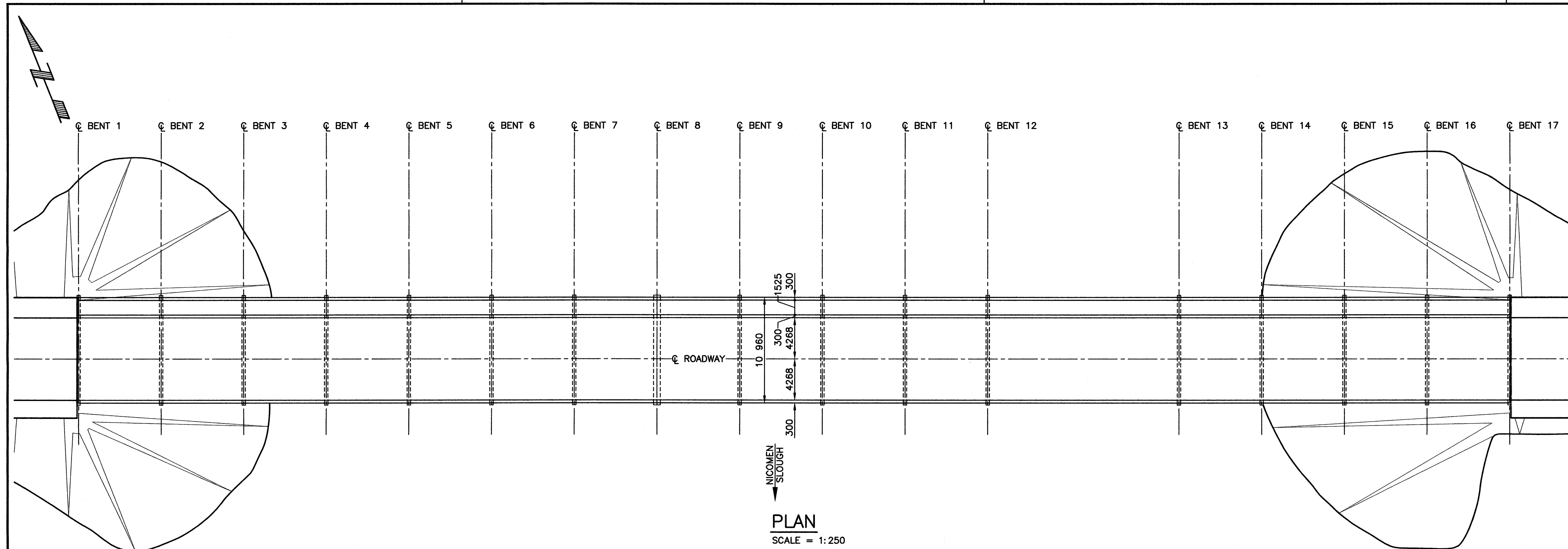
### REPLACEMENT PROCEDURE FOR TIMBER CAPS

1. WHERE POSSIBLE, LIVE LOAD TO BE RESTRICTED TO THE SIDE OF BRIDGE OPPOSITE THE SIDE WHERE THE TIMBER CAP IS BEING REPLACED.
2. PLACE TEMPORARY SUPPORT/JACKING SYSTEM AS INDICATED ON THE DRAWINGS FOR THE TIMBER CAP BEING REPLACED.
3. JACK TO REMOVE SUPERSTRUCTURE LOAD FROM CAP BEING REPLACED. JACKING SYSTEM TO BE BLOCKED AFTER JACKING TO PREVENT ANY MOVEMENT IF THERE IS FAILURE OF THE JACKS.
4. LIMIT MAXIMUM VERTICAL JACKING MOVEMENT TO 15 mm. LIMIT MAX ROTATION OF SUPERSTRUCTURE IN THE TRANSVERSE DIRECTION TO 6 mm PER 1000 mm OF DECK. PROFILE OF DECK IN THE TRANSVERSE DIRECTION SHALL BE MAINTAINED FLAT OR IN SINGLE CURVATURE WITH THE TOP SURFACE OF THE DECK IN COMPRESSION.
5. AFTER ACHIEVING GAP BETWEEN STRUCTURAL ELEMENTS ABOVE AND BELOW THE CAP, CUT ANY DRIFT PINS OR OTHER CONNECTING DEVICES BETWEEN CAP AND THE OTHER ELEMENTS.
6. REMOVE EXISTING TIMBER CAP SECTION.
7. REPLACE REMOVED CAP SECTION WITH NEW TIMBER CAP. NEW CAP SHALL BEAR EVENLY ON ALL PILES. USE TREATED HARDWOOD WEDGES, DRIVEN FROM BOTH SIDES AS REQUIRED FOR EVEN BEARING.
8. REMOVE BLOCKING AND LOWER SUPERSTRUCTURE ONTO REPLACED CAP SECTION. ALL GIRDERS SHALL BEAR EVENLY ON CAP. USE TREATED HARDWOOD WEDGES DRIVEN FROM BOTH SIDES, AS REQUIRED FOR EVEN BEARING.
9. ALL HARDWOOD WEDGES TO BE SECURED IN PLACE WITH 2 - 100 mm LONG GALVANIZED SPIRAL NAILS. PRE-DRILL HOLES IN WEDGES TO PREVENT SPLITTING.
10. SECURE NEW CAP IN PLACE AS SHOWN ON THE DRAWINGS.

