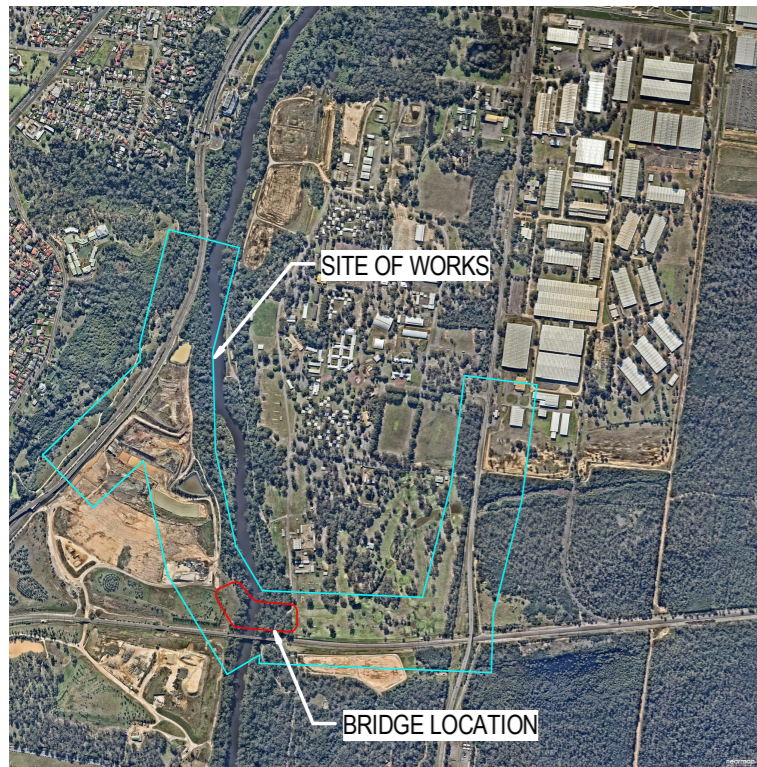


MOOREBANK INTERMODAL TERMINAL DEVELOPMENT - PACKAGE 1 - RALP No.1 GEORGES RIVER BRIDGE COVER SHEET

LOCALITY PLAN



DESIGN STANDARD:

AS 5100 - 2004 BRIDGE DESIGN
ARTC COP SECTION 9 - STRUCTURES
ARTC COP SECTION 7 - CLEARANCES
RISSB AS7636 - 2013 RAIL STRUCTURES

TRAFFIC LOADING: 300-LA

No. OF TRACKS: 2
300LA RAILWAY TRAFFIC LOAD WITH DYNAMIC LOAD ALLOWANCE IN ACCORDANCE WITH AS5100.2, CLAUSE 8.4
300LA DERAILMENT RAILWAY TRAFFIC LOAD
DESIGN RAIL SPEED: 60km/h
TRACK IS CONTINUOUS FOR BRAKING FORCES
MINIMUM BALLAST THICKNESS UNDER SLEEPER: 250mm
MAXIMUM BALLAST THICKNESS ALONG DECK: 650mm

MAINTENANCE WALKWAY LOAD: 5kPa

FATIGUE LOADING

MAIN FREIGHT LINE
WIND LOADING
WIND TERRAIN CATEGORY: 2
WIND REGION: A2
REGIONAL WIND SPEED SLS: 37m/s
REGIONAL WIND SPEED ULS: 48m/s
AVERAGE RECURRENCE INTERVAL ULS: R = 2000 YEARS
AVERAGE RECURRENCE INTERVAL SLS: R = 20 YEARS
WIND LOAD CALCULATION IN ACCORDANCE WITH AS 5100.2 SECTION 16.

EARTHQUAKE LOADING

BRIDGE CLASSIFICATION: TYPE III
IMPORTANCE FACTOR: I = 1.25
ACCELERATION COEFFICIENT: a = 0.08
SITE FACTOR: S = 1.0
STRUCTURAL RESPONSE FACTOR: Rf = 2.0
DESIGN CATEGORY: BEDC-2

DIFFERENTIAL SETTLEMENT

10mm TOTAL BETWEEN ADJACENT BRIDGE SUPPORTS
10mm TRANSVERSELY ACROSS WIDTH OF SUPPORT

REFERENCE DESIGN REPORTS

BRIDGE DESIGN REPORT: N01031-PWD-DRP-BRD-0001
DURABILITY REPORT: N01031-DE-RPT-0001
TRACK DESIGN REPORT: N01031-PWD-DRP-TGM-0001
EARTHWORKS PACKAGE: N01031-PWD-DRG-GEN-0001
SERVICES AND UTILITIES PACKAGE: N01031-PWD-DRG-UTL-0001

JACKING OF BRIDGE DECK FOR BEARING REPLACEMENT

THE JACKING OPERATIONS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
FOR JACKING LOCATIONS, LOADS AND STEEL PLATE SIZES ABOVE AND BELOW THE JACK SEE SHEET No's 1040 AND 1061, FOR JACKING UNDER THE LOADING NOTED BELOW.
BRIDGE SHALL BE CLOSED TO RAIL TRAFFIC DURING BEARING REPLACEMENT.
DESIGN JACKING LOAD IS BASED ON DEAD LOAD OF BRIDGE STRUCTURE ONLY AND SUPERIMPOSED DEAD LOAD ONLY.
BRIDGE BEARINGS ARE DESIGNED TO BE REPLACED USING LIFTS OF NOT GREATER THAN 15mm
ALL JACKS AT EACH GIRDER END SHALL BE HYDRAULICALLY LINKED TO ENSURE THAT FORCE ACROSS EACH OF THESE JACKS IS EQUAL UNDER ALL LOADING CONDITIONS. SAFETY MEASURES TO BE EMPLOYED BY THE JACKING CONTRACTOR TO ELIMINATE THE RISK OF HYDRAULIC FLUID LOSS THAT MAY LEAD TO FAILURE OF THE JACKING SYSTEM.
HORIZONTAL RESTRAINTS AT ABUTMENTS TO BE MAINTAINED.

FLOOD DATA

100 YEAR FLOW VELOCITY:	1.76m/s
100 YEAR FLOOD LEVEL:	11.53m AHD
2000 YEAR FLOW VELOCITY:	2.10m/s
2000 YEAR FLOOD LEVEL:	13.03m AHD
100 YEAR SCOUR DEPTH:	ABUTMENT A 0.0m
	PIER 1 4.6m
	PIER 2 5.4m
	PIER 3 6.2m
	PIER 4 5.7m
	PIER 5 4.9m
	ABUTMENT B 2.3m
2000 YEAR SCOUR DEPTH:	ABUTMENT A 0.0m
	PIER 1 5.0m
	PIER 2 5.9m
	PIER 3 6.6m
	PIER 4 6.1m
	PIER 5 5.3m
	ABUTMENT B 4.0m
DEPTH OF DEBRIS MAT FOR SCOUR ASSESSMENT:	1.6m
DEPTH OF DEBRIS MAT FOR STRUCTURAL DESIGN:	3m
LENGTH OF DEBRIS MAT FOR STRUCTURAL DESIGN:	20m



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Wherever a discrepancy in the contract documents is found and unless directed otherwise by the Principal/Engineer, the contractor shall adopt, at their own cost the greater quantum, class of finish, grade, or specification where applicable.

FOR CONSTRUCTION

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SCHEDULE OF DRAWINGS	
SHEET No.	SHEET NAME
1000	COVER SHEET
1005	SCHEDULE OF DRAWINGS
1006	CONSTRUCTION SEQUENCE
1010	GENERAL ARRANGEMENT - SHEET A
1011	GENERAL ARRANGEMENT - SHEET B
1012	GENERAL ARRANGEMENT - SHEET C
1020	PILE LAYOUT
1025	PILE DETAILS - SHEET A
1026	PILE DETAILS - SHEET B
1027	PILE DETAILS - SHEET C
1040	ABUTMENT CONCRETE - SHEET A
1041	ABUTMENT CONCRETE - SHEET B
1042	ABUTMENT CONCRETE - SHEET C
1043	ABUTMENT CONCRETE - SHEET D
1050	ABUTMENT REINFORCEMENT - SHEET A
1051	ABUTMENT REINFORCEMENT - SHEET B
1060	PIER CONCRETE - SHEET A
1061	PIER CONCRETE - SHEET B
1065	PIER REINFORCEMENT - SHEET A
1066	PIER REINFORCEMENT - SHEET B
1090	BEARING LAYOUT
1095	BEARING DETAILS - SHEET A
1096	BEARING DETAILS - SHEET B
1100	PSC GIRDERS - SHEET A
1101	PSC GIRDERS - SHEET B
1102	PSC GIRDERS - SHEET C
1103	PSC GIRDERS - SHEET D
1104	PSC GIRDERS - SHEET E
1110	PSC GIRDERS REINFORCEMENT - SHEET A
1111	PSC GIRDERS REINFORCEMENT - SHEET B
1112	PSC GIRDERS REINFORCEMENT - SHEET C
1113	PSC GIRDERS REINFORCEMENT - SHEET D
1114	PSC GIRDERS REINFORCEMENT - SHEET E
1120	DECK CONCRETE - SHEET A
1121	DECK CONCRETE - SHEET B
1125	DECK REINFORCEMENT - SHEET A
1126	DECK REINFORCEMENT - SHEET B
1127	DECK REINFORCEMENT - SHEET C
1130	EXPANSION JOINT DETAILS
1150	DRAINAGE DETAILS - SHEET A
1151	DRAINAGE DETAILS - SHEET B
1160	APPROACH SLAB - SHEET A
1161	APPROACH SLAB - SHEET B
1162	APPROACH SLAB - SHEET C
1180	EARTHWORKS AND SCOUR DETAILS - SHEET A
1181	EARTHWORKS AND SCOUR DETAILS - SHEET B
1182	EARTHWORKS AND SCOUR DETAILS - SHEET C
1183	EARTHWORKS AND SCOUR DETAILS - SHEET D
1190	MAINTENANCE STAIRS - SHEET A
1191	MAINTENANCE STAIRS - SHEET B
1192	MAINTENANCE STAIRS - SHEET C
1195	WALKWAY DETAILS - SHEET A
1196	WALKWAY DETAILS - SHEET B
1197	WALKWAY DETAILS - SHEET C

ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE SCHEDULE OF DRAWINGS		
DRAWING No.	PROJECT No	WBS	TYPE
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NUMBER	REV		
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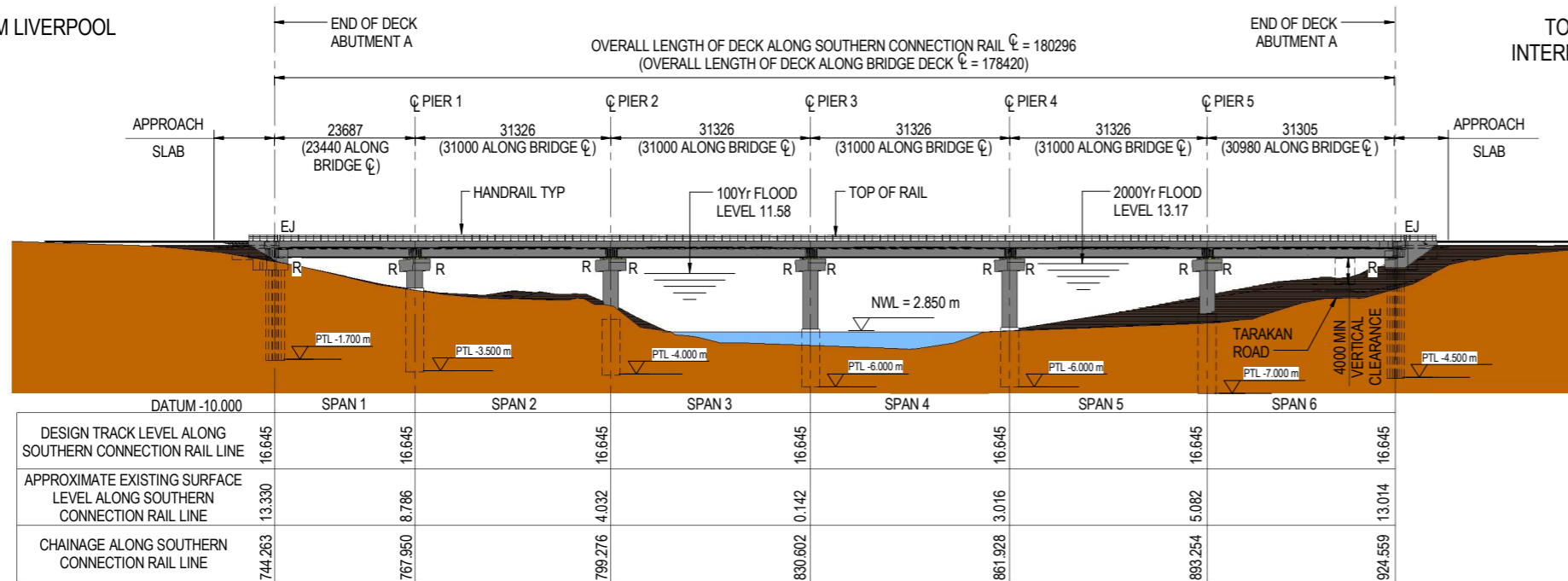


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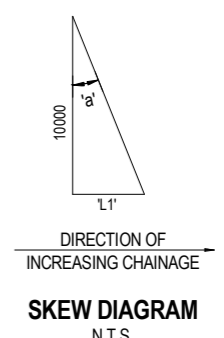
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APPROVED		DATE
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FROM LIVERPOOL

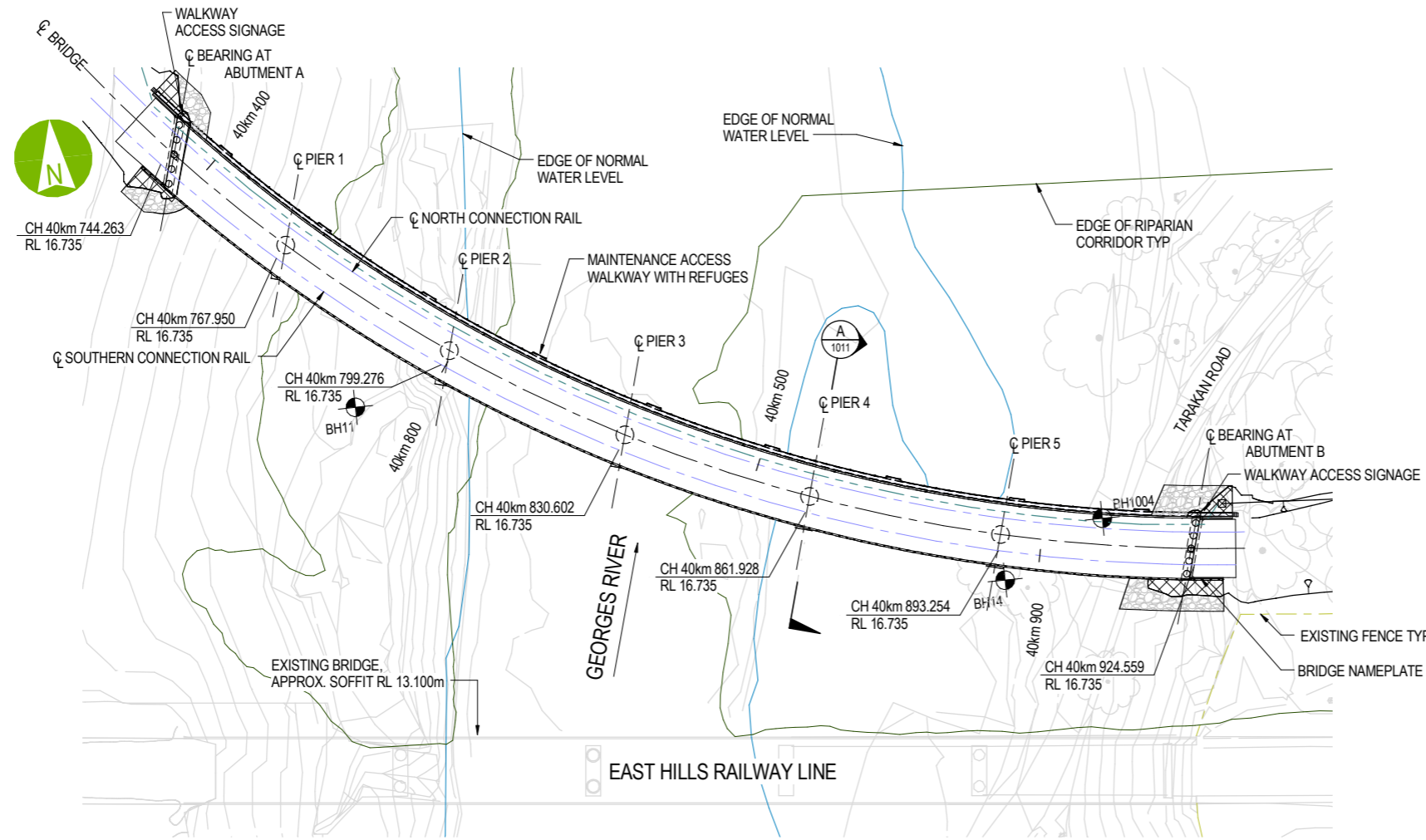
TO MOOREBANK
INTERMODAL TERMINAL



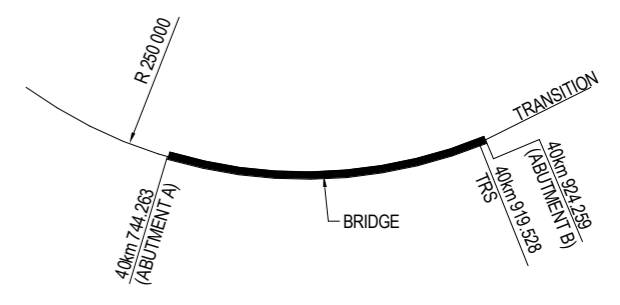
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SKEW ANGLES		
LOCATION	SKEW ANGLE 'a'	'L1'
ABUTMENT A	-31°45'00"	6188
PIER 1	-26°18'27"	4944
PIER 2	-19°07'42"	3468
PIER 3	-11°56'56"	2116
PIER 4	-04°45'03"	833
PIER 5	02°24'36"	421
ABUTMENT B	09°32'31"	1681



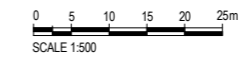
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HORIZONTAL ALIGNMENT DIAGRAM - SOUTHERN CONNECTION RAIL
N.T.S.

GENERAL NOTES

- SCALE AS SHOWN.
- DIMENSIONS ARE IN MILLIMETRES.
- RADIUS ARE IN MILLIMETRES.
- CHAINAGES, CO-ORDINATES AND REDUCED LEVELS ARE IN METRES.
- REDUCED LEVELS ARE RELATED TO AUSTRALIAN HEIGHT DATUM.
- COORDINATES ARE TO MGA SYSTEM.
- DIAL BEFORE YOU DIG TO BE CARRIED OUT AND THE LOCATION OF ALL EXISTING SERVICES IS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND RELOCATED IF REQUIRED.
- EJ DENOTES EXPANSION JOINT.
- PTL DENOTES PILE TOE LEVEL.
- R DENOTES RESTRAINED BEARING.
- REFER TO FENCING GATES AND SIGNAGE PACKAGE (N01031-PWD-DRP-FEN-0001) FOR WALKWAY ACCESS SIGNAGE AND BRIDGE NAMEPLATE DETAILS.
- DENOTES COMPLETED BOREHOLE.
- DENOTES GST LINE



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE GENERAL ARRANGEMENT SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	-	GRB	- DRG - BRD
NUMBER	REV		
1010	- 01		



REV	DATE	REVISION DETAILS	APPROVAL
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SCALE	SIZE
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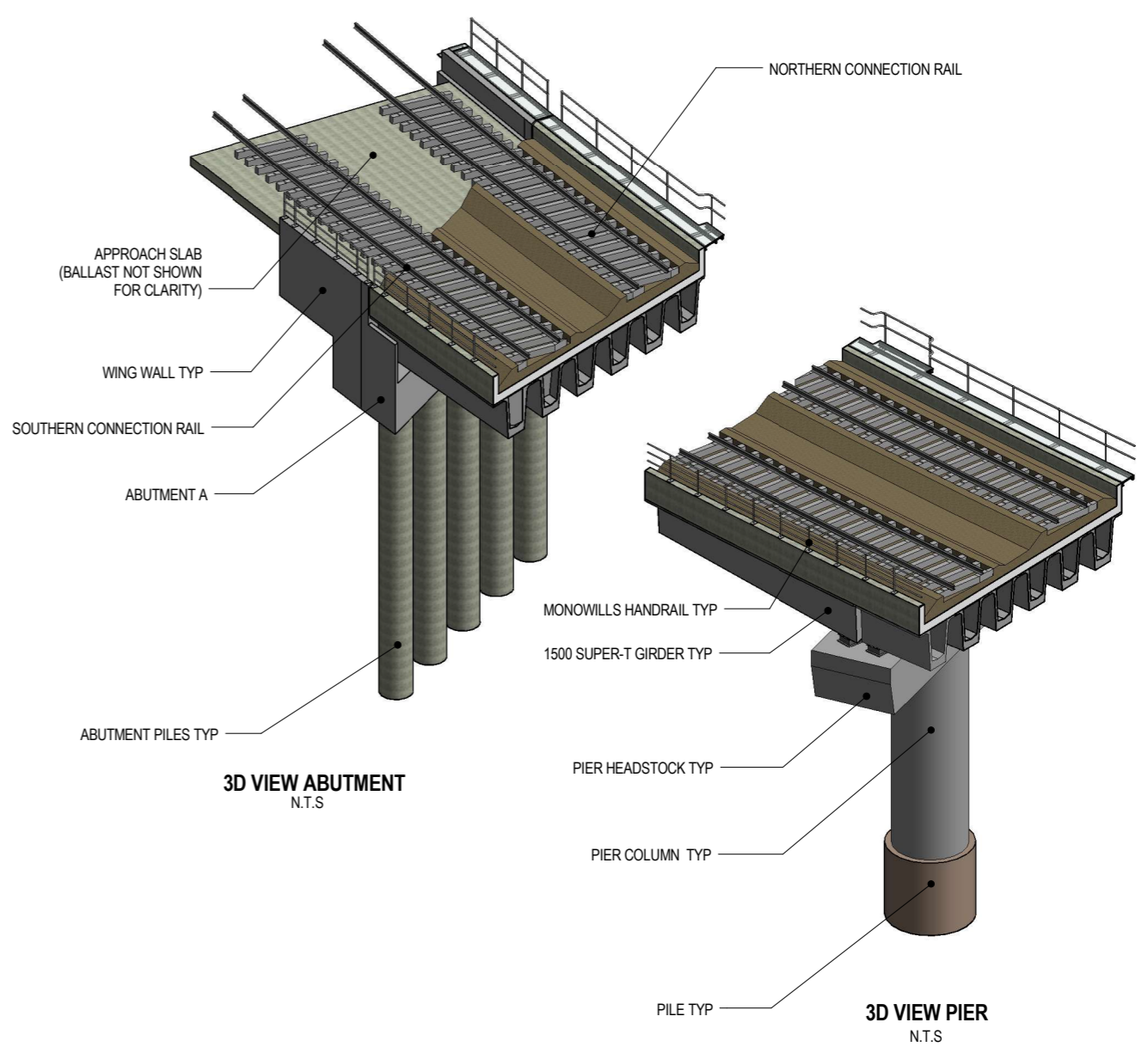
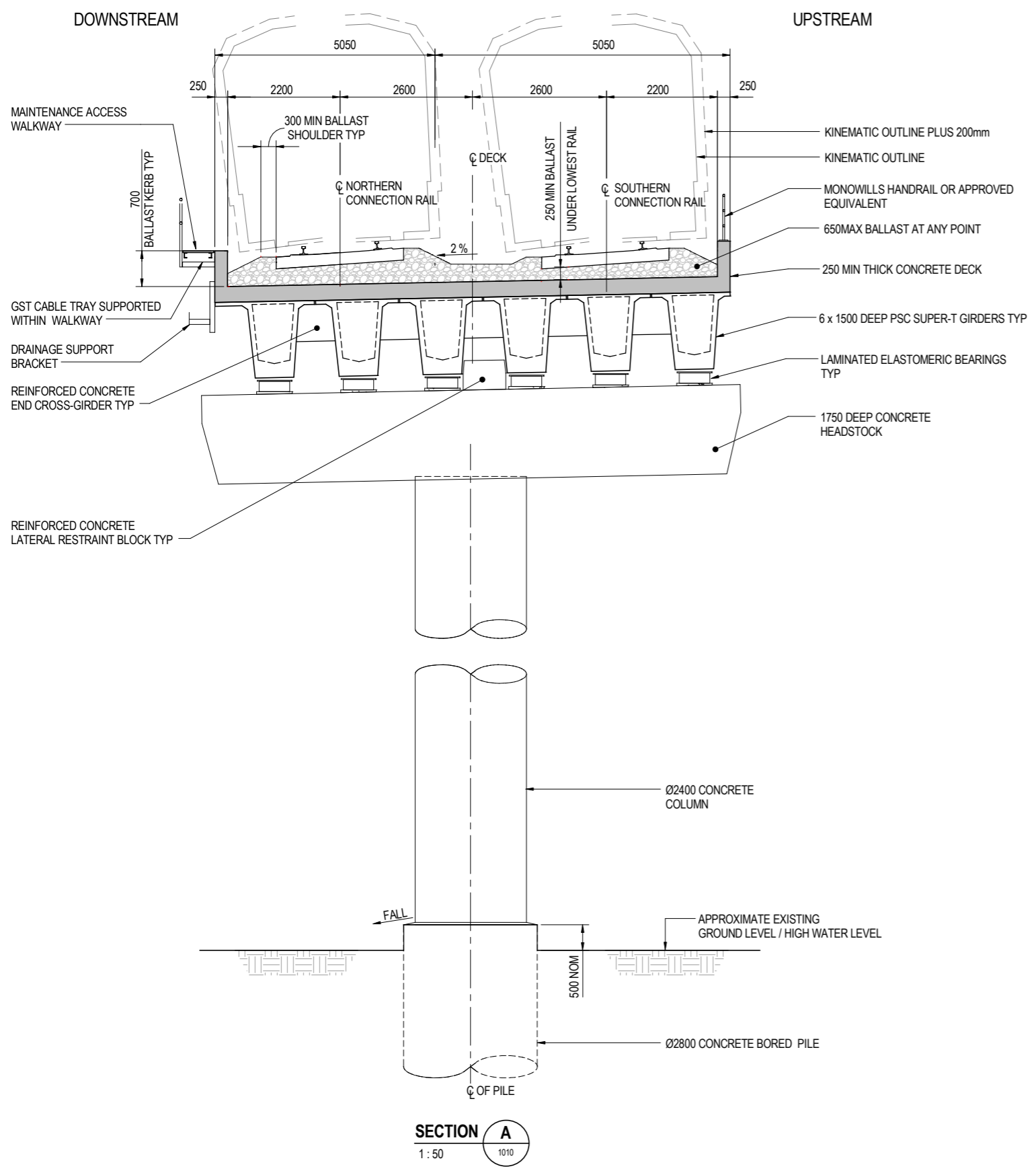
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APPROVED

DATE 20.12.16

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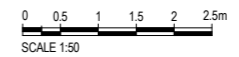


SECTION A
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3D VIEW ABUTMENT
N.T.S.

3D VIEW PIER
N.T.S.

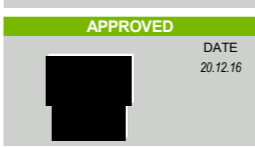
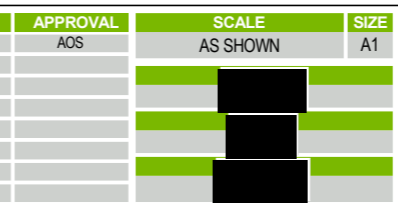
- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1010.



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TITLE	GEORGES RIVER BRIDGE GENERAL ARRANGEMENT SHEET B		
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NUMBER	REV		
1011	01		

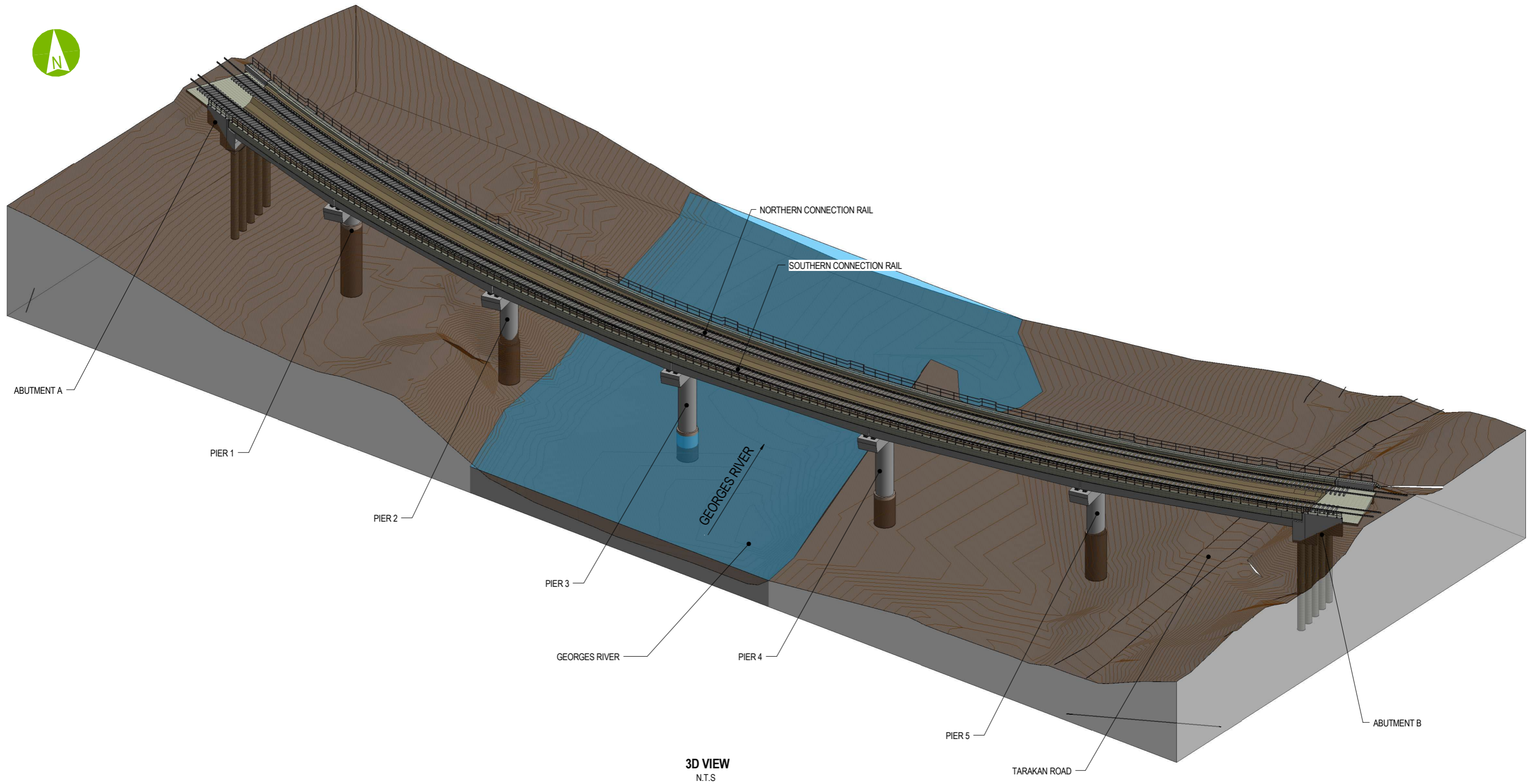


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FROM LIVERPOOL

TO MOOREBANK INTERMODAL TERMINAL



3D VIEW
N.T.S

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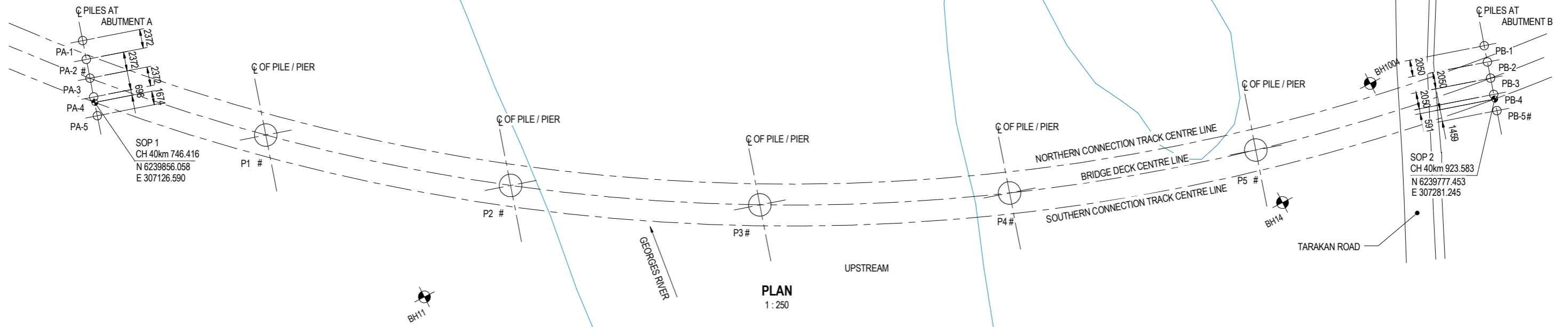
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SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

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TITLE	GEORGES RIVER BRIDGE GENERAL ARRANGEMENT SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
			DISC
			BRD
			NUMBER
			1012
			REV
			01

FROM LIVERPOOL



GENERAL NOTES

- SCALE AS SHOWN.
- CONCRETE EXPOSURE CLASSIFICATION: B1
- MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF CONCRETE SHALL BE: 40MPa
- NOMINAL CONCRETE COVER TO REINFORCEMENT SHALL BE 75mm UNLESS SPECIFIED OTHERWISE.
- REINFORCEMENT SHALL BE GRADE D500N IN ACCORDANCE WITH AS/NZS 4671.
- RISK OF COLLAPSE OF THE PILE HOLE TO BE MANAGED BY THE PILING CONTRACTOR. METHOD STATEMENT TO BE SUBMITTED TO CPB FOR APPROVAL PRIOR TO THE COMMENCEMENT OF PILING WORKS.
- UNLESS SHOWN OTHERWISE ON THE DRAWINGS, LAPS ON ADJACENT BARS ON ANY FACE SHALL BE STAGGERED (OFFSET) BY NO LESS THAN THE LAP LENGTH.
- HELICAL REINFORCEMENT SHALL BE SPLICED WITHIN ITS LENGTH EITHER BY WELDING OR MECHANICAL MEANS.
- UNLESS SPECIFIED OTHERWISE, THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE:

BAR SIZE:	N28	N32	N36	N40
a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR	-	-	-	-
b) OTHER BARS	1100	1400	1700	2050

- CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3x BAR DIAMETER.
- Δ DENOTES BARS TO BE ORIENTATED USING A TEMPLATE OR OTHER SUITABLE METHOD TO ENSURE ALIGNMENT OF REINFORCEMENT WITH COLUMN REINFORCEMENT.
- SOP DENOTES SETOUT POINT
- ⊙ DENOTES COMPLETED BOREHOLE
- DENOTES APPROXIMATE GEORGES RIVER OUTLINE

GENERAL NOTES

11. INDICATIVE RANGE OF ULTIMATE GEOTECHNICAL STRENGTH PARAMETERS FOR SANDSTONE ARE SHOWN IN THE TABLE BELOW.

ROCK STRENGTH TO AS1726	POINT LOAD, I _{s50} (MPa)	ULTIMATE END BEARING CAPACITY (kPa)	ULTIMATE SHAFT ADHESION (kPa)
EL	0.03	1000	100
VL-L	0.03 - 0.3	3000	400
M	0.3 - 1.0	30000	1000
H	1.0 - 10.0	80000	1500

∅_g = 0.60 (ABUTMENTS)
 ∅_g = 0.52 (PIERS)
 EL DENOTES SANDSTONE ROCK STRENGTH EXTREMELY LOW
 VL-L DENOTES SANDSTONE ROCK STRENGTH VERY LOW TO LOW
 M DENOTES SANDSTONE ROCK STRENGTH MEDIUM
 H DENOTES SANDSTONE ROCK STRENGTH HIGH OR BETTER

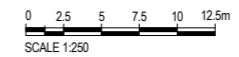
- PILE TOE LEVELS SHOWN IN TABLE, ON SHEET No. 1025, ARE INDICATIVE ONLY, AND BASED ON INTERPRETATION OF AVAILABLE BORE DATA DOCUMENTED IN APPENDIX E OF THE BRIDGE DESIGN REPORT AND SURVEY INFORMATION. THESE LEVELS MAY VARY ON SITE.
- CONFORMING BOREHOLES ARE REQUIRED TO BE COMPLETED IN ACCORDANCE WITH C16.2 OF AS5100.3, IN ORDER TO CONFIRM THE ACTUAL ROCK PROFILE AND PILE SOCKET DEPTH PRIOR TO CONSTRUCTION OF PILES.
- THE GEOTECHNICAL DESIGN REPRESENTATIVE SHALL REVIEW THE ACTUAL PROFILE OF THE ROCK SOCKET AND ADJUST THE FOUNDING LEVEL IF REQUIRED TO ACHIEVE THE DESIGN GEOTECHNICAL STRENGTH TO RESIST THE APPLIED STRUCTURAL LOADINGS PRIOR TO CONSTRUCTION OF THE PILES.
- PILE TOE LEVELS SHALL BE LOWERED IF NECESSARY TO OBTAIN THE MINIMUM ROCK SOCKET LENGTH SPECIFIED.
- IF THE PILE TOE LEVELS ON SITE ARE FOUND TO VARY FROM THE GIVEN VALUES ON SHEET No. 1025 BY MORE THAN 10% OF THE PILE LENGTH OR 1.0m, WHICHEVER IS GREATER, THE DESIGNERS ADVICE SHALL BE SOUGHT PRIOR TO COMMENCEMENT OF CONCRETE PLACEMENT.
- TEMPORARY CASING MAY BE LEFT IN PLACE.
- PILE SPIRAL REINFORCEMENT MAY BE REPLACED WITH CIRCULAR CLOSED TIES AT THE SAME SPACING AND BAR SIZE.
- COUPLERS MAY BE ADOPTED TO REPLACE LAPPED JOINTS.
- PILES HAVE BEEN DESIGNED FOR BOTH AXIAL AND HORIZONTAL DESIGN ACTIONS. REFER TO TABLE ON SHEET No. 1025 FOR THE MAXIMUM DESIGN ACTIONS.

PILE INTEGRITY TESTING

- # DENOTES NOMINATED PILES TO BE INTEGRITY TESTED IN ACCORDANCE WITH AS2159. INTEGRITY TESTING SHALL BE SONIC LOGGING (SL).
- PILES NOMINATED FOR SL SHALL HAVE PROVISION FOR INTEGRITY TESTING
 - PILES NOMINATED FOR SL TESTING, TO BE TESTED IN ACCORDANCE WITH CLAUSE D6 - SONIC LOGGING METHOD IN APPENDIX D OF AS 2159.
 - THE STEEL TUBES SHALL BE RIGIDLY ATTACHED TO THE CAGE SUCH THAT THEY ARE NOT DISPLACED DURING CONCRETING AND THE POSITIONING SHOULD BE SUCH THAT THE USE OF A TREMIE IS NOT HINDERED.

ELECTRICAL BONDING AND ISOLATION REQUIREMENT

- ALL PILE REINFORCEMENT SHALL BE TACK WELDED TOGETHER TO FORM AN ELECTRONICALLY CONNECTED CAGE AND CONNECTED TO THE COLUMN REINFORCEMENT AND ELECTRICAL TESTING POINT.
- THE ELECTRICAL CONNECTIVITY OF ALL REINFORCEMENT AND FITMENTS SHALL BE DEMONSTRATED IN ACCORDANCE WITH AS2832.5 PRIOR TO INSTALLATION OF PILE CAGE AND POURING OF CONCRETE.
- TACK WELDING OF REINFORCING STEEL SHALL COMPLY WITH AS1554.3.
- ELECTRICAL TEST POINT TO BE WELDED TO STRUCTURAL STEEL VIA 70mm² CSA COPPER CABLE AND PROVIDED AT AN ACCESSIBLE LOCATION AT THE BASE OF EACH PIER.



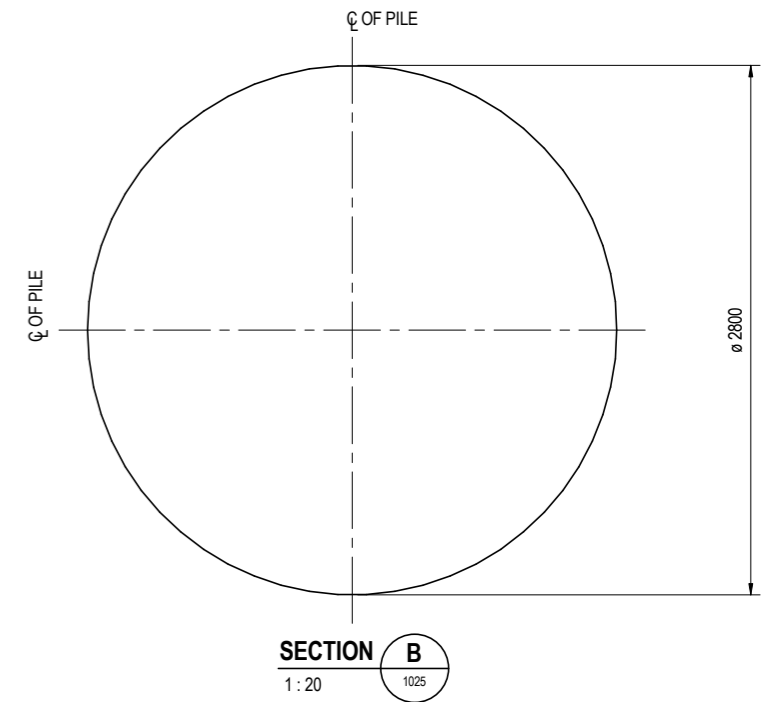
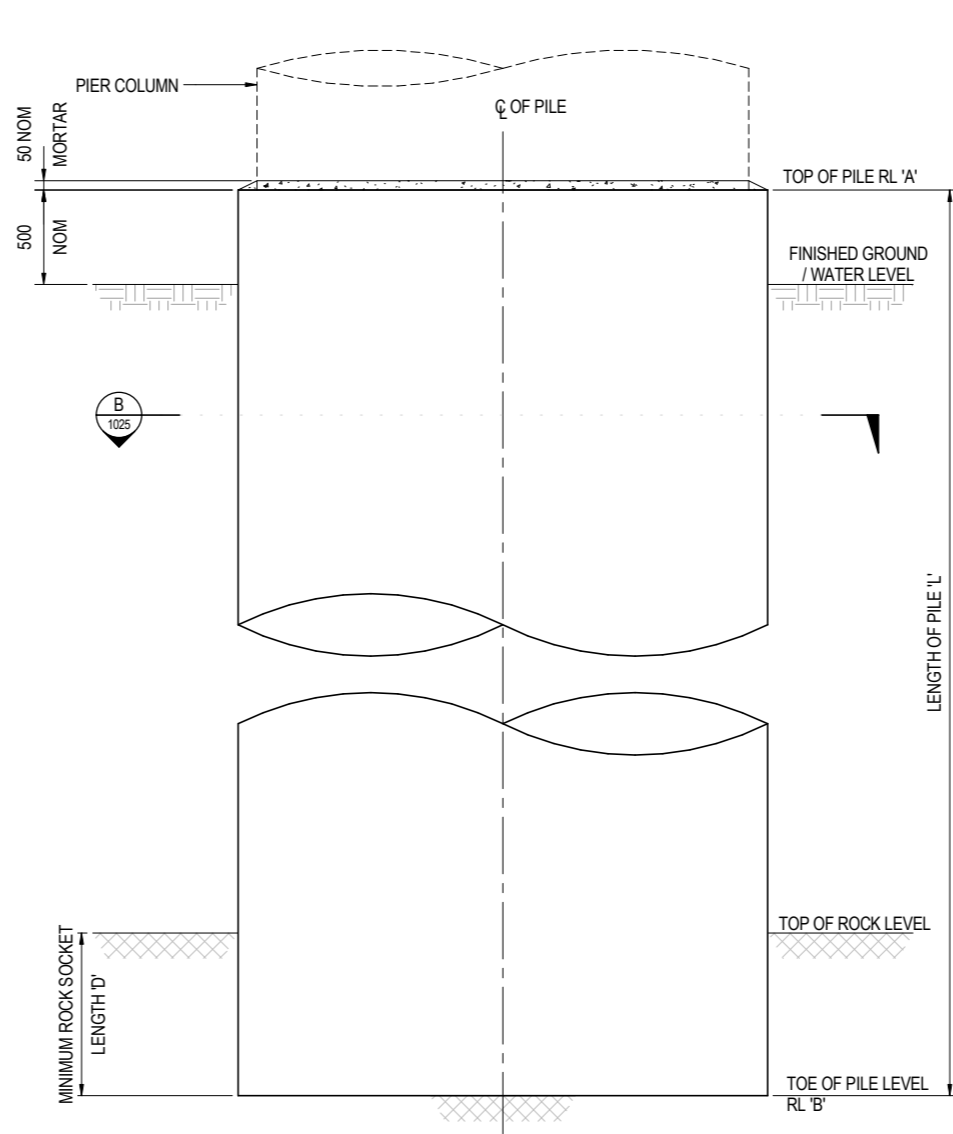
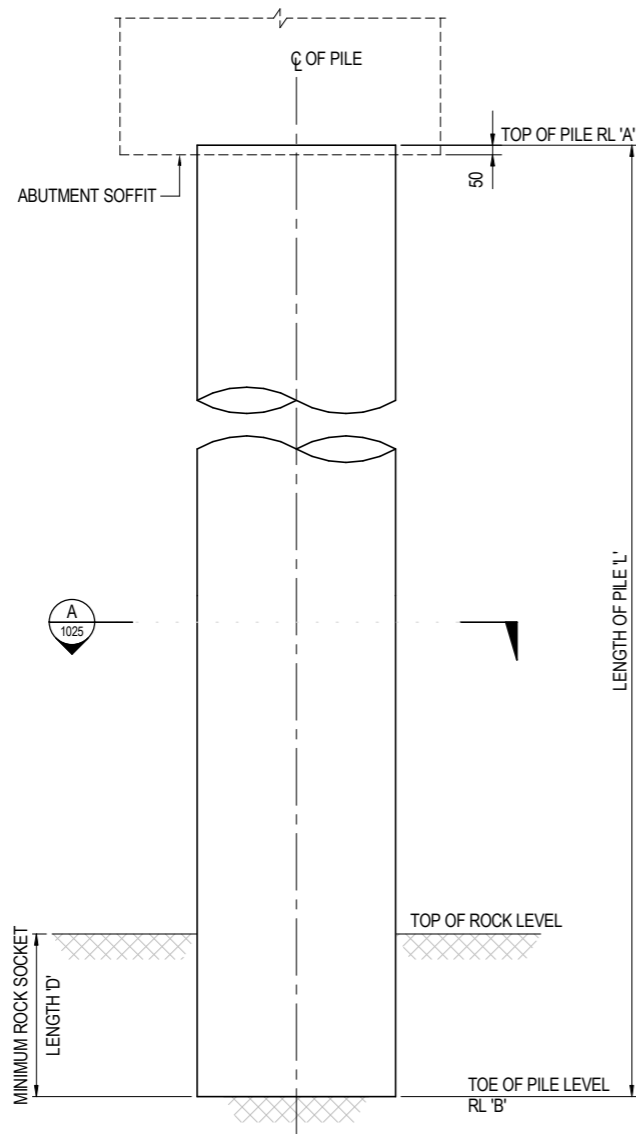
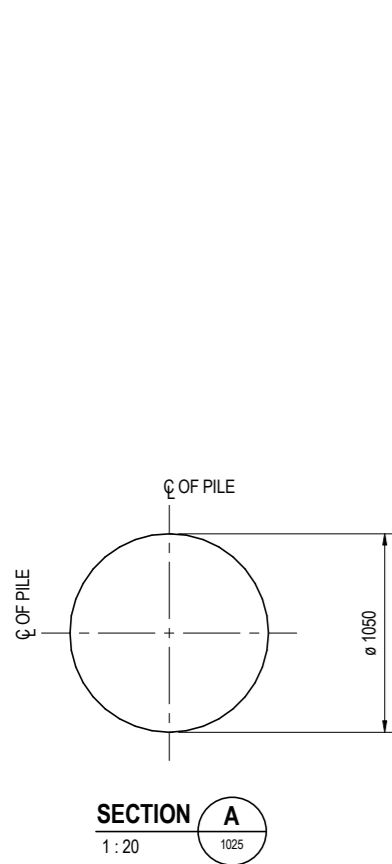
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N01031	N01031	GRB	DRG
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			BRD
			NUMBER
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			01



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01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

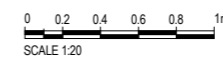
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PILE DETAILS													
PILE MARK		PILE SETOUT (m)			PILE GEOMETRY AND SOCKET DETAILS							MAXIMUM ULS DESIGN LOADS PER PILE	
LOCATION	PILE No	CHAINAGE	EASTING	NORTHING	APPROXIMATE RL OF EXISTING GROUND (mAHD)	TOP OF PILE RL 'A' (mAHD)	TOE OF PILE RL 'B' (mAHD)	LENGTH OF PILE 'L' (m)	SANDSTONE SOCKET MATERIAL STRENGTH (IS50)	SANDSTONE FOUNDING MATERIAL STRENGTH (IS50)	MINIMUM ROCK SOCKET LENGTH 'D' (m)	AXIAL (kN)	BENDING MOMENT (kNm)
ABUTMENT A	PA - 1	40 742.257	307128.745	6239863.567	13.478	12.300	-1.700	14.000	M	H	1.500	3690	2100
	PA - 2	40 743.539	307128.091	6239861.286	13.427	12.300	-1.700	14.000	M	H	1.500	3690	2100
	PA - 3	40 744.806	307127.438	6239859.006	13.375	12.300	-1.700	14.000	M	H	1.500	3690	2100
	PA - 4	40 746.052	307126.784	6239856.726	13.360	12.300	-1.700	14.000	M	H	1.500	3690	2100
	PA - 5	40 747.278	307126.130	6239854.446	13.371	12.300	-1.700	14.000	M	H	1.500	3690	2100
PIER 1	P1 - 1	40 767.950	307143.623	6239842.814	9.041	9.454	-3.500	12.954	M	H	4.000	26760	46120
PIER 2	P2 - 1	40 799.276	307167.795	6239823.437	3.893	4.677	-4.000	8.677	M	H	4.000	29870	41600
PIER 3	P3 - 1	40 830.602	307194.199	6239807.232	0.490	3.150	-6.000	9.150	M	H	5.500	29660	29460
PIER 4	P4 - 1	40 861.928	307222.420	6239794.454	2.061	3.349	-6.000	9.349	M	H	3.500	30050	35850
PIER 5	P5 - 1	40 893.254	307252.018	6239785.304	5.463	5.506	-7.000	12.506	M	H	3.500	30350	37830
ABUTMENT B	PB - 1	40 924.700	307283.105	6239783.932	12.848	12.300	-4.500	16.800	M	H	1.500	4450	1350
	PB - 2	40 924.361	307282.540	6239781.962	12.147	12.300	-4.500	16.800	M	H	1.500	4450	1350
	PB - 3	40 924.021	307281.974	6239779.991	11.261	12.300	-4.500	16.800	M	H	1.500	4450	1350
	PB - 4	40 923.678	307281.409	6239778.021	10.943	12.300	-4.500	16.800	M	H	1.500	4450	1350
	PB - 5	40 923.349	307280.844	6239776.050	10.107	12.300	-4.500	16.800	M	H	1.500	4450	1350

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1020.
- THE AXIAL LOADS AND MOMENTS PROVIDED IN TABLE 1 ARE NOT CONCURRENT, BUT ARE MAXIMUM VALUES IN EACH CASE.

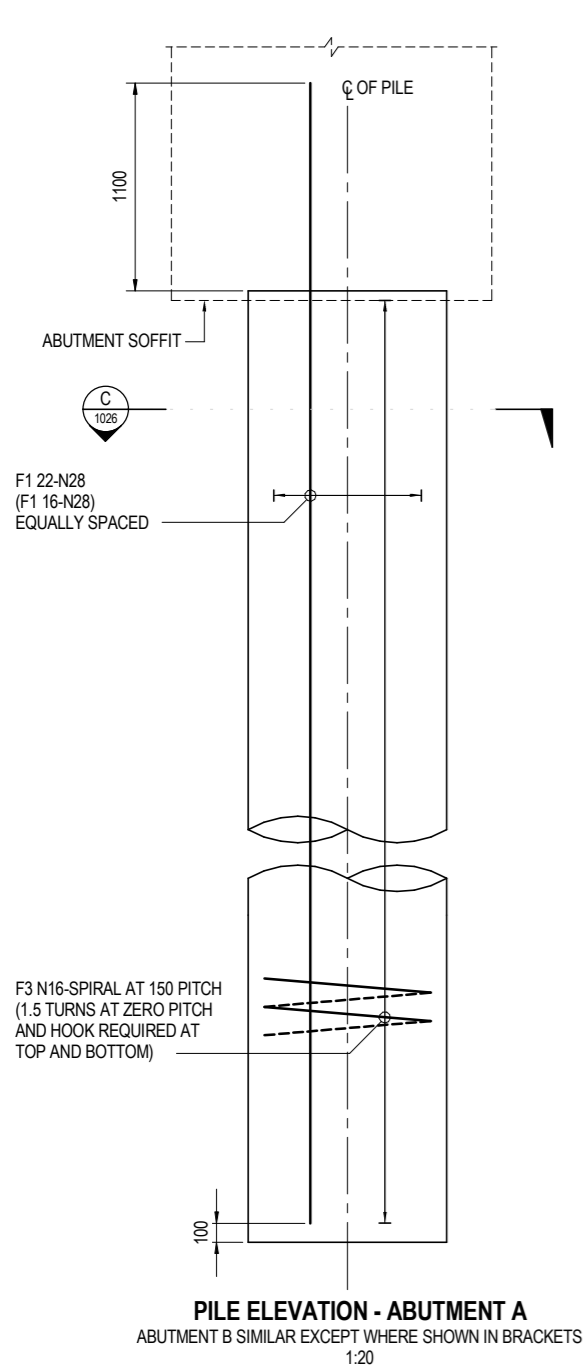


ART C DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PILE DETAILS SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
DISC	NUMBER	REV	
BRD	1025	02	

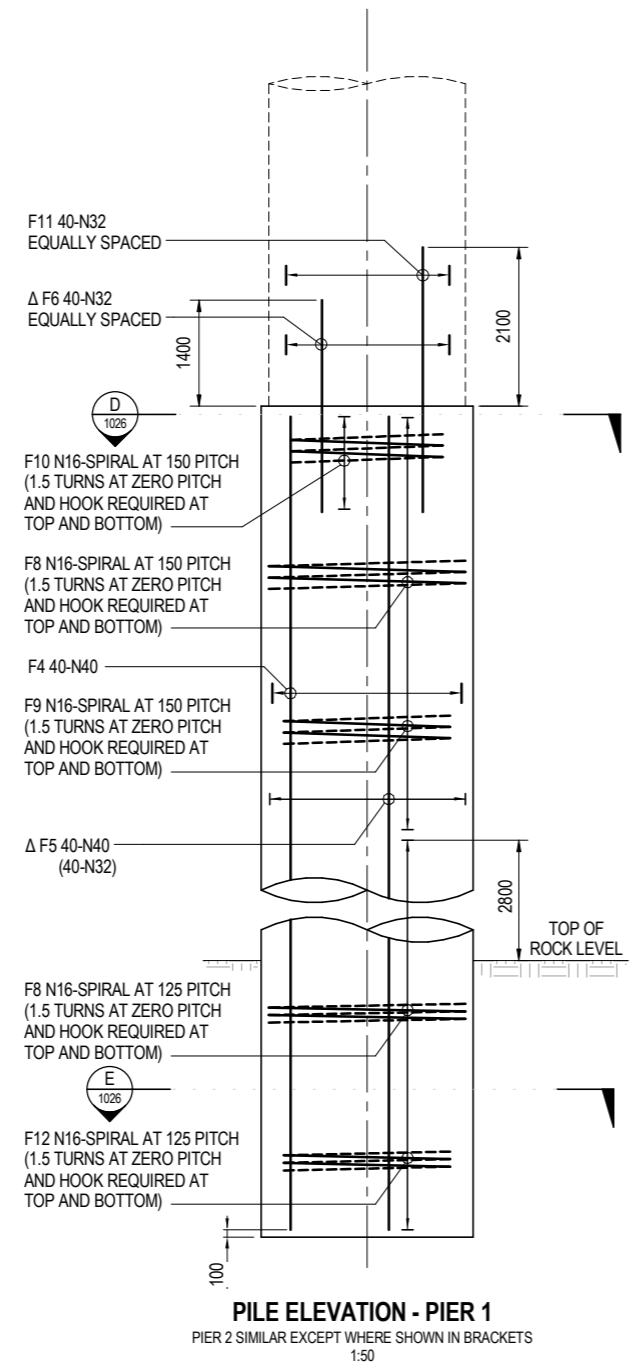
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

SCALE	SIZE
AS SHOWN	A1

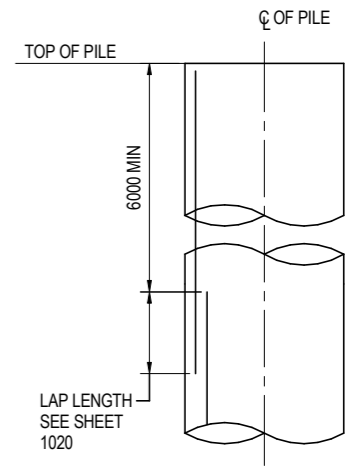
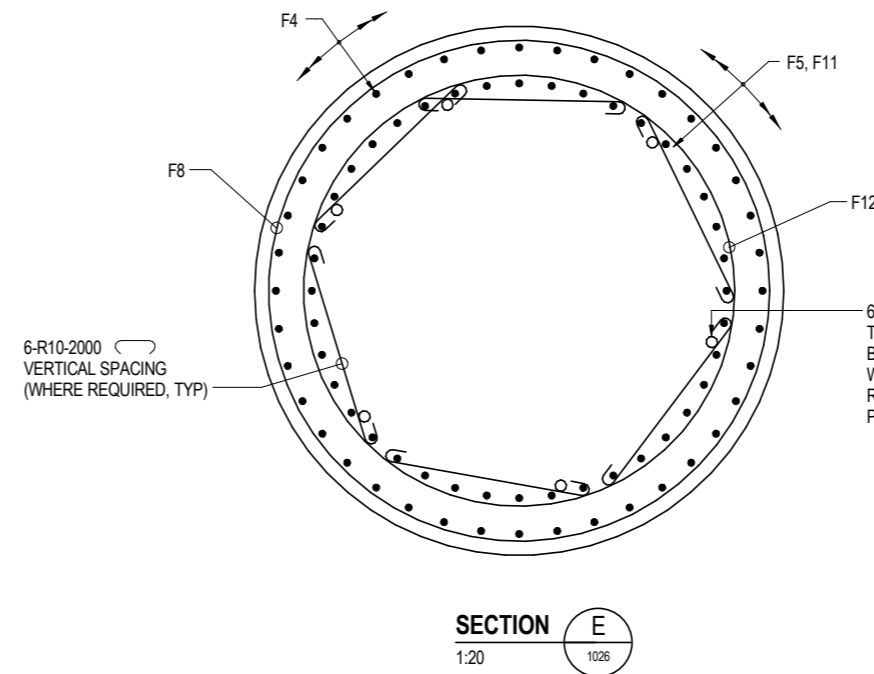
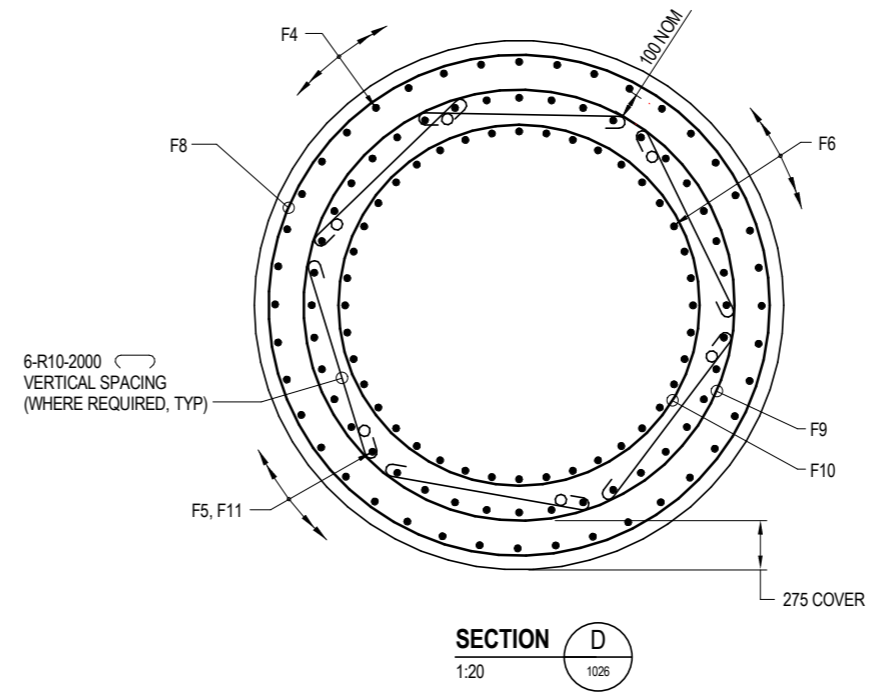
FOR CONSTRUCTION	DATE
	20.12.16



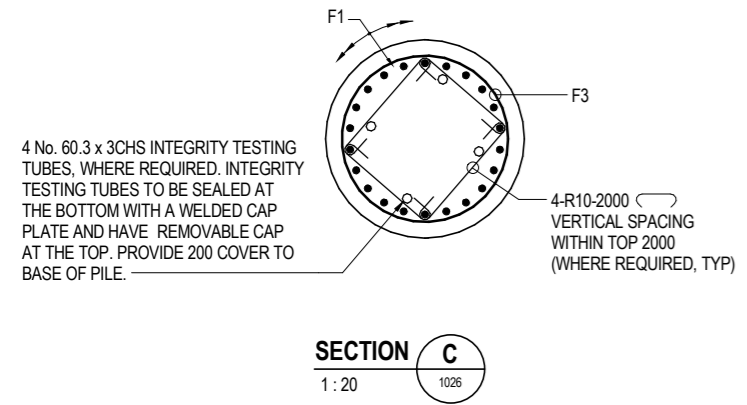
PILE ELEVATION - ABUTMENT A
 ABUTMENT B SIMILAR EXCEPT WHERE SHOWN IN BRACKETS
 1:20



PILE ELEVATION - PIER 1
 PIER 2 SIMILAR EXCEPT WHERE SHOWN IN BRACKETS
 1:50



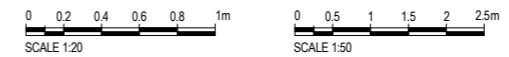
TYPICAL PILE REINFORCEMENT LAP DIAGRAM



SECTION C
 1:20

4 No. 60.3 x 3 CHS INTEGRITY TESTING TUBES, WHERE REQUIRED. INTEGRITY TESTING TUBES TO BE SEALED AT THE BOTTOM WITH A WELDED CAP PLATE AND HAVE REMOVABLE CAP AT THE TOP. PROVIDE 200 COVER TO BASE OF PILE.

- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1020.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PILE DETAILS SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
	NUMBER	REV	
	1026	01	

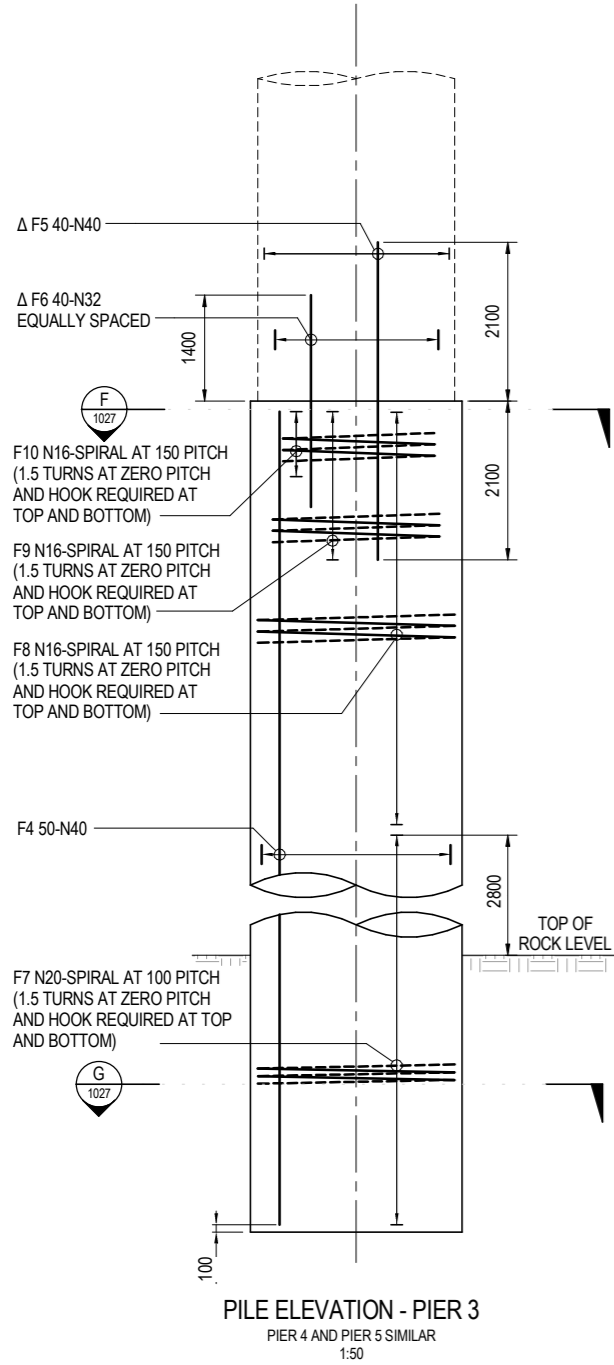
REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION

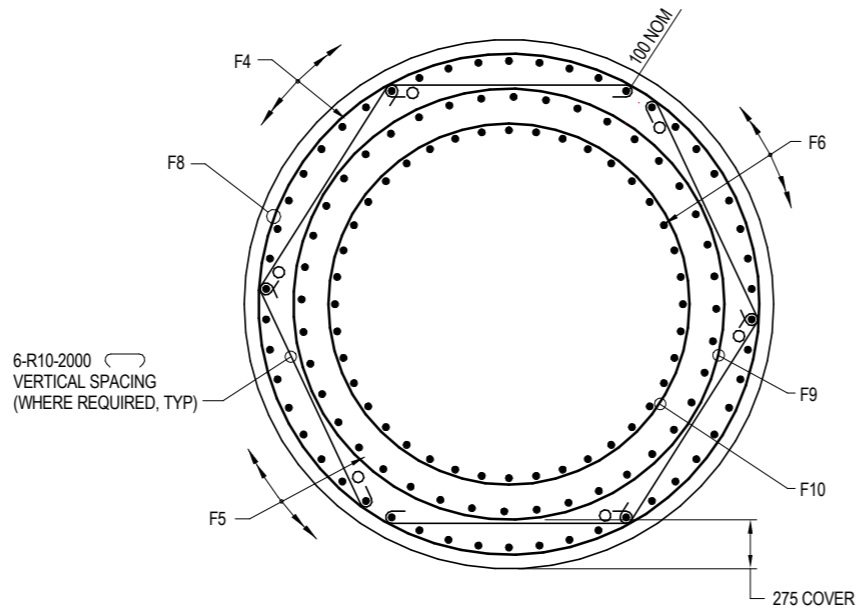
APPROVED

DATE 20.12.16

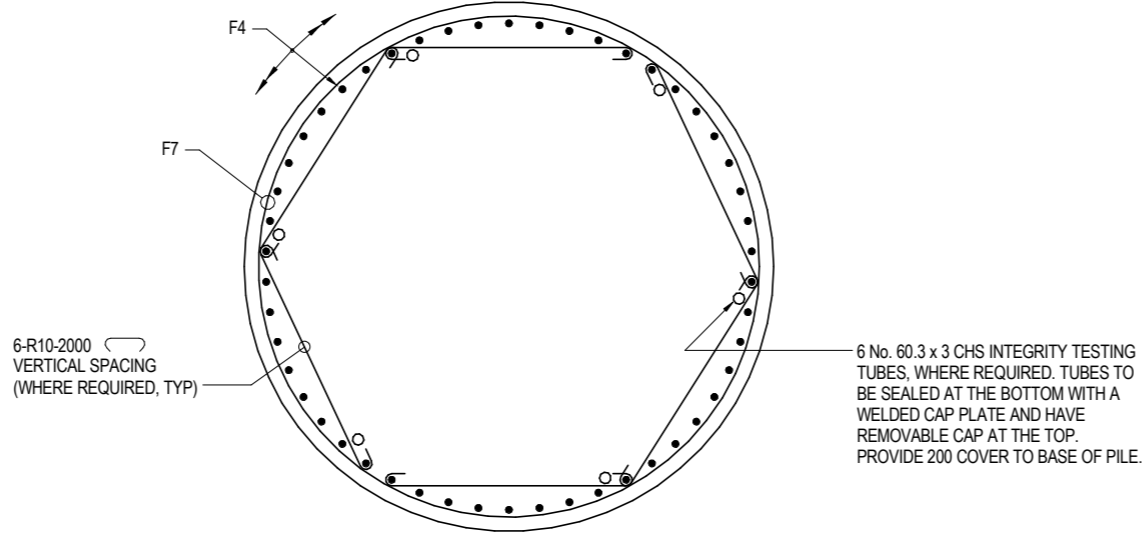




PILE ELEVATION - PIER 3
PIER 4 AND PIER 5 SIMILAR
1:50

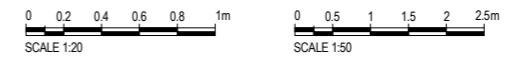


SECTION F
1:20



SECTION G
1:20

- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1020.

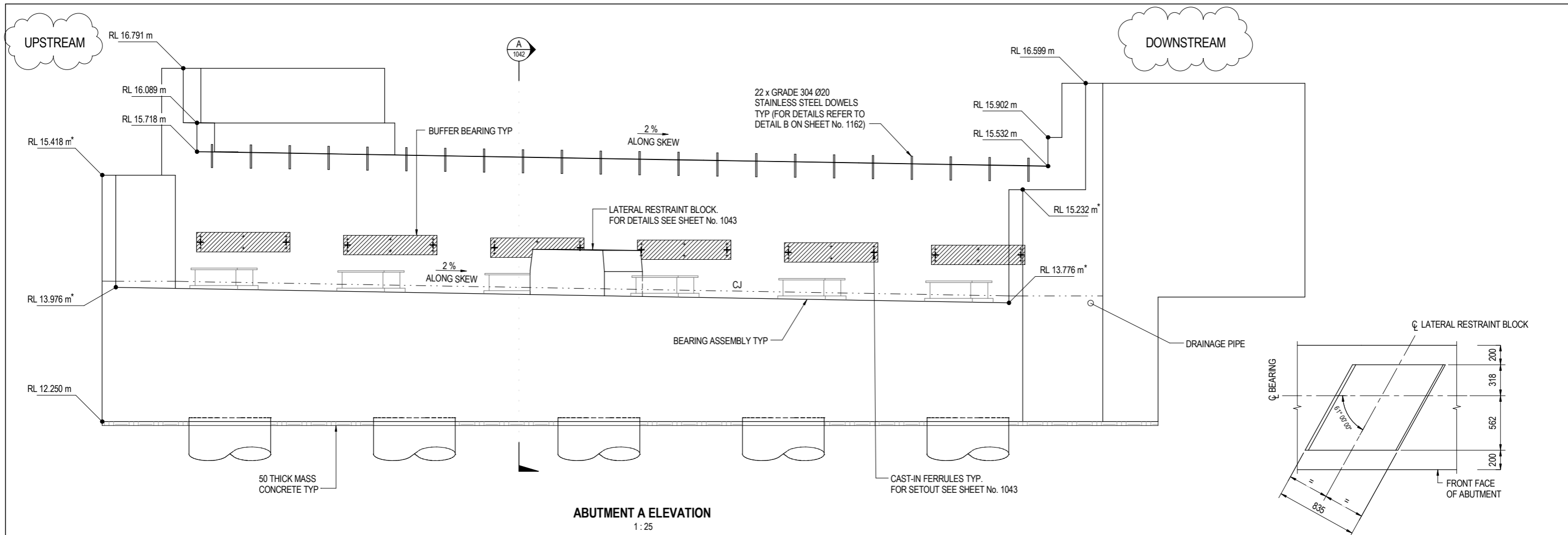


ARTG DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PILE DETAILS SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
	DISC	NUMBER	REV
	BRD	1027	01

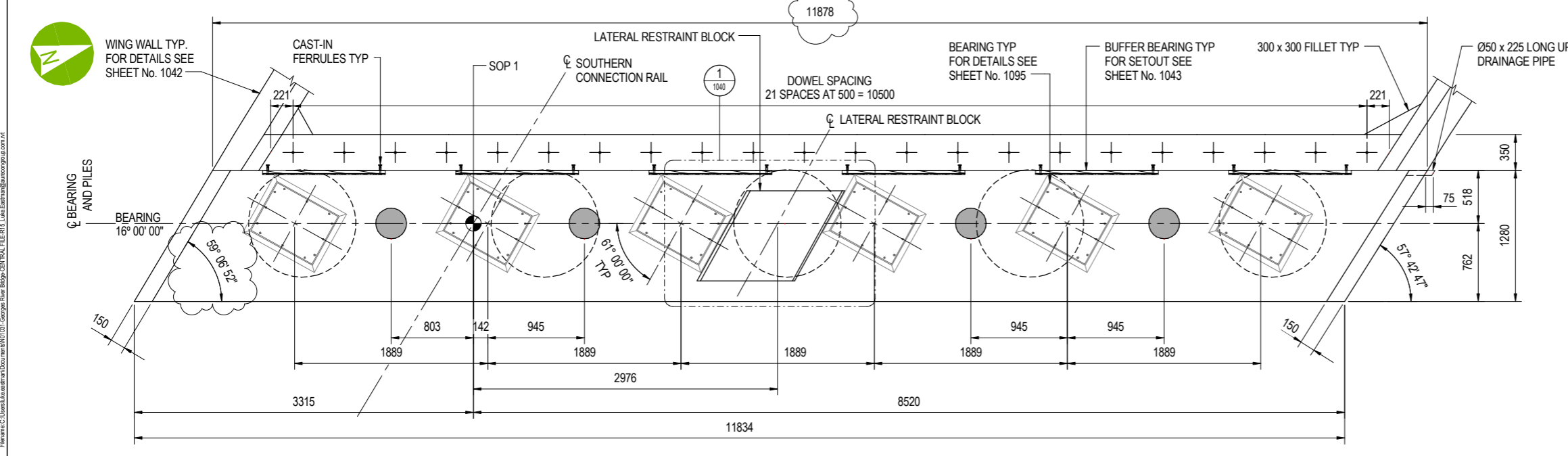
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE	FOR CONSTRUCTION
AS SHOWN	A1	





ABUTMENT A ELEVATION
1:25



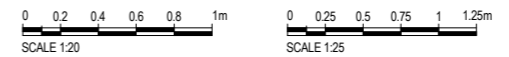
ABUTMENT A PLAN
1:25

JACKING LOADS FOR BEARING REPLACEMENT				
LOCATION	SLS (kN)	ULS (kN)	JACKING PLATE SIZE (mm)	
			ABOVE JACK	BELOW JACK
ABUTMENT A / SPAN 1	1400	1760	Ø220 x MIN 10 THICK	Ø275 x MIN 10 THICK
ABUTMENT B / SPAN 6	1760	2410	Ø275 x MIN 10 THICK	Ø275 x MIN 10 THICK

MAXIMUM ALLOWABLE ULS CONTACT PRESSURE SHALL BE 48MPa BETWEEN THE JACK AND THE CROSS-GIRDER.
 MAXIMUM ALLOWABLE ULS CONTACT PRESSURE SHALL BE 48MPa BETWEEN THE JACK AND THE SUBSTRUCTURE.
 MINIMUM JACKING PLATE THICKNESS HAS BEEN DETERMINED ASSUMING JACK BASE AND SADDLE DIAMETERS ARE GREATER THAN OR EQUAL TO THOSE FOR THE JACK SPECIFIED IN APPENDIX D OF THE DESIGN REPORT.

GENERAL NOTES

- SCALE AS SHOWN
- CONCRETE EXPOSURE CLASSIFICATION: B1
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF ALL CONCRETE SHALL BE 40MPa.
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASS CONCRETE SHALL BE 20MPa.
- EDGES SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLETED 20 x 20 UNLESS SPECIFIED OTHERWISE.
- ALL STAINLESS STEEL DOWELS SHALL BE GRADE 304 TO ASTM A276.
- NCF DENOTES NO CHAMFER OR FILLET.
- SOP DENOTES SETOUT POINT. FOR SETOUT DIMENSIONS SEE SHEET No. 1020.
- CJ DENOTES CONSTRUCTION JOINT.
- ALL STAINLESS STEEL COMPONENTS SHALL BE GRADE 304 CONFORMING TO ASTM A276 UNLESS NOTED OTHERWISE.
- * DENOTES RL TAKEN ON FRONT FACE OF HEADSTOCK.
- DENOTES TEMPORARY JACKING POSITIONS FOR BEARING REPLACEMENT.



N/A ARTC DRAWING No. N/A TNSW EDMS No.



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

APPROVED

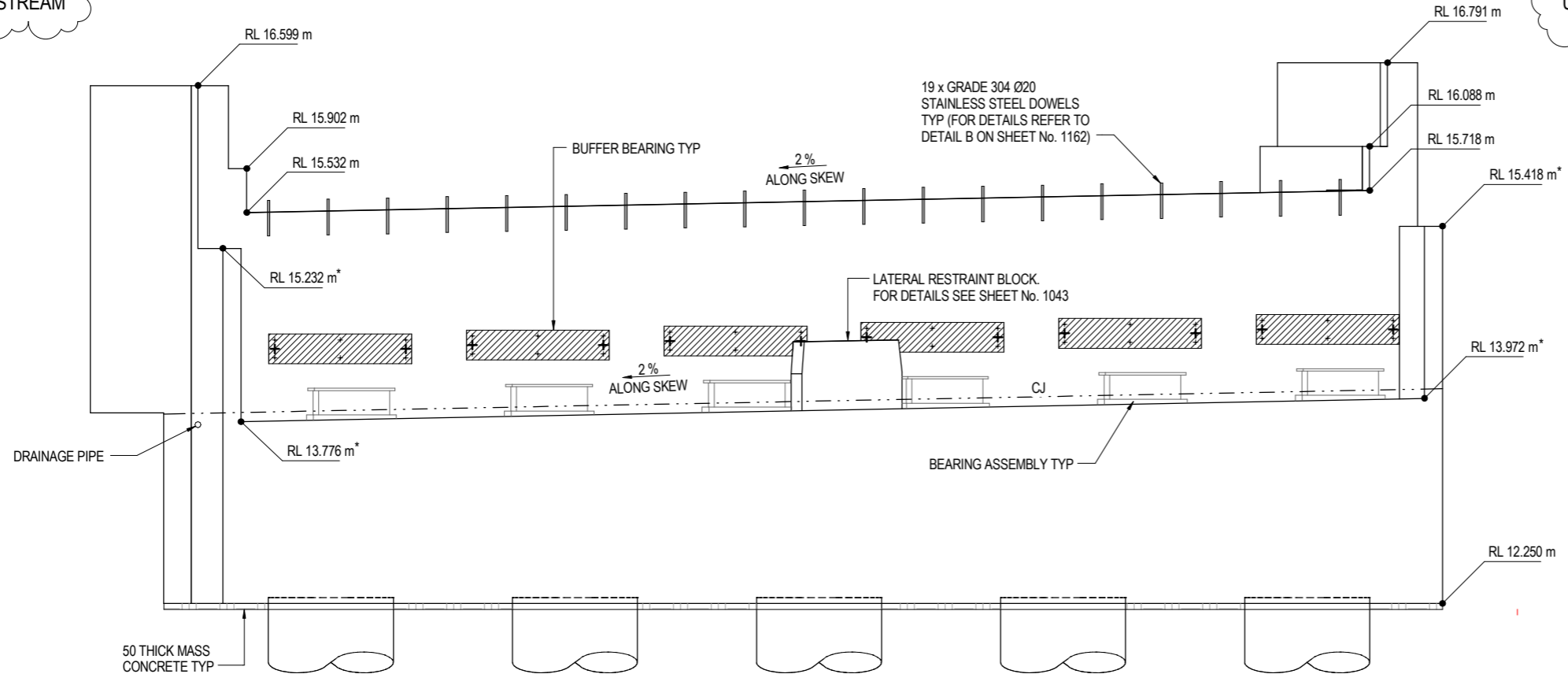
DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1				
TITLE	GEORGES RIVER BRIDGE ABUTMENT CONCRETE SHEET A				
DRAWING No.	PROJECT No.	WBS	TYPE	DISC	NUMBER
N01031	N01031	GRB	DRG	BRD	1040
					REV
					02

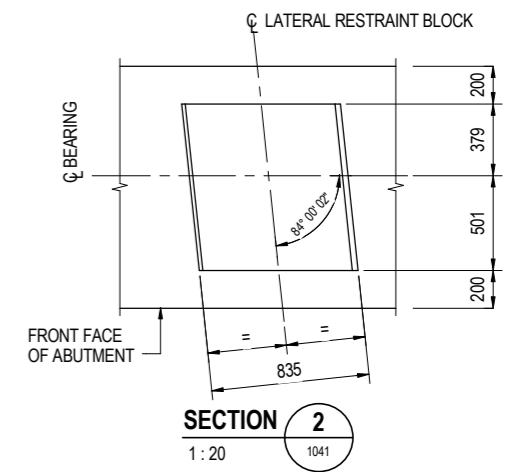
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 Plot Date: 22/02/2017 9:10:18 AM
 Office:

DOWNSTREAM

UPSTREAM



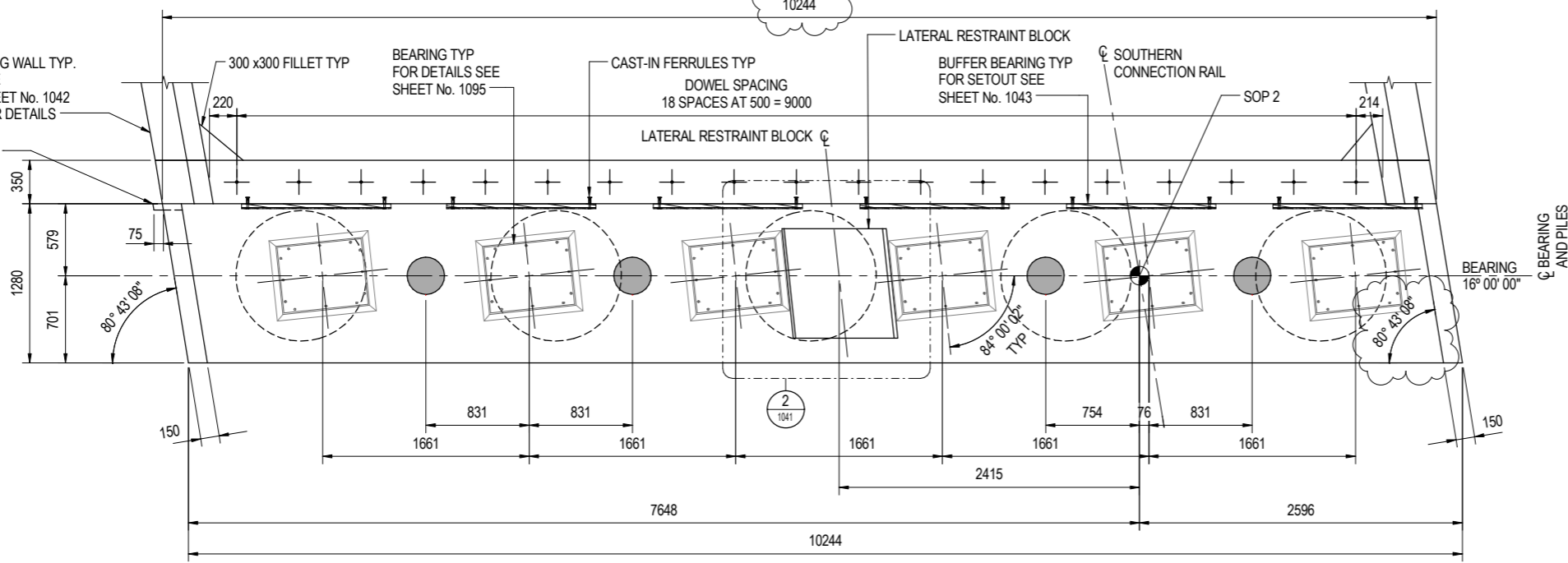
ABUTMENT B ELEVATION
1 : 25



SECTION 2
1 : 20



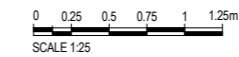
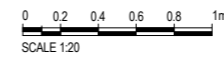
WING WALL TYP. SEE SHEET No. 1042 FOR DETAILS
Ø50 x 225 LONG UPVC DRAINAGE PIPE



ABUTMENT B PLAN
1 : 25

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1040.



ARTC DRAWING No	TNSW EDMS No
N/A	N/A



REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
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02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS		

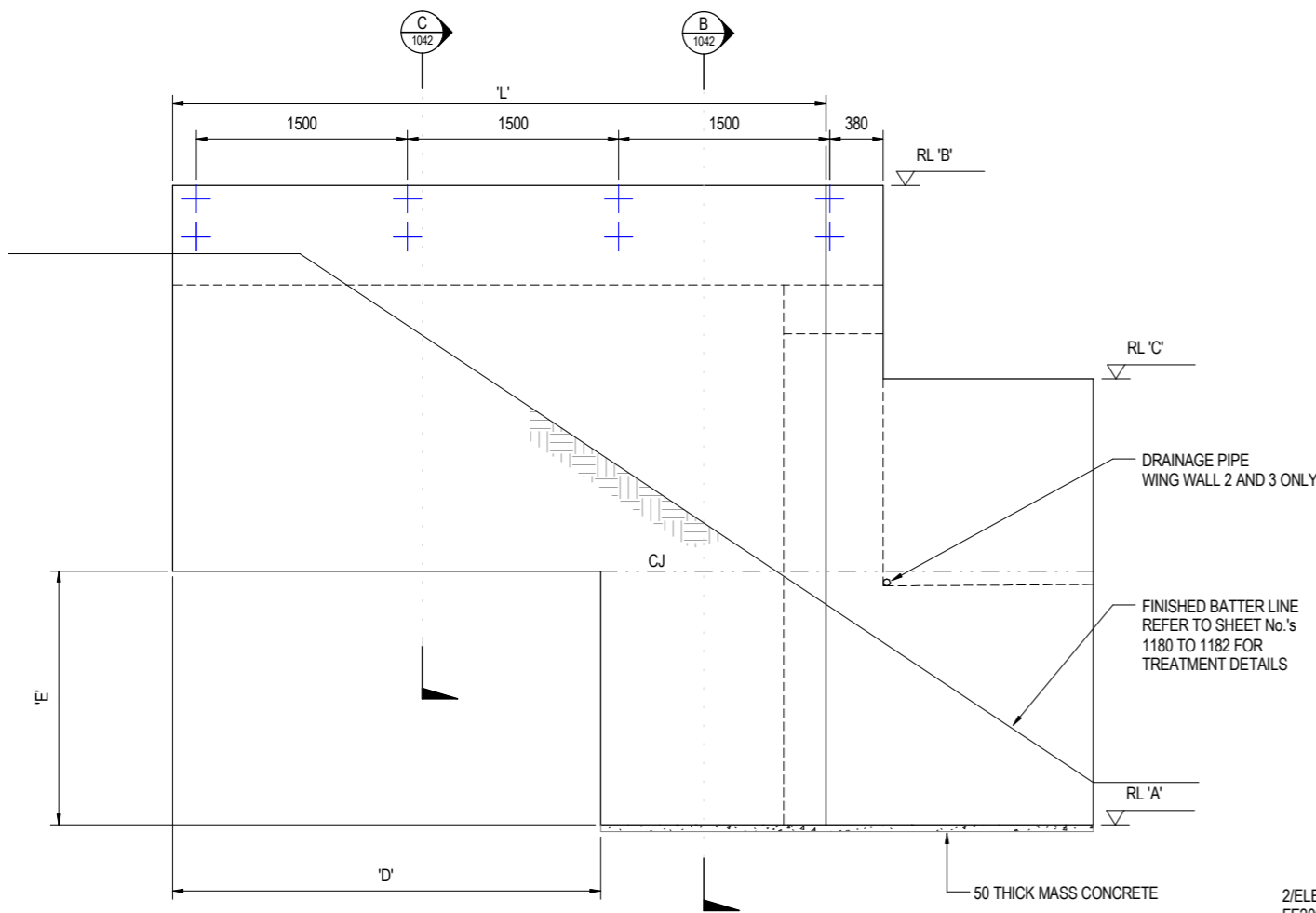
FOR CONSTRUCTION

APPROVED

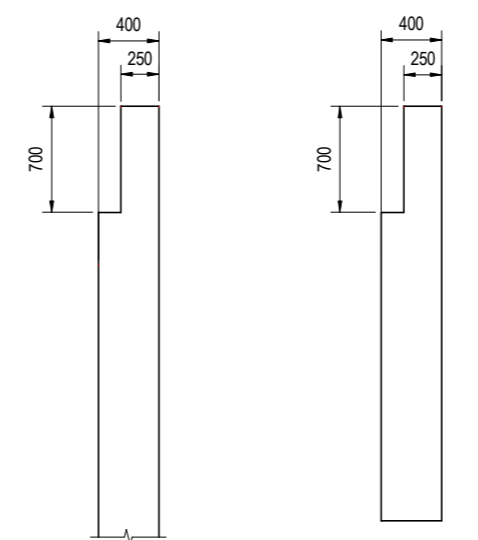
DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1				
TITLE	GEORGES RIVER BRIDGE ABUTMENT CONCRETE SHEET B				
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER
N01031	-	GRB	-	DRG	-
				BRD	-
					1041
					-
					02

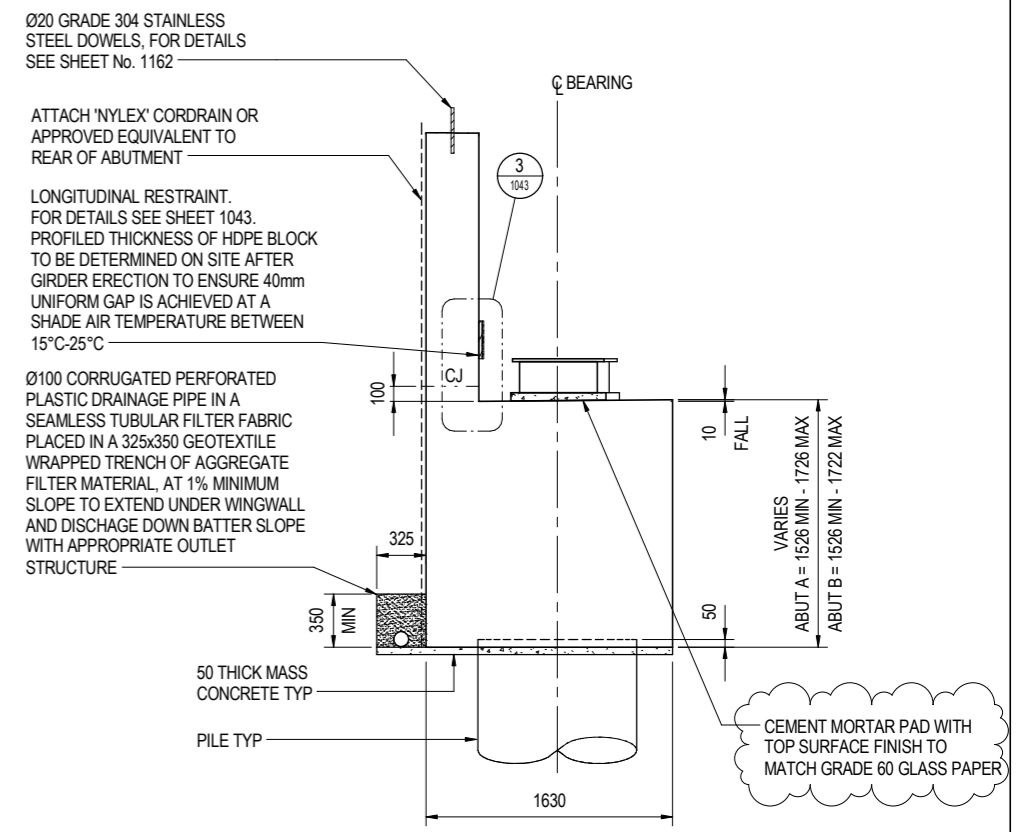
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 Plot Date: 22/02/2017 9:10:25 AM Office



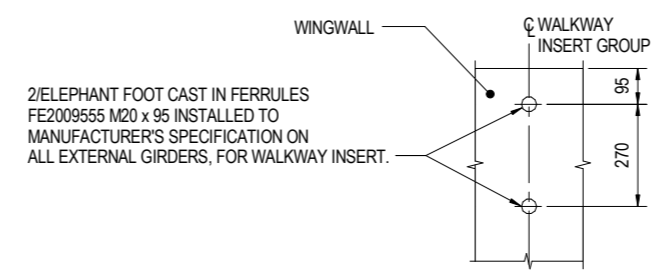
WING WALL ELEVATION
1 : 25
ABUTMENT A SHOWN
ABUTMENT B SIMILAR



SECTION B 1 : 25
SECTION C 1 : 25

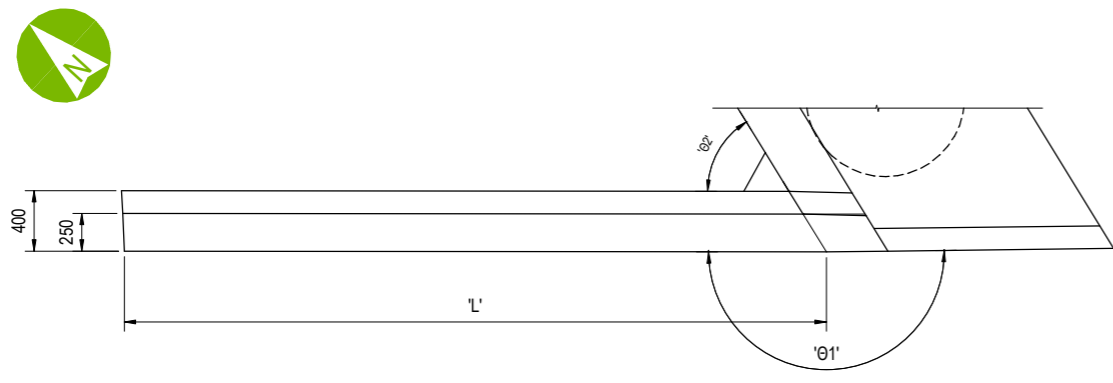


SECTION A 1 : 25
ABUTMENT A SHOWN
ABUTMENT B SIMILAR

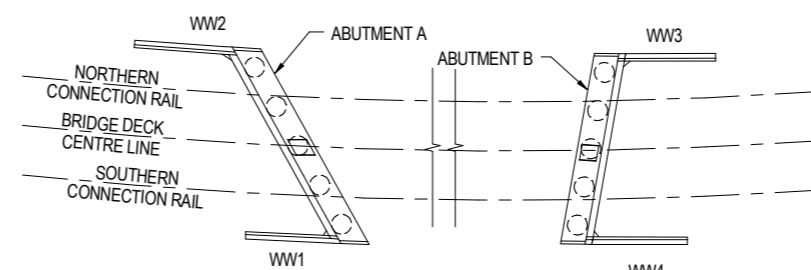


WALKWAY CONNECTION DETAIL
1 : 10

1. PROVISION IS FOR WALKWAY ON DOWNSTREAM SIDE OF BRIDGE.
2. PRESS FIT PLASTIC PLUGS REQUIRED FOR EACH INSERT, TO BE REMOVED UPON WALKWAY ERECTION AND ALSO TO REMAIN IN UNUSED INSERTS.