Consultant Logo			
<b>UMA   AECOM</b>			
Rev	Date	Description	Init
2	2010-07-07	AS-BUILT	J. DE GUZMAN
1	2008-04-21	ISSUED FOR CONSTRUCTION	J. HAUGLAND
0	2008-03-13	ISSUED FOR TENDER	A. BONDA
REVISIONS			
		<b>Ministry of Transportation</b> South Coast Region	
<b>LOWER MAINLAND DISTRICT</b> DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 SUBSTRUCTURE REHABILITATION DETAILS			
PREPARED UNDER THE DIRECTION OF		DESIGNED <u>A.W. STEWART</u> DATE <u>DEC 2007</u>	
ENGINEER OF RECORD		CHECKED <u>B. RAMSAY</u> DATE <u>MAR 2008</u>	
DATE		DRAWN <u>A. KOUREMENOS</u> DATE <u>DEC 2007</u>	
FILE No.		SCALE AS NOTED	
PROJECT No.		NEGATIVE No.	
0596	11996-0001	1	0596-107
2			







**GENERAL NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. DRAWINGS ARE BASED ON UMA/AECOM CAD DRAWINGS 0598-101 THROUGH 0598-107.
3. DRAWINGS INDICATE MODIFICATIONS THE BRIDGE DURING EMERGENCY REPAIRS FROM SEPTEMBER 18 TO 21, 2015.