WING WALL PLAN
1 : 25
ABUTMENT A SHOWN
ABUTMENT B SIMILAR



WING WALL MARKING PLAN
1 : 200

LOCATION	WING WALL No.	'L' (mm)	'D' (mm)	'E' (mm)	'01'	'02'	RL 'A' (m)	RL 'B' (m)	RL 'C' (m)
ABUTMENT A	WW1	5050	3450	1800	180°47'29"	58°19'23"	12.250	16.791	15.418
	WW2	4750	3450	1600	479°06'20"	123°10'53"	12.250	16.599	15.232
ABUTMENT B	WW3	4750	3450	1600	179°01'19"	100°15'32"	12.250	16.599	15.232
	WW4	5050	3450	1800	180°39'57"	80°03'12"	12.250	16.791	15.418

GENERAL NOTES

1. SCALE AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1040.
3. + DENOTES LOCATION OF THRU BOLTS FOR WALKWAY SUPPORTS ON WW2 AND WW3 ONLY.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE ABUTMENT CONCRETE SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
	DISC	BRD	
	NUMBER	1042	
	REV		02



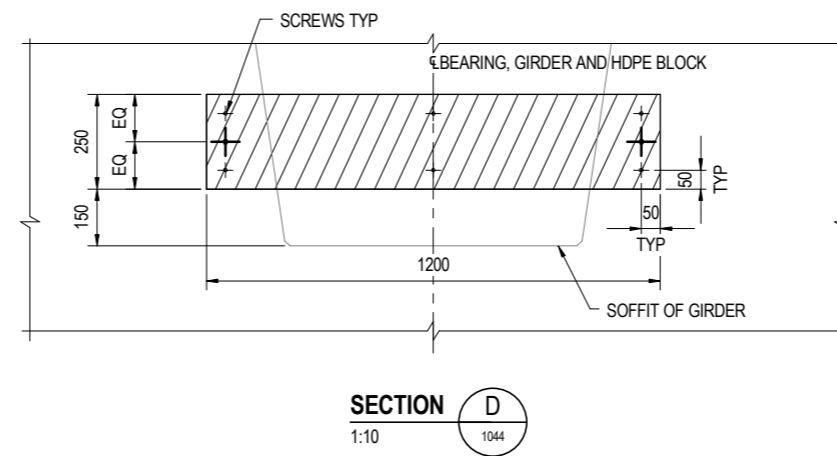
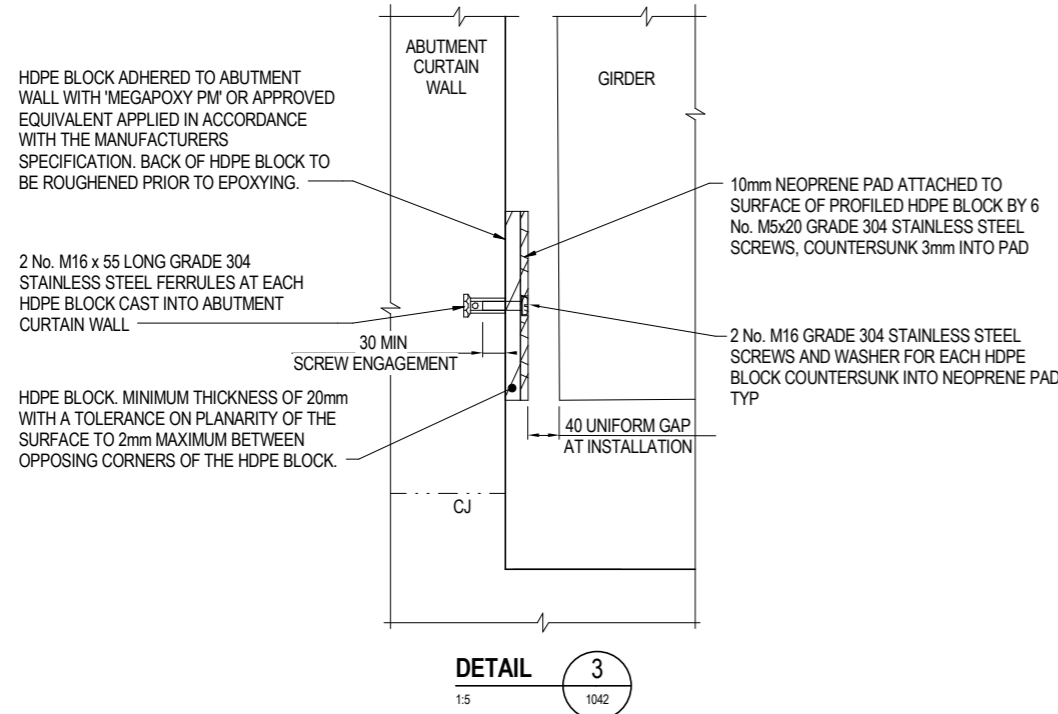
REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
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02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS		

FOR CONSTRUCTION

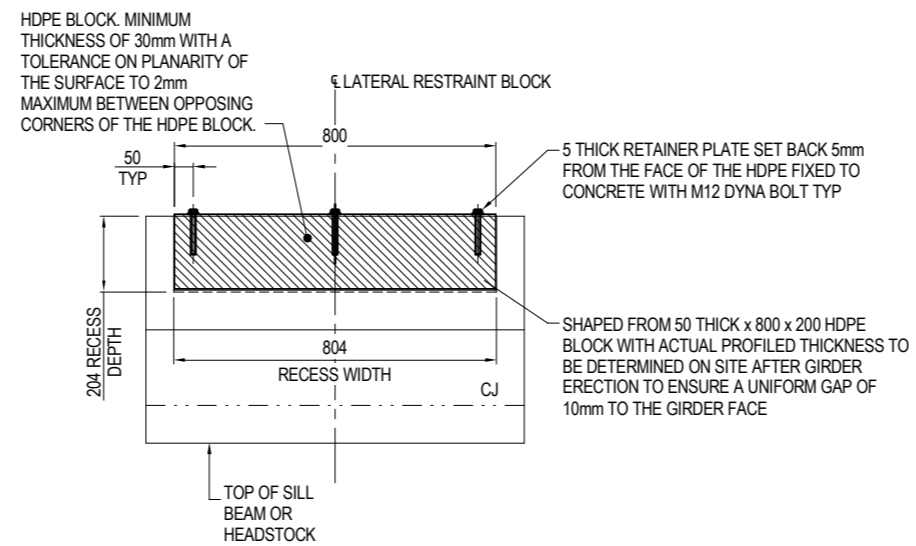
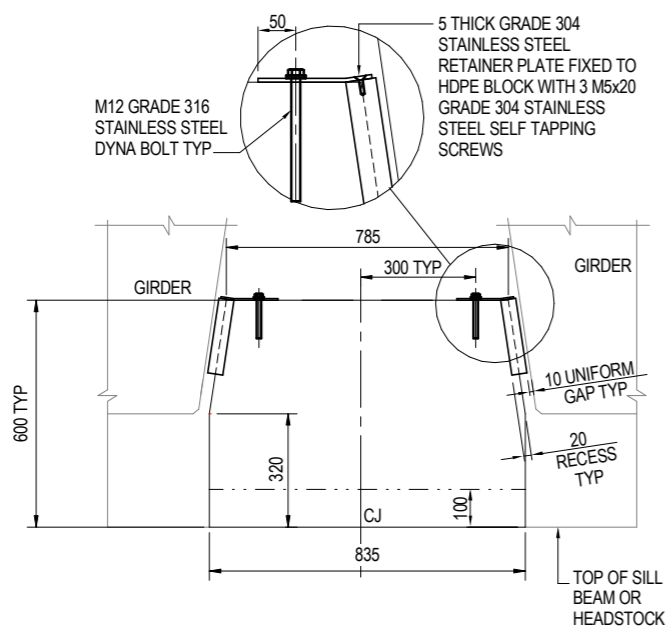
APPROVED

DATE 20.12.16

File name: C:\Users\jacob@arcadis\Documents\10101_Georges River Bridge_CENTRAL_FILE_015_Lake Eschard\arcadis\10101031.dwg
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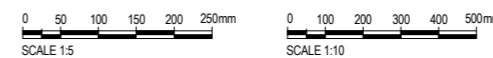
LONGITUDINAL RESTRAINT DETAIL
1:10



LATERAL RESTRAINT BLOCK DETAIL
1:10

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1040.

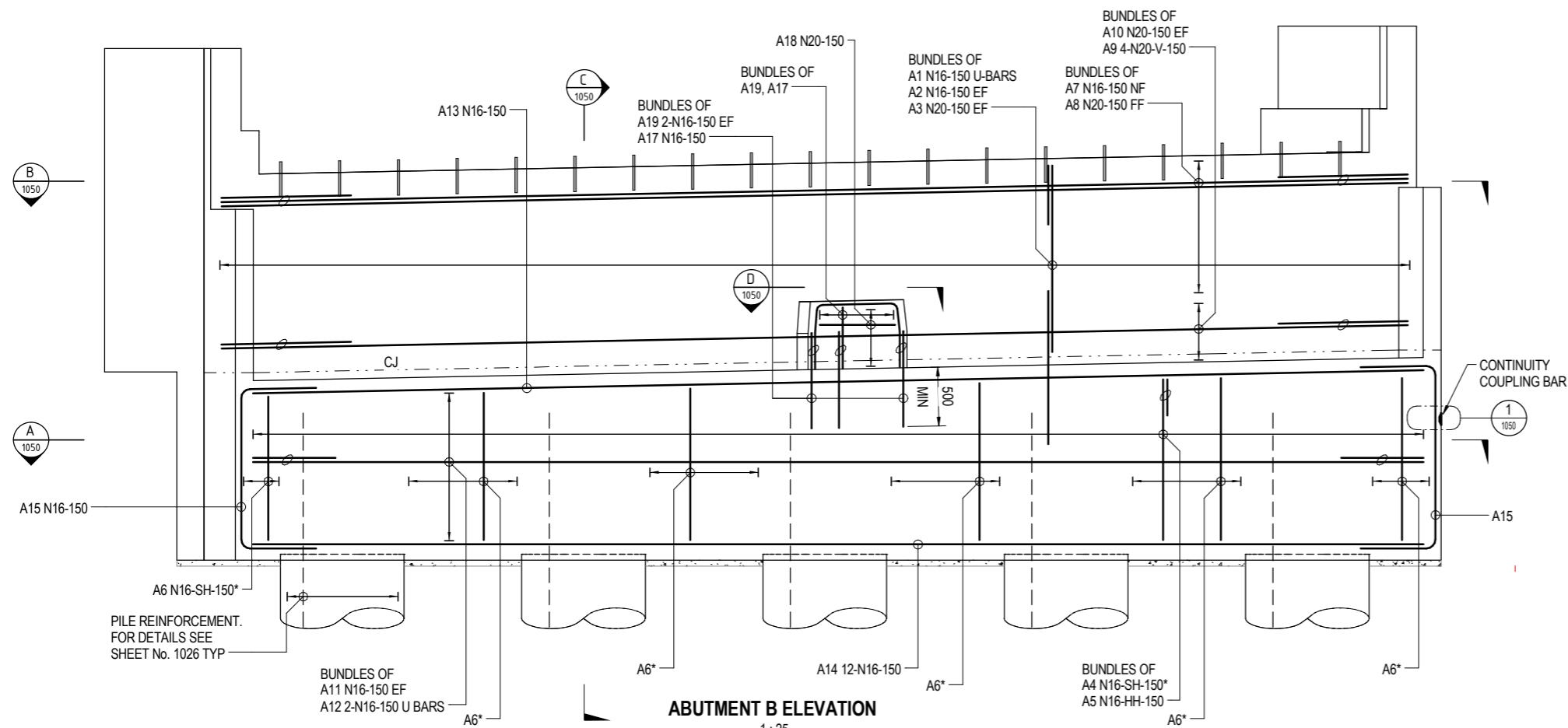


ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE ABUTMENT CONCRETE SHEET D		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1043	01		

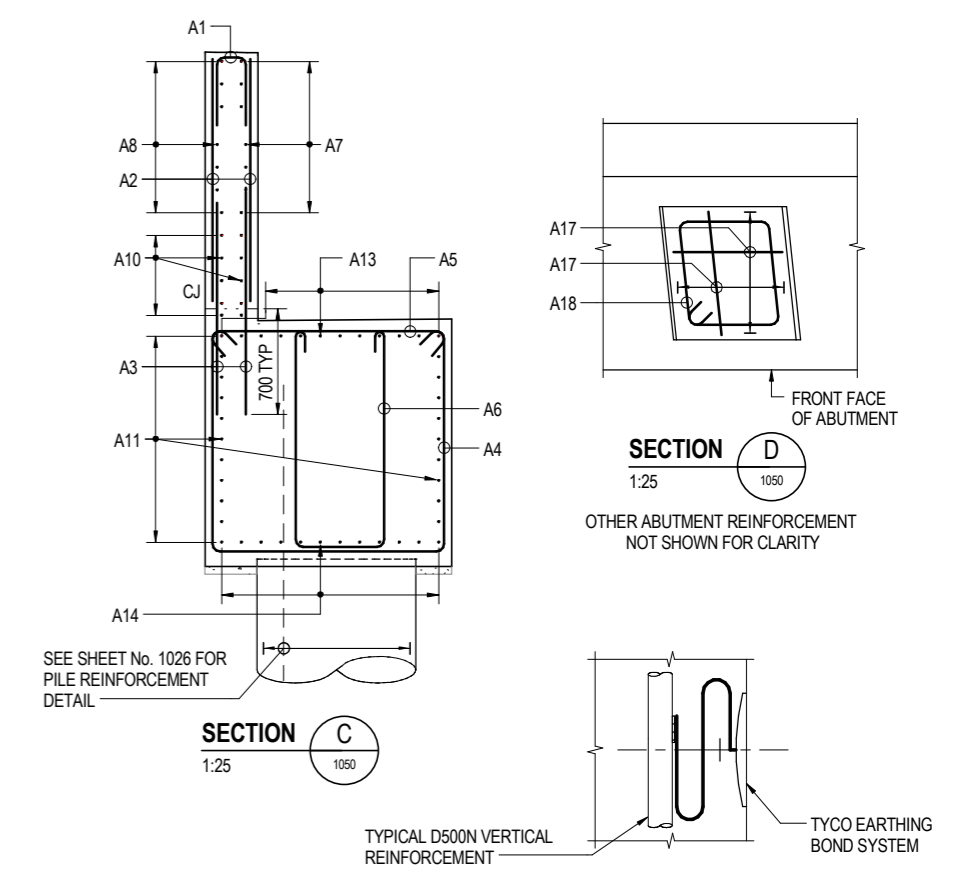
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16



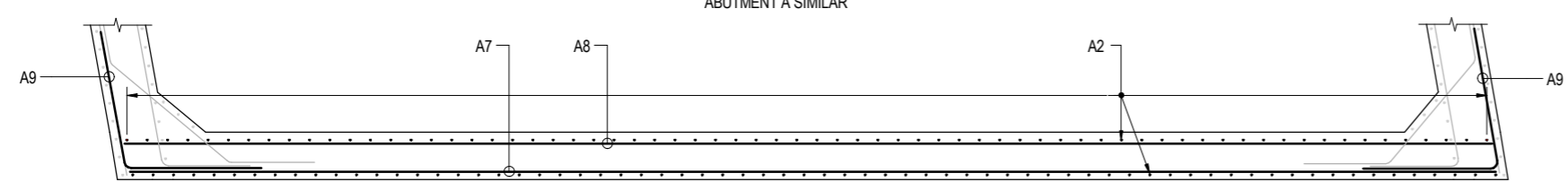
ABUTMENT B ELEVATION
1:25
WINGWALL REINFORCEMENT NOT SHOWN FOR CLARITY
ABUTMENT A SIMILAR



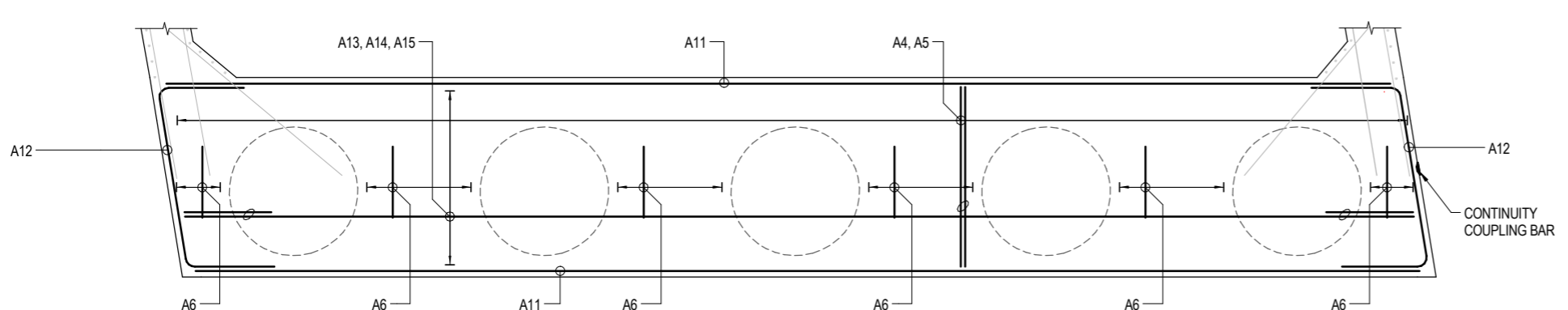
SECTION C
1:25

SECTION D
1:25

DETAIL 1
1:5



SECTION B
1:25



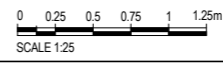
SECTION A
1:25

GENERAL NOTES

- SCALE AS SHOWN
 - NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE 40mm.
 - REINFORCEMENT SHALL BE GRADE D500N IN ACCORDANCE WITH AS/NZS 4671.
 - UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE:
- | BAR SIZE: | N12 | N16 | N20 | N24 |
|--|-----|-----|-----|------|
| a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR | 475 | 625 | 850 | 1175 |
| b) OTHER BARS | 350 | 500 | 675 | 900 |
- CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER
 - REINFORCEMENT MAY BE DISPLACED SLIGHTLY WHERE NECESSARY TO CLEAR STAINLESS STEEL DOWELS AND PILE STARTER BARS - AS SHOWN ON SHEET 1026.
 - * DENOTES VARIABLE LENGTH BAR
 - EF DENOTES EACH FACE
 - FF DENOTES FAR FACE
 - NF DENOTES NEAR FACE

ELECTRICAL BONDING AND ISOLATION REQUIREMENTS

- ALL ABUTMENT AND PILE REINFORCEMENT SHALL BE TACK WELDED TO DEVELOP AN ELECTRONICALLY CONNECTED CAGE AND CONNECTED TO THE COLUMN REINFORCEMENT AND ELECTRICAL CONNECTION POINT.
- THE ELECTRICAL CONNECTIVITY OF ALL REINFORCEMENT AND FITMENTS SHALL BE DEMONSTRATED IN ACCORDANCE WITH AS2832.5 PRIOR TO POURING OF CONCRETE.
- TACK WELDING OF REINFORCING STEEL SHALL COMPLY WITH AS1554.3.
- ELECTRICAL TEST POINT TO BE WELDED TO STRUCTURAL STEEL VIA 70mm² CSA COPPER CABLE AND PROVIDED AT AN ACCESSIBLE LOCATION AT THE BASE OF EACH PIER.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE ABUTMENT REINFORCEMENT SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1050	01		

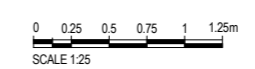
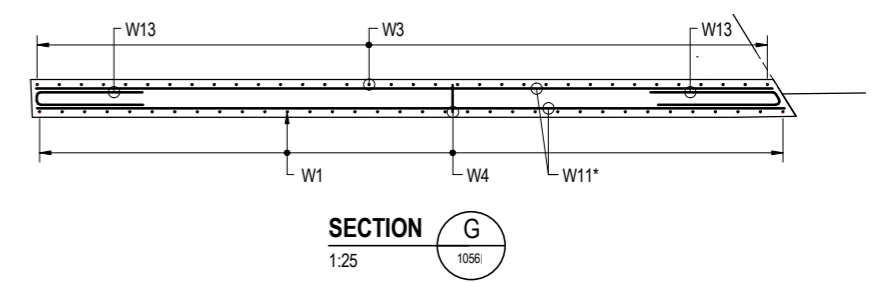
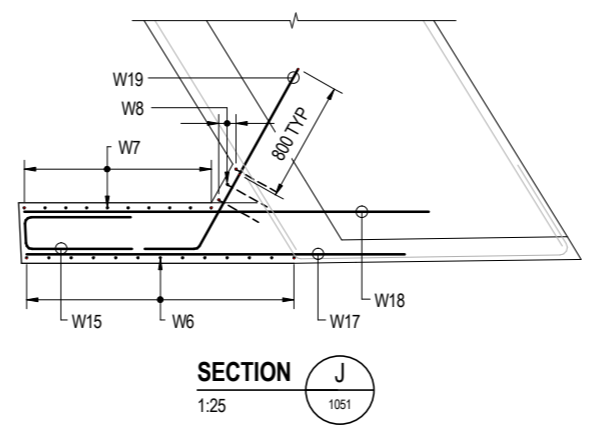
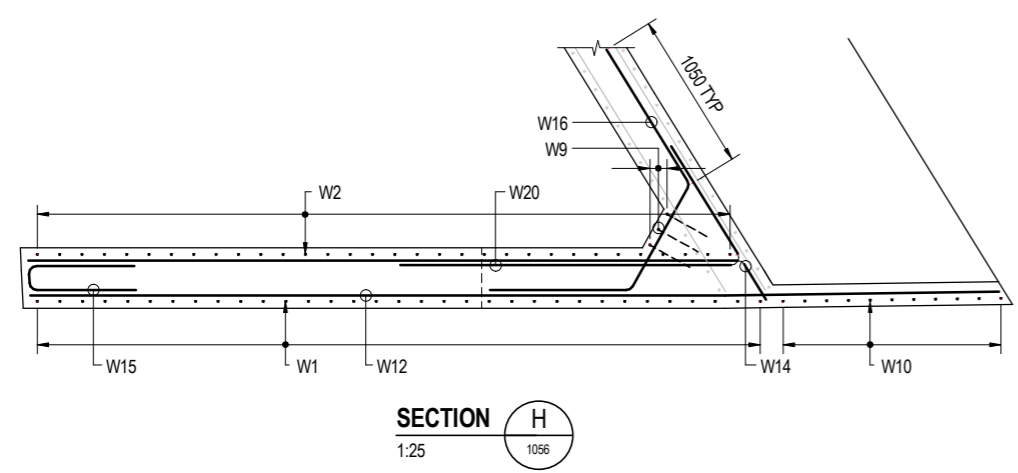
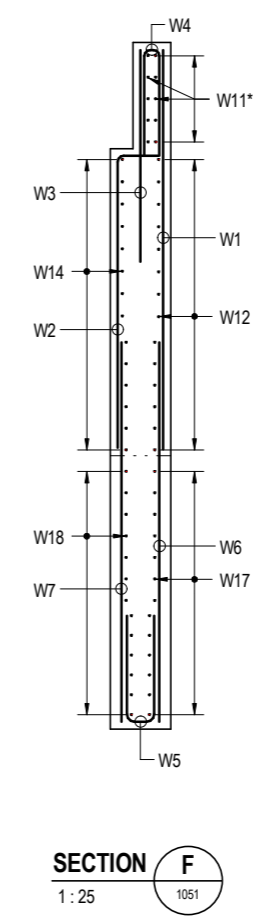
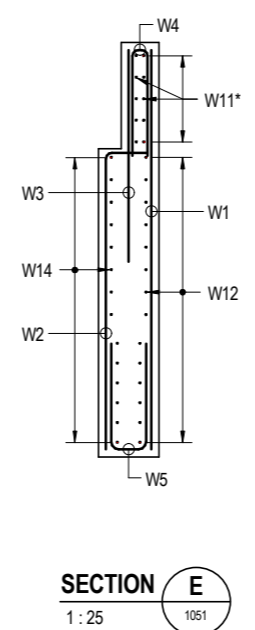
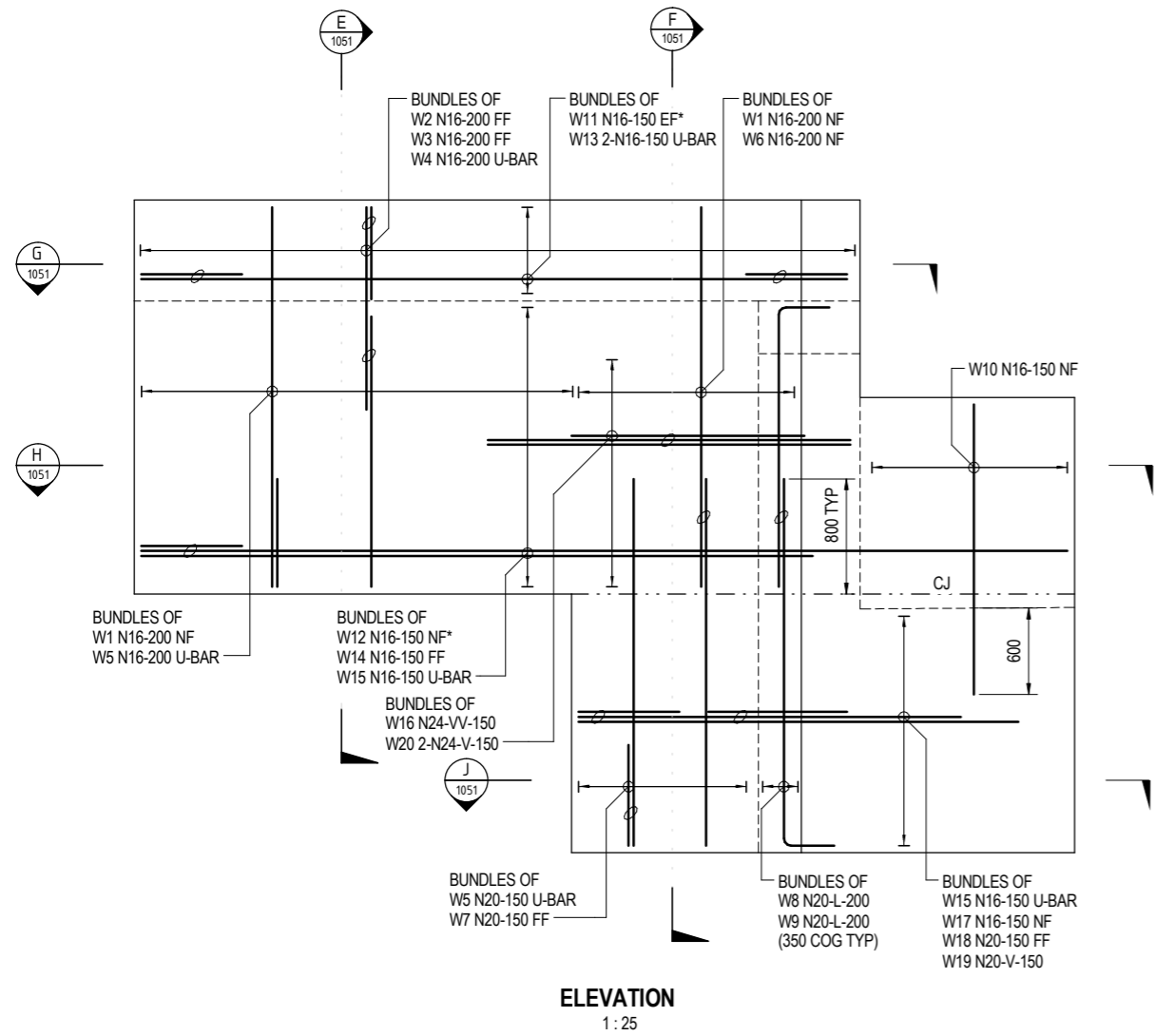


REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION	APPROVED
	DATE 20.12.16

File Name: C:\Users\j\Documents\1031 Georges River Bridge_Civil\RAI\File 015 - RAI\Sheet A1.dwg
 Plot Date: 19/12/2016 15:43:24 Office

File Name: C:\Users\j\Documents\1051 Georges River Bridge\CD\TRIAL FILES\15 Rlp\abutment.mxd
 Plot Date: 19/12/2016 1:58:51 PM Office:



GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1050.



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

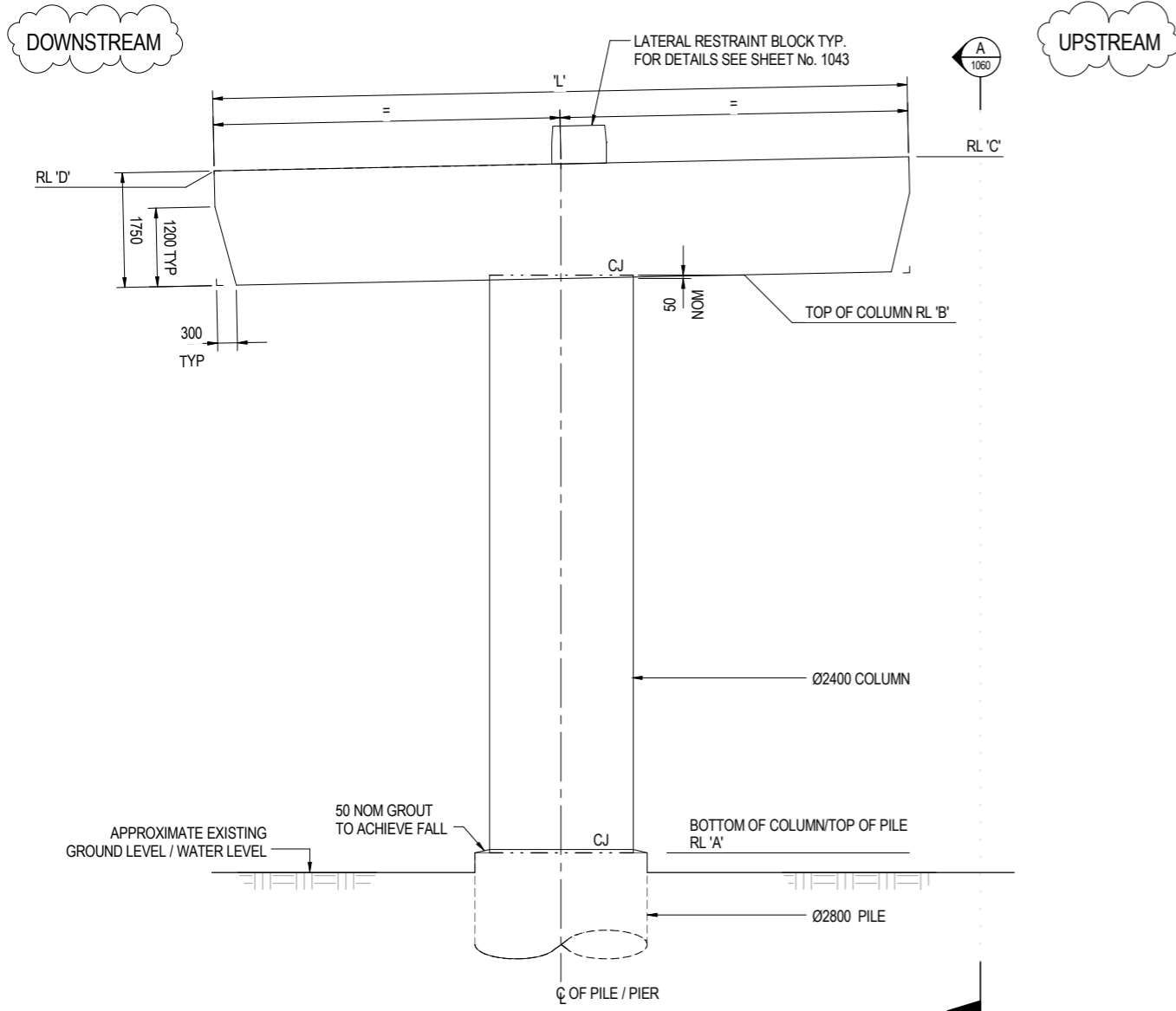
SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

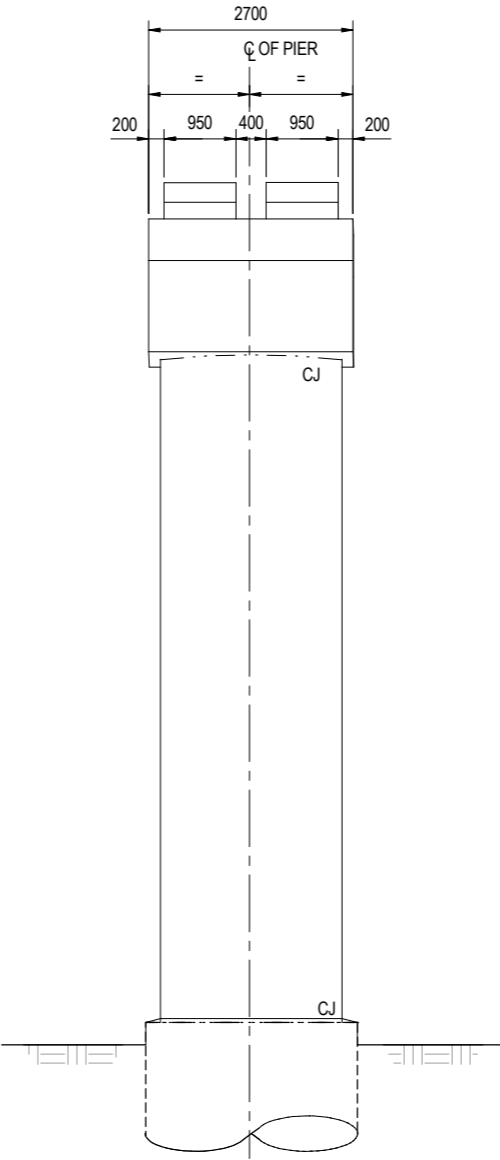
APPROVED

DATE: 20.12.16

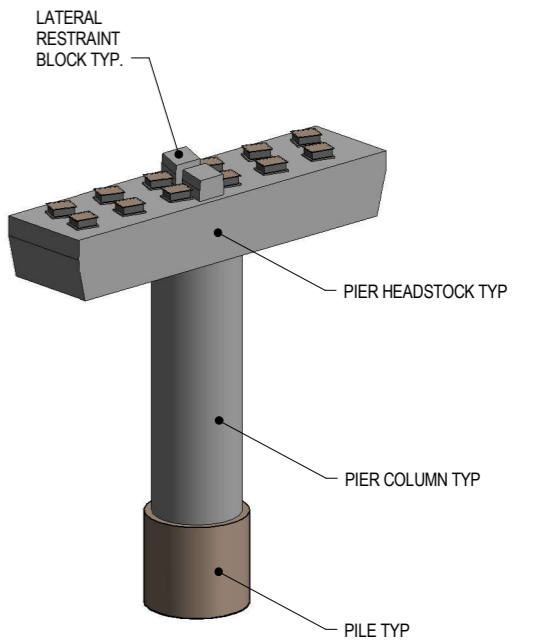
ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE ABUTMENT REINFORCEMENT SHEET B		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031		GRB	DRG - BRD
NUMBER	REV		
1051	01		



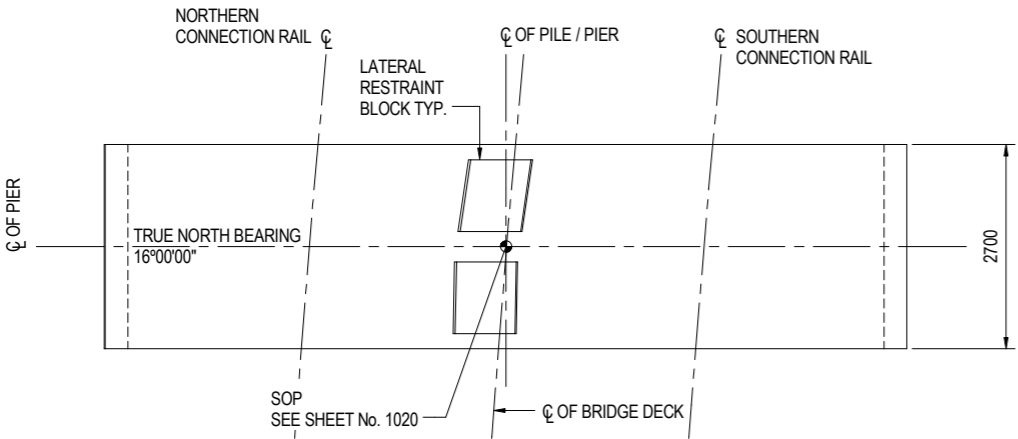
ELEVATION
1:50
FOR 'A', 'B', 'L' AND 'b' VALUES SEE TABLE



SECTION A
1:50



3D VIEW

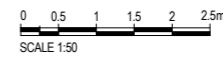


PLAN
1:50

PIER DETAILS					
LOCATION	RL 'A' (m)	RL 'B' (m)	RL 'C' (m)	RL 'D' (m)	L' (mm)
PIER 1	9.454	12.165	13.761	13.969	11200
PIER 2	4.677	12.165	13.757	13.973	11200
PIER 3	3.150	12.165	13.760	13.970	10600
PIER 4	3.349	12.165	13.758	13.972	10600
PIER 5	5.506	12.165	13.760	13.970	10600

GENERAL NOTES

- SCALE AS SHOWN.
- CONCRETE EXPOSURE CLASSIFICATION: B1.
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
- EDGES SHALL BE CHAMFERED 20 x 20 UNLESS SPECIFIED OTHERWISE.
- REDUCED LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.
- FOR SETOUT OF PIER STRUCTURES SEE SHEET No. 1020.
- CJ DENOTES CONSTRUCTION JOINT.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PIER CONCRETE SHEET A		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031	-	GRB	DRG - BRD
NUMBER	REV		
1060	- 02		

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 Plot Date: 22/02/2017 9:11:08 AM Office:

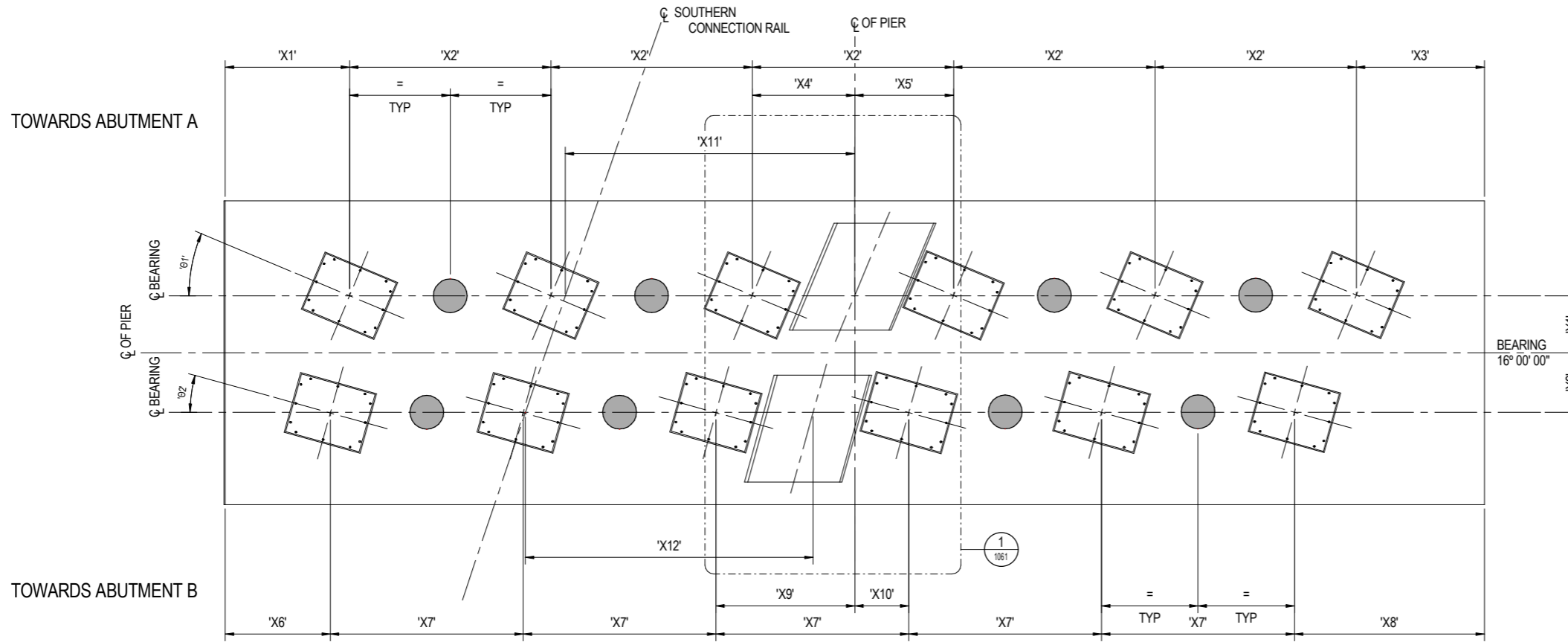


REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS		

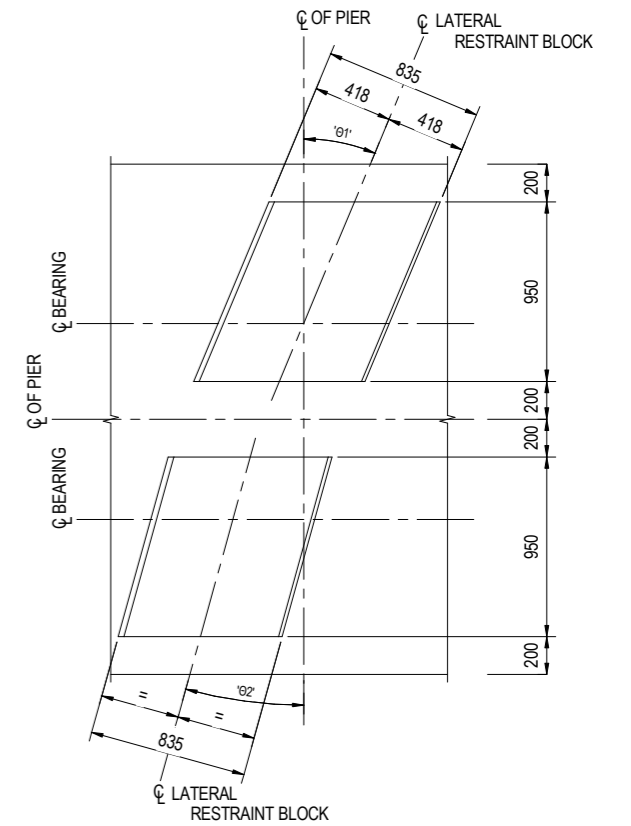
FOR CONSTRUCTION

APPROVED

DATE 20.12.16



HEADSTOCK BEARING PLAN
1 : 25



SECTION 1
1 : 20

PIER No.	P-1		P-2		P-3		P-4		P-5	
	SPAN 1	SPAN 2	SPAN 2	SPAN 3	SPAN 3	SPAN 4	SPAN 4	SPAN 5	SPAN 5	SPAN 6
'X1'	1055		1105		930		965		920	
'X2'	1889		1791		1715		1670		1652	
'X3'	700		1140		1095		1285		1420	
'X4'	769		912		940		995		1076	
'X5'	1120		878		775		675		577	
'X6'		705		935		798		900		955
'X7'		1791		1715		1670		1652		1661
'X8'		1542		1690		1452		1440		1340
'X9'		1313		1236		1162		1096		1021
'X10'		477		480		507		556		640
'X11'	2838		2575		2468		2401		2370	
'X12'		2748		2554		2443		2377		2382
'Y1'	480		509		532		547		552	
'Y2'		509		532		546		552		550
'Ø1'	29°00'00"		22°45'36"		15°32'24"		8°21'36"		1°10'48"	
'Ø2'		22°45'36"		15°32'24"		8°21'36"		1°10'48"		-6°00'00"

JACKING LOADS FOR BEARING REPLACEMENT				
LOCATION	SLS (kN)	ULS (kN)	JACKING PLATE SIZE (mm)	
			ABOVE JACK	BELOW JACK
SPAN 2, 3, 4, 5 AND SPAN 6/ABUTMENT B	1760	2410	Ø275 x MIN 10	Ø275 x MIN 10

MAXIMUM ALLOWABLE ULS CONTACT PRESSURE SHALL BE 48MPa BETWEEN THE JACK AND THE CROSS-GIRDER.
 MAXIMUM ALLOWABLE ULS CONTACT PRESSURE SHALL BE 48MPa BETWEEN THE JACK AND THE SUBSTRUCTURE.
 MINIMUM JACKING PLATE THICKNESS HAS BEEN DETERMINED ASSUMING JACK BASE AND SADDLE DIAMETERS ARE GREATER THAN OR EQUAL TO THOSE FOR THE JACK SPECIFIED IN APPENDIX D OF THE DESIGN REPORT.

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1060.
- FOR SETOUT OF PIER STRUCTURES SEE SHEET No. 1020.
- DENOTES TEMPORARY JACKING POSITIONS FOR BEARING REPLACEMENT.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS		

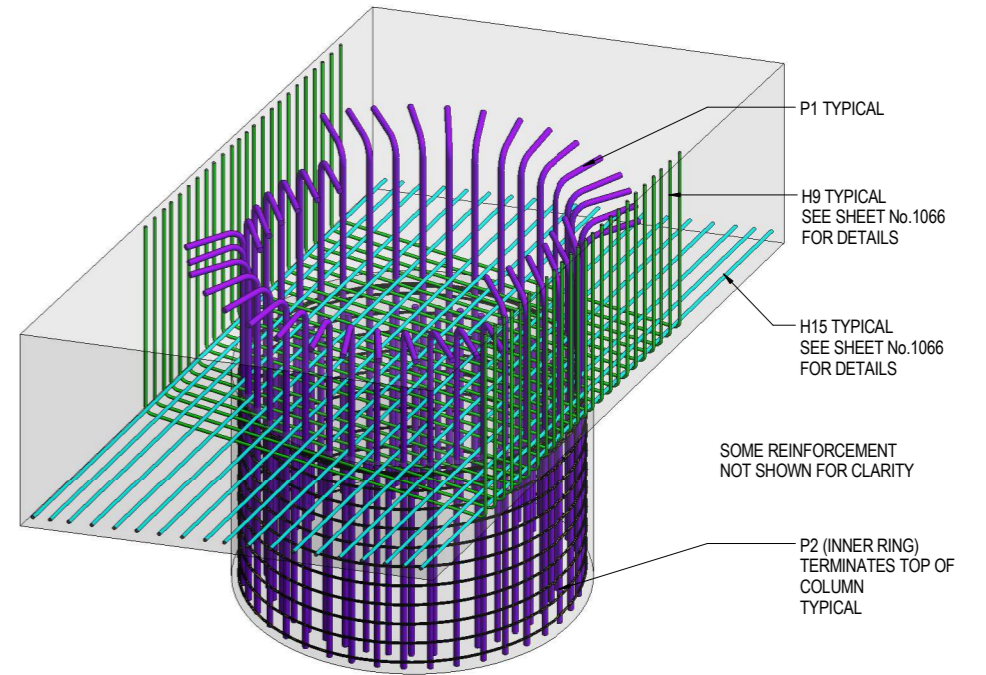
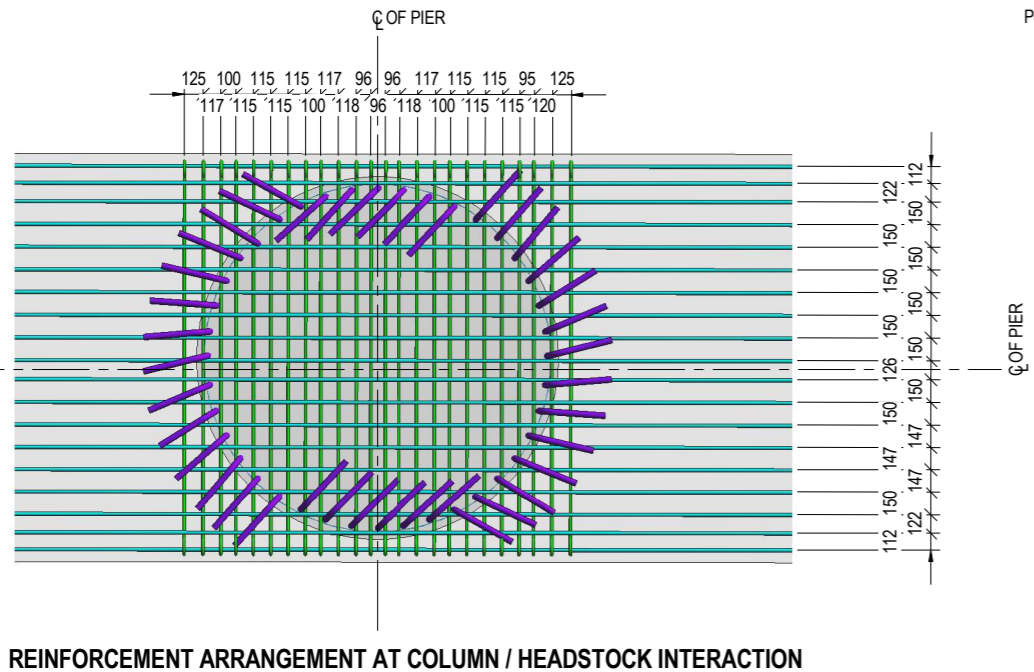
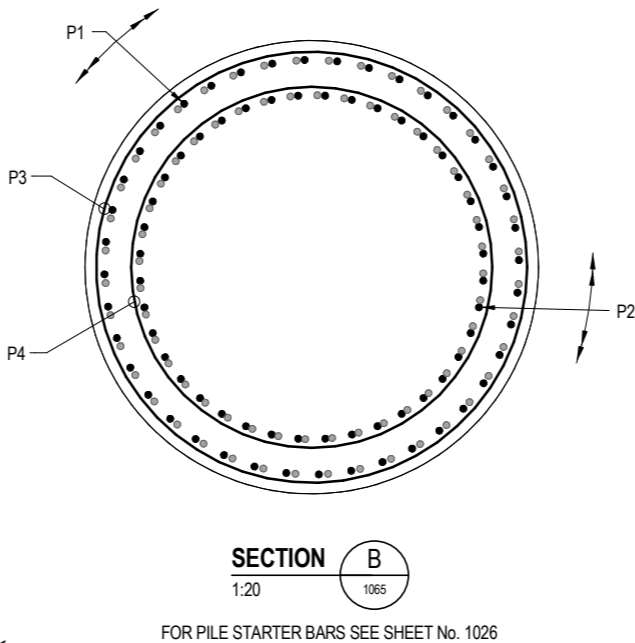
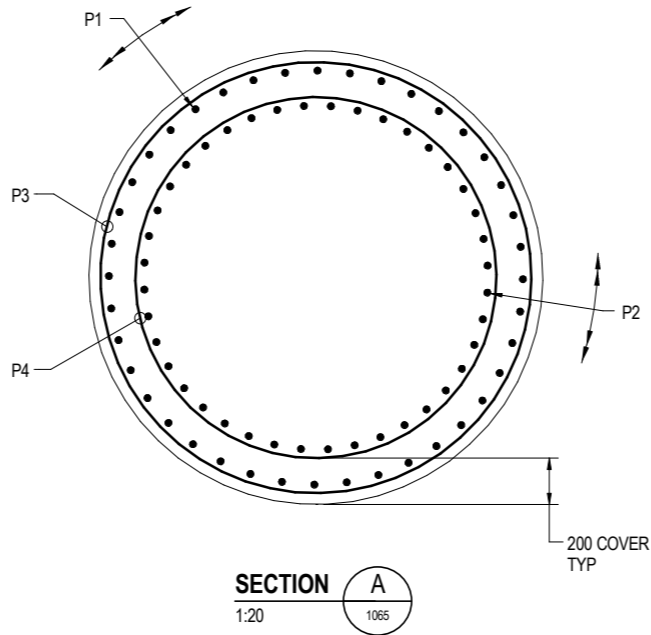
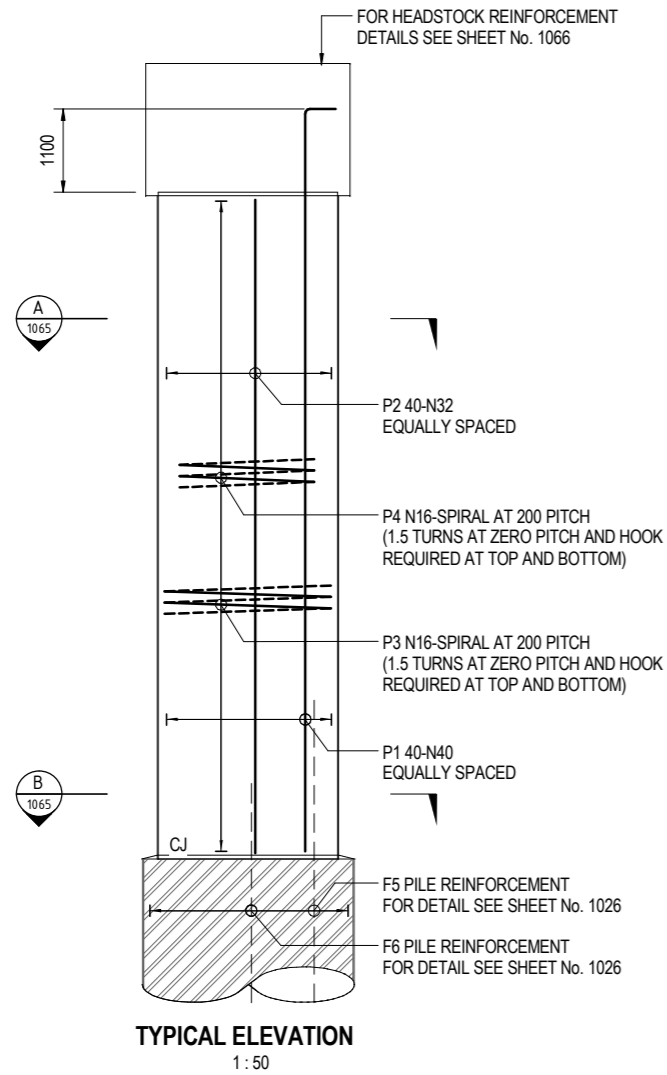
FOR CONSTRUCTION

APPROVED

DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1				
TITLE	GEORGES RIVER BRIDGE PIER CONCRETE SHEET B				
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER
N01031	-	GRB	-	DRG	-
				BRD	-
					1061
					02

File name: C:\Users\user\Documents\101_Georges River Bridge_CDR\RAI_FILE_015_Lake Eschard\mcsproj\01.dwg
 Plot Date: 22/02/2017 9:11:17 AM Office:



3D VIEW OF PIER REINFORCEMENT AT COLUMN/HEADSTOCK

GENERAL NOTES

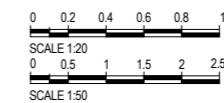
1. SCALES AS SHOWN.
2. NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE 40mm.
3. REINFORCEMENT SHALL BE GRADE D500N IN ACCORDANCE WITH AS/NZS 4671.
4. UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LAP LENGTHS SHALL BE:

BAR SIZE:	N16	N20	N24	N28	N32	N36	N40
a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR	700	975	1300	1625	2000	2375	2800
b) OTHER BARS	550	750	1000	1250	1525	1825	2150

5. CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER.
6. COLUMN STARTER CAGE TO BE SET OUT BASED ON COLUMN SOP PRIOR TO POURING OF PILE CONCRETE
7. REINFORCEMENT MAY BE DISPLACED SLIGHTLY WHERE NECESSARY TO CLEAR PILE STARTER BARS AS SHOWN ON PILE COLUMN INTERSECTION SHOWN ON SHEET No. 1026 SECTION D AND SHEET No. 1027 SECTION F.
8. PILE SPIRAL REINFORCEMENT MAY BE REPLACED WITH CIRCULAR CLOSED TIES AT THE SAME SPACING AND BAR SIZE.
9. HELICAL REINFORCEMENT SHALL BE SPLICED WITHIN ITS LENGTH EITHER BY WELDING OR MECHANICAL MEANS.

ELECTRICAL BONDING AND ISOLATION REQUIREMENTS

1. ALL PILE COLUMN AND HEADSTOCK REINFORCEMENT SHALL BE TACK WELDED TO DEVELOP AN ELECTRONICALLY CONNECTED CAGE AND CONNECTED TO THE COLUMN REINFORCEMENT AND ELECTRICAL CONNECTION POINT.
2. THE ELECTRICAL CONNECTIVITY OF ALL REINFORCEMENT AND FITMENTS SHALL BE DEMONSTRATED IN ACCORDANCE WITH AS2832.5 PRIOR TO POURING OF CONCRETE.
3. TACK WELDING OF REINFORCING STEEL SHALL COMPLY WITH AS1554.3.



N/A	ARTC DRAWING No	N/A	TNSW EDMS No
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1
TITLE	GEORGES RIVER BRIDGE PIER REINFORCEMENT SHEET A

DRAWING No.	PROJECT No.	WBS	TYPE	DISC	NUMBER	REV
N01031	GRB	DRG	BRD		1065	01

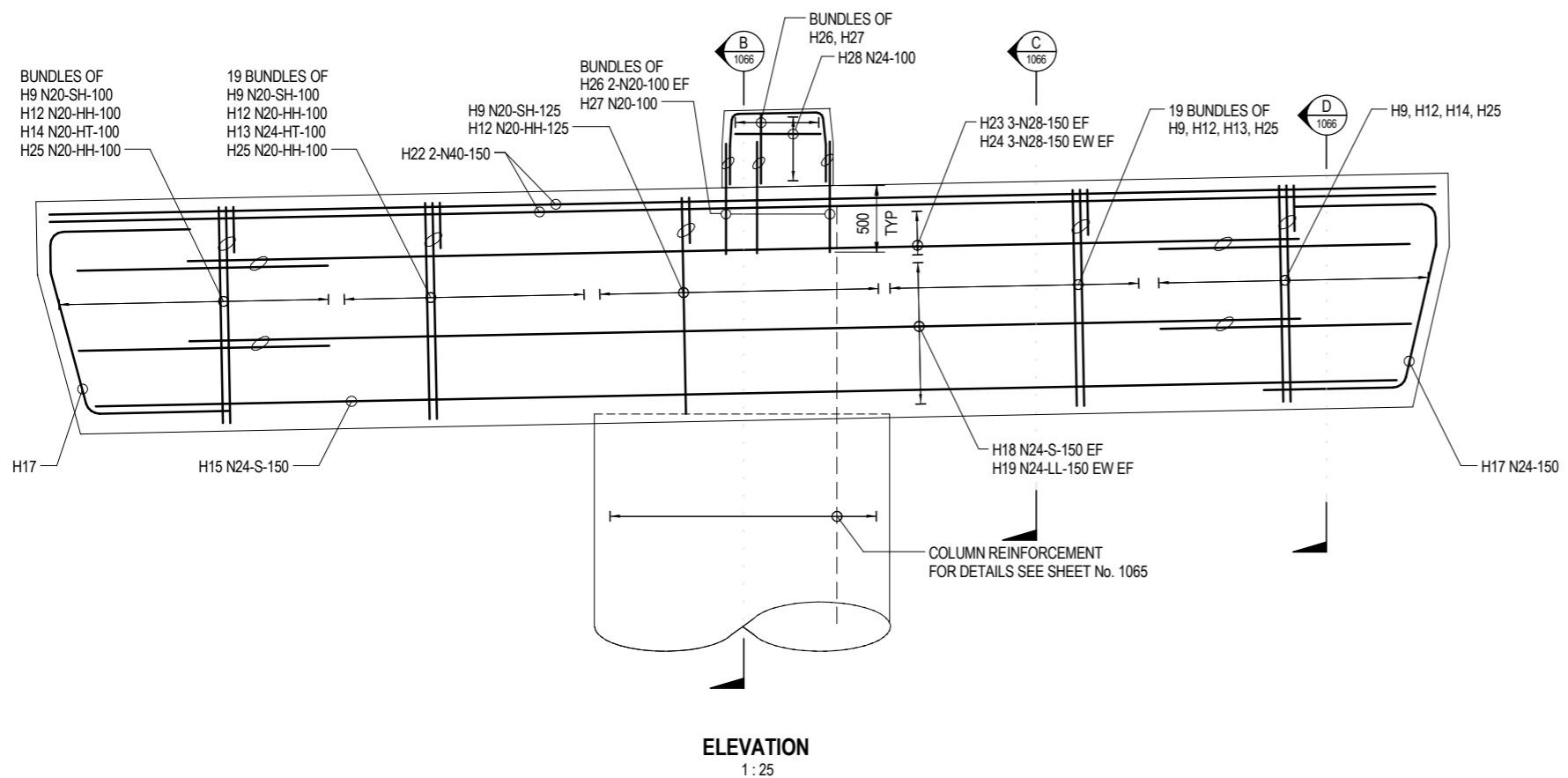
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 Plot Date: 19/12/2016 15:59:04
 Office:

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

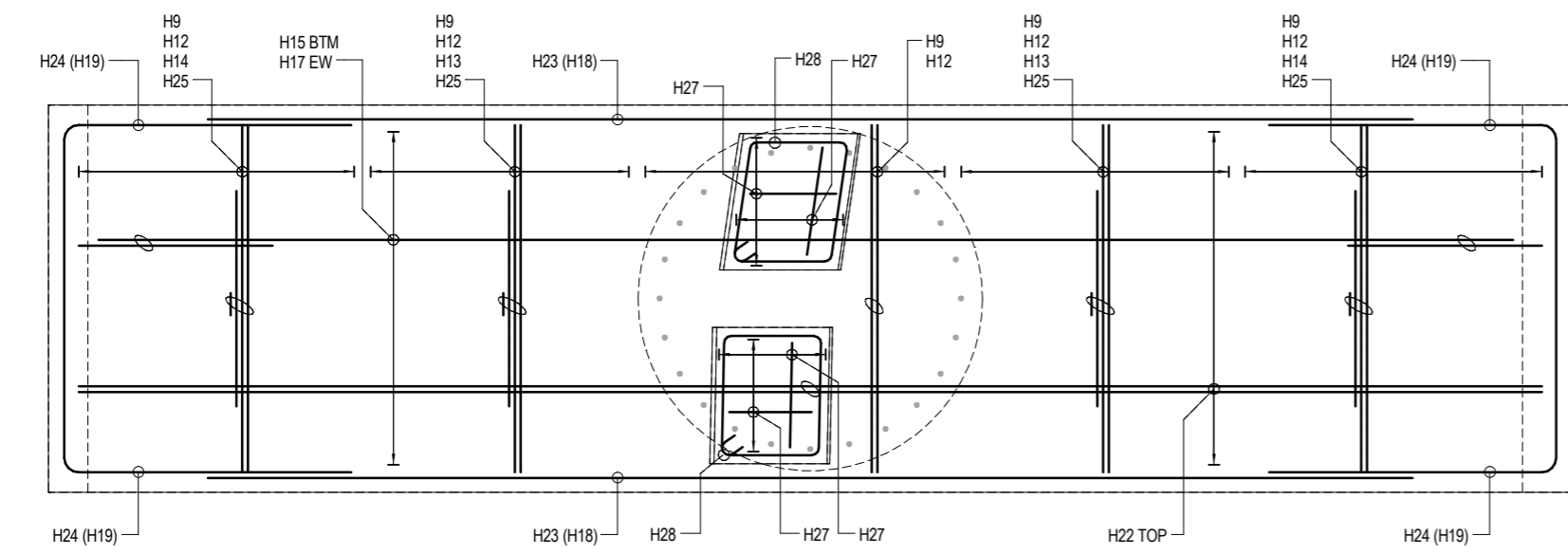
FOR CONSTRUCTION

APPROVED

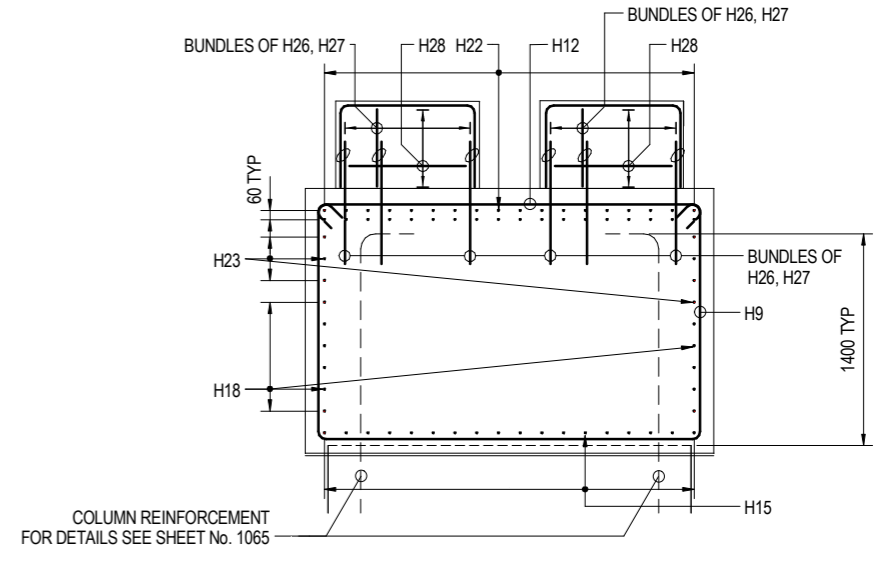
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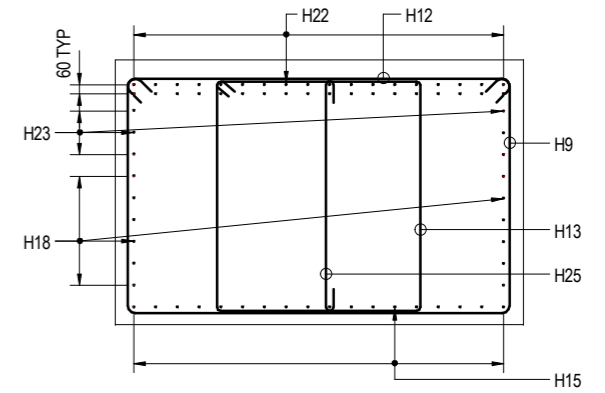
ELEVATION
1 : 25



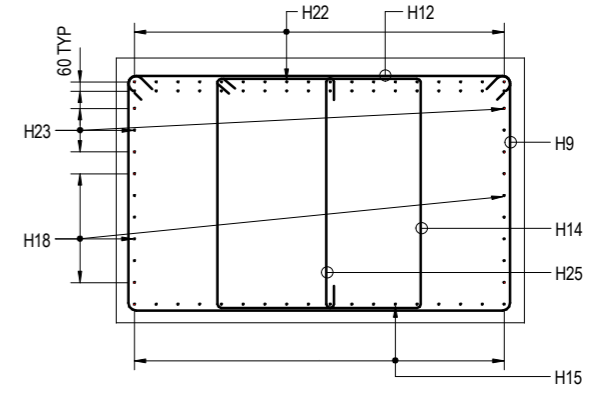
PLAN
1 : 25



SECTION B
1 : 25

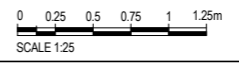


SECTION C
1 : 25



SECTION D
1 : 25

GENERAL NOTES
1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWINGS SEE SHEET No. 1065.



File name: C:\Users\j\OneDrive\Documents\1011 Georges River Bridge\CD\TRAIL FILES\15 RALP\job\1066.dwg
 Plot Date: 19/12/2016 11:59:38 AM Office:



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

APPROVED

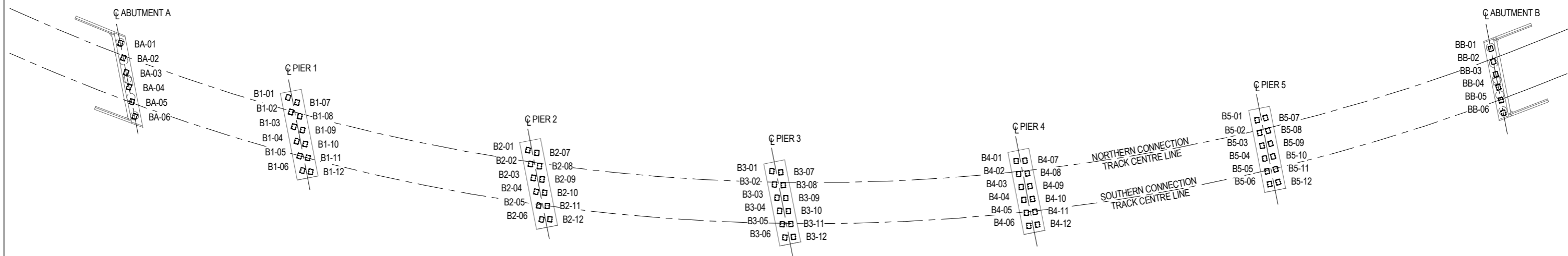
DATE: 20.12.16

ARTC DRAWING No: N/A		TNSW EDMS No: N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PIER REINFORCEMENT SHEET B		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1066	01		

FROM LIVERPOOL



TO MOOREBANK INTERMODAL TERMINAL

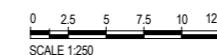


BEARING LAYOUT PLAN

1 : 250

BEARING DETAILS				BEARING DETAILS				BEARING DETAILS			
BEARING No.	TOP OF BEARING RL 'Z'	BEARING TYPE	AS5100.4 PART No.	BEARING No.	TOP OF BEARING RL 'Z'	BEARING TYPE	AS5100.4 PART No.	BEARING No.	TOP OF BEARING RL 'Z'	BEARING TYPE	AS5100.4 PART No.
BA-01	14.055	A	091511R	B2-07	14.055	A	091511R	B4-07	14.037	B	091211R
BA-02	14.088			B2-08	14.088			B4-08	14.070		
BA-03	14.121			B2-09	14.121			B4-09	14.103		
BA-04	14.154			B2-10	14.154			B4-10	14.136		
BA-05	14.187			B2-11	14.187			B4-11	14.169		
BA-06	14.220			B2-12	14.220			B4-12	14.202		
B1-01	14.055			B3-01	14.055			B5-01	14.037		
B1-02	14.088			B3-02	14.088			B5-02	14.070		
B1-03	14.121			B3-03	14.121			B5-03	14.103		
B1-04	14.154			B3-04	14.154			B5-04	14.136		
B1-05	14.187			B3-05	14.187			B5-05	14.169		
B1-06	14.220			B3-06	14.220			B5-06	14.202		
B1-07	14.055			B3-07	14.037	B5-07	14.037				
B1-08	14.088			B3-08	14.070	B5-08	14.070				
B1-09	14.121			B3-09	14.103	B5-09	14.103				
B1-10	14.154			B3-10	14.136	B5-10	14.136				
B1-11	14.187			B3-11	14.169	B5-11	14.169				
B1-12	14.220			B3-12	14.202	B5-12	14.202				
B2-01	14.055			B4-01	14.037	BB-01	14.037				
B2-02	14.088			B4-02	14.070	BB-02	14.070				
B2-03	14.121			B4-03	14.103	BB-03	14.103				
B2-04	14.154			B4-04	14.136	BB-04	14.136				
B2-05	14.187			B4-05	14.169	BB-05	14.169				
B2-06	14.220			B4-06	14.202	BB-06	14.202				

36 No. TYPE A BEARINGS REQUIRED.
36 No. TYPE B BEARINGS REQUIRED.



GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWINGS SEE SHEET No. 1095.

ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE BEARING LAYOUT		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
DISC	NUMBER	REV	
BRD	1090	01	



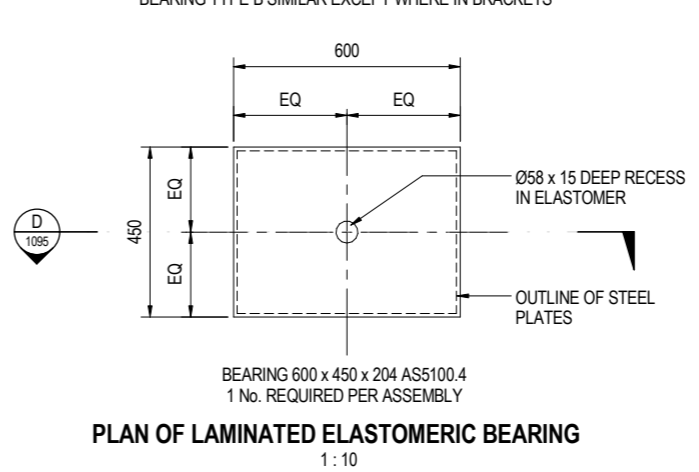
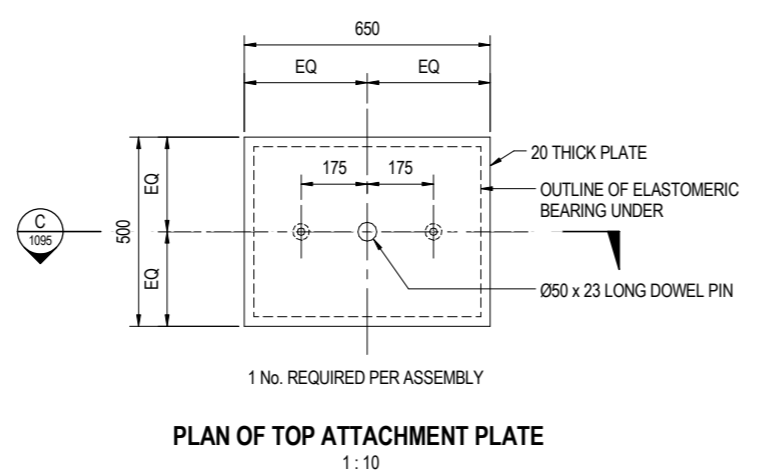
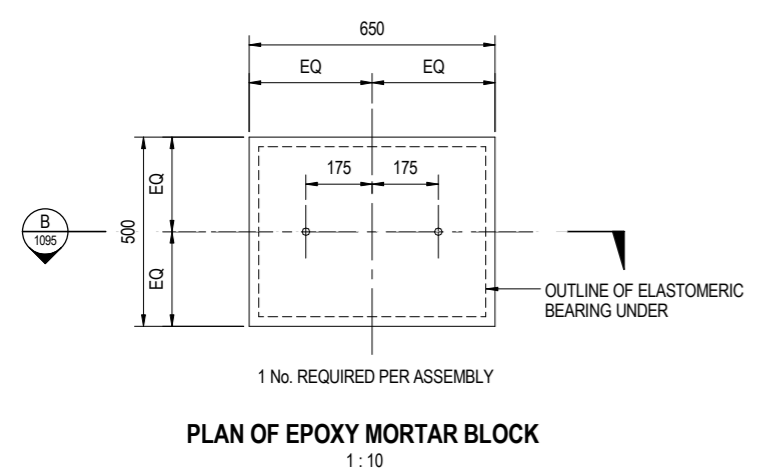
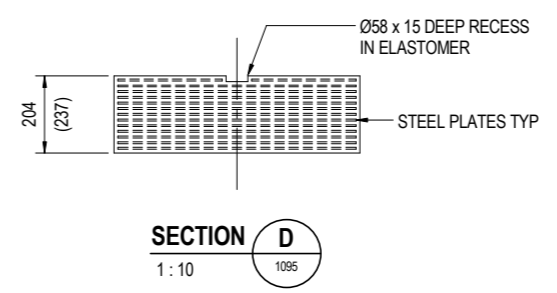
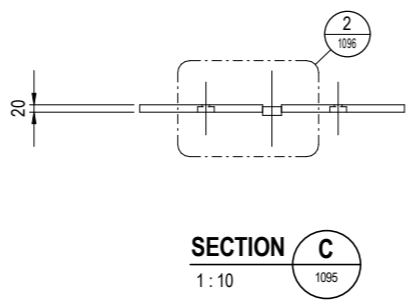
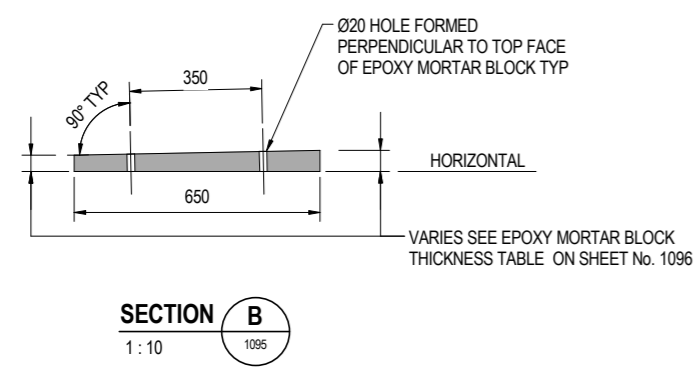
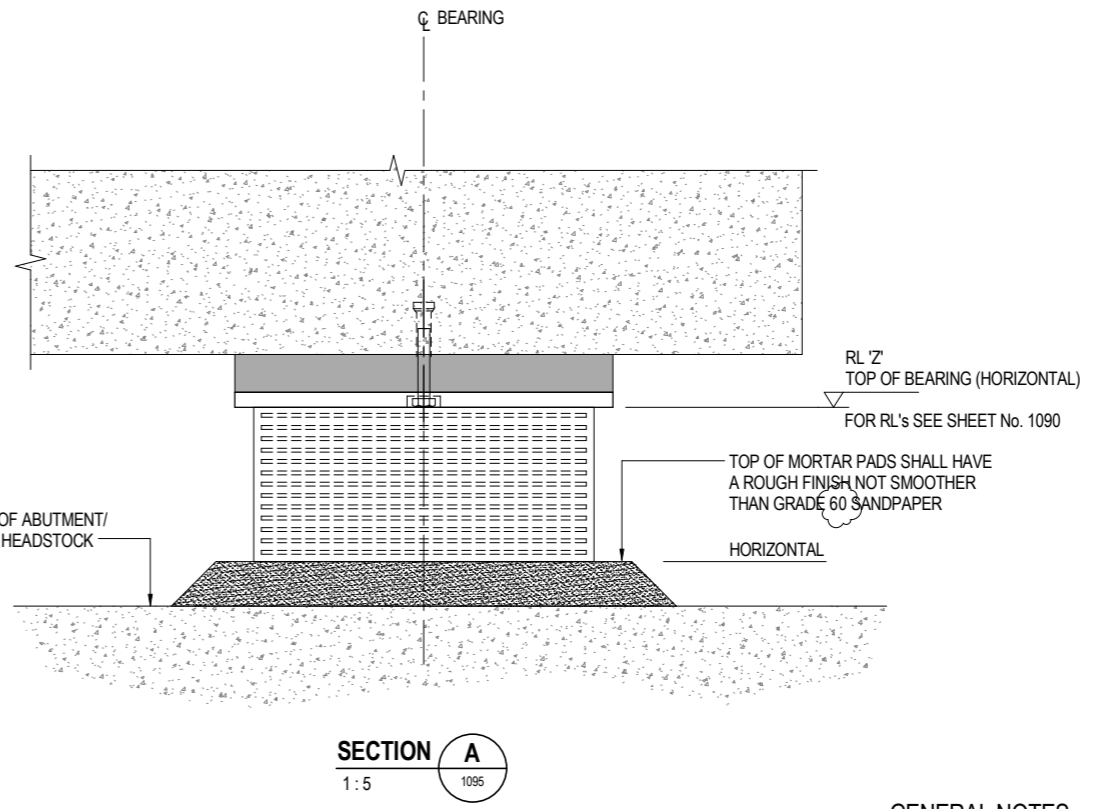
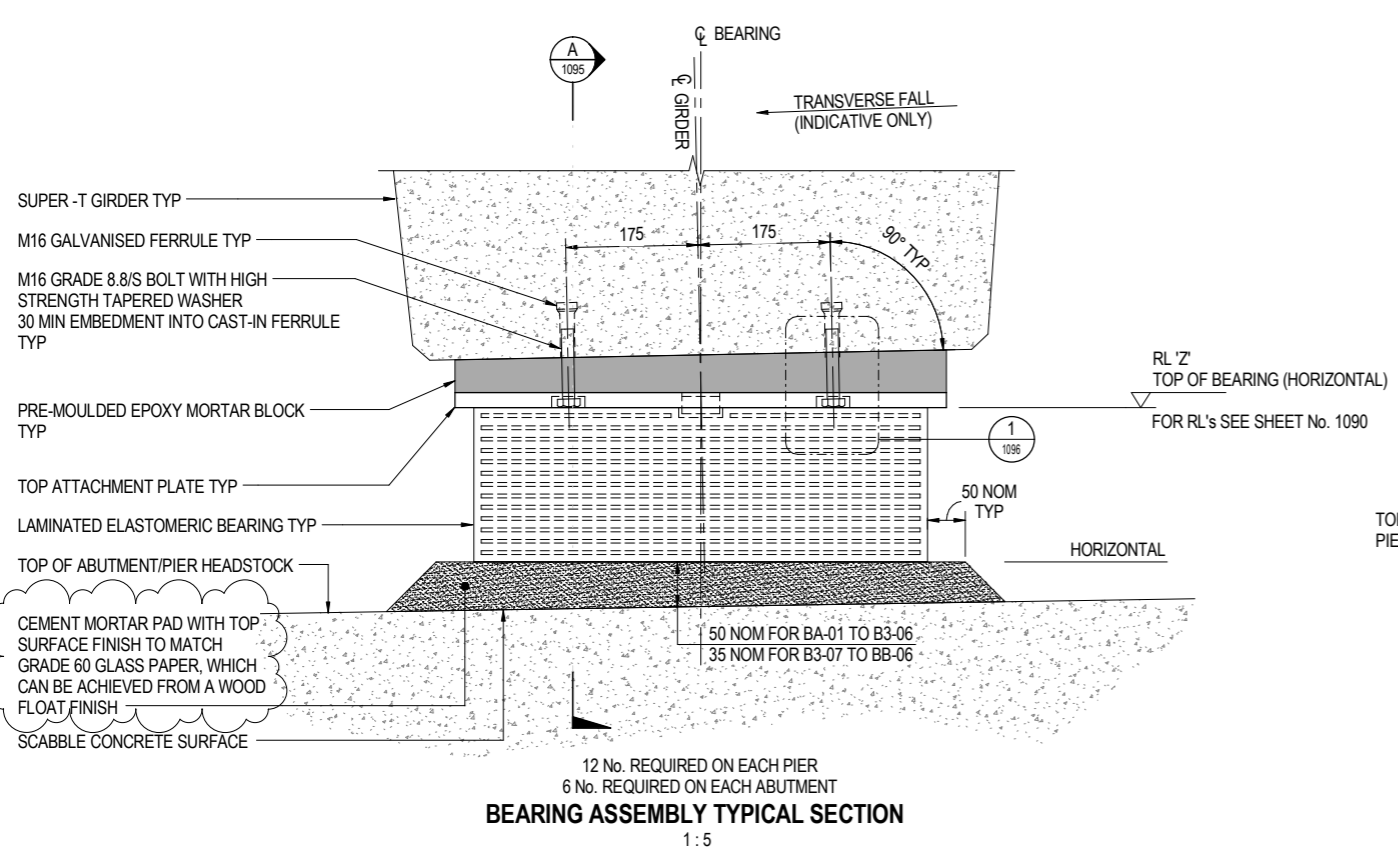
CLIENT



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

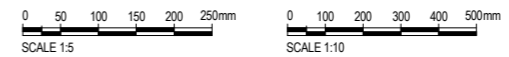


GENERAL NOTES

1. SCALES AS SHOWN.
2. LEVELS HAVE BEEN CALCULATED BASED ON A NOMINAL CEMENT MORTAR PAD THICKNESS OF 55mm FOR BEARING TYPE A AND 35mm FOR BEARING TYPE B.
3. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CEMENT MORTAR AND EPOXY SHALL BE 40 MPa.
4. MINIMUM COMPRESSIVE STRENGTH AT TIME OF PLACEMENT OF GIRDERS, CEMENT MORTAR, EPOXY AND SMEAR TO BE 30MPa.
5. STEEL PLATE SHALL BE GRADE 250 TO AS/NZS 3678.
6. STEEL DOWELS SHALL BE GRADE 250 TO AS/NZS 3679.1
7. THE WELD CATEGORY SHALL BE SP IN ACCORDANCE WITH AS/NZS 1554 PART 1.
8. WELDING SYMBOLS ARE TO AS 1101 PART 3.
9. EXPOSED EDGES OF STEEL PLATES SHALL BE ROUNDED TO A RADIUS OF 1.5mm PRIOR TO GALVANISING U.N.O.
10. ALL STEEL COMPONENTS, BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANISED AFTER FABRICATION IN ACCORDANCE WITH RMS SPECIFICATION B220.
11. PREMOULDED EPOXY MORTAR BLOCKS MUST BE FABRICATED NOT MORE THAN 2 WEEKS PRIOR TO ERECTION OF THE GIRDER.
12. THE MIX RATIO OF EPOXY AND SAND, AS WELL AS SAND TYPE FOR EPOXY MORTAR BLOCKS SHALL BE IN ACCORDANCE WITH THE EPOXY MANUFACTURERS SPECIFICATION.
13. WIRE BRUSH TOP OF EPOXY MORTAR BLOCK TO REMOVE ANY GLOSS FINISH.
14. EPOXY MORTAR BLOCKS SHALL BE TAGGED APPROPRIATELY.
15. IF THE MEASURED GIRDER HOG AT TIME OF ERECTION EXCEEDS THE CALCULATED HOG TABULATED ON SHEET No. 1096 (TABLE 1), THE LEVEL OF THE BEARINGS (RL 'Z') SHALL BE LOWERED BY REDUCING THE THICKNESS OF THE BOTTOM MORTAR SEATING BY THE DIFFERENCE IN THE MEASURED AND CALCULATED HOGS.
16. ALL MORTAR PAD LEVELS IN ANY ONE SPAN SHALL BE REDUCED BY THE SAME AMOUNT BASED ON THE LARGEST MEASURED HOG FOR THE GIRDER IN THAT SPAN. IN NO CASE SHALL THE THICKNESS OF THE MORTAR PADS BE LESS THAN 20mm AT ANY LOCATION.

BEARING INSTALLATION SEQUENCE

1. MEASURE GIRDER HOG NOT MORE THAN 2 WEEKS PRIOR TO GIRDER ERECTION AND CONTACT THE DESIGNER IF THE HOG FALLS OUTSIDE THE RANGE GIVEN IN TABLE ON SHEET No. 1096 BY 35%. CONSTRUCT PRE-MOULDED EPOXY MORTAR BLOCKS TO DIMENSIONS GIVEN IN TABLE 1 ON SHEET No. 1096.
2. SECURE PRE-MOULDED EPOXY MORTAR BLOCKS AND STEEL ATTACHMENT PLATES TO UNDERSIDE OF GIRDERS WITH BOLTS AND EPOXY RESIN. SMEAR TOP OF PRE-MOULDED EPOXY MORTAR BLOCKS WITH EPOXY RESIN IMMEDIATELY PRIOR TO SECURING. ONCE SECURED, FILL REMAINDER OF RECESS WITH EPOXY RESIN TO FINISH FLUSH WITH GIRDER SOFFIT.
3. SURVEY GIRDER LENGTH BETWEEN TOP ATTACHMENT PLATES AND CONSTRUCT CEMENT MORTAR PAD.
4. IF HOGS (MEASURED NOT MORE THAN 2 WEEKS PRIOR TO GIRDER ERECTION) ARE OUTSIDE THE RANGE GIVEN IN TABLE ON SHEET No. 1096, THEN CEMENT MORTAR PAD THICKNESS TO BE ADJUSTED.
5. INSTALL ELASTOMERIC BEARINGS.
6. ERECT GIRDER ONTO ELASTOMERIC BEARINGS AND BRACE AS NECESSARY.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE BEARING DETAILS SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG
	DISC	BRD	
	NUMBER	1095	
	REV		02

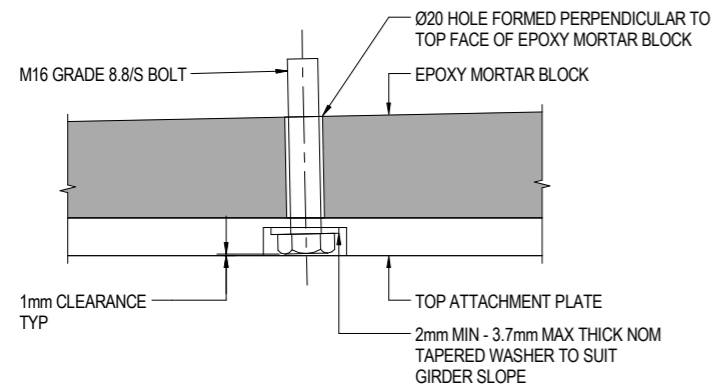
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 Plot Date: 22/02/2017 9:11:27 AM Office



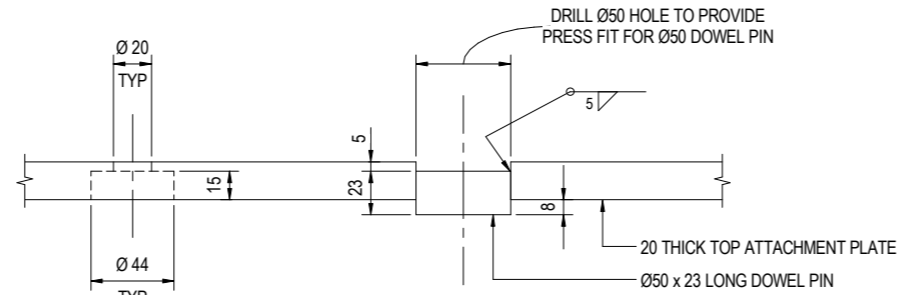
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE
20.12.16

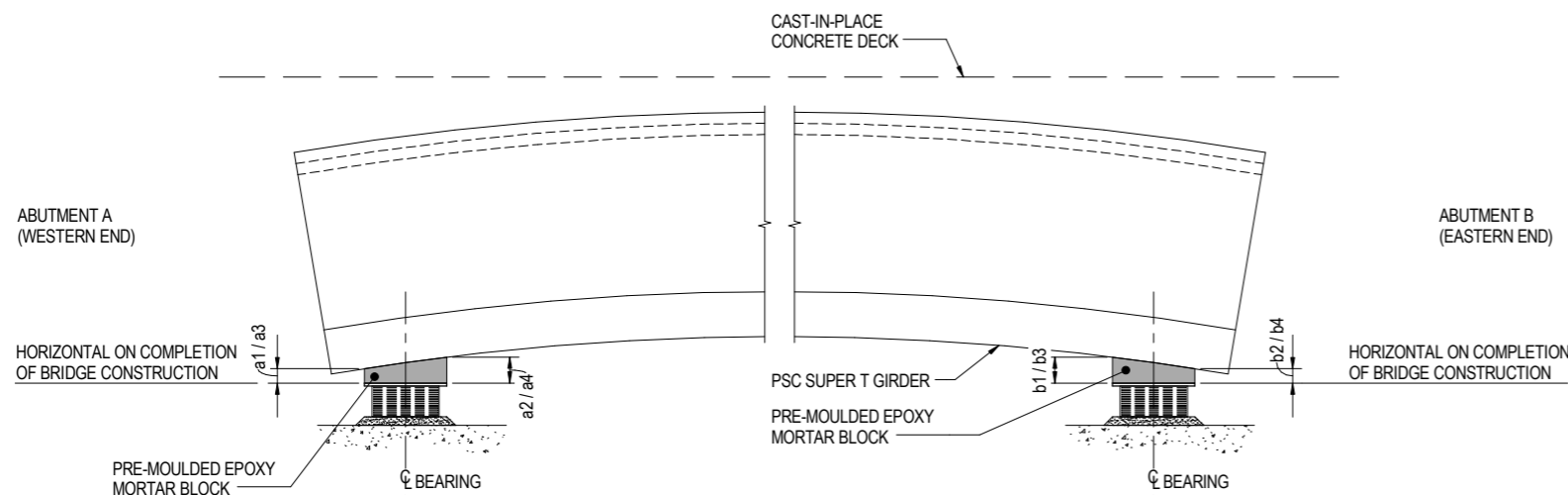


DETAIL 1
1:2



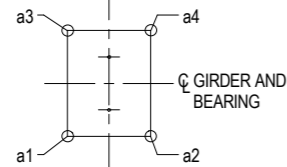
HOLES DRILLED PERPENDICULAR TO FACE OF PLATE.

DETAIL 2
1:2

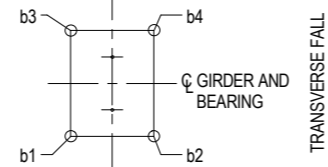


ELEVATION OF GIRDER AFTER DECK CONSTRUCTION

NOT TO SCALE
FOR VALUES OF a1, a2, a3, a4, b1, b2, b3 AND b4 SEE TABLE 1



PLAN OF EPOXY MORTAR BLOCK



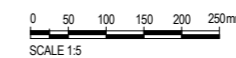
PLAN OF EPOXY MORTAR BLOCK

SPAN	BEARING No.	BA-01 TO BA-06				B1-01 TO B1-06				
		VERTICAL DIMENSIONS (mm)								
SPAN 1	◇ MEASURED HOG OF GIRDER BY CONTRACTOR (mm)	a1	a2	a3	a4	b1	b2	b3	b4	
		20	36	37	23	24	37	36	24	23
		30	36	37	23	24	37	36	24	23
		40	35	38	22	25	38	35	25	22
		50	35	38	22	25	38	35	25	22
	55	35	38	22	25	38	35	25	22	
SPAN 2	BEARING No.	B1-07 TO B1-12				B2-01 TO B2-06				
	◇ MEASURED HOG OF GIRDER BY CONTRACTOR (mm)	VERTICAL DIMENSIONS (mm)								
		40	36	37	23	24	37	36	24	23
		50	36	37	23	24	37	36	24	23
		60	36	37	23	24	37	36	24	23
	65	36	37	23	24	37	36	24	23	
SPAN 3	BEARING No.	B2-07 TO B2-12				B3-01 TO B3-06				
	◇ MEASURED HOG OF GIRDER BY CONTRACTOR (mm)	VERTICAL DIMENSIONS (mm)								
		40	36	37	23	24	37	36	24	23
		50	36	37	23	24	37	36	24	23
		60	36	37	23	24	37	36	24	23
	65	35	38	22	25	38	35	25	22	
SPAN 4 - 6	BEARING No.	B3-07 TO B3-12 B4-07 TO B4-12 B5-07 TO B5-12				B4-01 TO B4-06 B5-01 TO B5-06 B6-01 TO B6-06				
	◇ MEASURED HOG OF GIRDER BY CONTRACTOR (mm)	VERTICAL DIMENSIONS (mm)								
		40	54	55	41	42	55	54	42	41
		50	54	55	41	42	55	54	42	41
		60	53	56	40	43	56	53	43	40
	65	55	54	42	41	54	55	41	42	

◇ DENOTES MEASURED GIRDER HOG DUE TO PRESTRESS SELF WEIGHT OF GIRDER MEASURED NOT MORE THAN TWO WEEKS PRIOR TO GIRDER ERECTION. MEASURED HOG TO BE TAKEN AT MIDSPAN BETWEEN GIRDER ENDS.

GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWINGS SEE SHEET No. 1095.