Rev	Date	Description	Init

REVISIONS



Ministry of Transportation & Infrastructure  
South Coast Region

LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
GENERAL LAYOUT

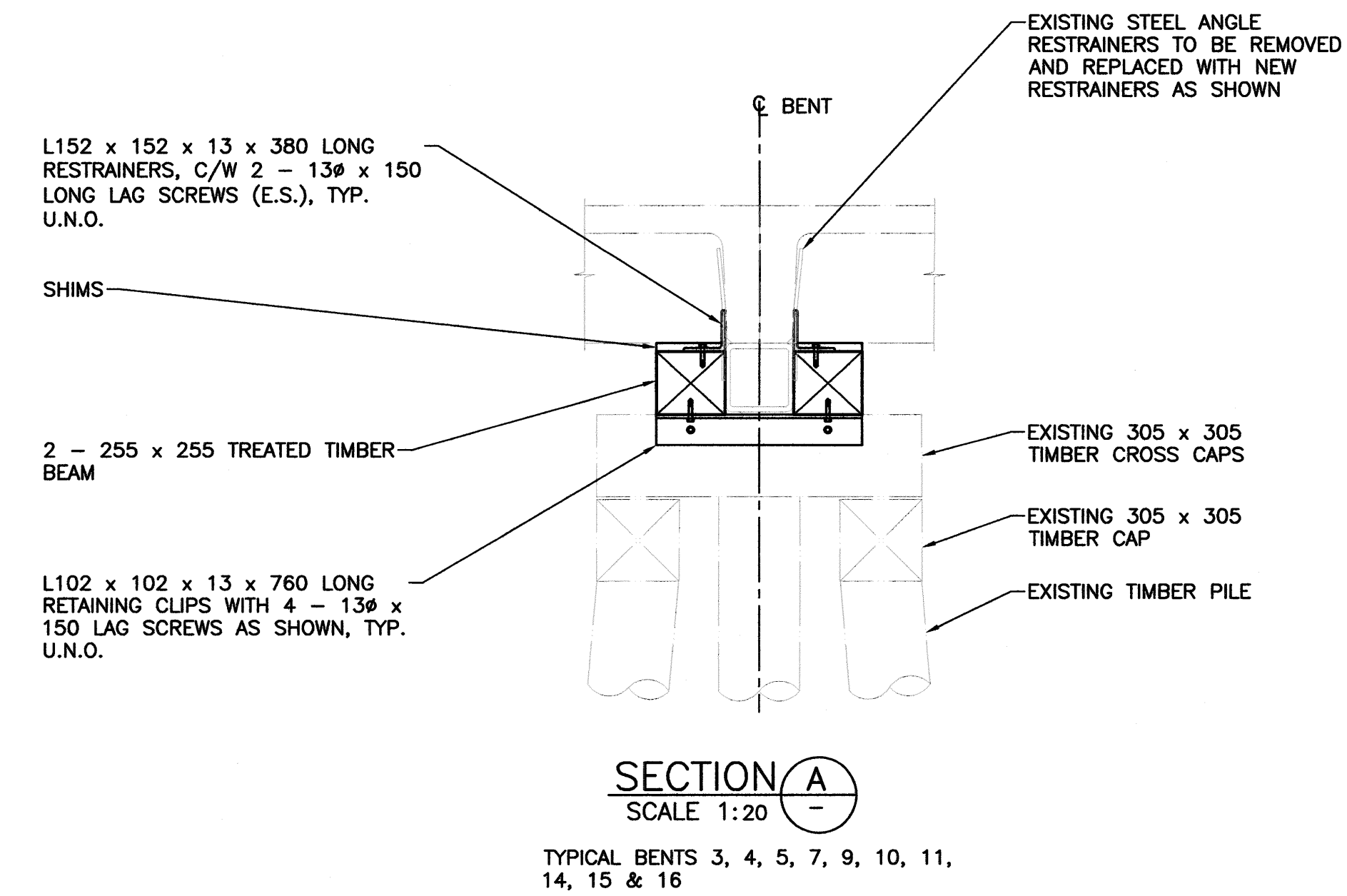
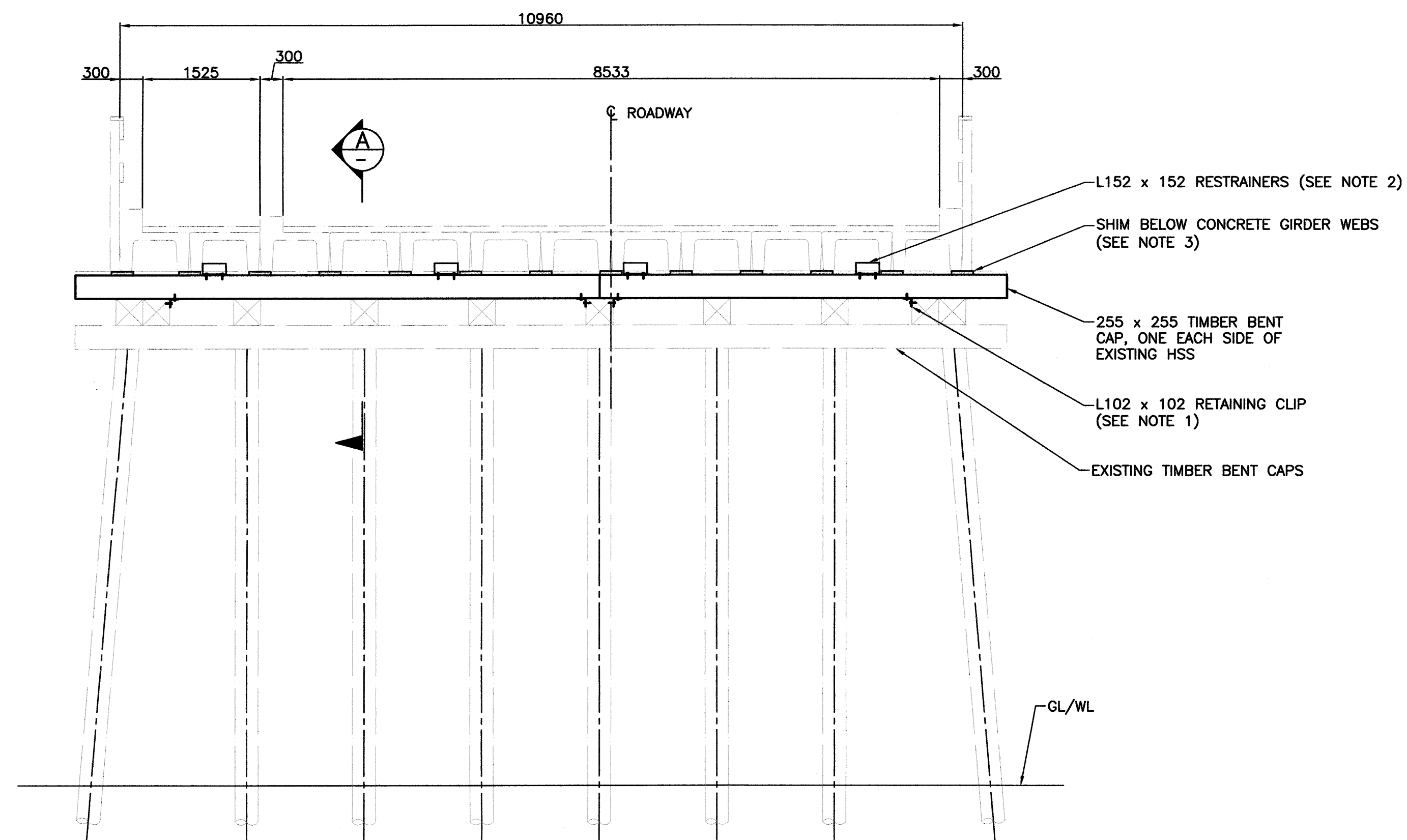
REFERENCE DRAWINGS	
DRAWING NO.	DESCRIPTION
0596-101	GENERAL LAYOUT
0596-102	BENT PLAN AND ELEVATION
0596-103	BENT PLAN AND ELEVATION
0596-104	BENT PLAN AND ELEVATION
0596-105	BENT PLAN AND ELEVATION
0596-106	BENT PLAN AND ELEVATION
0596-107	DETAILS

RECORD DRAWING

PREPARED UNDER THE DIRECTION OF	DESIGNED	B.B.	DATE	SEP. 2015
B.A. HAMERSLEY	CHECKED	W.W.	DATE	SEP. 2015
	ENGINEER OF RECORD	M.B.	DATE	SEP. 2015
DATE	OCTOBER 09, 2015	SCALE	AS NOTED	
FILE No.	PROJECT No.	REG.	DRAWING No.	0596-200

CANCEL PRINTS BEARING PREVIOUS LETTER

11-308-1-(03-07)



**TYPICAL BENT ELEVATION**  
1:50

TYPICAL BENTS 3, 4, 5, 7, 9, 10, 11,  
14, 15 & 16  
(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C<sub>E</sub> ON  
OPPOSITE SIDE

**BENT REPAIR TABLE**

BENT NUMBER	ADDITIONAL REPAIR DETAILS
3	- REPLACE TWO EXISTING TIMBER CROSS CORBELS WITH TWO NEW TIMBER CROSS CORBELS AT THE SOUTH END. - SPLICED THIRD SET OF TIMBER BENT CAP END BEAMS AT NORTH END WITH 2 - R13 x 50 AND 130 x 150 LAG SCREWS (E.S.)
4	- SPLICED THIRD SET OF TIMBER BENT CAP END BEAMS AT NORTH END WITH 2 - R13 x 50 AND 130 x 150 LAG SCREWS (E.S.) - L152 x 152 x 9.5 x 305 LONG RETAINING ANGLES USED INSTEAD OF L152 x 152 x 13 x 380 LONG IN THE TYP. DETAIL
5	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS
7	
9	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS PROVIDED AT SPLICE LOCATION
10	- ONE ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIP PROVIDED
11	- TWO ADDITIONAL L102 x 102 x 13 CAP BEAM RETAINING CLIPS PROVIDED AT SPLICE LOCATION
14	- FOUR ADDITIONAL L152 x 152 x 13 BRIDGE GIRDER RESTRAINERS PROVIDED (E.S.)
15	
16	- THREE ADDITIONAL L152 x 152 x 13 BRIDGE GIRDER RESTRAINERS PROVIDED (E.S.)

**REPAIR NOTES:**

1. A MINIMUM OF 2 - L102 x 102 x 13 RETAINING CLIPS PER INDIVIDUAL LENGTH OF 255 x 255 BENT CAPS. RETAINING CLIPS TO BE INSTALLED AS CLOSE AS PRACTICAL TO BEAM ENDS, TYP. U.N.O.
2. A MINIMUM OF 4 - L152 x 152 RESTRAINER ASSEMBLIES TO BE INSTALLED EACH SIDE OF BENT SPACED EVENLY APART. EACH ASSEMBLY SHALL BEAR AGAINST A CONCRETE GIRDER WEB TO PREVENT LATERAL BRIDGE MOVEMENT (ALTERNATING WEBS).
3. SHIMS SHALL BE UHMW-PE OF VARYING THICKNESS TO ACHIEVE FULL BEARING. IN AREAS WITH LARGER GAPS, SHIMS MAY BE TREATED TIMBER BEAMS 50 x 255 OR 50 x 305.



Rev	Date	Description	Init

REVISIONS



Ministry of Transportation  
& Infrastructure  
South Coast Region

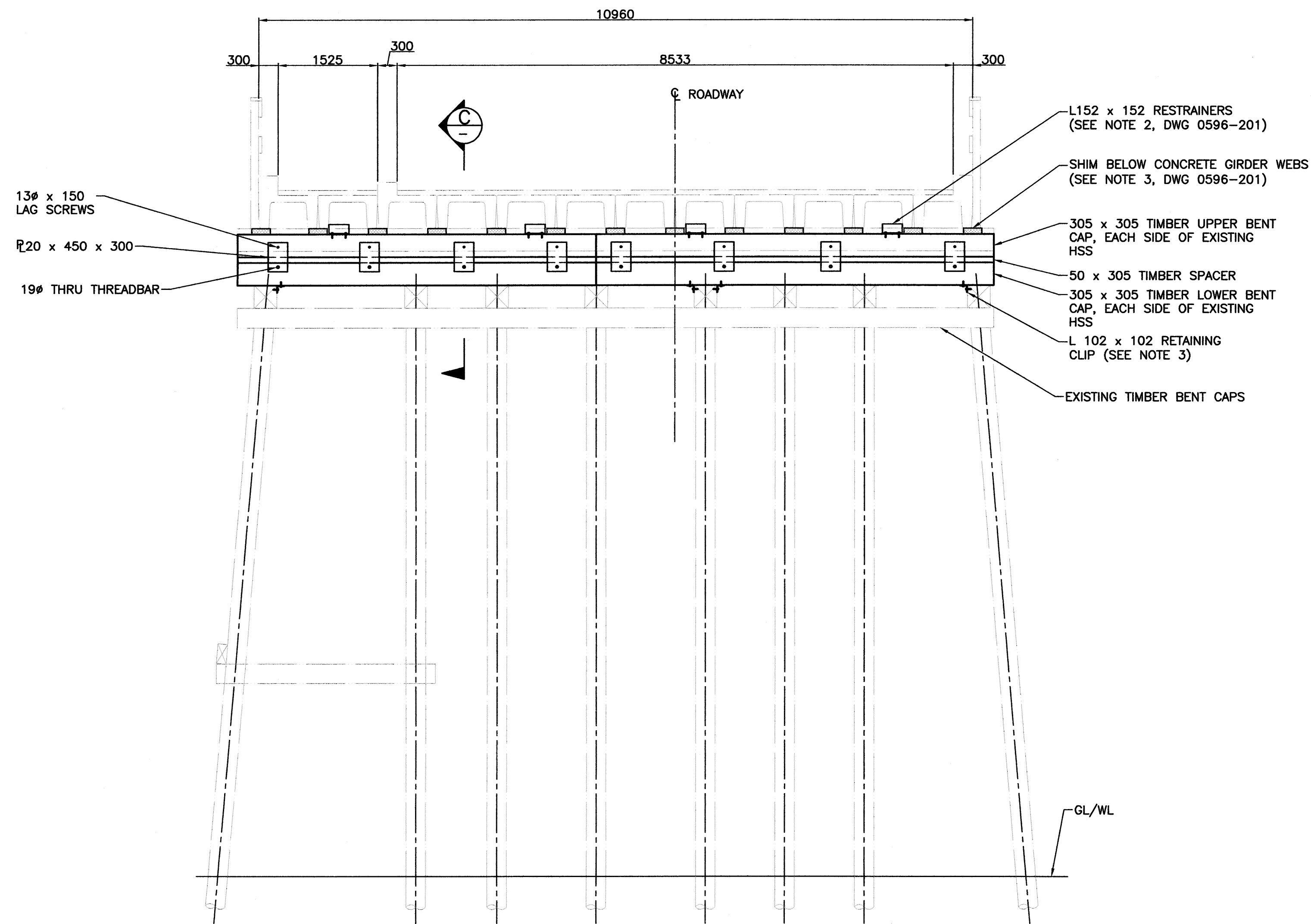
LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
**DETAILS SHEET 1 OF 4**