ARTC DRAWING No.	N/A	TNSW EDMS No.	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE BEARING DETAILS SHEET B		
DRAWING No.	PROJECT No.	WBS	TYPE
	N01031	GRB	DRG - BRD
DISC	NUMBER	REV	
	1096	02	

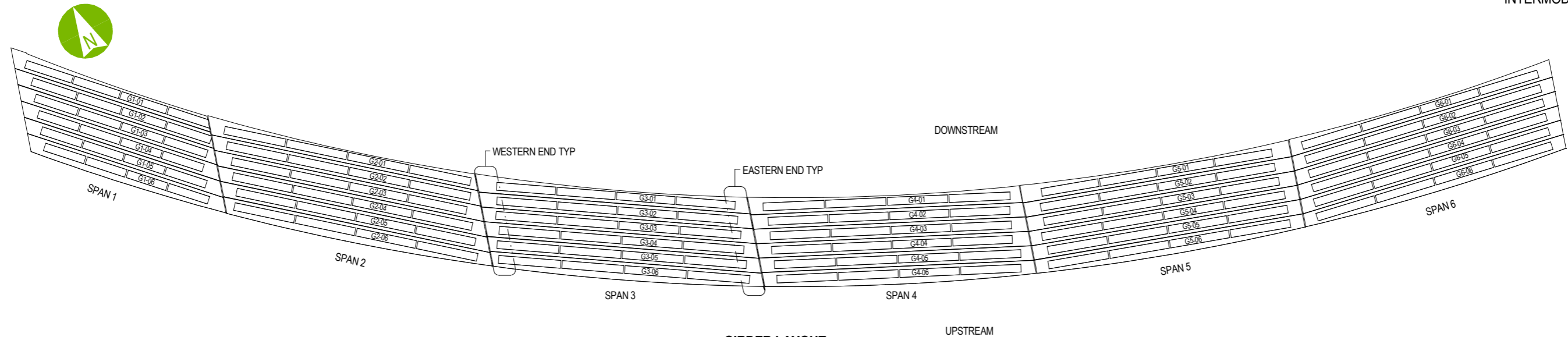
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

FROM LIVERPOOL

TO MOOREBANK INTERMODAL TERMINAL



GIRDER LAYOUT
1:250
GIRDER No. AND ENDS SHALL BE MARKED BY MANUFACTURER TO FACILITATE ERECTION

GIRDER DIMENSIONS																			
GIRDER	'L'	'A'	'e'	'y1'	'y2'	'y3'	'y4'	'y5'	'y6'	'y7'	'y8'	'y9'	'y10'	'y11'	'y12'	'w1'	'w2'		
G1-01	23345	2847.5	29°00'00"	1139	975	850	761	709	695	718	777	856				145	100		
G1-02																			
G1-03																			
G1-04																			
G1-05																			
G1-06																			
G2-01	30875	6612.5	22°45'43"	986	1074	1126	1143	1124	1070	979	853	738				145	100		
G2-02				1234	1036	876	753	667	619	607	633	696	796	933	986				
G2-03																			
G2-04																			
G2-05																			
G2-06																			
G3-01	30875	6612.5	15°32'19"	899	1036	1138	1204	1235	1230	1189	1113	1000	852	669	617	145	100		
G3-02				1214	1023	870	754	675	633	629	661	731	838	982	1034				
G3-03																			
G3-04																			
G3-05																			
G3-06																			
G4-01	30875	6612.5	8°21'33"	827	974	1087	1164	1206	1212	1182	1117	1016	879	707	657	145	100		
G4-02				1191	1008	864	756	685	652	656	697	775	891	1043	1096				
G4-03																			
G4-04																			
G4-05																			
G4-06																			
G5-01	30875	6612.5	1°10'48"	1169	995	858	759	696	671	683	732	818	941	1102	1156	145	100		
G5-02																			
G5-03																			
G5-04																			
G5-05																			
G5-06																			
G6-01	30875	6612.5	-5°59'58"	704	868	997	1090	1148	1169	1155	1106	1021	900	743	691	145	100		
G6-02				1117	951	822	730	675	658	677	734	828	960	1127	1182				
G6-03																			
G6-04																			
G6-05																			
G6-06																			

DIMENSION 'y' GIVEN IN TABLE ARE SET OUT AND SPACED AT 3000 TYPICALLY FROM WESTERN END OF EACH GIRDER, AS SHOWN ON SHEETS No. 1101, 1102 AND 1103.

GENERAL NOTES

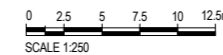
- SCALE AS SHOWN.
- CONCRETE EXPOSURE CLASSIFICATION:
EXTERNAL FACES : B1
INTERNAL FACES : A
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 50MPa.
- MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa AT TRANSFER OF PRESTRESS.
- THE CONCRETE SHALL BE PREPARED WITH MAXIMUM AGGREGATE SIZE OF 10mm.
- GIRDERS SHALL BE CAST HORIZONTAL.
- STRANDS SHALL BE 7-WIRE ORDINARY, DIAMETER 15.2mm, TENSILE STRENGTH 1830MPa, RELAX2, TO AS/NZS 4672.1 WITH A MINIMUM BREAKING FORCE OF 261kN.
- THE FORCE REMAINING IN EACH STRAND IMMEDIATELY AFTER THE RELEASE OF THE TENSIONING JACK SHALL BE 196kN. RELEASE OF THE STRANDS SHALL BE DONE SYMMETRICALLY ABOUT THE CENTRELINE OF THE GIRDER IN THE STRAND NUMERICAL SEQUENCE ON SHEET No 1104
- AFTER TRANSFER OF PRESTRESS, STRANDS SHALL BE CUT FLUSH WITH THE ENDS OF GIRDER AND EXPOSED STRANDS SEALED AGAINST CORROSION BY THE APPLICATION OF AN APPROVED EPOXY RESIN.
- GIRDER HOGS AND DEFLECTIONS IN TABLE 1 HAVE BEEN CALCULATED ASSUMING:
- DENSITY = 2600kg/m³
- ELASTIC MODULUS AT TRANSFER = 32800MPa
- STEAM CURING AT 70°C FOR 8 HOURS AFTER CASTING
- STORAGE IN OPEN AIR, AFTER STEAM CURING, AT 20°C AVERAGE TEMPERATURE AND
- RELATIVE HUMIDITY IN THE RANGE OF 50%-70%
- NO LOADS EXCEPT GIRDER SELF WEIGHT

GENERAL NOTES CONTINUED

GIRDER	GIRDER HOG AT			DEFLECTION OF GIRDER DUE TO WEIGHT OF DECK SLAB
	TRANSFER	28 DAYS	90 DAYS	
G1-01 TO G1-06	25mm	47mm	62mm	- 7mm
G2-01 TO G6-06	48mm	55mm	73mm	- 23mm

- CALCULATED MASS OF GIRDER (MAX FLANGE WIDTH = 2055mm) IS APPROXIMATELY:
SPAN 1 : 40t SPAN 2-6 : 60t
- LIFTING DEVICES/HOOKS SHALL BE DESIGNED BY THE MANUFACTURER. LIFTING DETAILS SHALL BE SUBMITTED TO THE STRUCTURAL DESIGN REPRESENTATIVE PRIOR TO CASTING GIRDERS.
- DURING ERECTION OF GIRDERS CARE SHALL BE TAKEN TO PREVENT ACCIDENTAL OVERTURNING. EACH GIRDER SHALL BE BRACED AGAINST OVERTURNING PRIOR TO RELEASE BY THE CRANE OR OTHER LIFTING DEVICE. CONTRACTOR TO ENSURE GIRDER STABILITY DURING CONSTRUCTION PRIOR TO THE COMPLETION OF THE END CROSS-GIRDERS.
- LENGTH OF GIRDER GIVEN IS THE REQUIRED LENGTH OF FINISHED PRODUCT.
- DURING STORAGE, TRANSPORT AND HANDLING GIRDERS SHALL BE IN AN UPRIGHT POSITION AND SUPPORTED NOT MORE THAN 500mm FROM EACH END. SUPPORT SHALL EXTEND OVER ALL WIDTH OF BOTTOM FLANGE.
- * DENOTES DIMENSION TAKEN AT THE GIRDER CENTRELINE.

DENOTES GIRDER SURFACES BENEATH DEBOUNDED ZONE AT LINK SLAB LOCATIONS TO RECEIVE SMOOTH TRAVELLED FINISH AT PIER ENDS OF GIRDERS ONLY.



ARTC DRAWING No		NSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG
	DISC	BRD	
	NUMBER	1100	
	REV		02



CLIENT



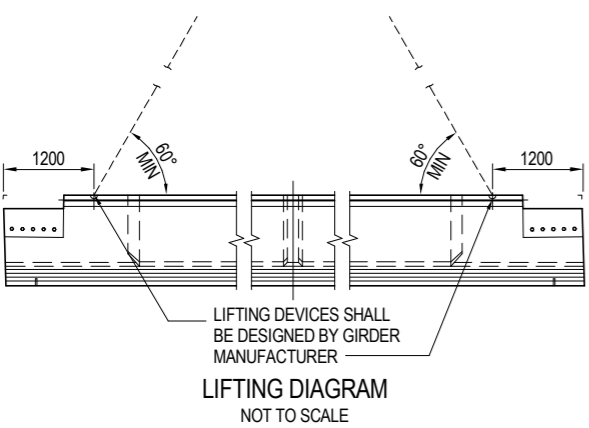
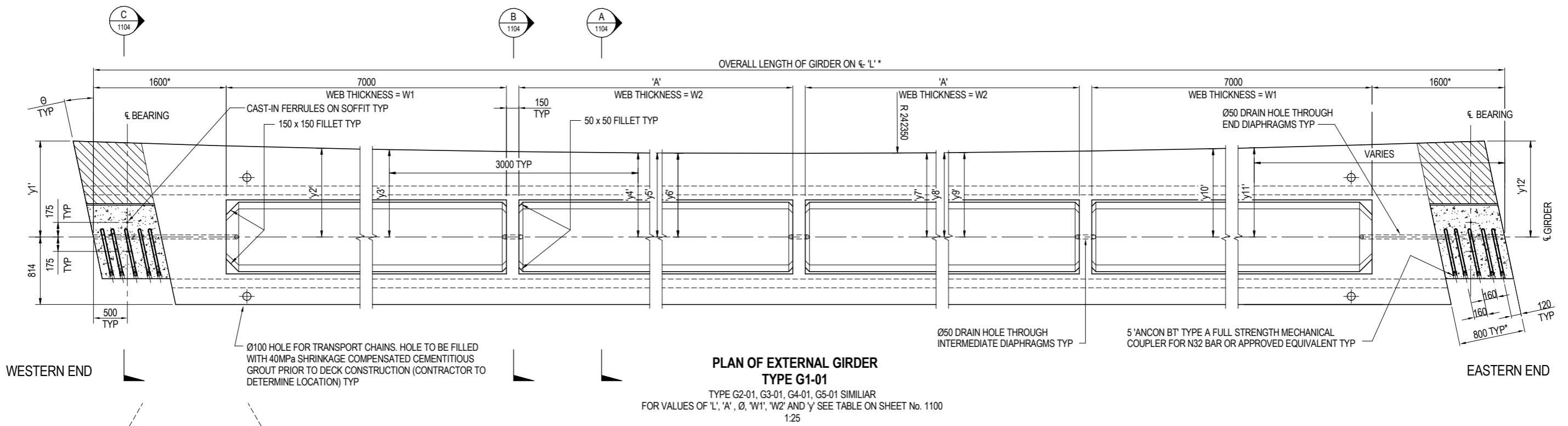
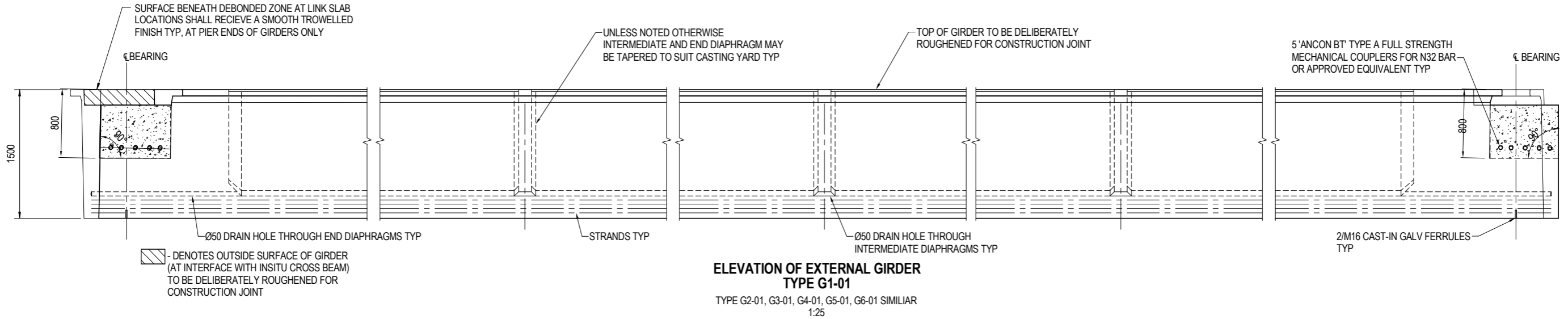
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

SCALE	SIZE
AS SHOWN	A1

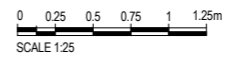
FOR CONSTRUCTION

APPROVED

DATE 20.12.16



- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1100.

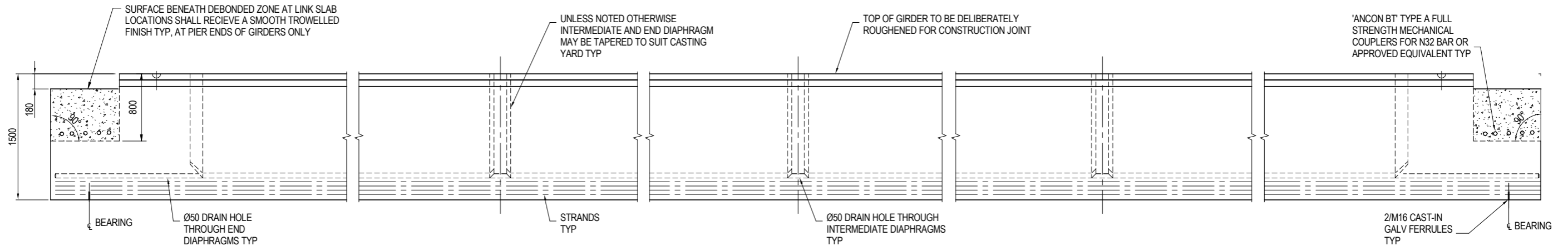


ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG
	DISC	BRD	
	NUMBER	1101	
	REV		01

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

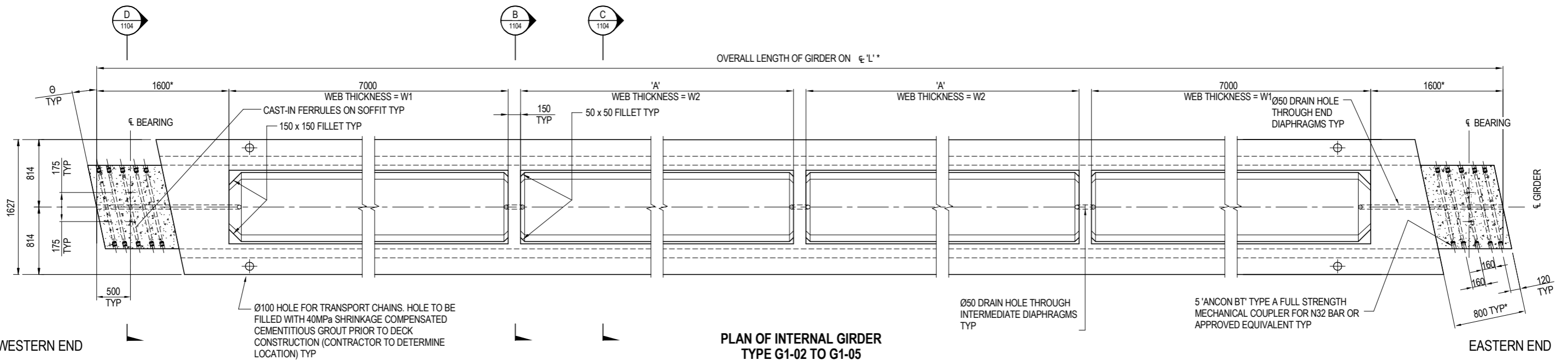


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 Plot Date: 19/12/2016 4:02:27 PM Office:



**ELEVATION OF INTERNAL GIRDER
TYPE G1-02 TO G1-05**

TYPE G2-02 TO G2-05, G3-02 TO G3-05, G4-02 TO G4-05, G5-02 TO G5-05, G6-02 TO G6-05 SIMILAR
1:25

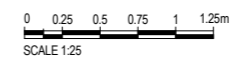


**PLAN OF INTERNAL GIRDER
TYPE G1-02 TO G1-05**

TYPE G2-02 TO G2-05, G3-02 TO G3-05, G4-02 TO G4-05, G5-02 TO G5-05, G6-02 TO G6-05 SIMILAR
FOR VALUES OF 'L', Ø, 'W1', 'W2' AND 'A' SEE TABLE ON SHEET No. 1100
1:25

GENERAL NOTES

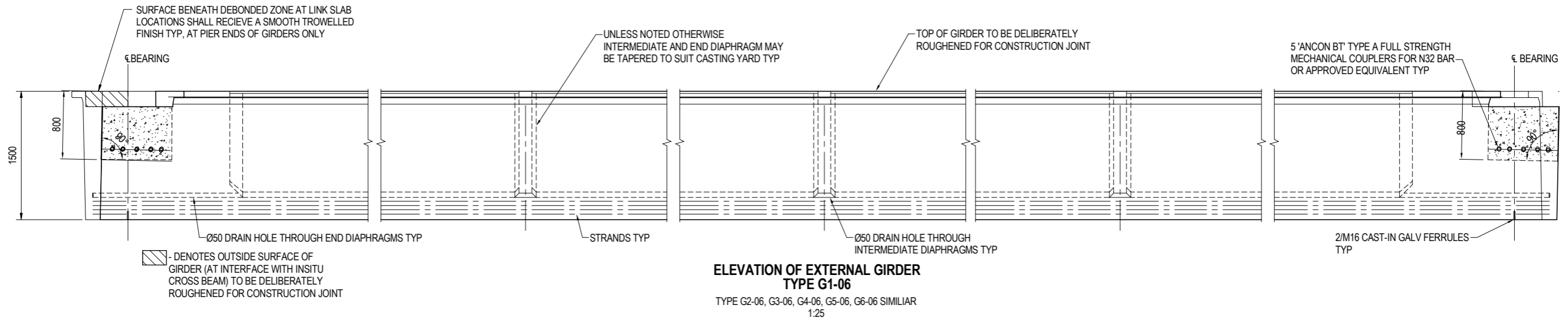
- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1100.



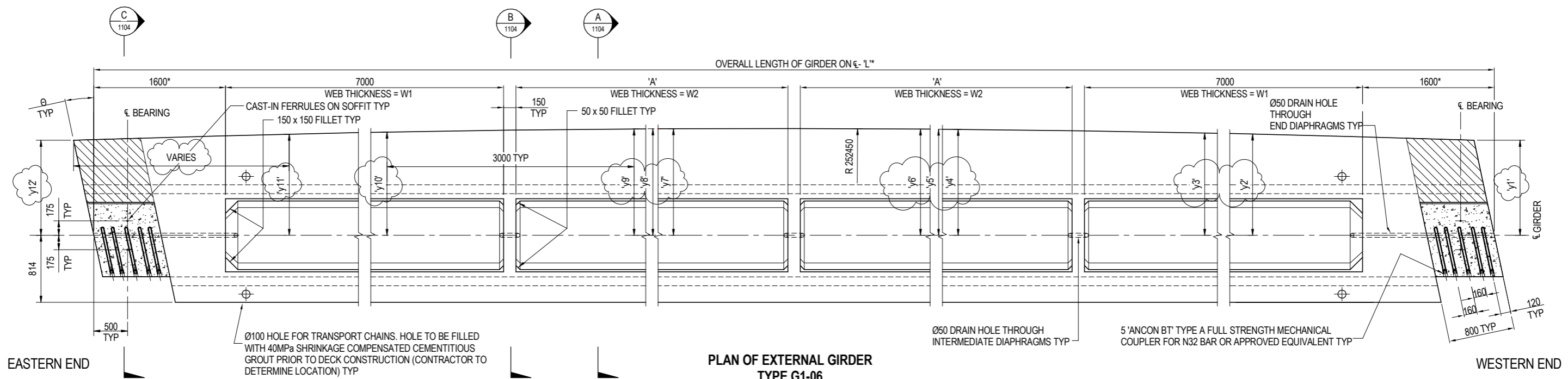
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1102	01		

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

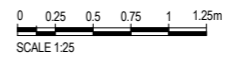


ELEVATION OF EXTERNAL GIRDER TYPE G1-06
 TYPE G2-06, G3-06, G4-06, G5-06, G6-06 SIMILIAR
 1:25



PLAN OF EXTERNAL GIRDER TYPE G1-06
 TYPE G2-06, G3-06, G4-06, G5-06, G6-06 SIMILIAR
 FOR VALUES OF 'L', 'A', 'Ø', 'W1', 'W2' AND 'Y' SEE TABLE ON SHEET No. 1100
 1:25

- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1100.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS SHEET D		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1103	02		

CLIENT

REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	AOS

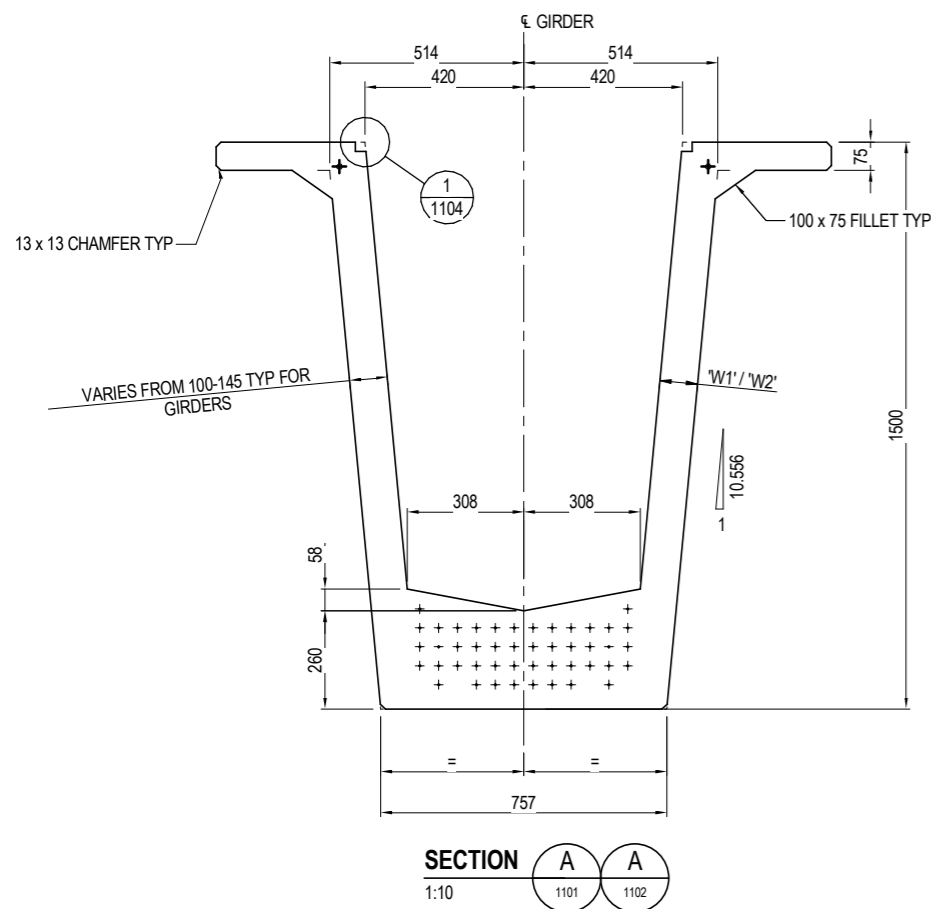
SCALE	AS SHOWN
SIZE	A1

FOR CONSTRUCTION

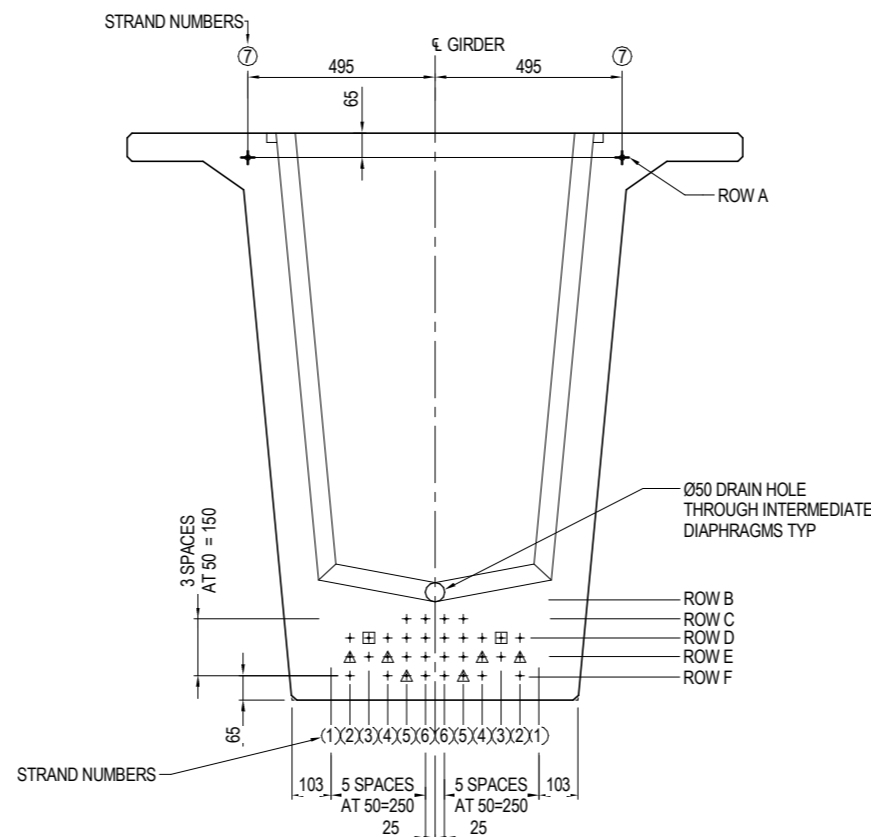
APPROVED

DATE 20.12.16

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 Plot Date: 22/02/2017 9:11:44 AM
 Office:



FOR VALUES OF 'L', 'A', 'Ø', 'W1', 'W2' AND 'Y' SEE TABLE ON SHEET No. 1100

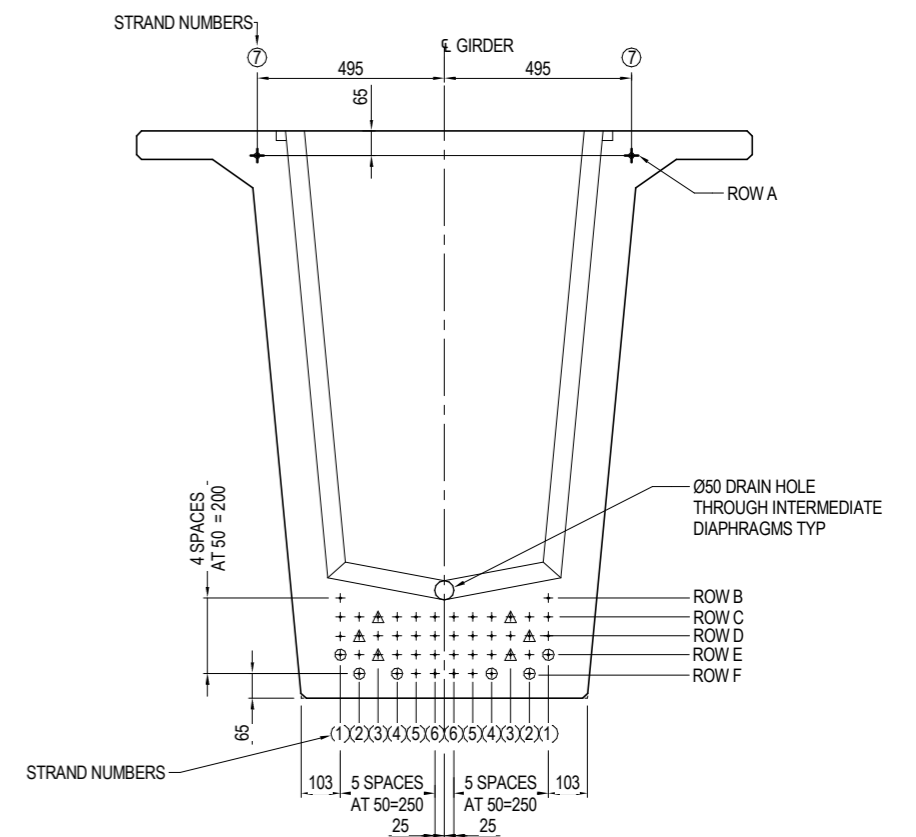


TYPICAL STRAND PATTERN
GIRDERS G1-01 TO G1-06

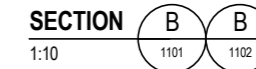


STRAND SYMBOL:

- DEBOND 2 STRANDS FOR 8000 FROM ENDS.
- △ DEBOND 6 STRANDS FOR 3200 FROM ENDS.

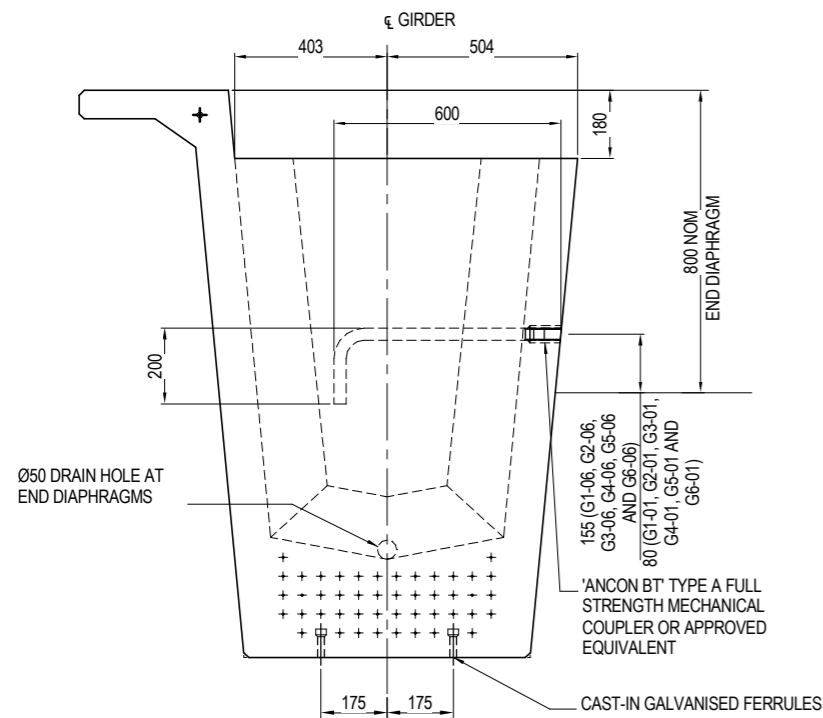


TYPICAL STRAND PATTERN
GIRDERS G2-01 TO G6-06

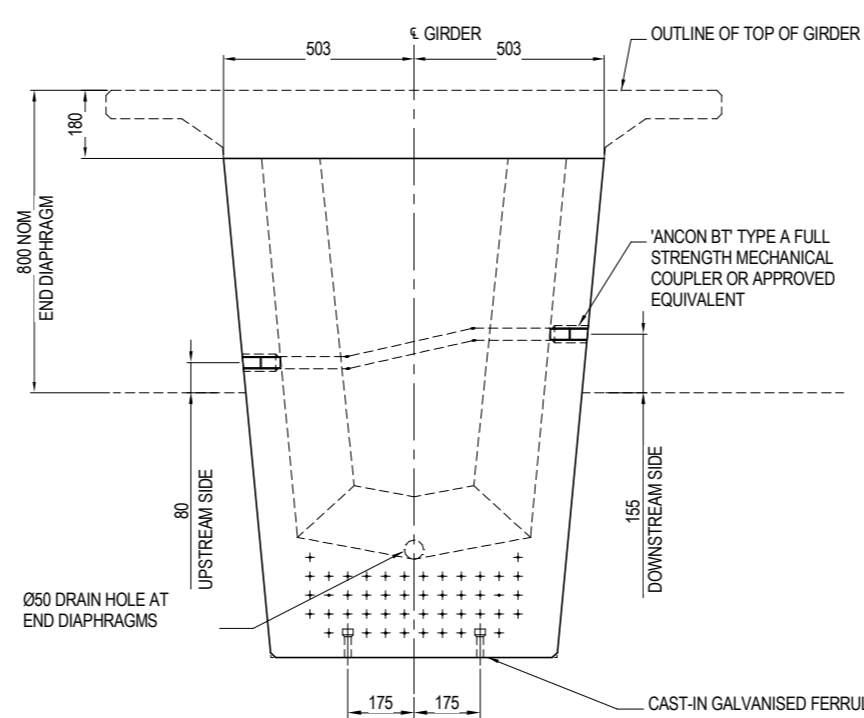
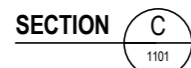


STRAND SYMBOL:

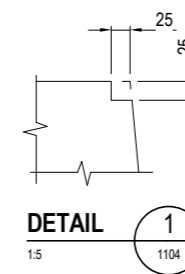
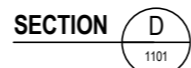
- △ DEBOND 6 STRANDS FOR 10100 FROM ENDS.
- DEBOND 6 STRANDS FOR 2600 FROM ENDS.



TYPICAL SECTION EXTERNAL AT DIAPHRAGM



TYPICAL SECTION INTERNAL AT DIAPHRAGM



GIRDER STRAND RELEASE SEQUENCE

GIRDER STRANDS TO BE RELEASED SYMMETRICALLY IN THE FOLLOWING ORDER:

GIRDERS G1-01 TO G1-06:

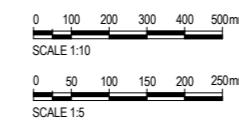
1. GIRDER STRANDS A7
2. GIRDER STRANDS C5 TO C6
3. GIRDER STRANDS D3 TO D6
4. GIRDER STRANDS E2 TO E6
5. GIRDER STRANDS F2
6. GIRDER STRANDS F4 TO F6

GIRDERS G2-01 TO G6-06:

1. GIRDER STRANDS A7
2. GIRDER STRANDS B1 TO B6
3. GIRDER STRANDS C1 TO C6
4. GIRDER STRANDS D1 TO D6
5. GIRDER STRANDS E1 TO E6
6. GIRDER STRANDS F2
7. GIRDER STRANDS F4 TO F6

GENERAL NOTES

1. SCALE AS SHOWN.
2. FOR OTHER GENERAL NOTES RELATING TO THIS DRAWING, SEE SHEET No 1110.
3. LIFTING DEVICES TO PRECASTERS PREFERRED DETAIL AND TO BE APPROVED BY CPB.

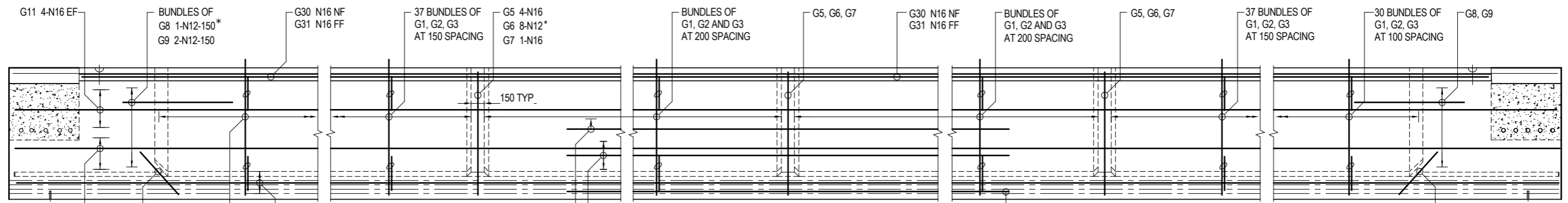


ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS SHEET E		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG - BRD
NUMBER	REV		
1104	01		

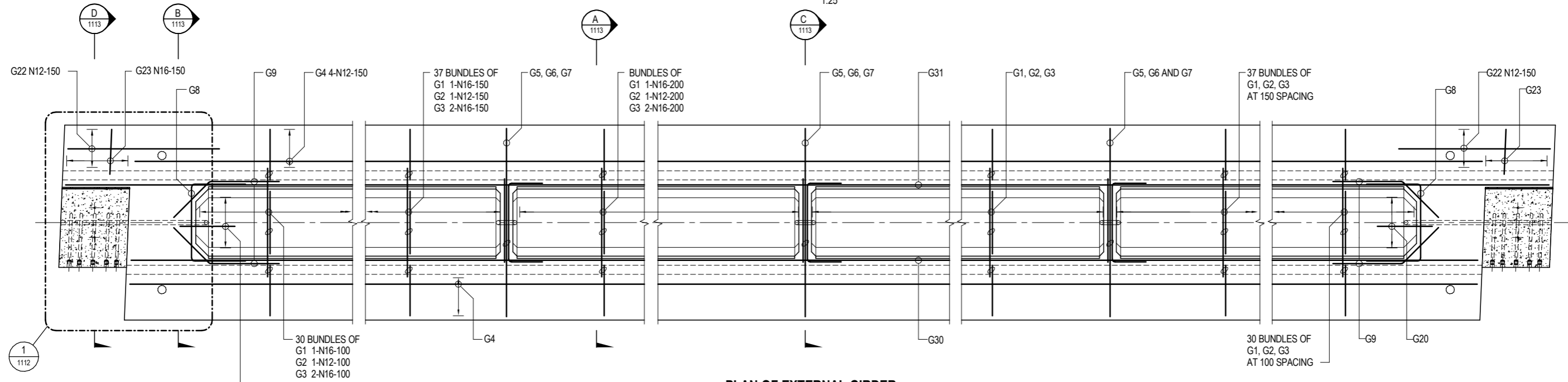
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16



**ELEVATION OF EXTERNAL GIRDER
TYPE G1-01**
TYPES G2-01, G3-01, G4-01, G5-01, G6-01 SIMILIAR
TYPES G1-06, G2-06, G3-06, G4-06, G5-06, G6-06 SIMILAR
AND MIRRORED ABOUT CENTRE LINE
1:25



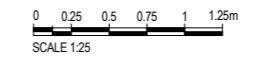
**PLAN OF EXTERNAL GIRDER
TYPE G1-01**
TYPES G2-01, G3-01, G4-01, G5-01, G6-01 SIMILIAR
TYPES G1-06, G2-06, G3-06, G4-06, G5-06, G6-06 SIMILAR
AND MIRRORED ABOUT CENTRE LINE
1:25

GENERAL NOTES

- SCALE AS SHOWN
- NOMINAL COVER TO:
- INTERNAL SURFACE = 25mm
- EXTERNAL SURFACE = 30mm UNLESS SPECIFIED OTHERWISE.
- RIGID STEEL FORMWORK AND INTENSE COMPACTION SHALL BE USED.
- REINFORCEMENT SHALL BE IGRADE 500N IN ACCORDANCE WITH AS/NZS 4671. UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE:

BAR SIZE:	N12	N16	N20	N24	N28
a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR	600	800	1050	1300	1600
b) OTHER BARS	450	625	800	1000	1200

- CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER
- * DENOTES VARIABLE LENGTH BAR
- EF DENOTES EACH FACE
- FF DENOTES FAR FACE
- NF DENOTES NEAR FACE



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS REINFORCEMENT SHEET A		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1110	01		

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 Office:



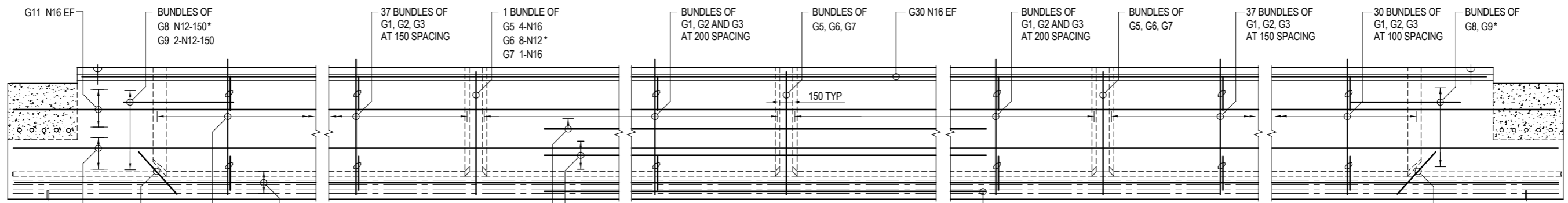
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01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

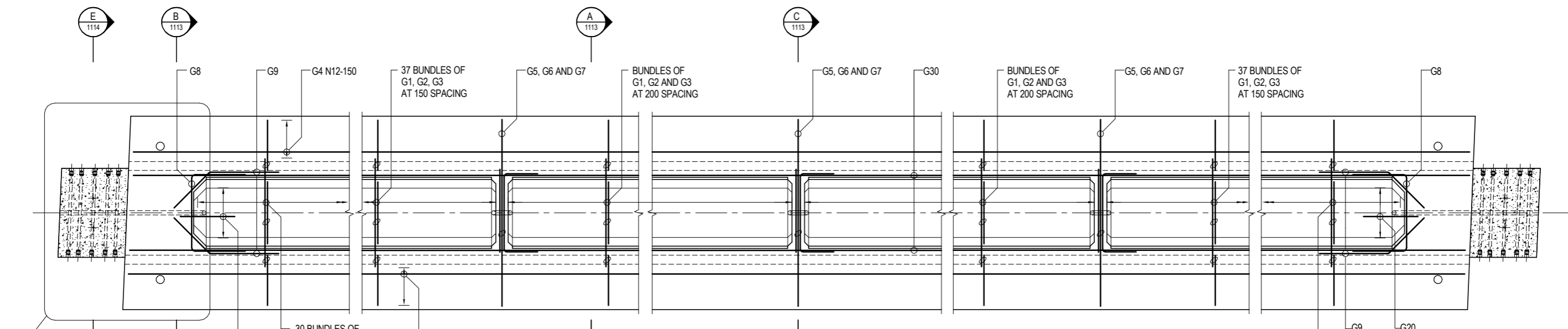
APPROVED

DATE
20.12.16



**ELEVATION OF INTERNAL GIRDER
TYPE G1-02 TO G1-05**

TYPE G2-02 TO G2-05, G3-02 TO G3-05, G4-02 TO G4-05, G5-02 TO G5-05, G6-02 TO G6-05 SIMILAR
1:25

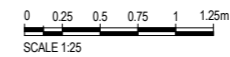


**PLAN OF INTERNAL GIRDER
TYPE G1-02 TO G1-05**

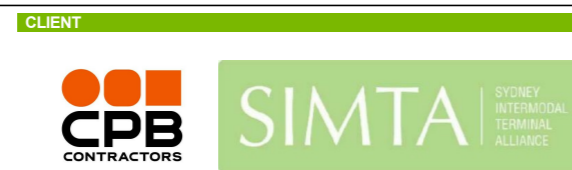
TYPE G2-02 TO G2-05, G3-02 TO G3-05, G4-02 TO G4-05, G5-02 TO G5-05, G6-02 TO G6-05 SIMILAR
1:25

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1110.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS REINFORCEMENT SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG - BRD
NUMBER	REV		
1111	01		



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

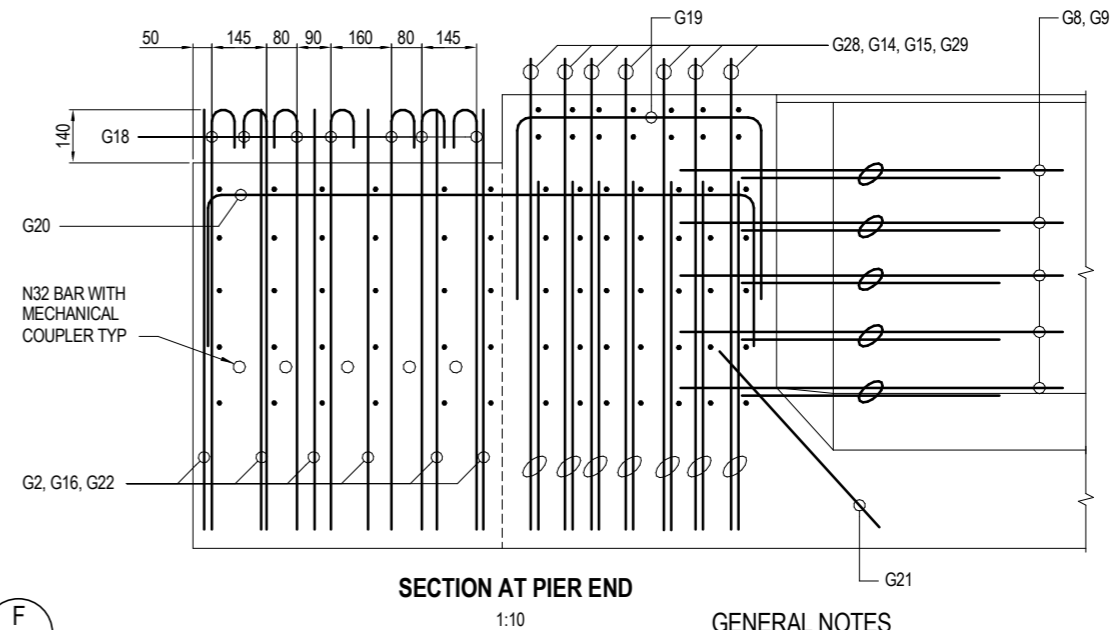
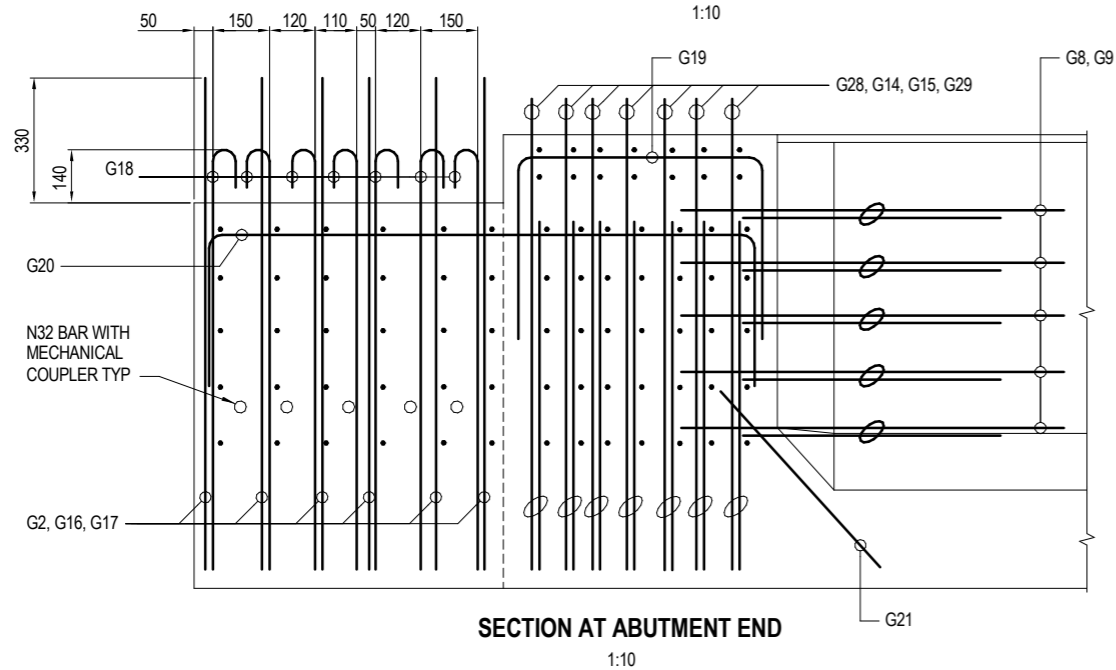
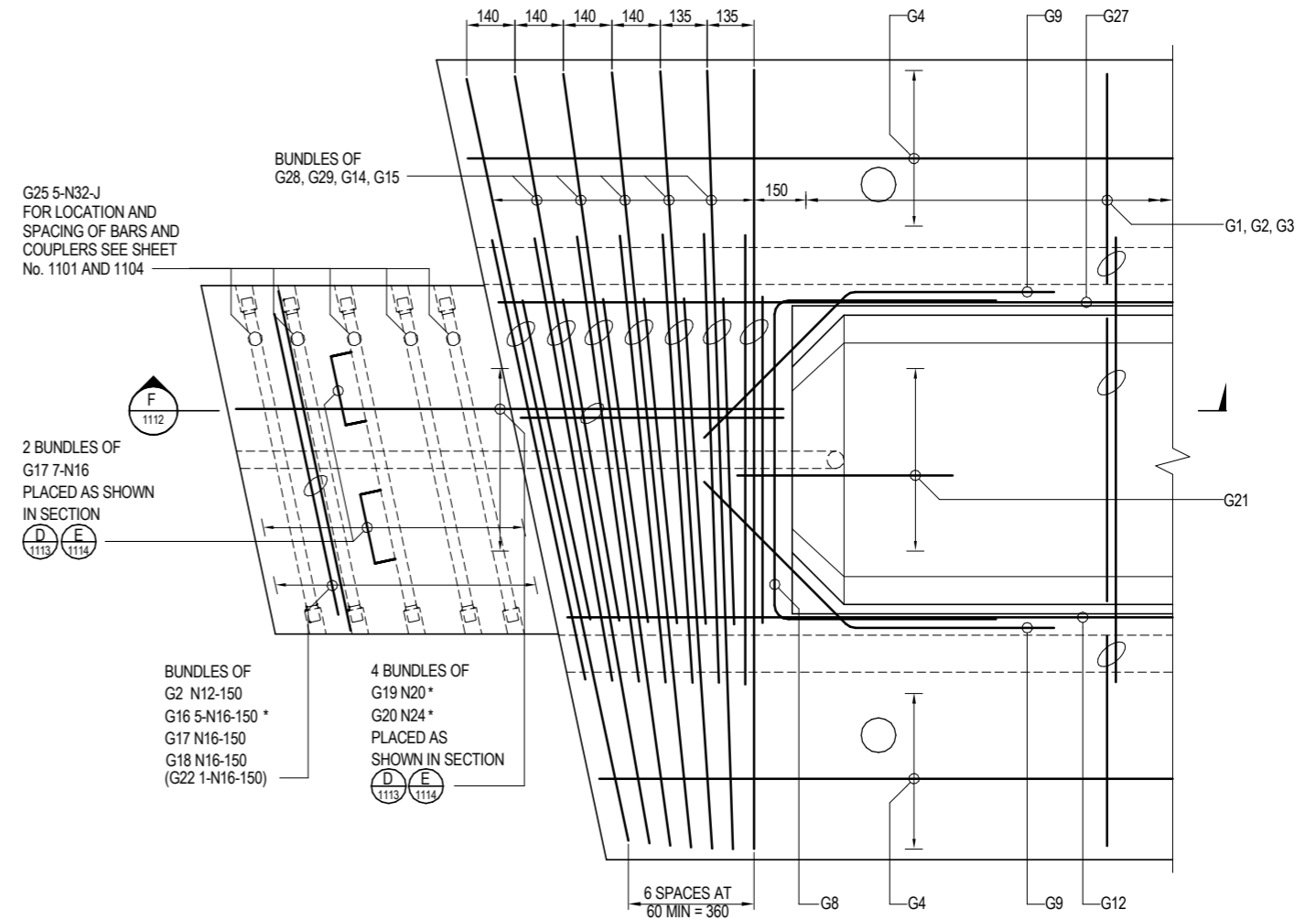
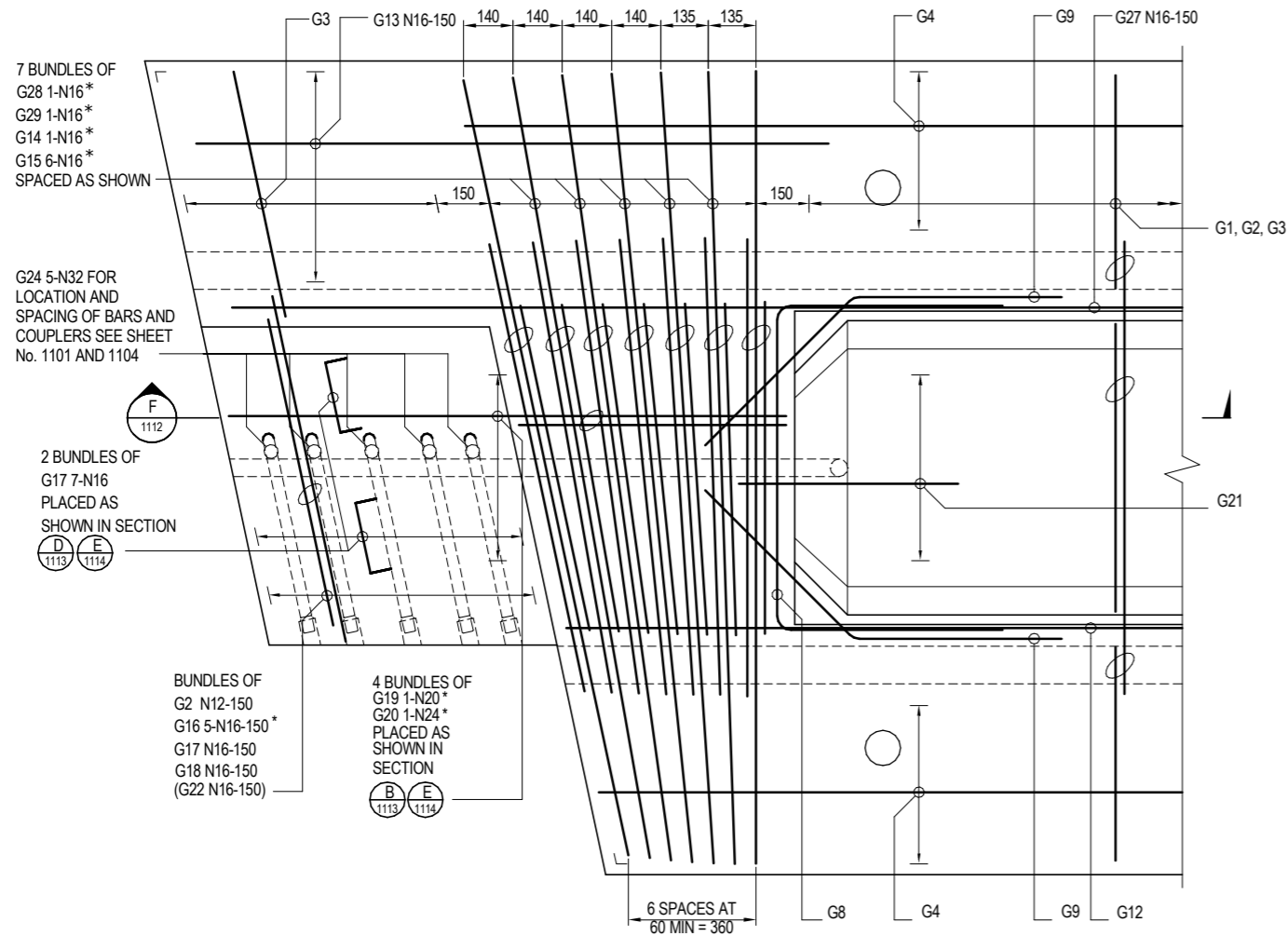
SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

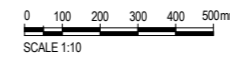
APPROVED

DATE
20.12.16

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 Office:



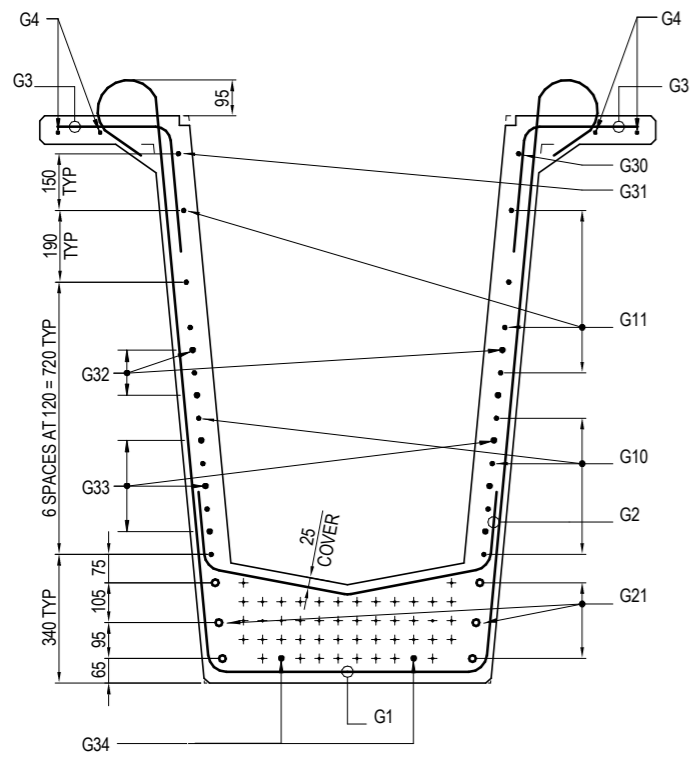
- GENERAL NOTES
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1110.



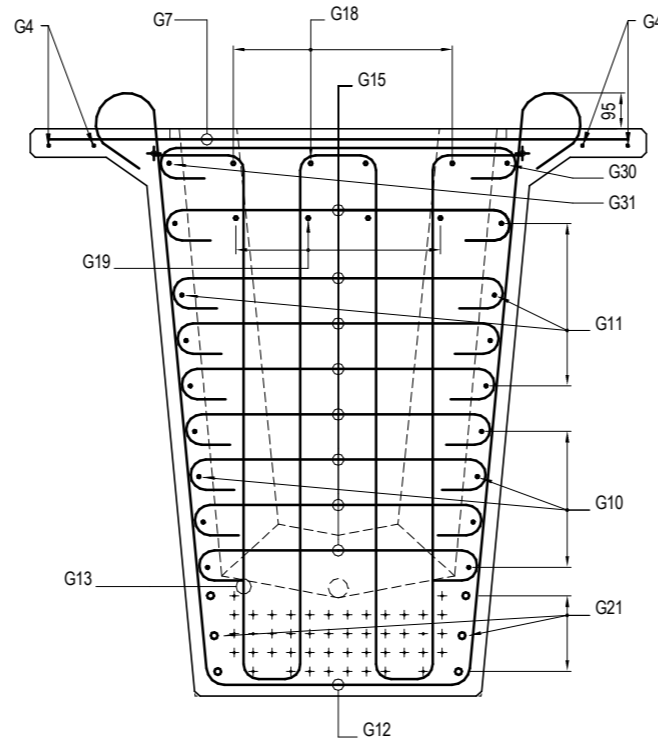
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N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS REINFORCEMENT SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG - BRD
DATE	NUMBER	REV	
20.12.16	1112	01	

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

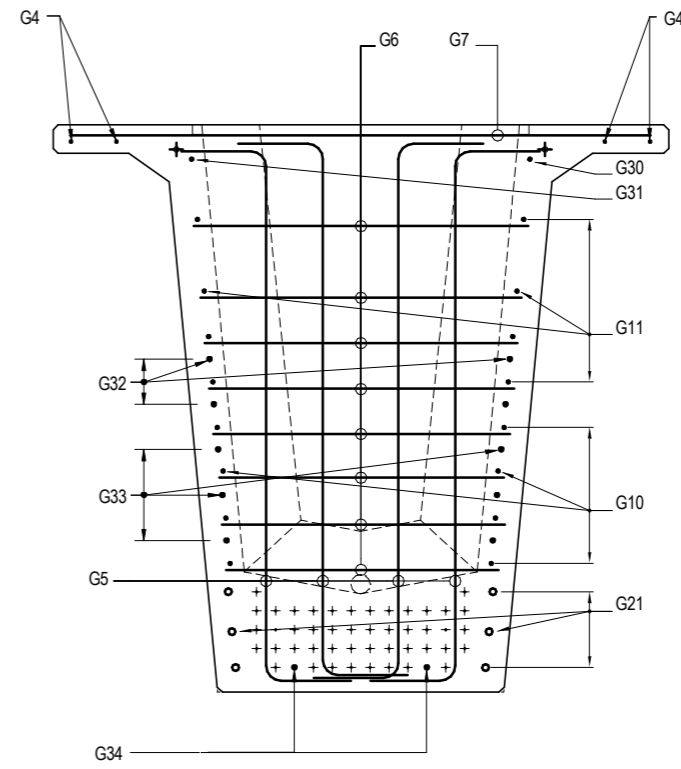
FOR CONSTRUCTION
APPROVED
DATE
20.12.16



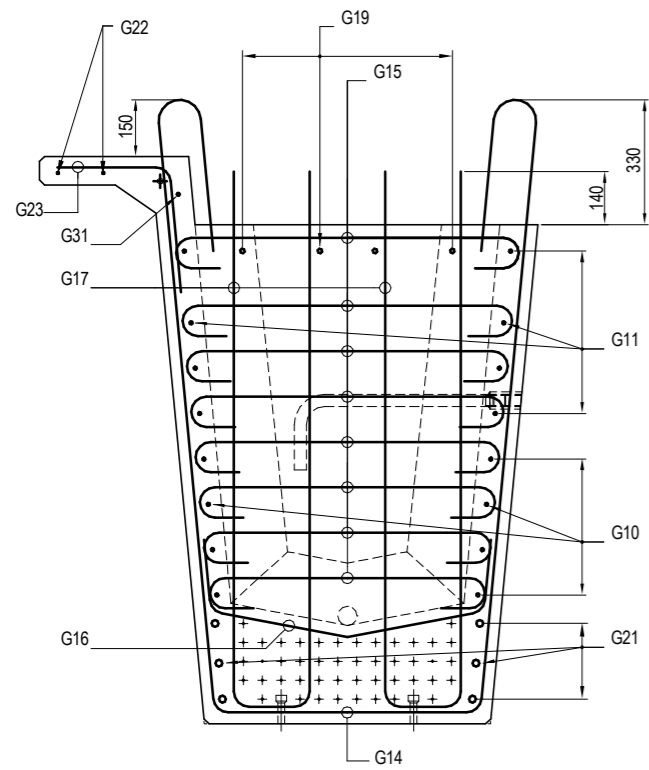
SECTION A A
1:10



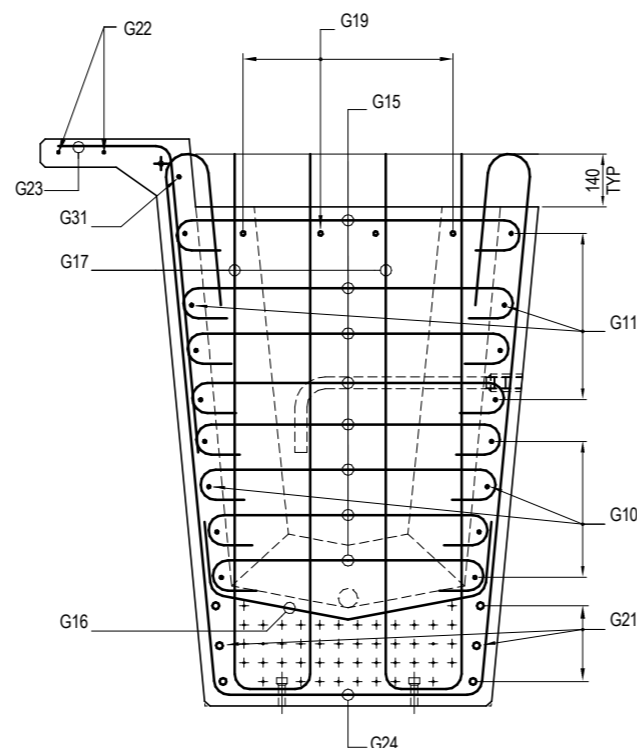
SECTION B B
1:10



SECTION C C
1:10



TYPICAL SECTION AT ABUTMENT END
1:10



TYPICAL SECTION AT PIER END
1:10

SECTION D
1:10

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1110.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1
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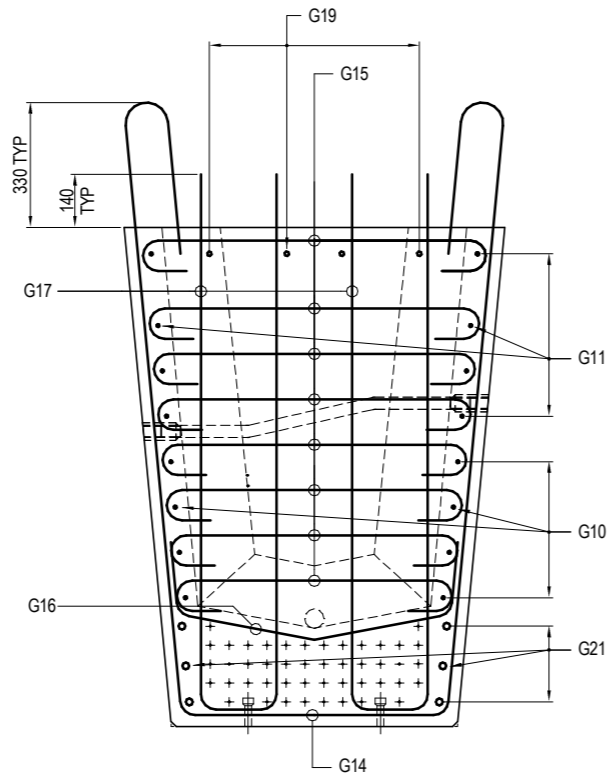
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DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER	REV
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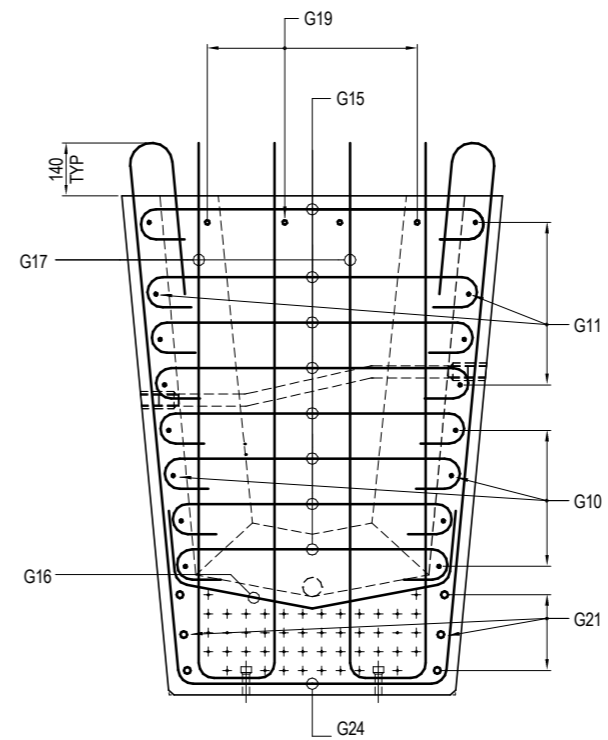
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	AS SHOWN
SIZE	A1

FOR CONSTRUCTION	
APPROVED	
DATE	20.12.16

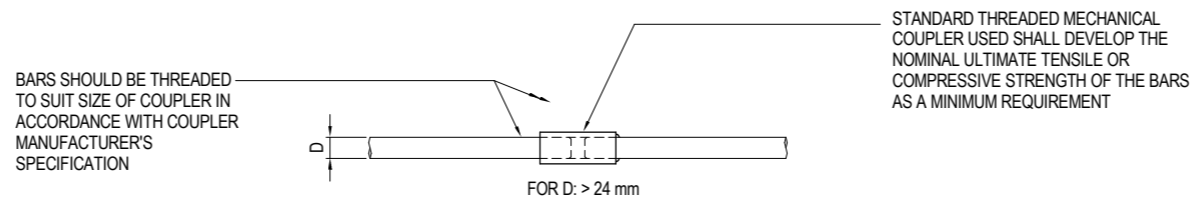
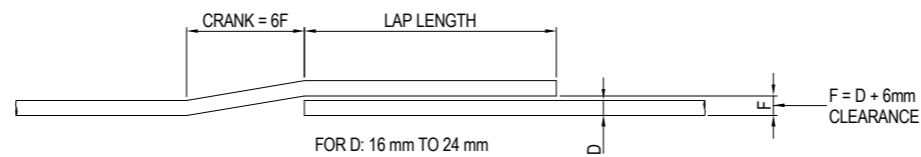


TYPICAL SECTION
AT ABUTMENT END
1:10

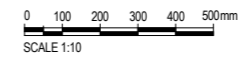


TYPICAL SECTION
AT PIER END
1:10

SECTION E
1:10



BOTTOM FLANGE REINFORCEMENT
BAR SPLICE DETAIL
NOT TO SCALE



GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1110.

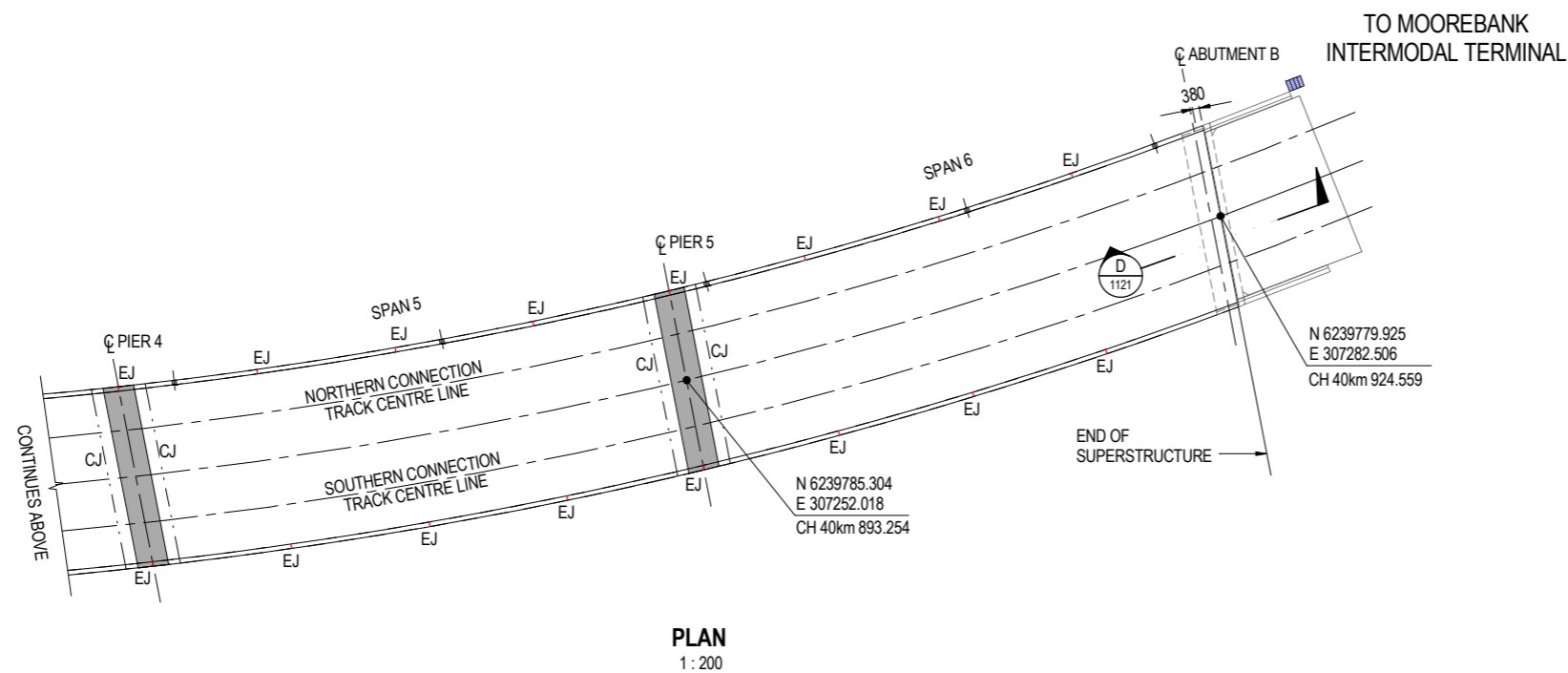
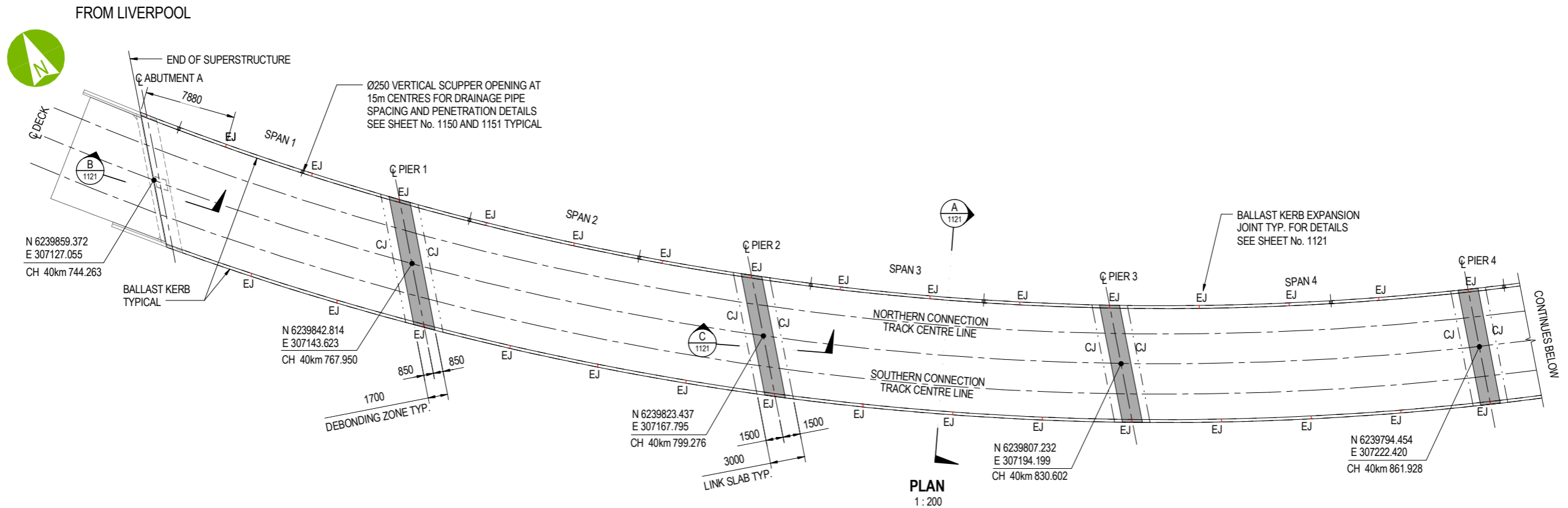
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE PSC GIRDERS REINFORCEMENT SHEET E		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1114	01		

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REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

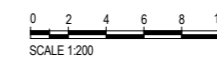


DECK POUR SEQUENCE

1. REFER TO CONSTRUCTION SEQUENCE ON SHEET No. 1006.
2. DECK CONCRETE SHALL BE POURED AT LEAST 7 DAYS AFTER THE END CROSS GIRDER OF EACH SPAN HAS BEEN CAST.
3. LINK SLABS SHALL ONLY BE POURED A MINIMUM OF 3 DAYS AFTER COMPLETION OF ADJACENT DECK SLABS.
4. LINK SLAB CONCRETE SHALL ONLY BE PLACED AFTER THE MIDSPAN CONCRETE HAS ACHIEVED A MINIMUM COMPRESSIVE STRENGTH OF 32MPa.

GENERAL NOTES

1. SCALE AS SHOWN
2. CONCRETE EXPOSURE CLASSIFICATION: B1
3. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
4. XYPEX IS REQUIRED FOR THE CONCRETE DECK SLAB MIX IN ACCORDANCE WITH TNSW TN 027:2015.
5. EDGES SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLETED 20 x 20 UNLESS SPECIFIED OTHERWISE.
6. CJ DENOTES CONSTRUCTION JOINT.
7. EJ DENOTES EXPANSION JOINT.
8. ALL CHAINAGES ARE MEASURED ALONG SOUTHERN CONNECTION RAIL.
9. ▼ NOMINAL DIMENSION AT MID SPAN TO BE VARIED ELSEWHERE DUE TO GIRDER HOG.
10. ⦿ SOP DENOTES SETOUT POINT.
11. ▭ DENOTES DEBONDING ZONE BETWEEN TOP OF GIRDER AND SOFFIT OF DECK.
12. FOR LOCATION OF THRU BOLTS FOR WALKWAY AND CAST-IN FERRULES FOR DRAINAGE BRACKETS SEE SHEETS No. 1195 AND 1196.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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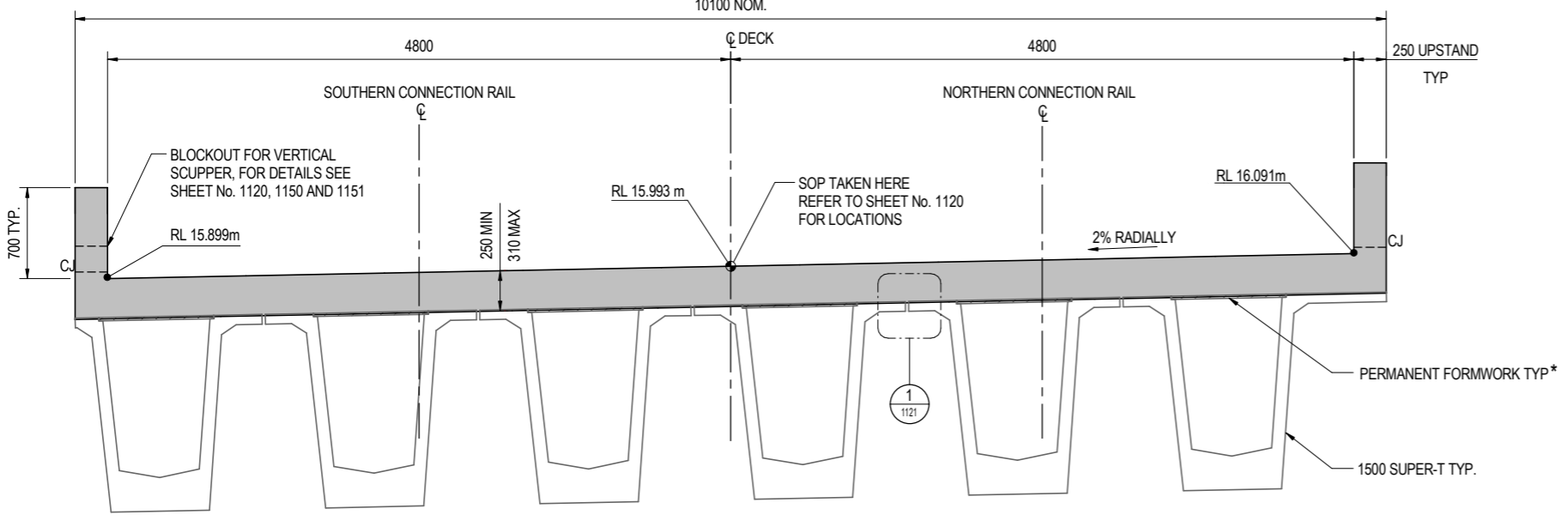
REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

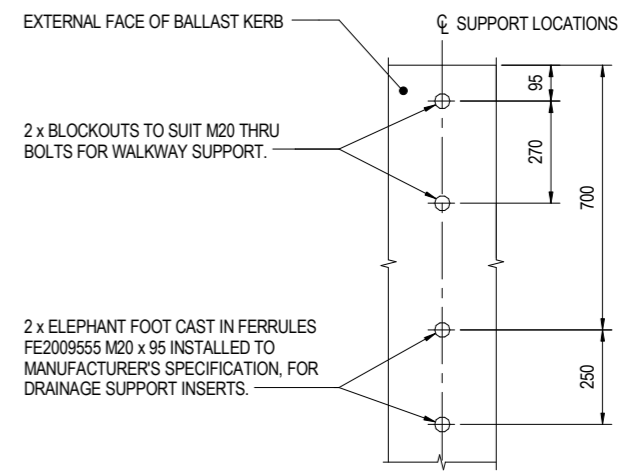
FOR CONSTRUCTION
APPROVED
DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1				
TITLE	GEORGES RIVER BRIDGE DECK CONCRETE SHEET A				
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER
N01031	-	GRB	-	DRG	-
				BRD	1120
					REV
					01

DOWNSTREAM UPSTREAM



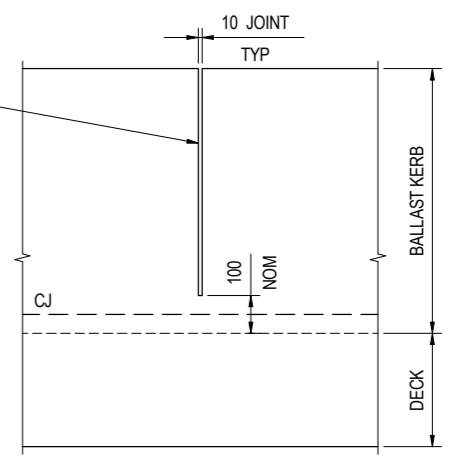
SECTION A
1:25



1. PROVISION IS FOR WALKWAY AND DRAINAGE SUPPORT ON DOWNSTREAM SIDE OF BRIDGE.
2. PRESS FIT PLASTIC PLUGS REQUIRED FOR EACH INSERT. TO BE REMOVED UPON WALKWAY ERECTION AND ALSO TO REMAIN IN UNUSED INSERTS.

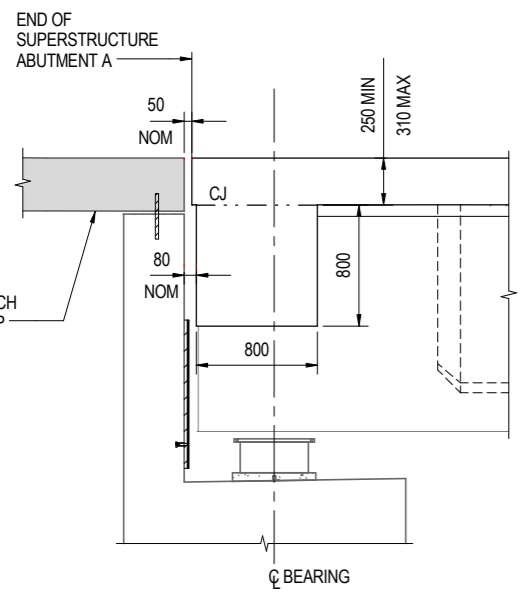
WALKWAY AND DRAINAGE SUPPORT CONNECTION DETAIL
1:10

EXPANSION JOINTS LOCATED AT EACH PIER AND SPACED AT 8000 CENTRES MAX. JOINTS TO BE SPACED TO AVOID DRAINAGE PIPES AND WALKWAY BRACKET LOCATIONS.

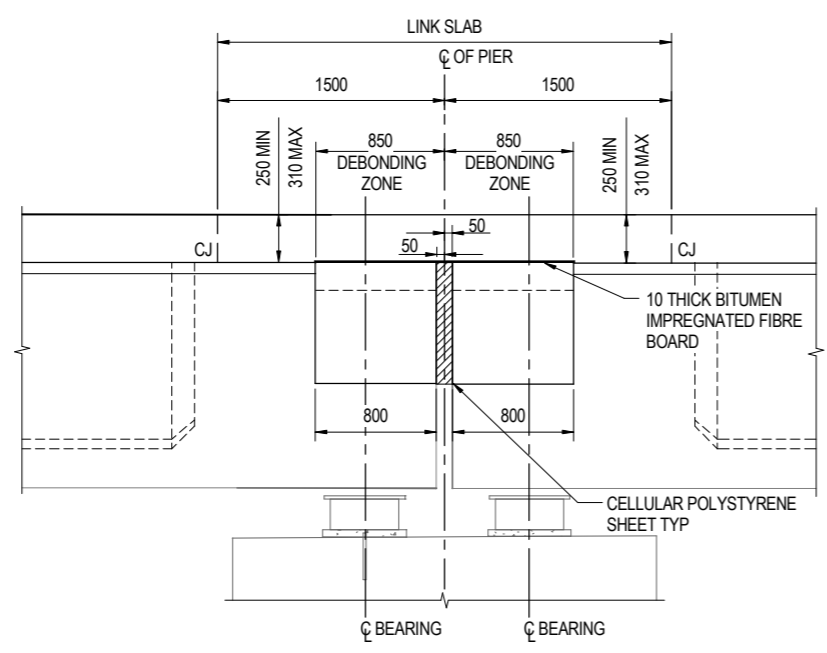


TYPICAL ELEVATION AT EXPANSION JOINT (EJ)
1:10

FROM LIVERPOOL



SECTION B
1:25

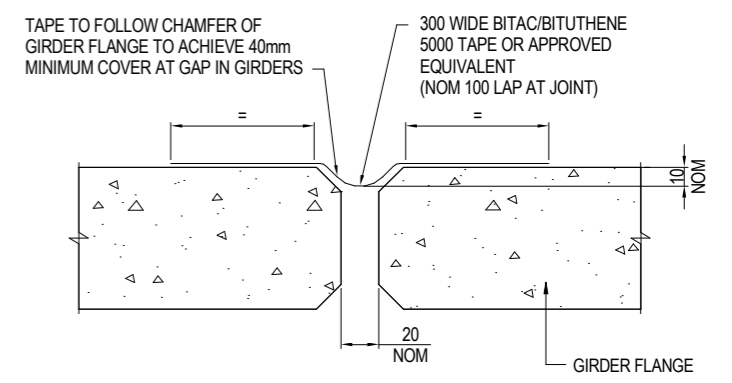


SECTION C
1:25

TO MOOREBANK INTERMODAL TERMINAL



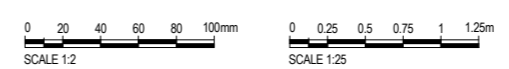
SECTION D
1:25



DETAIL 1
1:2

GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWINGS SEE SHEET No. 1120.
3. * DENOTES MARINE PLY WITH EDGE TREATMENT.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE DECK CONCRETE SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
	DISC	NUMBER	REV
	BRD	1121	01

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1



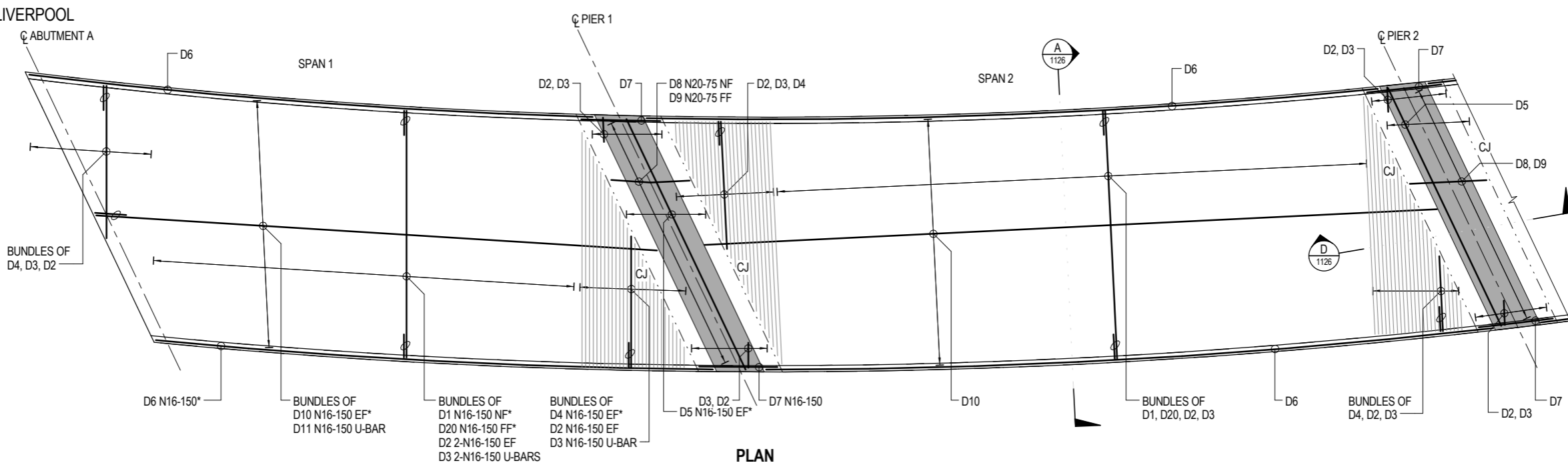
FOR CONSTRUCTION

APPROVED

DATE 20.12.16

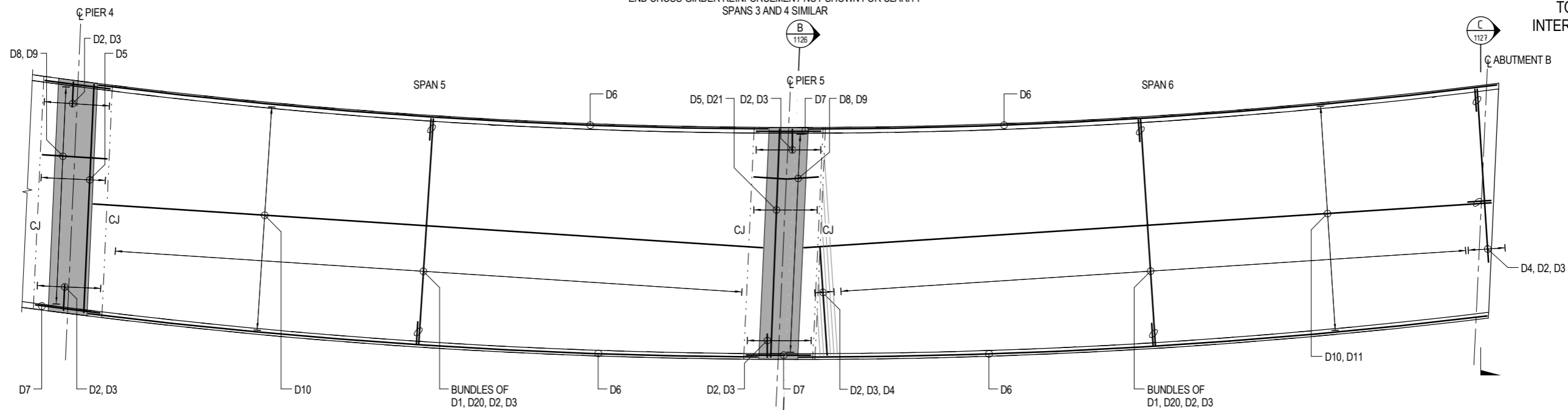
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 Other

FROM LIVERPOOL



PLAN
1:100

END CROSS-GIRDER REINFORCEMENT NOT SHOWN FOR CLARITY
SPANS 3 AND 4 SIMILAR



PLAN
1:100

END CROSS-GIRDER REINFORCEMENT NOT SHOWN FOR CLARITY
SPAN 3 AND 4 SIMILAR

TO MOOREBANK
INTERMODAL TERMINAL

GENERAL NOTES

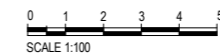
- SCALE AS SHOWN.
- FOR OTHER NOTES RELATING TO THIS DRAWING SEE SHEET No. 1120.
- NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE:
TOP OF DECK SLAB:45mm.
BOTTOM OF DECK SLAB:40mm.
END CROSS-GIRDER BEAM:40mm.
- REINFORCEMENT SHALL BE GRADE D500N IN ACCORDANCE WITH AS/NZS4671.
- REINFORCEMENT MAY BE DISPLACED SLIGHTLY, WHERE NECESSARY TO CLEAR STAINLESS STEEL DOWELS.
- REINFORCEMENT MAY BE CUT SLIGHTLY WHERE NECESSARY FOR SCUPPERS.
- CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER.

GENERAL NOTES CONTINUED

- UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LAP LENGTHS SHALL BE:

BAR SIZE:	N12	N16	N20
a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR	500	700	1000
b) OTHER BARS	400	600	800

- * DENOTES VARIABLE BAR LENGTH.
- NF DENOTES NEAR FACE.
- FF DENOTES FAR FACE.
- EF DENOTES EACH FACE.