PREPARED UNDER THE DIRECTION OF  B.A. HAMERSLEY ENGINEER OF RECORD DATE OCTOBER 09, 2015	DESIGNED B.B. DATE SEP. 2015 CHECKED W.W. DATE SEP. 2015 DRAWN M.B. DATE SEP. 2015 SCALE AS NOTED NEGATIVE No.	REG. No. PROJECT No. DRAWING No. <b>0596-201</b>
--	--	---

RECORD DRAWING

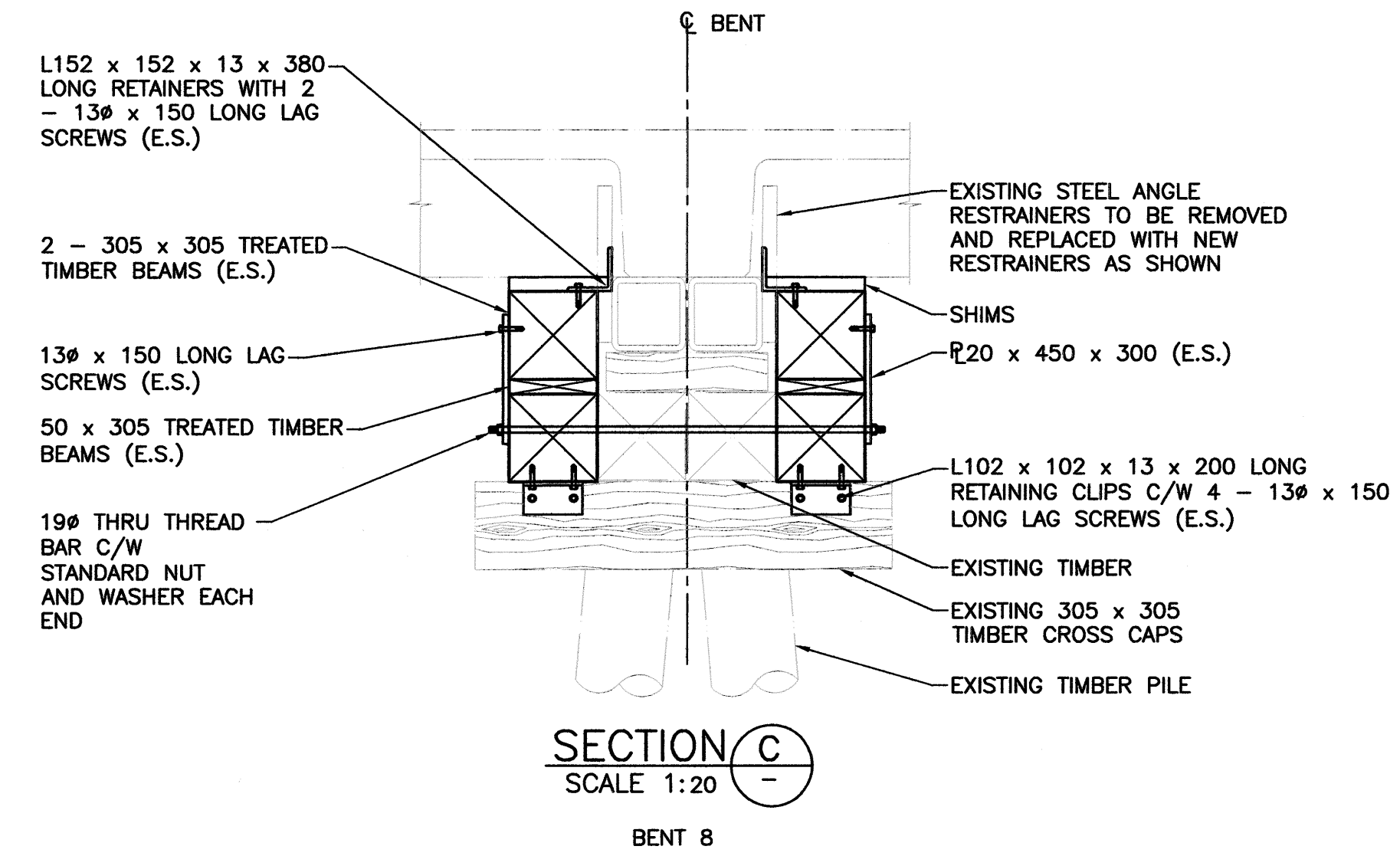
CANCEL PRINTS BEARING PREVIOUS LETTER





**BENT 8 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE



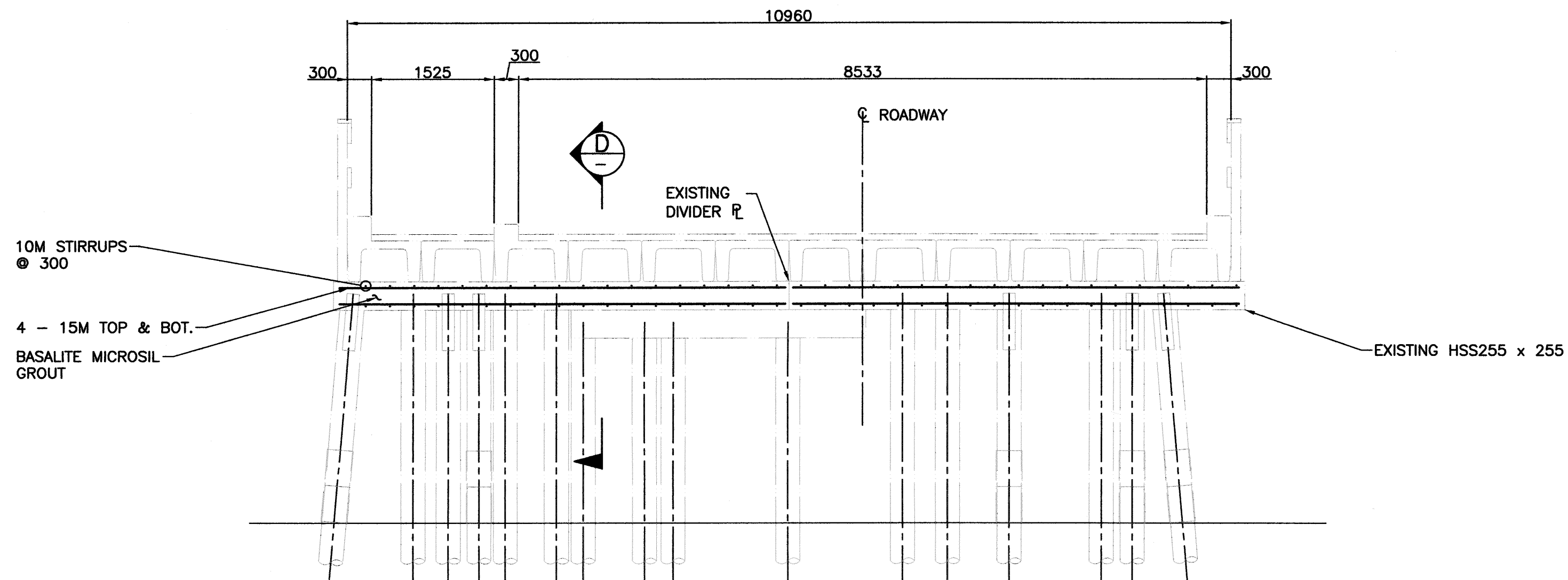
**NOTES:**

1. FOR GENERAL NOTES SEE DRAWING 0596-200.
2. FOR REPAIR NOTES SEE DRAWING 0596-201.
3. A MINIMUM OF TWO SETS OF 2 - L102 x 102 RETAINING CLIPS PER INDIVIDUAL LENGTH OF 255 x 255 BENT CAPS. RETAINING CLIPS TO BE INSTALLED AS CLOSE AS PRACTICAL TO BEAM ENDS, TYP. U.N.O.

Rev	Date	Description	Init
REVISIONS			
		Ministry of Transportation & Infrastructure South Coast Region	
LOWER MAINLAND DISTRICT DEWDNEY BRIDGE No. 0596 - HIGHWAY 7 <b>EMERGENCY CAP BEAM REPAIRS</b> <b>DETAILS SHEET 3 OF 4</b>			
PREPARED UNDER THE DIRECTION OF B.A. HAMERSLEY ENGINEER OF RECORD DATE OCTOBER 09, 2015		DESIGNED B.B. DATE SEP. 2015 CHECKED W.W. DATE SEP. 2015 DRAWN M.B. DATE SEP. 2015 SCALE AS NOTED NEGATIVE No.	
FILE No.	PROJECT No.	REG.	DRAWING No. <b>0596-203</b>