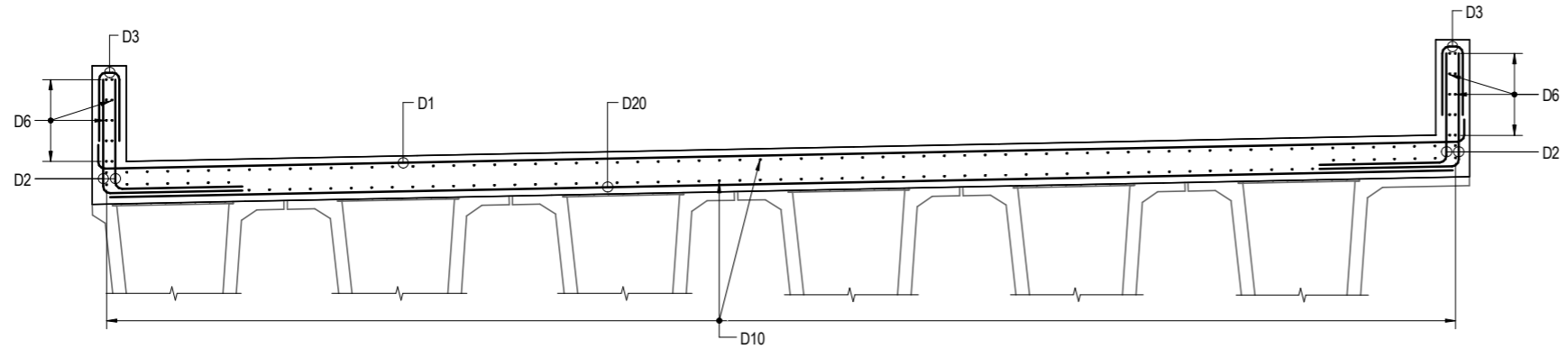
ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

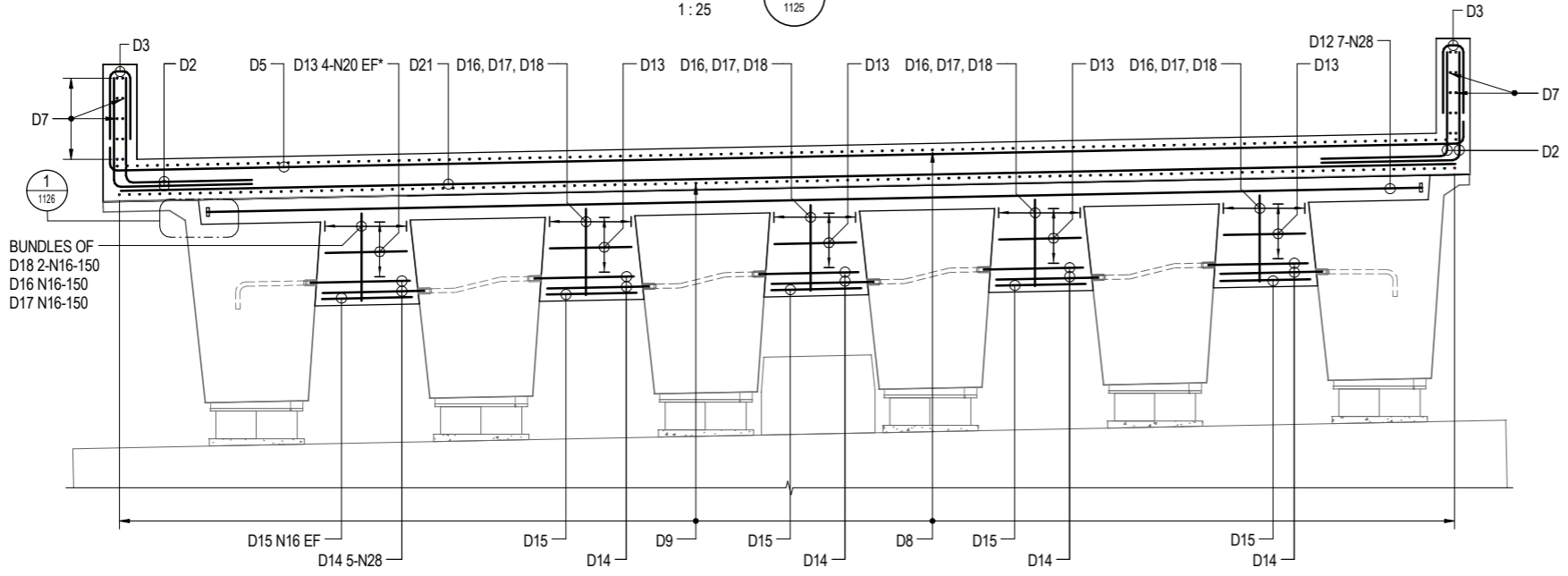
FOR CONSTRUCTION	APPROVED
	DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1
TITLE	GEORGES RIVER BRIDGE DECK REINFORCEMENT SHEET A

DRAWING No.	PROJECT No.	WBS	TYPE	DISC	NUMBER	REV
N01031	GRB	DRG	BRD	1125	01	



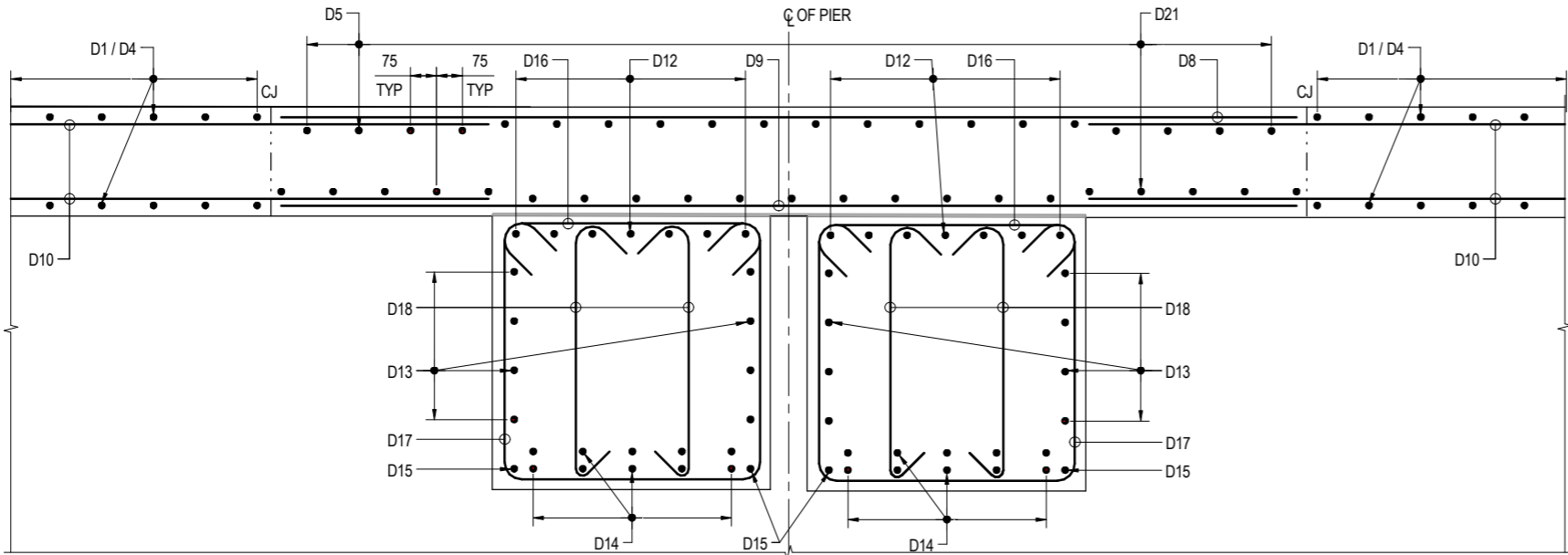
SECTION A
1:25



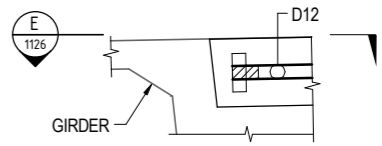
BUNDLES OF
D18 2-N16-150
D16 N16-150
D17 N16-150

SECTION B
1:25

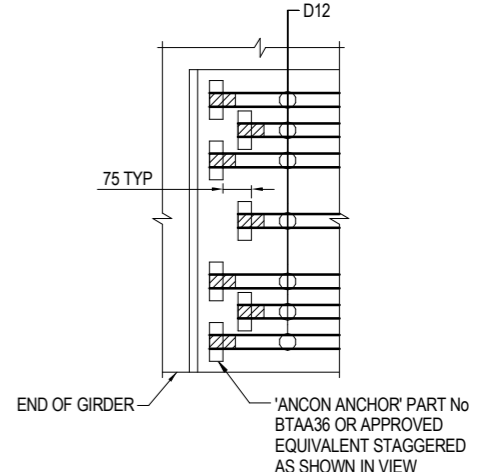
SECTION AT PIER SHOWN
BARS IN BRACKETS ARE AT ABUTMENT ENDS ONLY



SECTION D
1:10



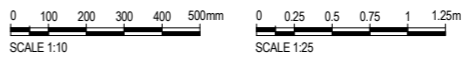
DETAIL 1
1:10



SECTION E
1:10

GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1125.



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 Office:

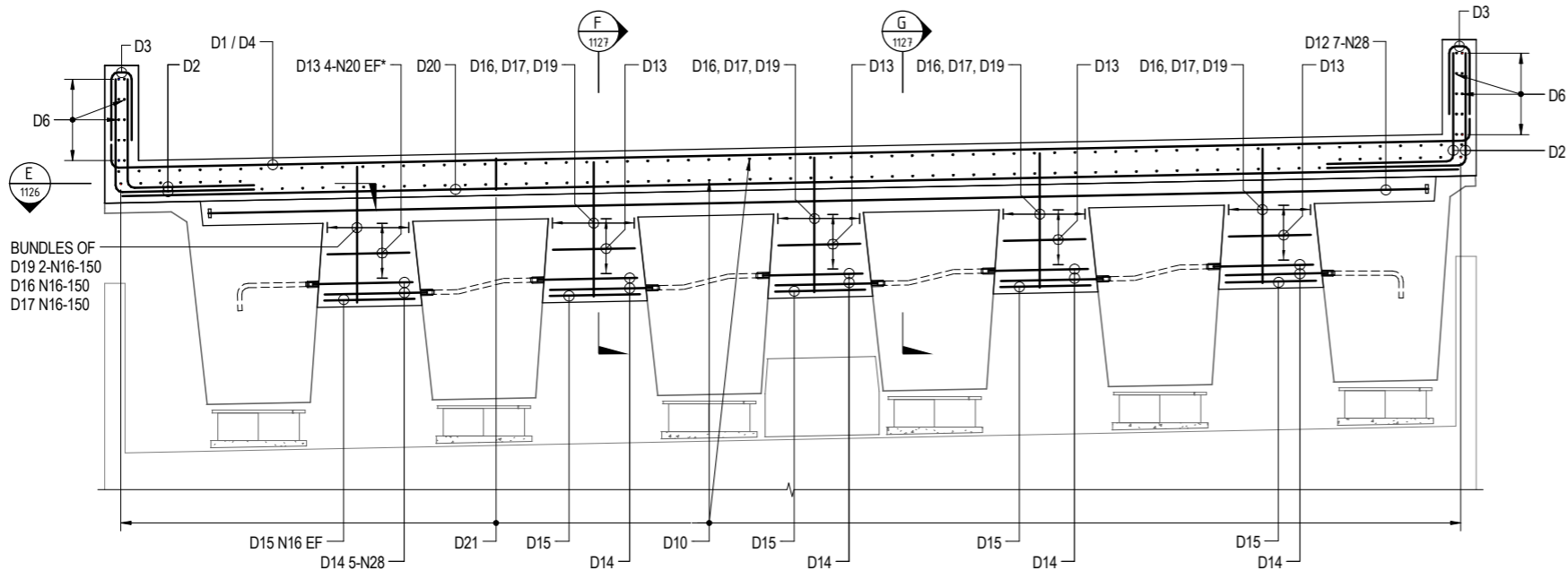


REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

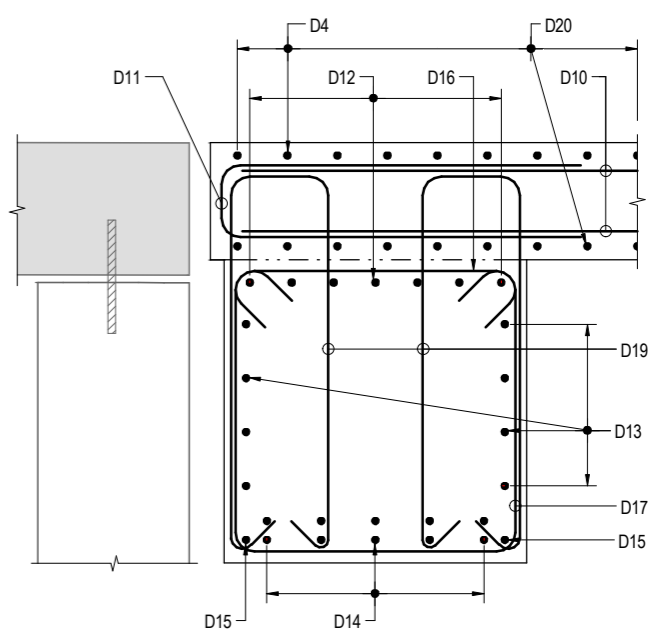
FOR CONSTRUCTION
APPROVED
DATE 20.12.16

ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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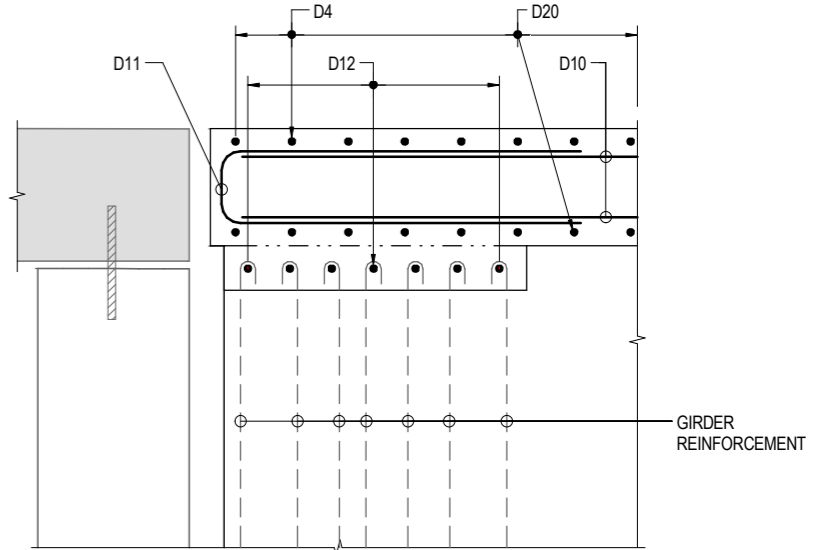
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1									
TITLE	GEORGES RIVER BRIDGE DECK REINFORCEMENT SHEET B									
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER	REV				
N01031	-	GRB	-	DRG	-	BRD	-	1126	-	01



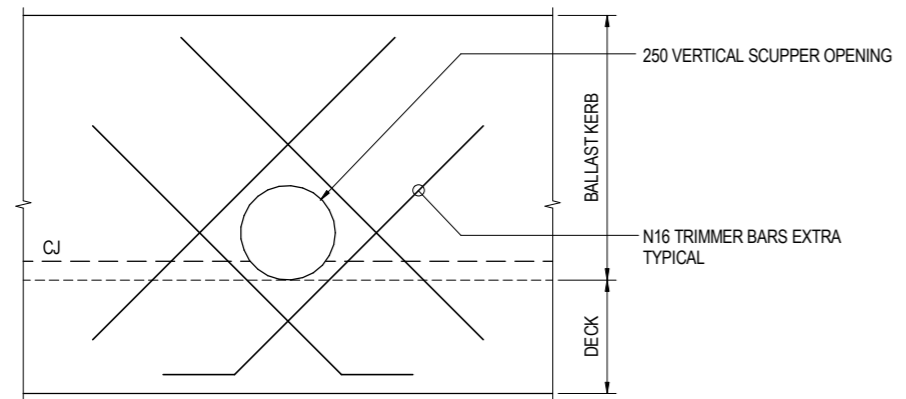
SECTION C
1 : 25



SECTION F
1 : 10
SECTION THROUGH CROSS-GIRDER

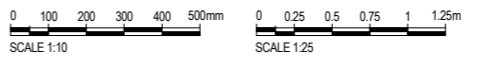


SECTION G
1 : 10
SECTION THROUGH GIRDER



TYPICAL ELEVATION AT SCUPPER
1 : 10

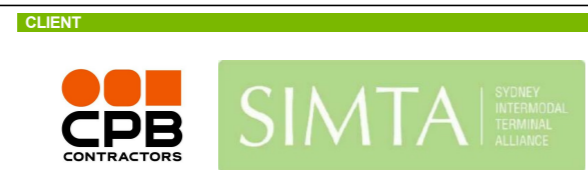
- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1125.



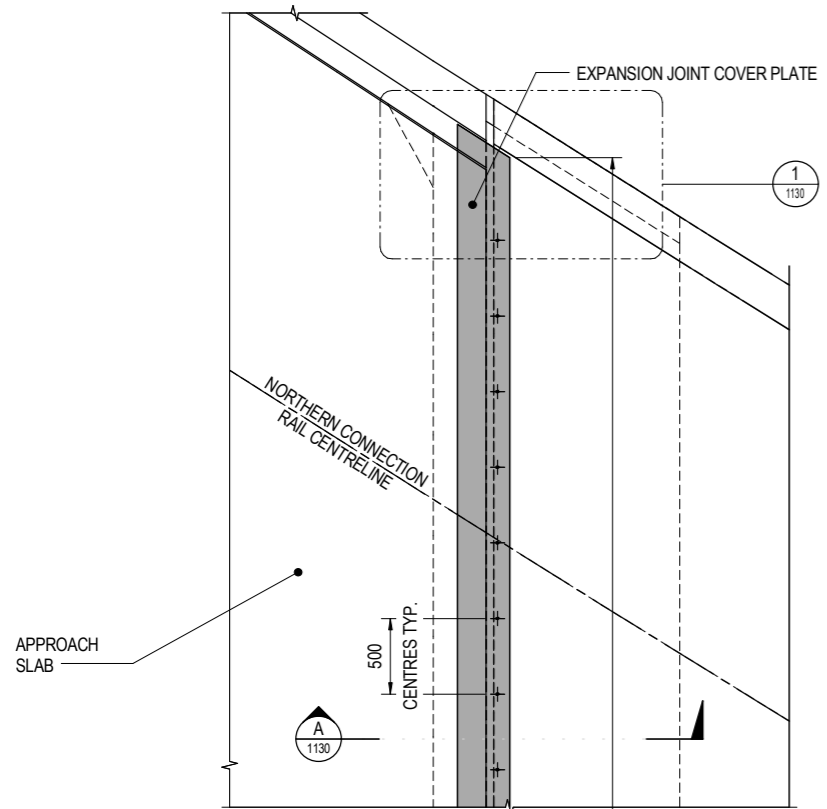
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N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE DECK REINFORCEMENT SHEET C		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031	N01031	GRB	DRG - BRD
NUMBER	REV		
1127	01		

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

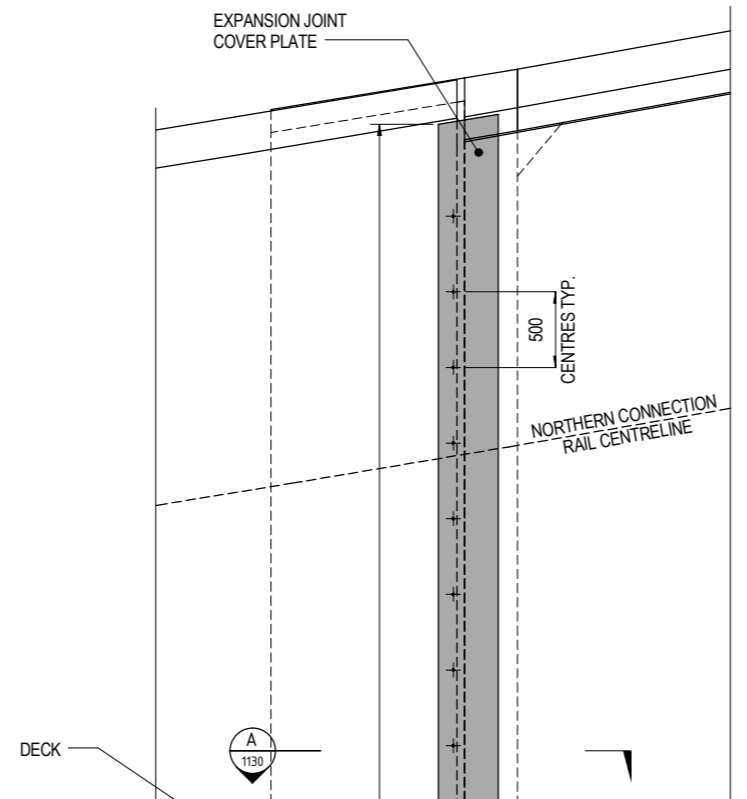
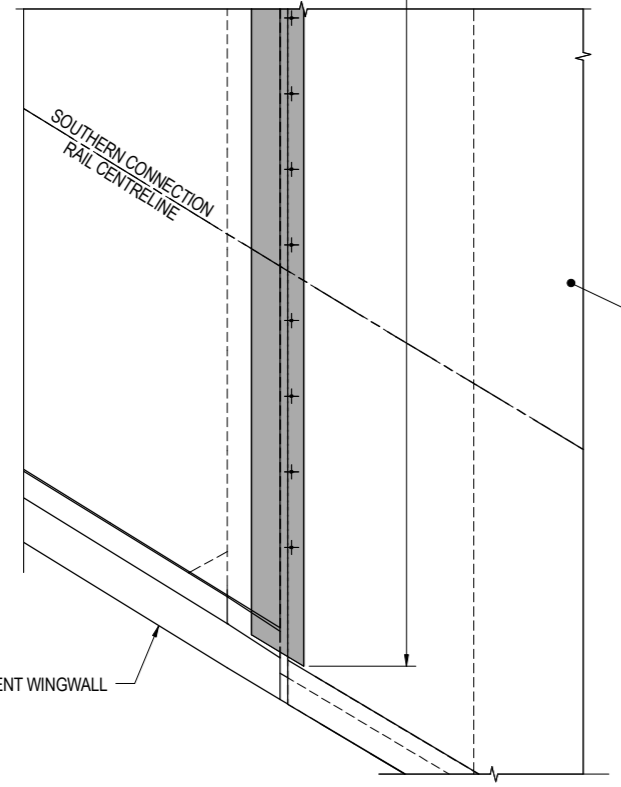
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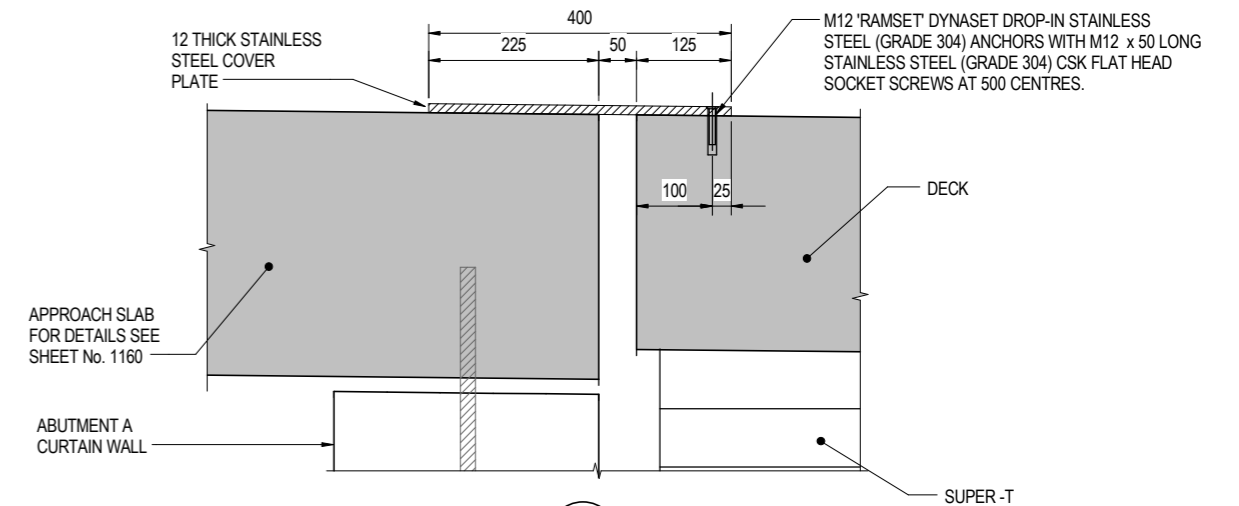
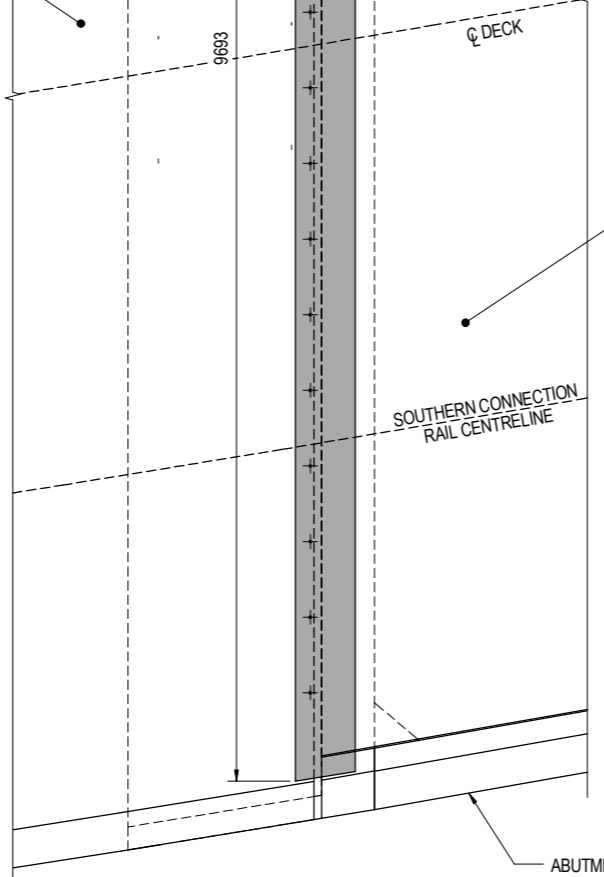
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PLAN AT ABUTMENT A
1:25

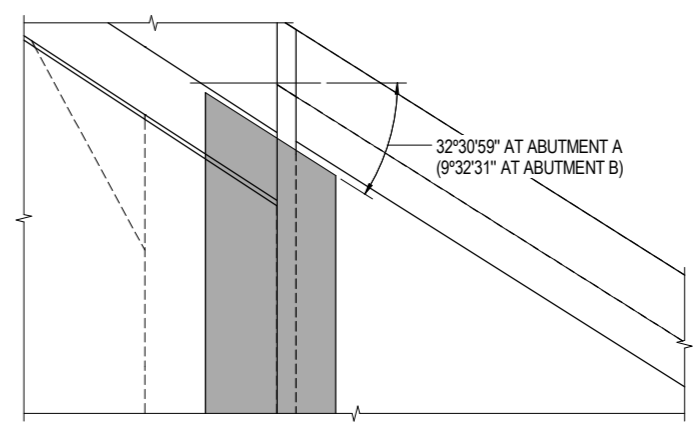


PLAN AT ABUTMENT B
1:25



SECTION A
1:5

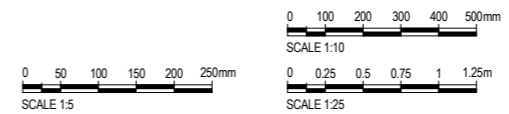
DECK COVER PLATE



DETAIL 1
1:10

GENERAL NOTES

- SCALE AS SHOWN
- STAINLESS STEEL PLATE SHALL BE GRADE 216L TO ASTM A240M



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE EXPANSION JOINT DETAILS		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031		GRB	DRG
			DISC
			BRD
			NUMBER
			1130
			REV
			01



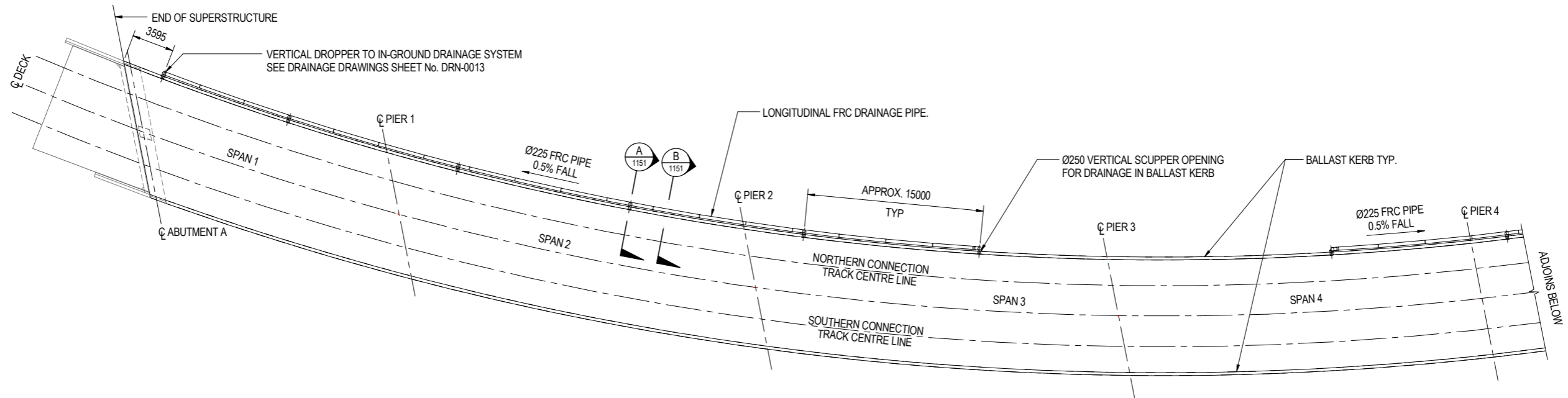
REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION

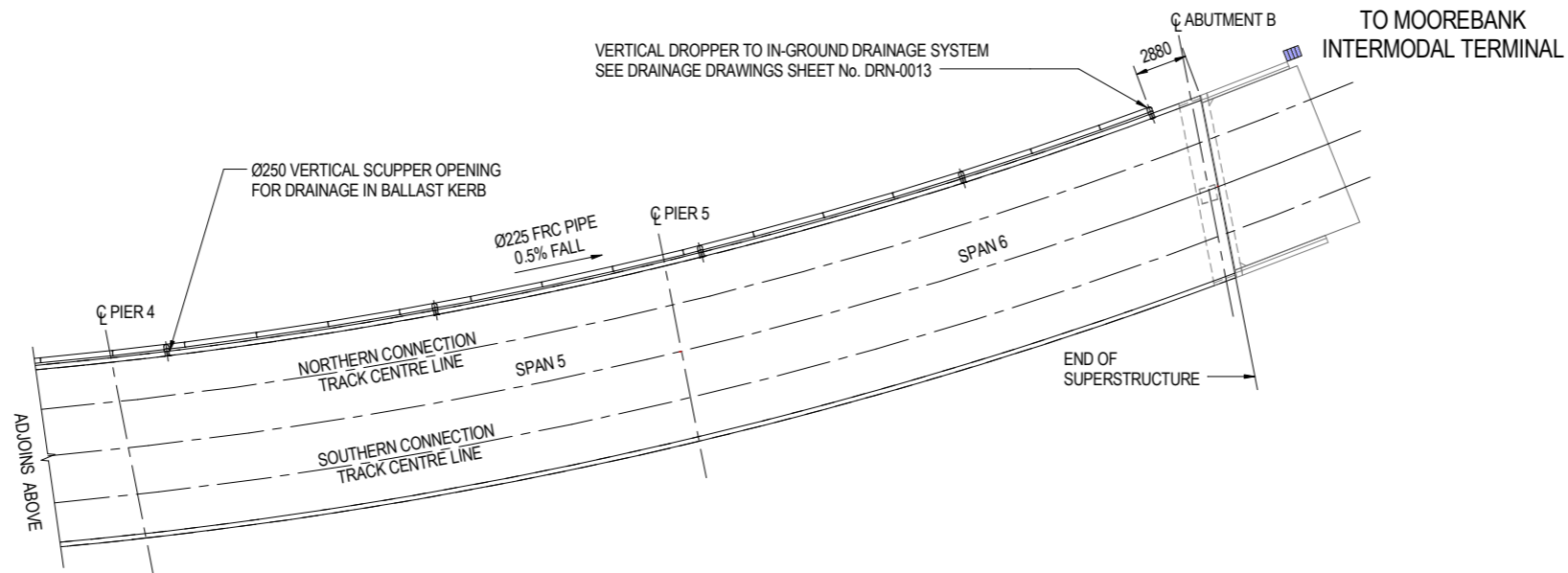
APPROVED

DATE: 20.12.16

FROM LIVERPOOL



PLAN
1:200



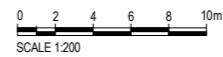
PLAN
1:200

GENERAL NOTES

- SCALE AS SHOWN.
- FRC PIPE SHALL BE CLASS 2 AND CONFORM TO AS3725 AND AS4139.
- PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AS3725.
- ALL STEELWORK TO BE HOT DIP GALVANISED, AND ANY DAMAGED/ UNCOATED AREA TO BE REPAIRED, IN ACCORDANCE WITH AS 4680.
- ALL NUTS, BOLTS AND WASHERS SHALL BE GALVANISED TO AS 1214.
- DRAINAGE PIPE TO BE SUPPORTED AT LOCATIONS IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS.
- ALL DRAINAGE PIPE FITTINGS TO BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.
- ALL STEEL PLATES SHALL COMPLY WITH AS 3678 GRADE 250.
- REINFORCEMENT MAY BE DISPLACED WHERE NECESSARY TO CLEAR CAST-IN FERRULES.
- DRAINAGE PIPES MUST NOT BE INSTALLED UNTIL BALLAST KERB HAS ACHIEVED ITS 28-DAY CHARACTERISTIC STRENGTH.

DRAINAGE SUPPORT STEELWORK

- ALL STRUCTURAL STEELWORK SHALL COMPLY WITH AS 4100.
- ALL ROLLED STEEL SECTIONS SHALL COMPLY WITH AS 3679 GRADE 300 PLUS.



ARTC DRAWING No		TNSW EDMS No	
N/A		N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE DRAINAGE DETAILS SHEET A		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG - BRD
NUMBER	REV		
1150	01		

CLIENT

REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

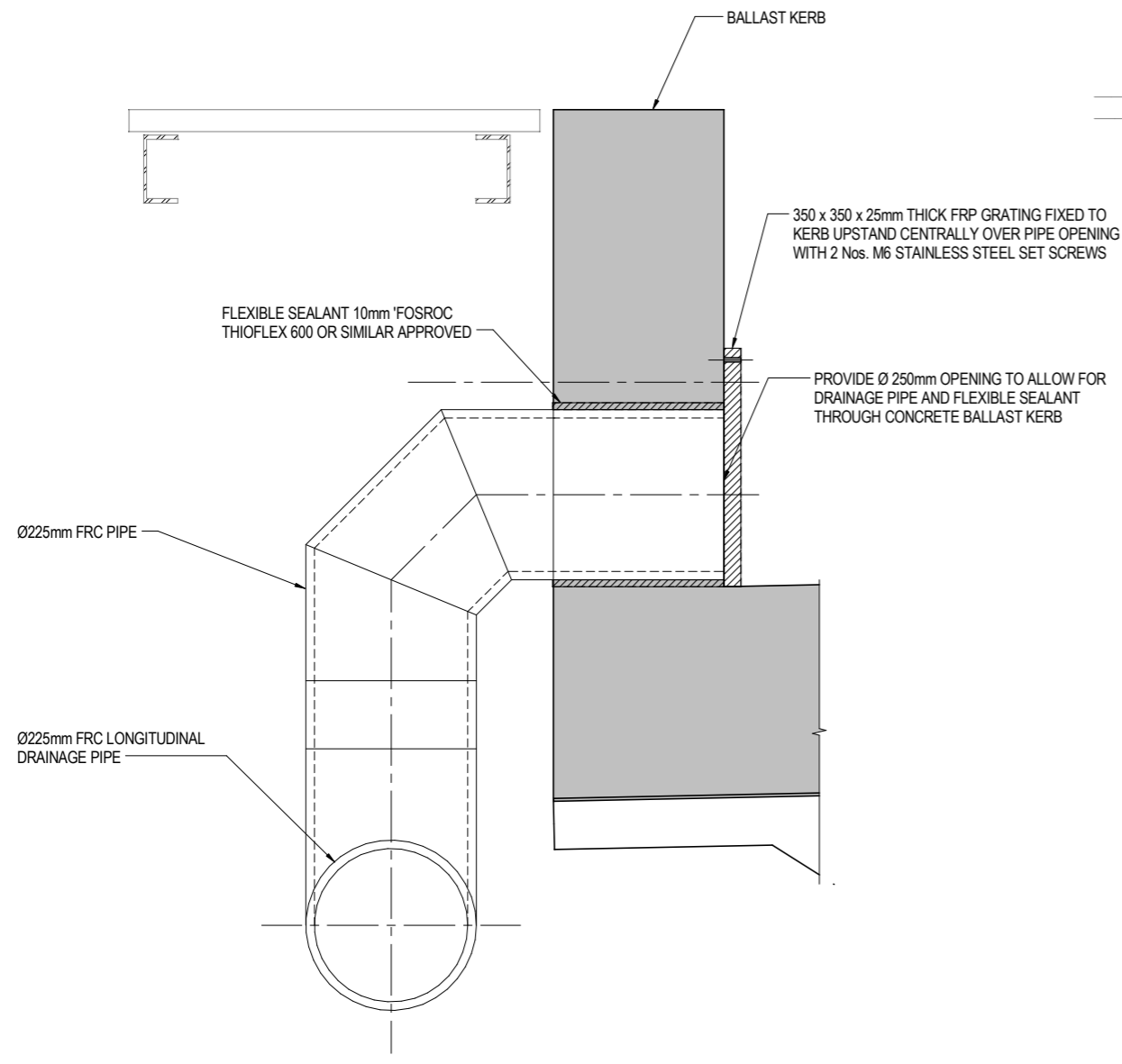
SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

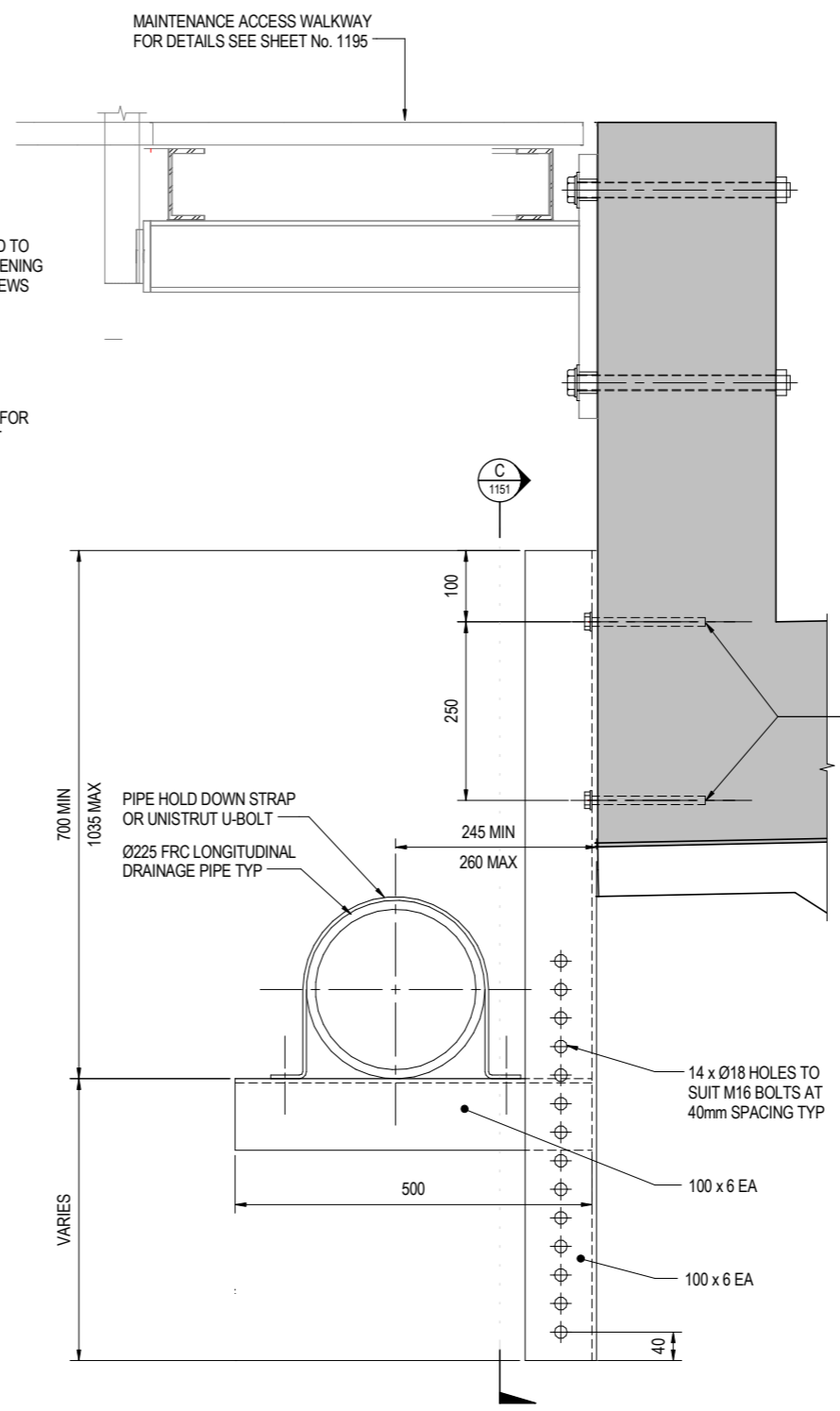
APPROVED

DATE 20.12.16

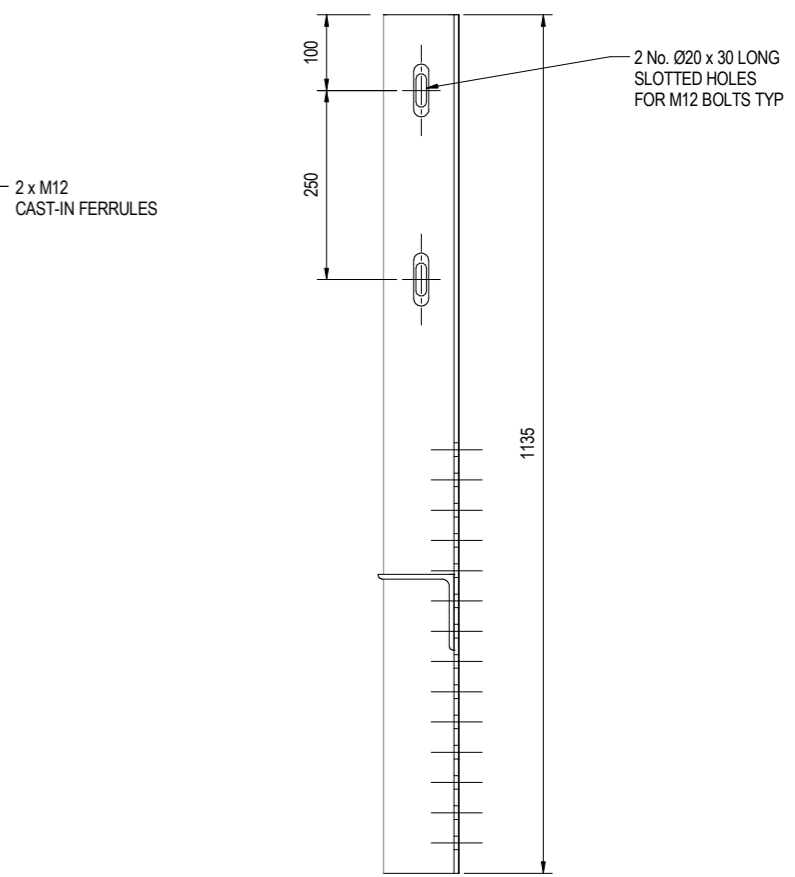
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SECTION A
 1:5
 1150
 TYPICAL SCUPPER DETAIL
 (AT 15000 SPACING TYPICAL)

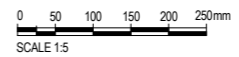


SECTION B
 1:5
 1150
 TYPICAL DRAINAGE SUPPORT
 (AT 2000 SPACING TYPICAL)



SECTION C
 1:5
 1151

- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1150.



REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1					
TITLE	GEORGES RIVER BRIDGE DRAINAGE DETAILS SHEET B					
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER	REV
N01031	N01031	GRB	DRG	BRD	1151	01



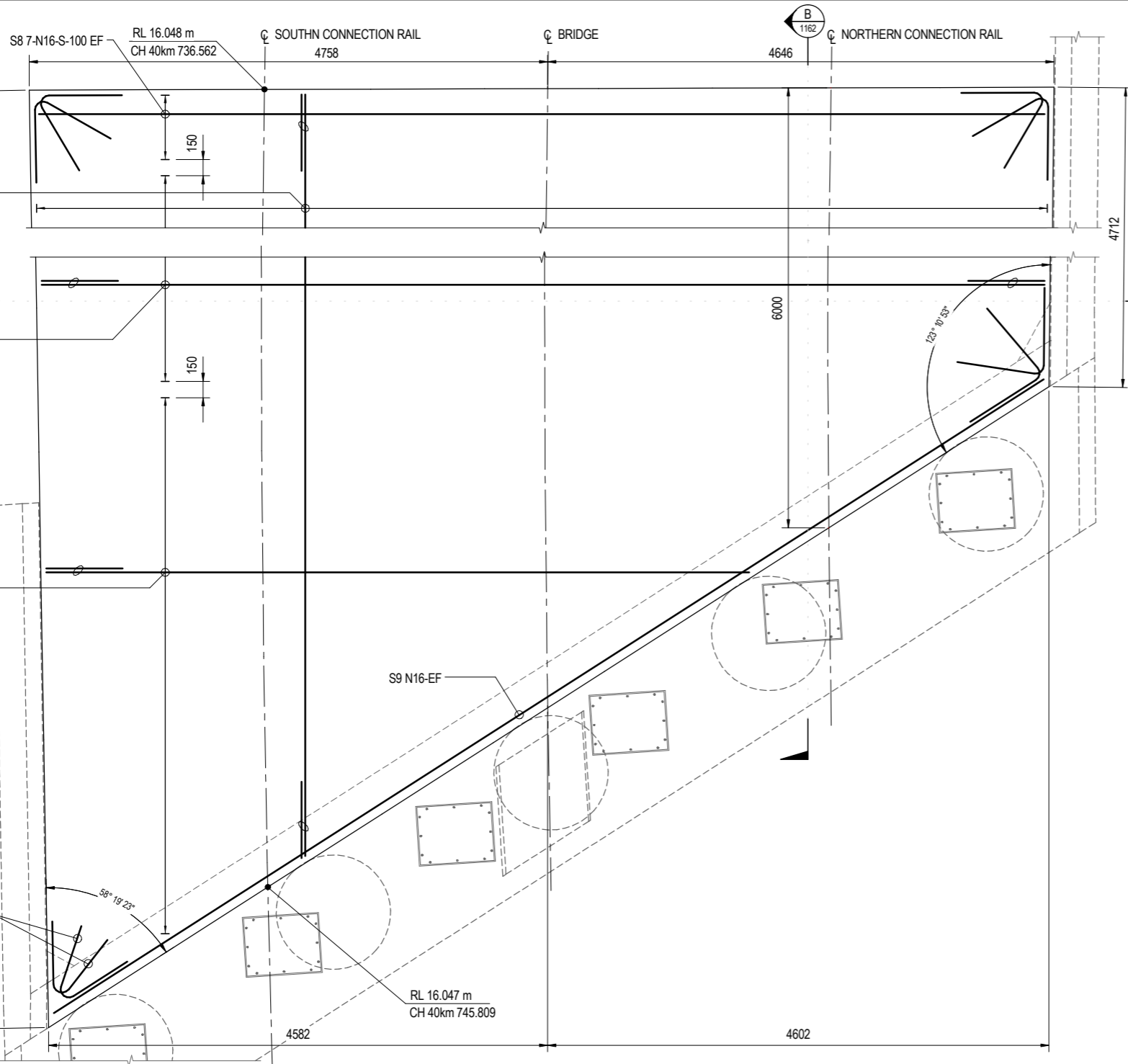
S1 N24-150 FF*
S2 N16-150 NF*
S3 2-N16-150



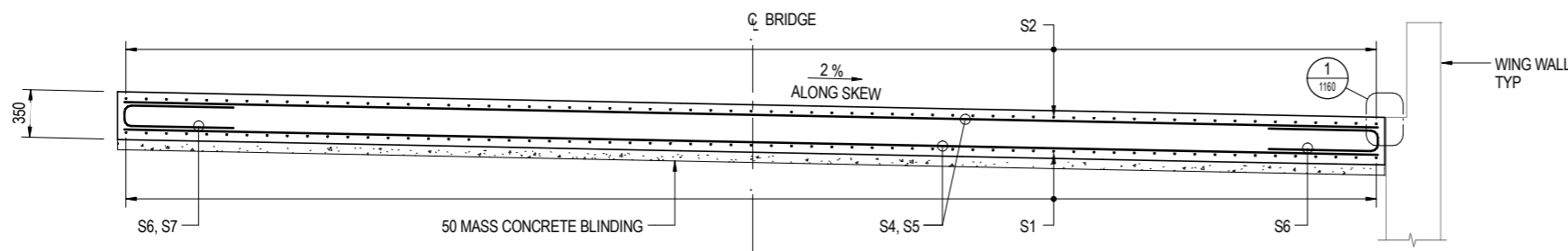
S4 N16-150 EF
S6 2-N16-150

S5 N16-150 EF
S7 N16-150

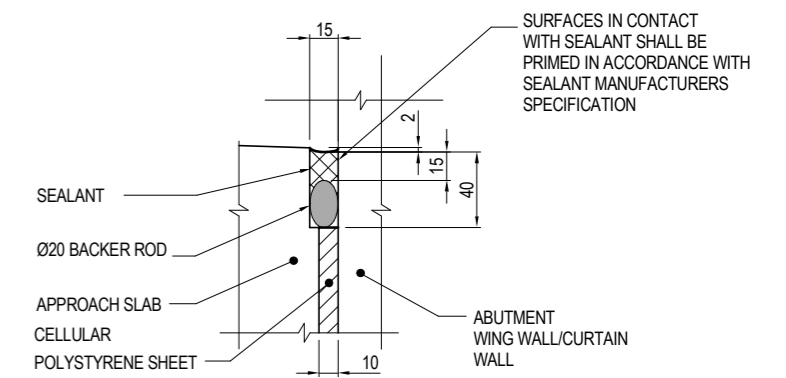
S10 2-N16-EF
TYP EACH CORNER



APPROACH SLAB A PLAN
1:25



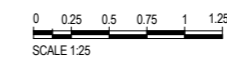
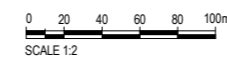
SECTION A
1:25



DETAIL 1
1:2

GENERAL NOTES

- SCALE AS SHOWN
 - CONCRETE EXPOSURE CLASSIFICATION: B1
 - MINIMUM 28 DAY COMPRESSIVE STRENGTH OF ALL CONCRETE SHALL BE 40MPa.
 - MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASS CONCRETE SHALL BE 20MPa.
 - EDGES SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLETED 20 x 20 UNLESS SPECIFIED OTHERWISE.
 - APPROACH SLABS SHALL BE CAST ON MASS CONCRETE BLINDING.
 - CELLULAR POLYSTYRENE SHEET SHALL BE CLASS H IN ACCORDANCE WITH AS1366.3.
 - BACKING RODS SHALL BE NON-ABSORBENT, CLOSED CELL POLYSTYRENE OR NEOPRENE (PARBURY'S EXPANDAFORM BACKER ROD OR APPROVED EQUIVALENT) INSTALLED WITH 25% COMPRESSION SEALANTS SHALL BE APPLIED AS PER MATERIAL SPECIFICATION REQUIREMENTS.
 - NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE, UNLESS SPECIFIED OTHERWISE, SHALL BE 40mm.
 - UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE:
- | BAR SIZE: | N12 | N16 | N20 | N24 |
|--|-----|-----|-----|------|
| a) HORIZONTAL BARS WITH > 300mm OF CONCRETE CAST BELOW THE BAR | 475 | 625 | 850 | 1175 |
| b) OTHER BARS | 350 | 500 | 675 | 900 |
- CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER.
 - * DENOTES VARIABLE LENGTH BAR.
 - EF DENOTES EACH FACE.
 - FF DENOTES FAR FACE.
 - NF DENOTES NEAR FACE.
 - REINFORCEMENT MAY BE DISPLACED SLIGHTLY WHERE NECESSARY TO CLEAR STAINLESS STEEL DOWELS.