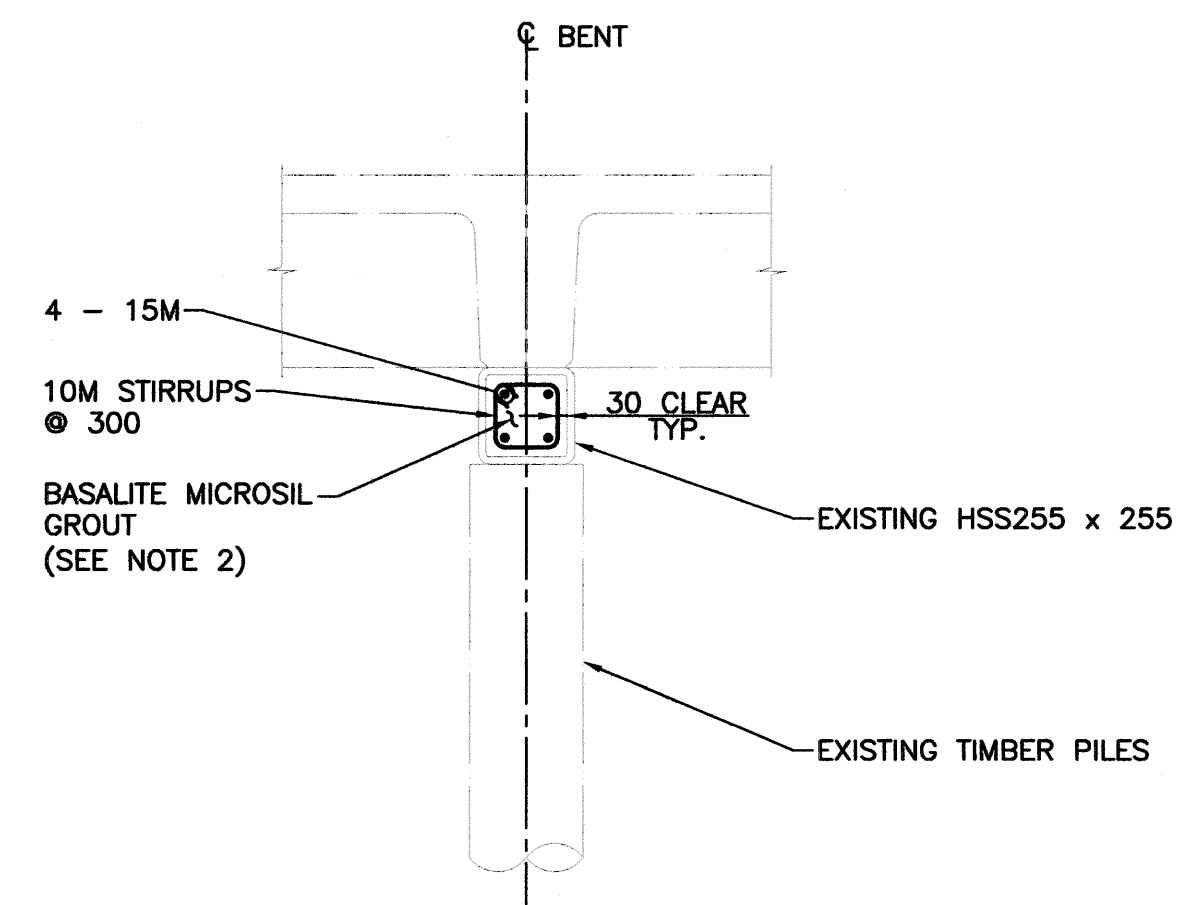
RECORD DRAWING

CANCEL PRINTS BEARING PREVIOUS LETTER



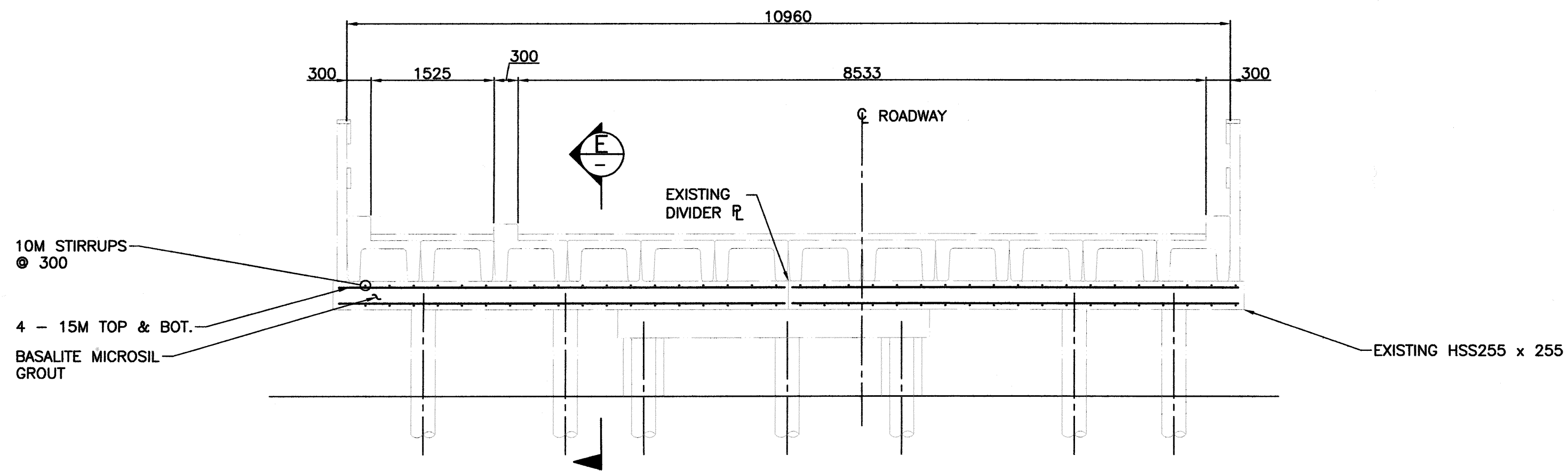
**BENT 2 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE  
(STIRRUPS NOT SHOWN FOR CLARITY)



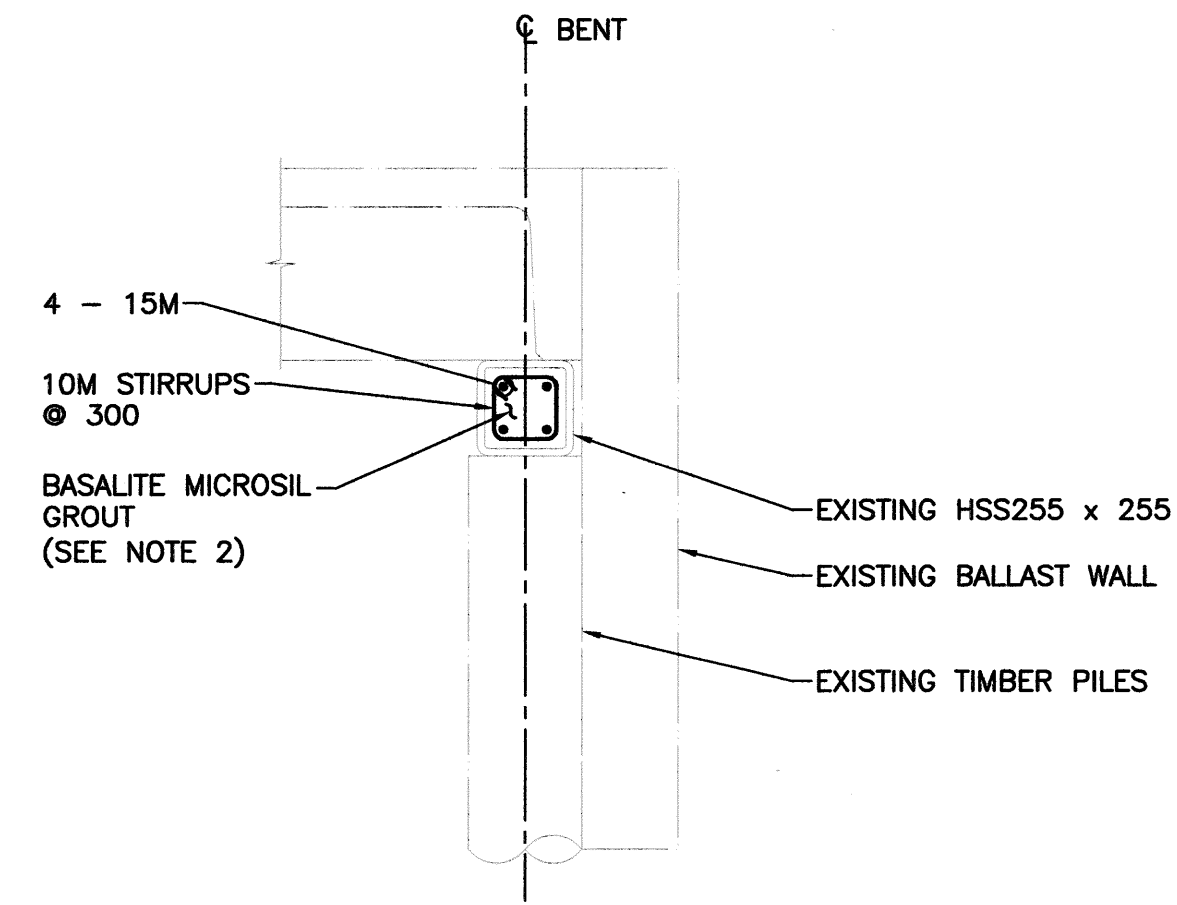
**SECTION D**  
SCALE 1:20

BENT 2



**BENT 17 ELEVATION**  
1:50

(LOOKING EAST)  
SYMMETRICAL ABOUT BENT C ON OPPOSITE SIDE  
(STIRRUPS NOT SHOWN FOR CLARITY)



**SECTION E**  
SCALE 1:20

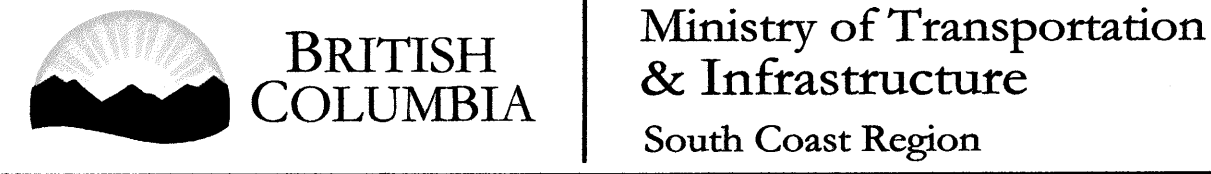
BENT 17

**NOTES:**

- FOR GENERAL NOTES SEE DRAWING 0596-200.
- BASILITE MICROSIL GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 30 MPa. THREE GROUT CUBES SHALL BE TAKEN PER BENT FOR TESTING. TWO COMPRESSIVE TESTS SHALL BE COMPLETED AT 7 DAYS FOR GROUT CUBES TAKEN FOR EACH BENT TO VERIFY STRENGTH. A 3<sup>RD</sup> TEST MAY BE COMPLETED AT 28 DAYS IF REQUIRED.

Rev	Date	Description	Init

REVISIONS



LOWER MAINLAND DISTRICT  
DEWDNEY BRIDGE No. 0596 - HIGHWAY 7  
**EMERGENCY CAP BEAM REPAIRS**  
**DETAILS SHEET 4 OF 4**

PREPARED UNDER THE DIRECTION OF	DESIGNED	B.B.	DATE SEP. 2015
	CHECKED	W.W.	DATE SEP. 2015
B.A. HAMERSLEY	DRAWN	M.B.	DATE SEP. 2015
ENGINEER OF RECORD	SCALE AS NOTED		
DATE OCTOBER 09, 2015	REG.	DRAWING No.	NEGATIVE No.
FILE No.	PROJECT No.	REG.	DRAWING No.
			<b>0596-204</b>

RECORD DRAWING

CANCEL PRINTS BEARING PREVIOUS LETTER

H-308-11-(6)-07