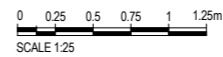
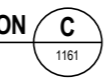
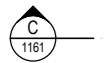
ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16

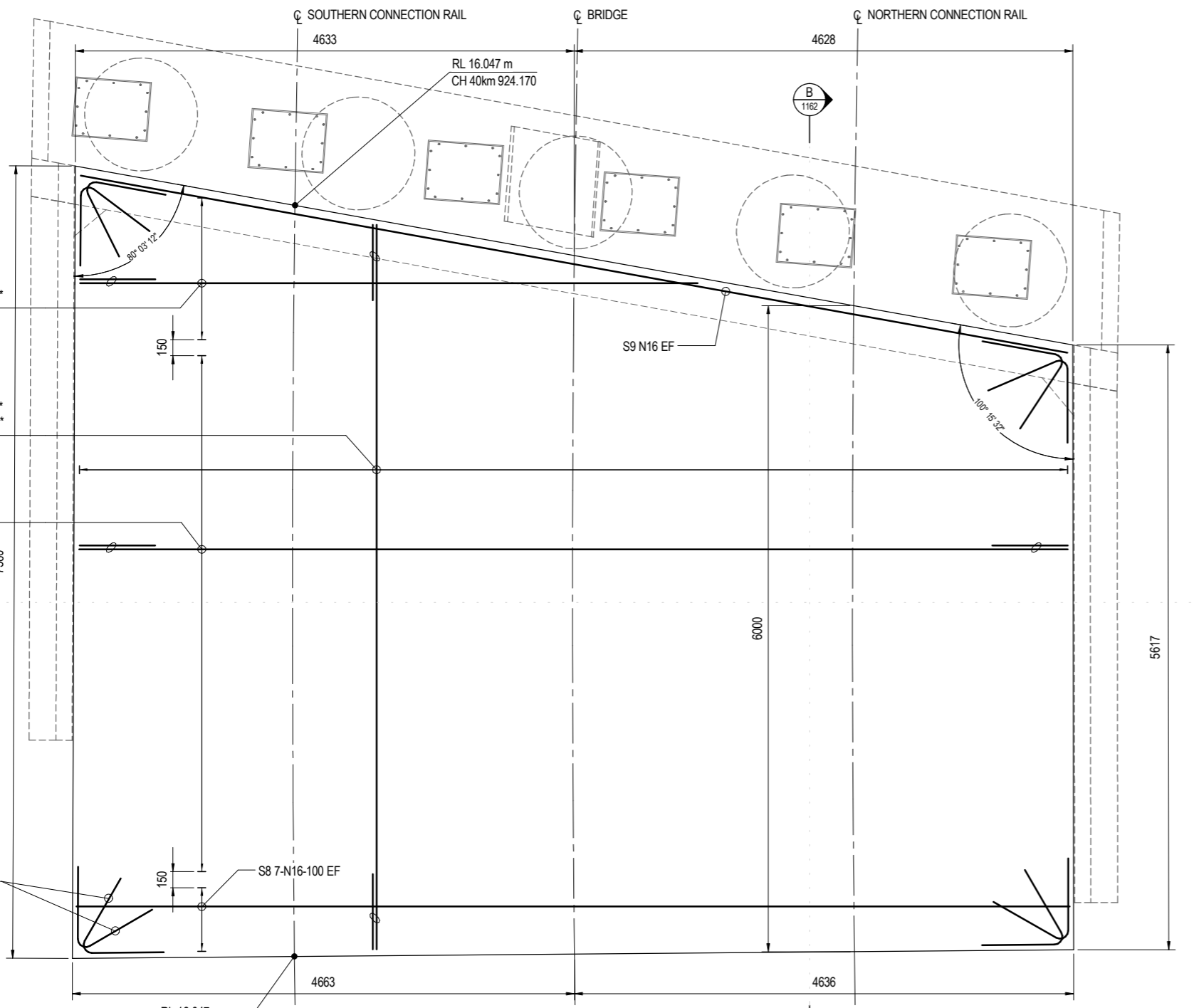
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TITLE	GEORGES RIVER BRIDGE APPROACH SLAB SHEET A
DRAWING No.	N01031
PROJECT No	GRB
WBS	DRG
TYPE	BRD
DISC	1160
NUMBER	01
REV	01



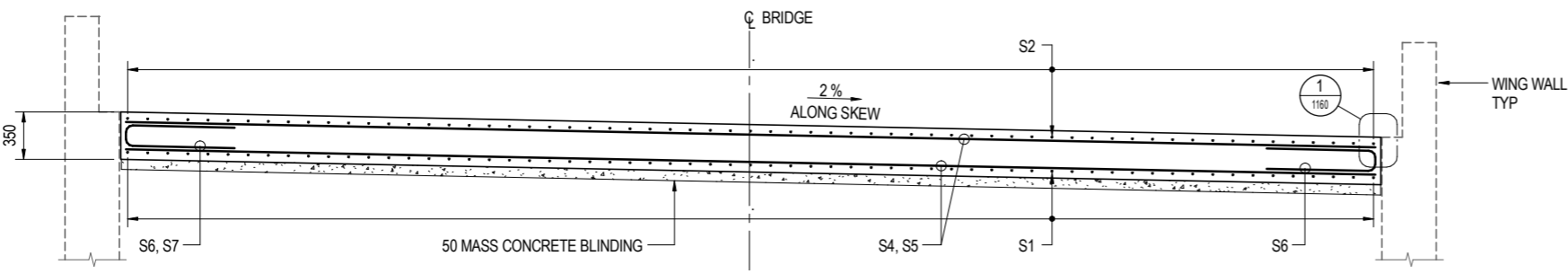
- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1160.

ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE APPROACH SLAB SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
	DISC	BRD	
	NUMBER	1161	
	REV		01

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 Plot Date: 19/12/2016 4:02:28 PM
 Office:



APPROACH SLAB B PLAN
1:25



SECTION C
1:25



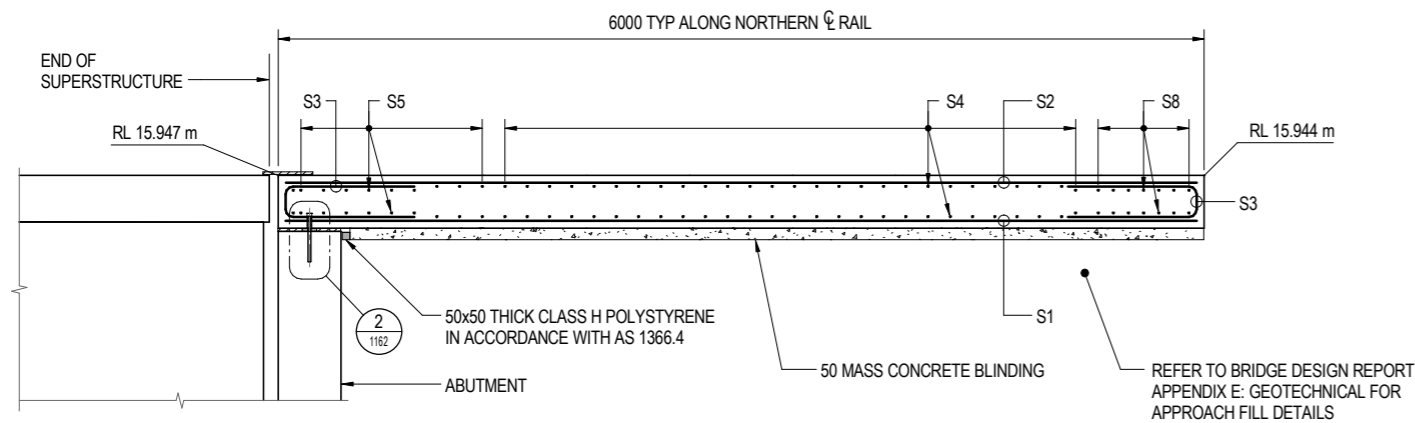
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01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

APPROVAL	SCALE	SIZE
[Signature]	AS SHOWN	A1

FOR CONSTRUCTION

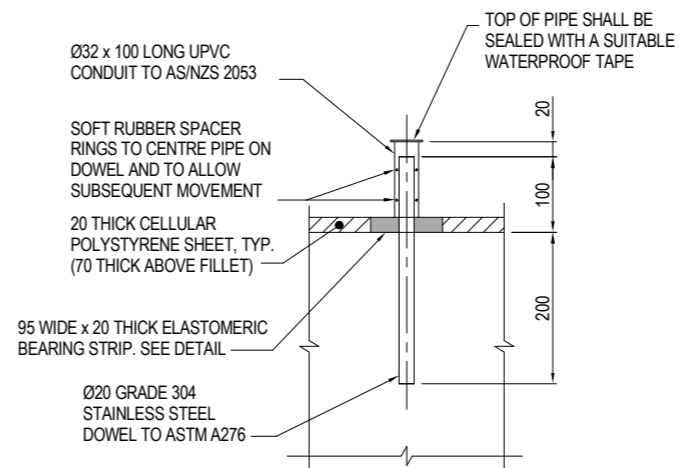
APPROVED

DATE
20.12.16

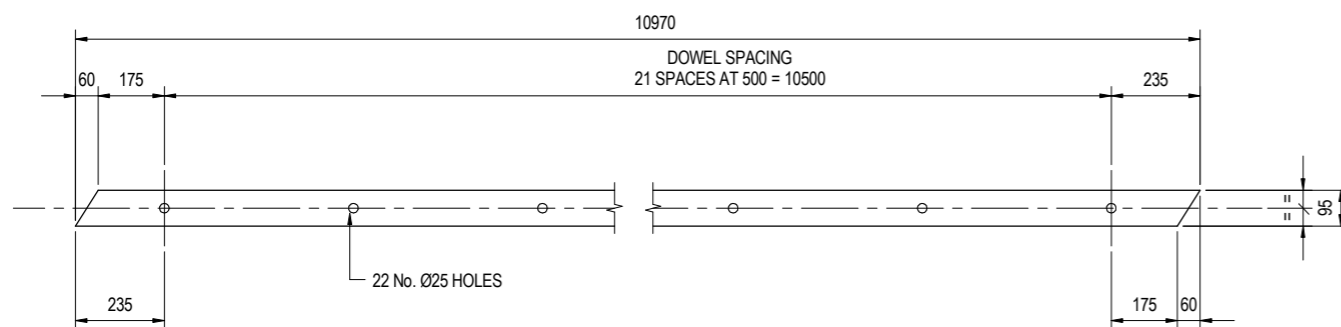


SECTION **B** **B**
1:25 1160 1161

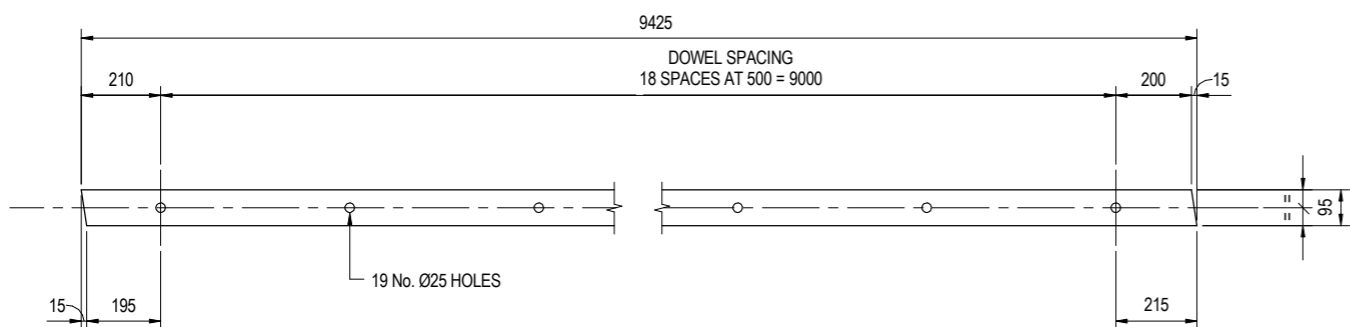
ABUTMENT A SHOWN, ABUTMENT B SIMILAR



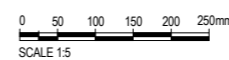
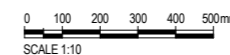
DETAIL **2**
1:5 1162



ABUTMENT A ELASTOMERIC BEARING STRIP DETAIL
1:10



ABUTMENT B ELASTOMERIC BEARING STRIP DETAIL
1:10



GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWINGS SEE SHEET No. 1160.

ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE APPROACH SLAB SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	-	GRB	- DRG - BRD -
NUMBER	REV		
1162	- 01		



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CLIENT



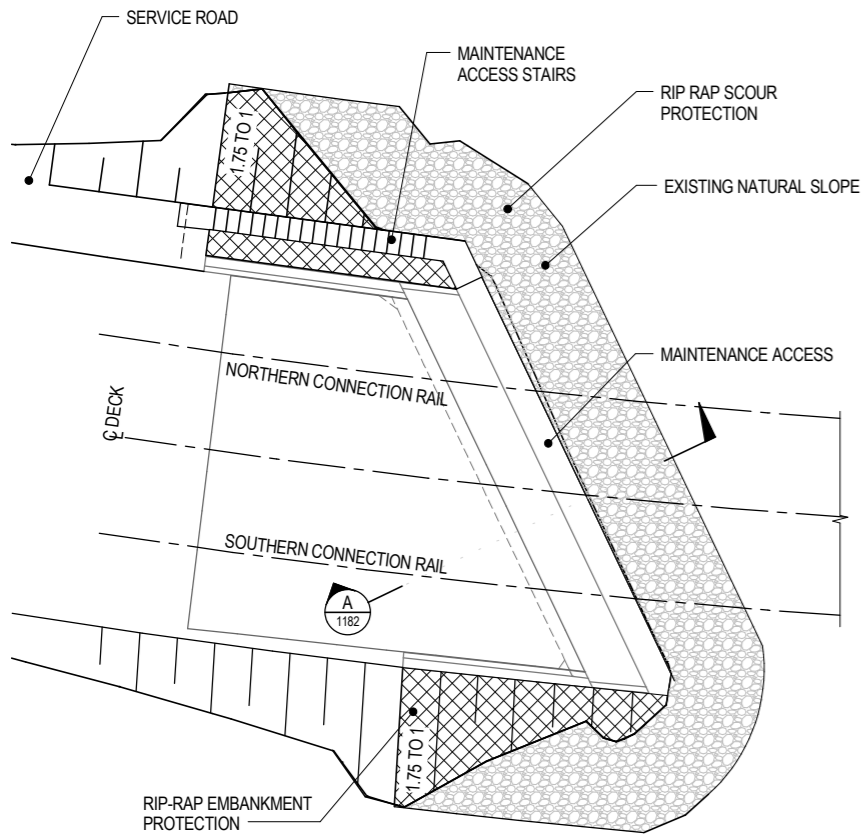
REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

APPROVED	DATE
[Signature]	20.12.16

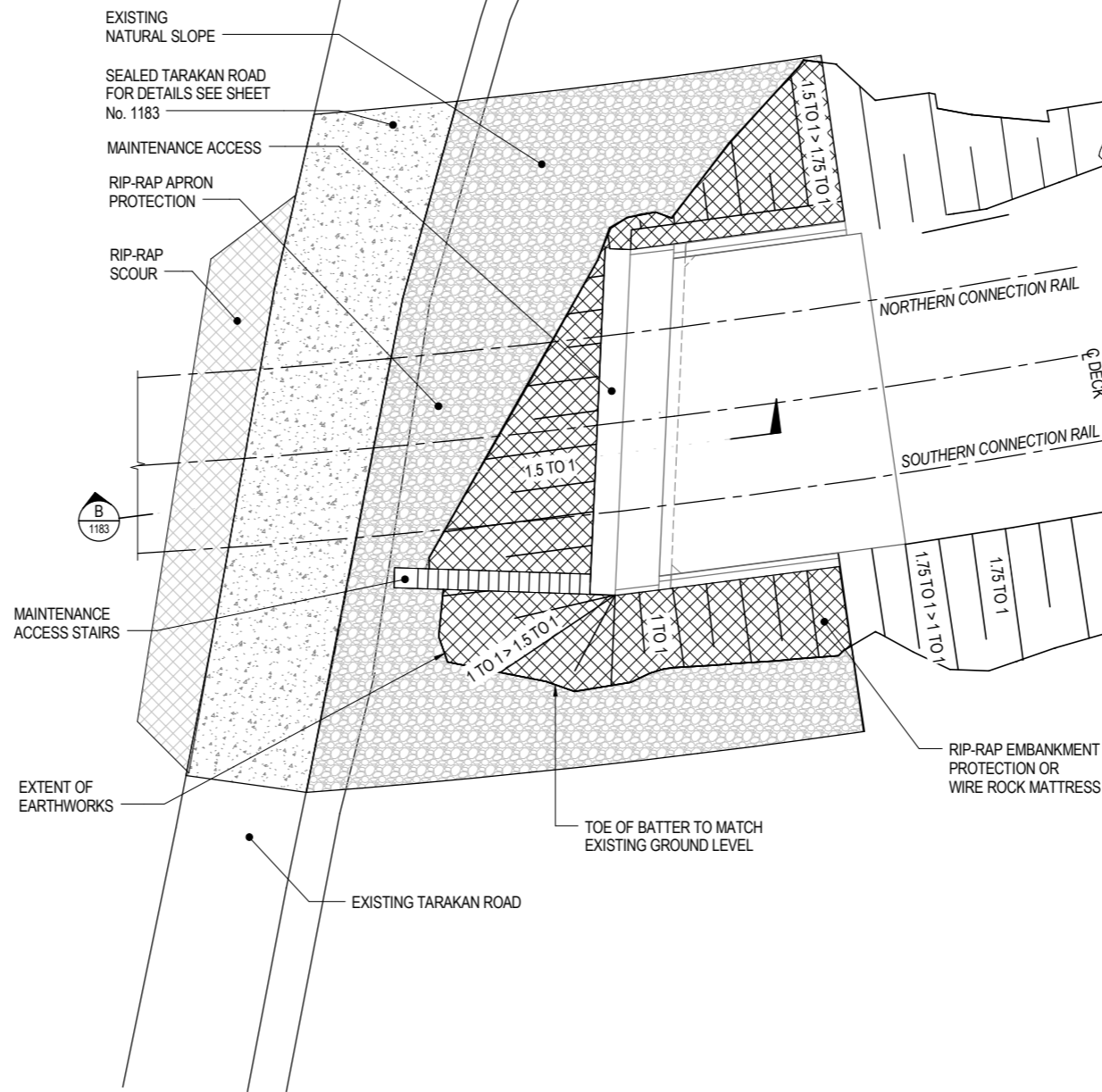
FOR CONSTRUCTION

FROM LIVERPOOL

TO MOOREBANK INTERMODAL TERMINAL



ABUTMENT A



ABUTMENT B

GEORGES RIVER

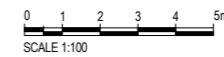
SCOUR PROTECTION PLAN
1:100

GENERAL NOTES

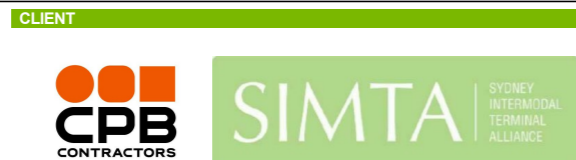
1. SCALES AS SHOWN.
2. DURING CONSTRUCTION OF THE SCOUR PROTECTION, GEOTEXTILE SHALL BE FOLDED OVER THE LAST PLACED ROCK SUCH THAT THE COMPACTED FILL AND GEOTEXTILE FILLS THE VOID BEHIND THE ROCK AND MAXIMISES THE CONTACT AREA BETWEEN THE ROCK AND THE GEOTEXTILE.
3. THE THICKNESS OF THE RIP-RAP SCOUR PROTECTION SHALL BE A MINIMUM OF 2xD SIZE SHOWN ON THE DRAWINGS.
4. THE ROCK SHALL BE REASONABLY WELL GRADED AND IN ACCORDANCE WITH THE FOLLOWING TABLE:

ROCK SIZE:	% OF D
D ₁₅	0.75 x D ₅₀
D ₅₀	1.00 x D ₅₀
D ₈₅	1.40 x D ₅₀
D ₁₀₀	2.00 x D ₅₀

5. ROCK IS TO BE HARD, DENSE, DURABLE, RESISTANT TO WEATHERING AND ANGULAR IN SHAPE. IT SHALL BE FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATTER. ROCK THAT IS LAMINATED, FRACTURED, POROUS OR OTHERWISE PHYSICALLY WEAK IS UNACCEPTABLE.
6. RIP-RAP SCOUR PROTECTION TO HAVE A RELATIVE DENSITY OF 2.6 TO 2.8.



ARTC DRAWING No	TNSW EDMS No
N/A	N/A



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

APPROVED

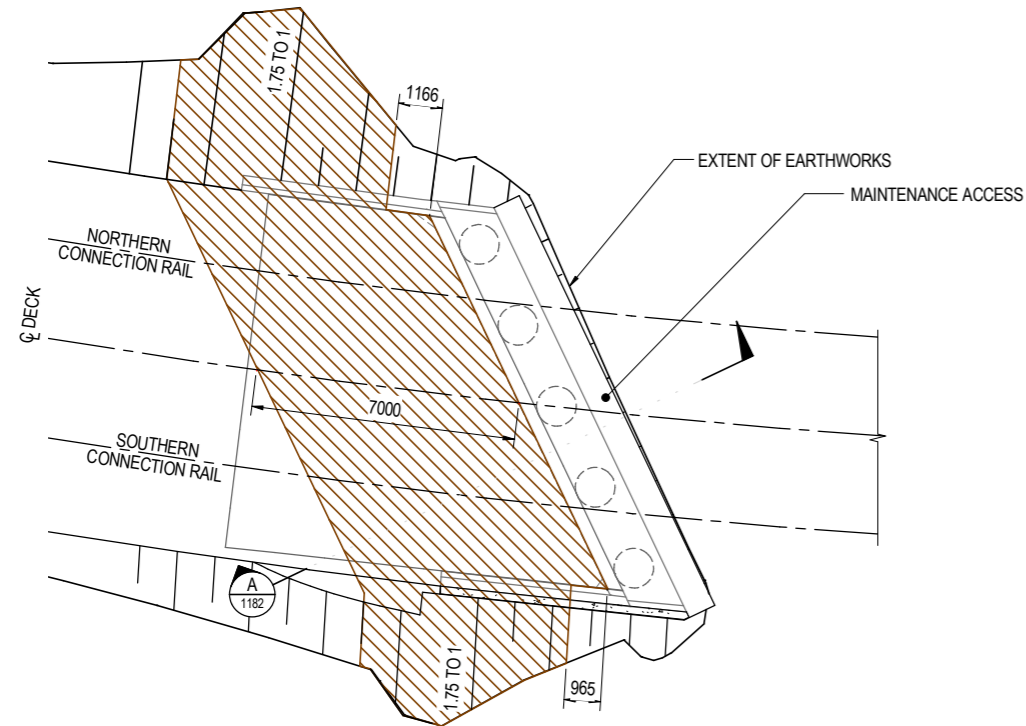
DATE 20.12.16

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1				
TITLE	GEORGES RIVER BRIDGE EARTHWORKS AND SCOUR DETAILS SHEET A				
DRAWING No.	PROJECT No.	WBS	TYPE	DISC	NUMBER
N01031	GRB	DRG	BRD	1180	01

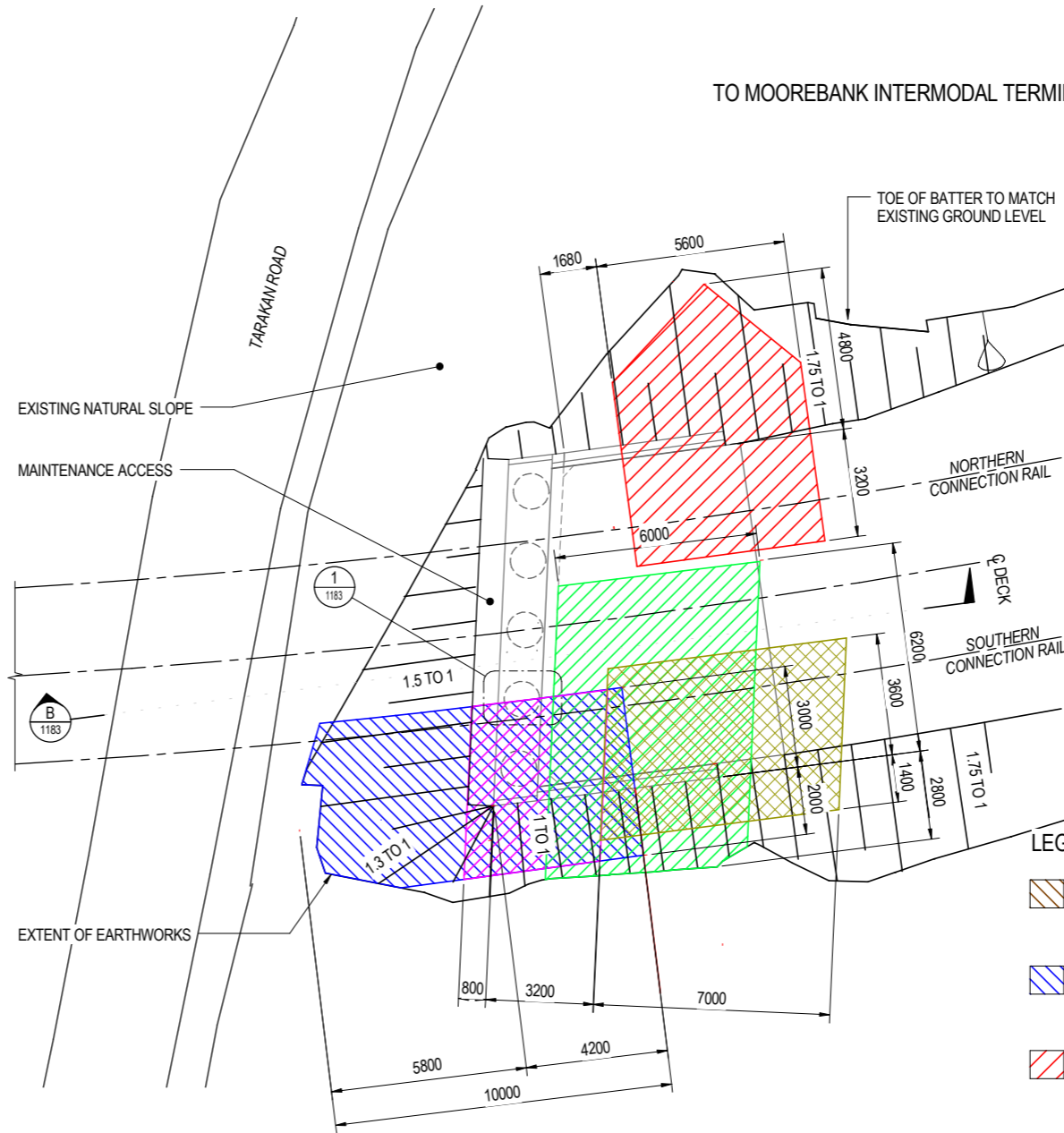
FROM LIVERPOOL



TO MOOREBANK INTERMODAL TERMINAL



ABUTMENT A



ABUTMENT B

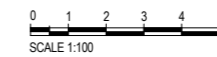
GEOGRID LAYOUT PLAN
1:100

LEGEND

- GEO LAYER TYPE 1.
1 LAYER OF HIGH STRENGTH GEOTEXTILE WITH A 200kN/m ULTIMATE TENSILE RATING IN A LONGITUDINAL DIRECTION TO THE RAIL ALIGNMENT, 7m LONG FROM THE BACK OF ABUTMENT.
- GEO LAYER TYPE 2.
2 LAYERS OF HIGH STRENGTH GEOTEXTILE WITH A 200kN/m ULTIMATE TENSILE RATING IN A LONGITUDINAL DIRECTION TO THE RAIL ALIGNMENT, 10m LONG FROM THE EDGE OF EMBANKMENT.
- GEO LAYER TYPE 3.
1 LAYER OF GEOTEXTILE WITH A 200kN/m ULTIMATE TENSILE RATING IN A TRANSVERSE DIRECTION TO THE RAIL ALIGNMENT, 8m LONG FROM THE EDGE OF EMBANKMENT AT RL. 13.800.
- GEO LAYER TYPE 4.
1 LAYER OF GEOGRID WITH A 200kN/m ULTIMATE TENSILE RATING IN A TRANSVERSE DIRECTION TO THE RAIL ALIGNMENT, 5m LONG FROM THE EDGE OF EMBANKMENT.
- GEO LAYER TYPE 5.
2 LAYERS OF HIGH STRENGTH GEOTEXTILE WITH A 200kN/m ULTIMATE TENSILE RATING IN A TRANSVERSE DIRECTION TO THE RAIL ALIGNMENT, 9m LONG FROM THE EDGE OF EMBANKMENT.
- GEO LAYER TYPE 6.
2 LAYERS OF GEOGRID WITH A 200kN/m ULTIMATE TENSILE RATING IN A TRANSVERSE DIRECTION TO THE RAIL ALIGNMENT, 5m LONG FROM THE EDGE OF EMBANKMENT.

GENERAL NOTES

1. SCALE AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1180
3. REFER TO EARTHWORKS SPECIFICATIONS FOR FURTHER DETAILS.
4. FOR GEOTEXTILE CUT OUT AROUND PILES REFER TO CONSTRUCTION SEQUENCE No. 1006
5. FOR MORE INFORMATION RELATING TO THE EXTENT OF GEO LAYERS REFER TO GEOTECHNICAL MEMO APPENDIX F.



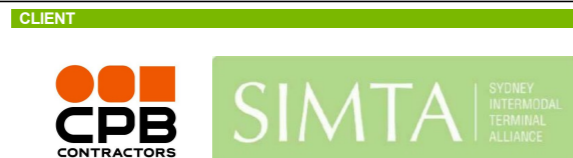
ARTC DRAWING No	TNSW EDMS No
N/A	N/A

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1
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TITLE	GEORGES RIVER BRIDGE EARTHWORKS AND SCOUR DETAILS SHEET B
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DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER	REV
N01031	-	GRB	-	DRG	-	BRD - 1181 - 01

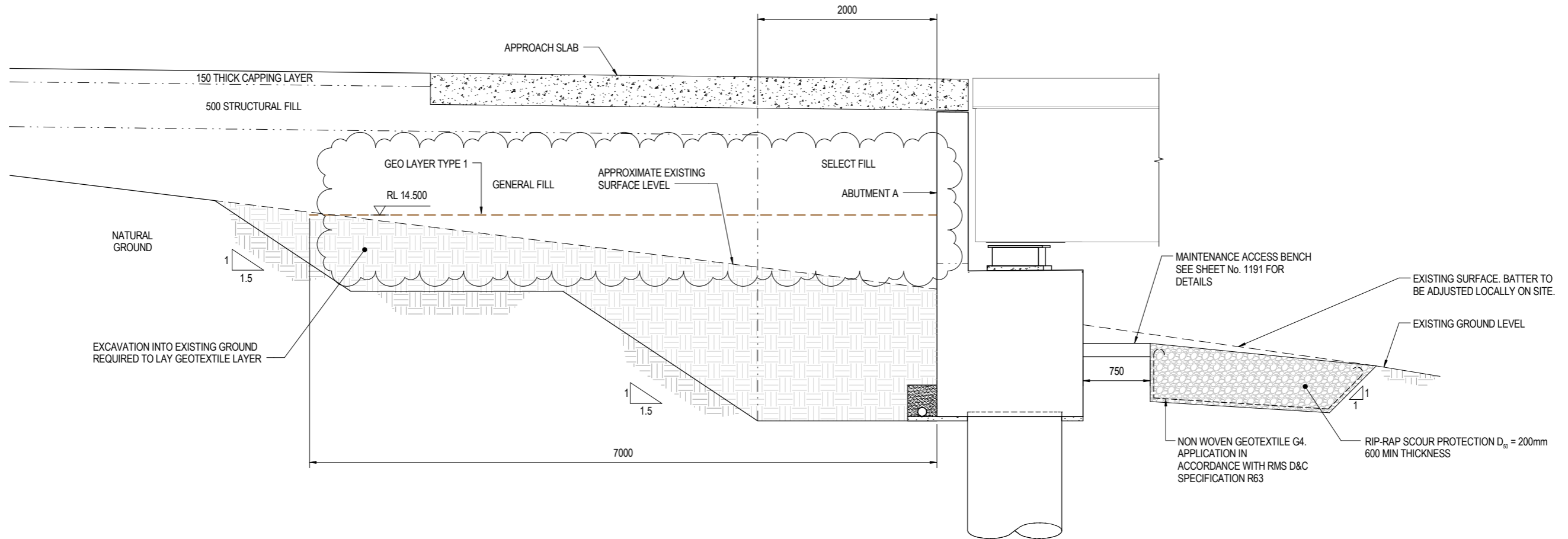
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 Office:



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

SCALE	SIZE
AS SHOWN	A1

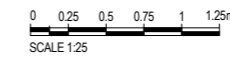
FOR CONSTRUCTION
APPROVED
DATE 20.12.16



SECTION A
1:25

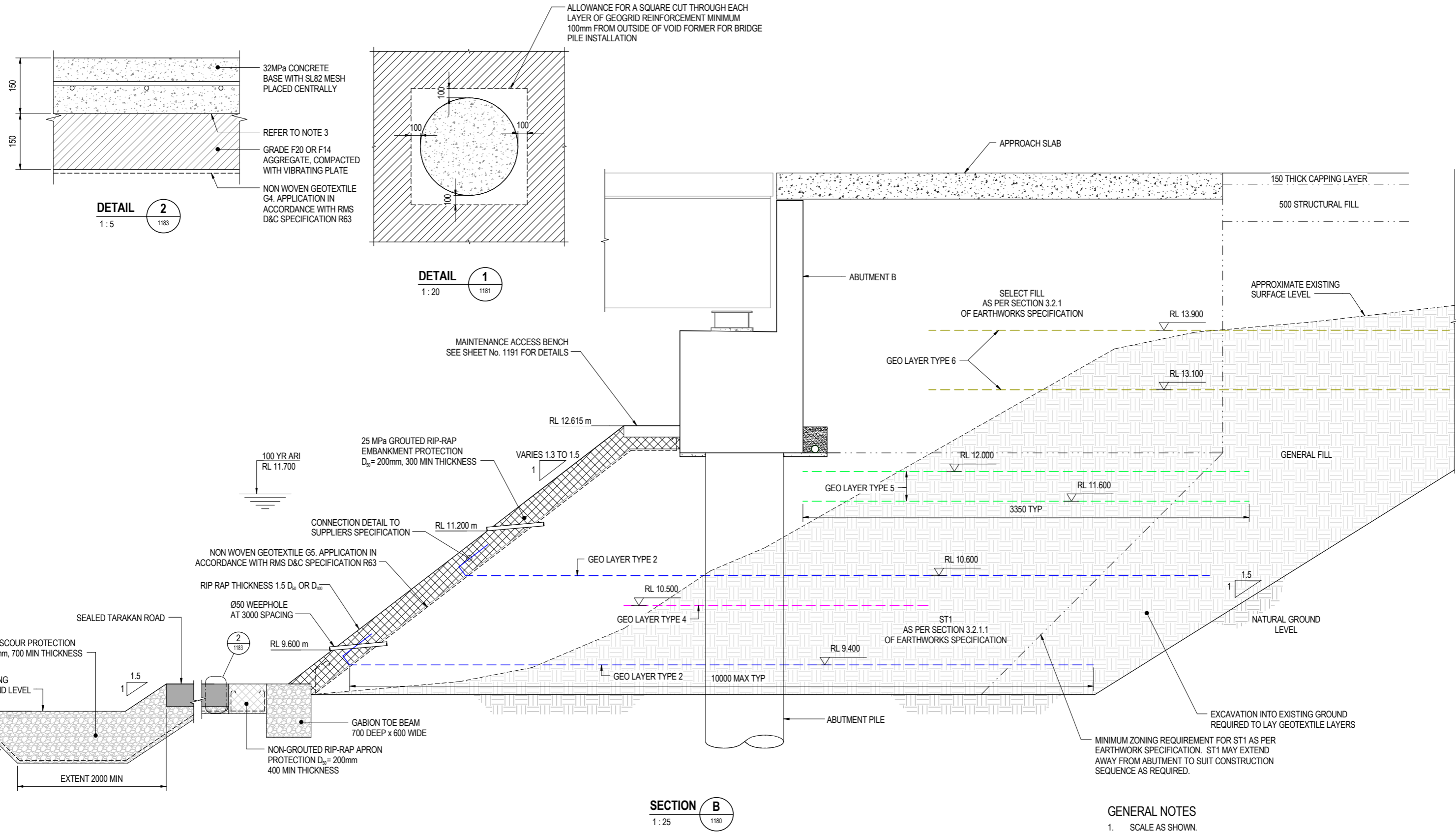
GENERAL NOTES

- SCALE AS SHOWN.
- FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1180 & 1181.
- FILL PLACEMENT AND COMPACTION BEHIND THE ABUTMENT TO TAKE PLACE ONCE THE CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 0.8fc.

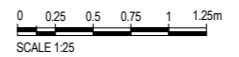


ARTC DRAWING No	TNSW EDMS No
N/A	N/A

CLIENT		REV		DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE	FOR CONSTRUCTION	PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1									
		01	20.12.16	ACCEPTED FOR CONSTRUCTION		AOS	AS SHOWN	A1			GEORGES RIVER BRIDGE EARTHWORKS AND SCOUR DETAILS SHEET C									
		02	24.02.16	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION		AOS														
									APPROVED	TITLE										
										DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER	REV				
										N01031	-	GRB	-	DRG	-	BRD	-	1182	-	02



- GENERAL NOTES**
- SCALE AS SHOWN.
 - FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1180 & 1181.
 - MOISTEN THE GRANULAR BASE PRIOR TO PLACEMENT OF THE CONCRETE BASE.
 - FILL PLACEMENT AND COMPACTION BEHIND THE ABUTMENT TO TAKE PLACE ONCE THE CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF $0.8f_c$.

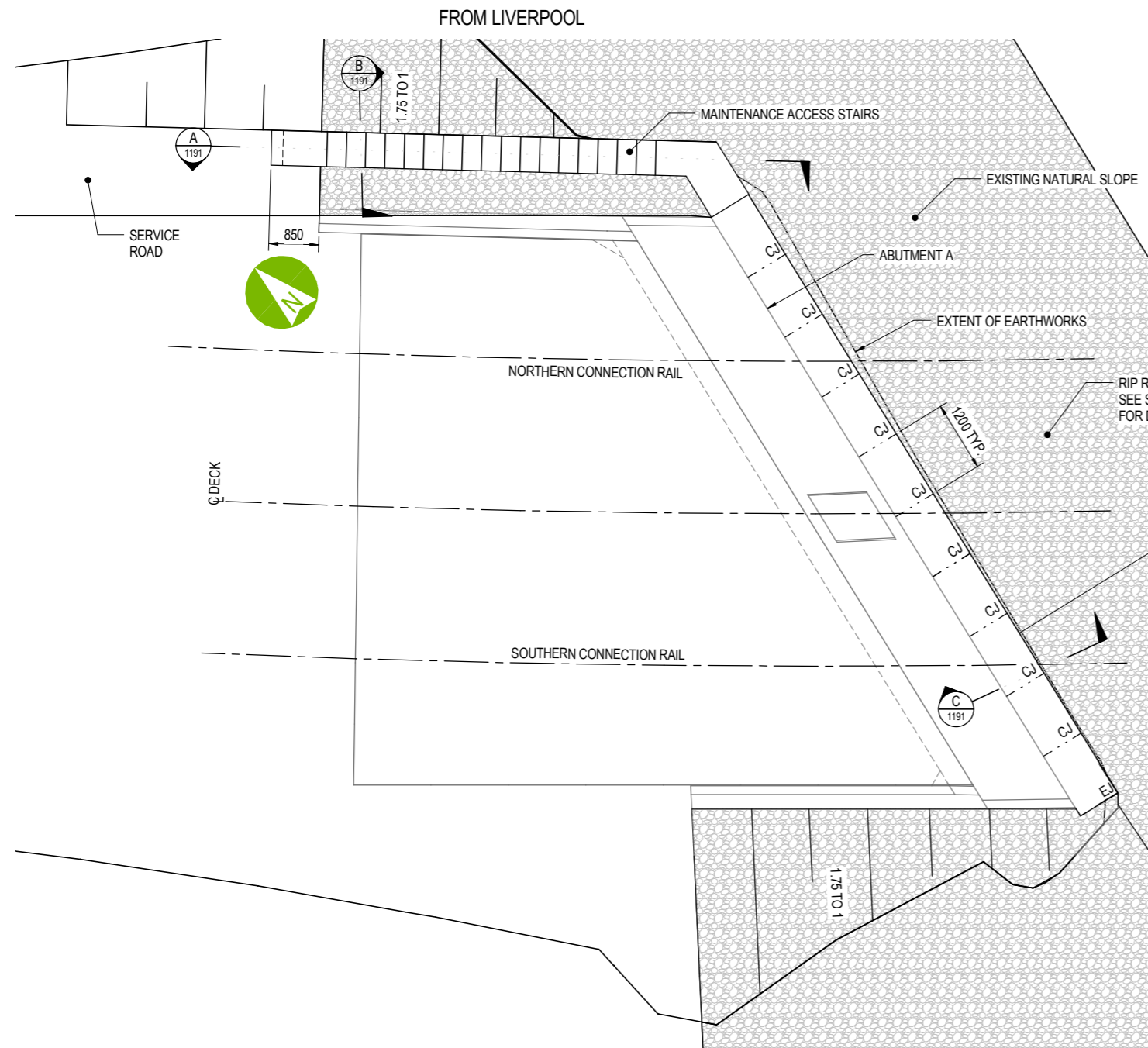


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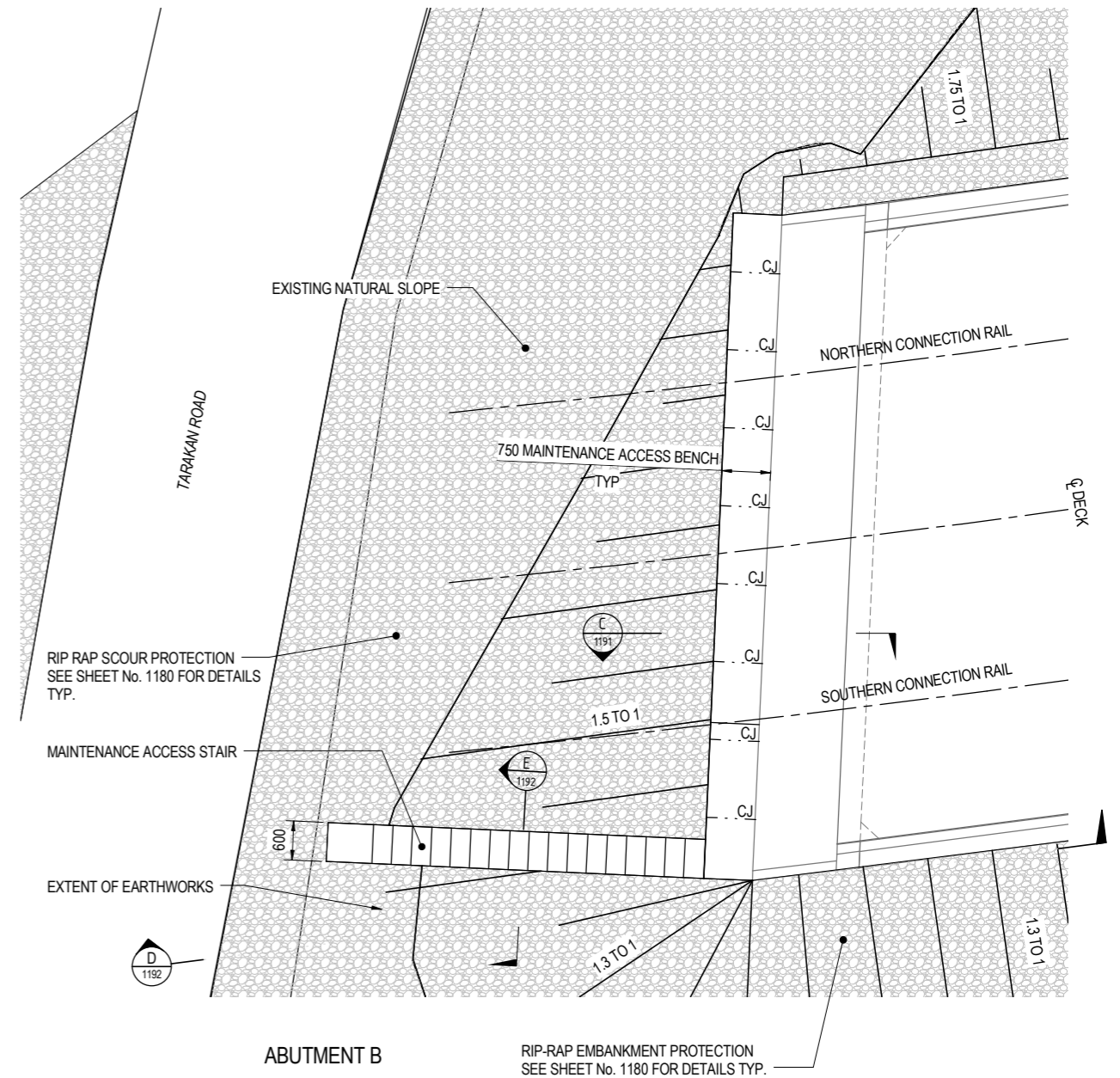
CLIENT	REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE	FOR CONSTRUCTION	PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1
	01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1		TITLE	GEORGES RIVER BRIDGE EARTHWORKS AND SCOUR DETAILS SHEET D
							APPROVED	DRAWING No.	N01031
							DATE	PROJECT No	N01031
								WBS	GRB
								TYPE	DRG
								DISC	BRD
								NUMBER	1183
								REV	01

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 Plot Date: 2017/12/15 9:46:44 AM
 Office:





ABUTMENT A



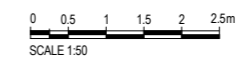
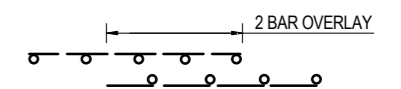
ABUTMENT B

RIP-RAP EMBANKMENT PROTECTION SEE SHEET No. 1180 FOR DETAILS TYP.

PLAN 1:50

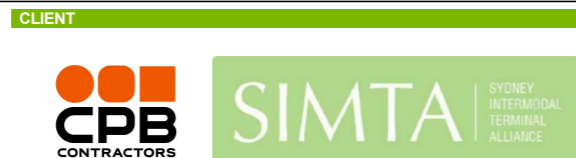
GENERAL NOTES

1. SCALES AS SHOWN.
2. EXPOSURE CLASSIFICATION: B1.
3. NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE, UNLESS SPECIFIED OTHERWISE, SHALL BE 40mm.
4. EDGES SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLED 20 x 20 UNLESS SPECIFIED OTHERWISE.
5. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 32MPa.
6. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASS CONCRETE SHALL BE 20MPa.
7. MAINTENANCE ACCESS STAIRS AND LANDINGS SHALL HAVE A TRANSVERSE BROOM FINISH.
8. CJ DENOTES CONTRACTION JOINT
9. EJ DENOTES EXPANSION JOINT
10. REINFORCEMENT FABRIC LAPPED SPLICE SHALL BE AS FOLLOW:



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
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REV	DATE	REVISION DETAILS	APPROVAL
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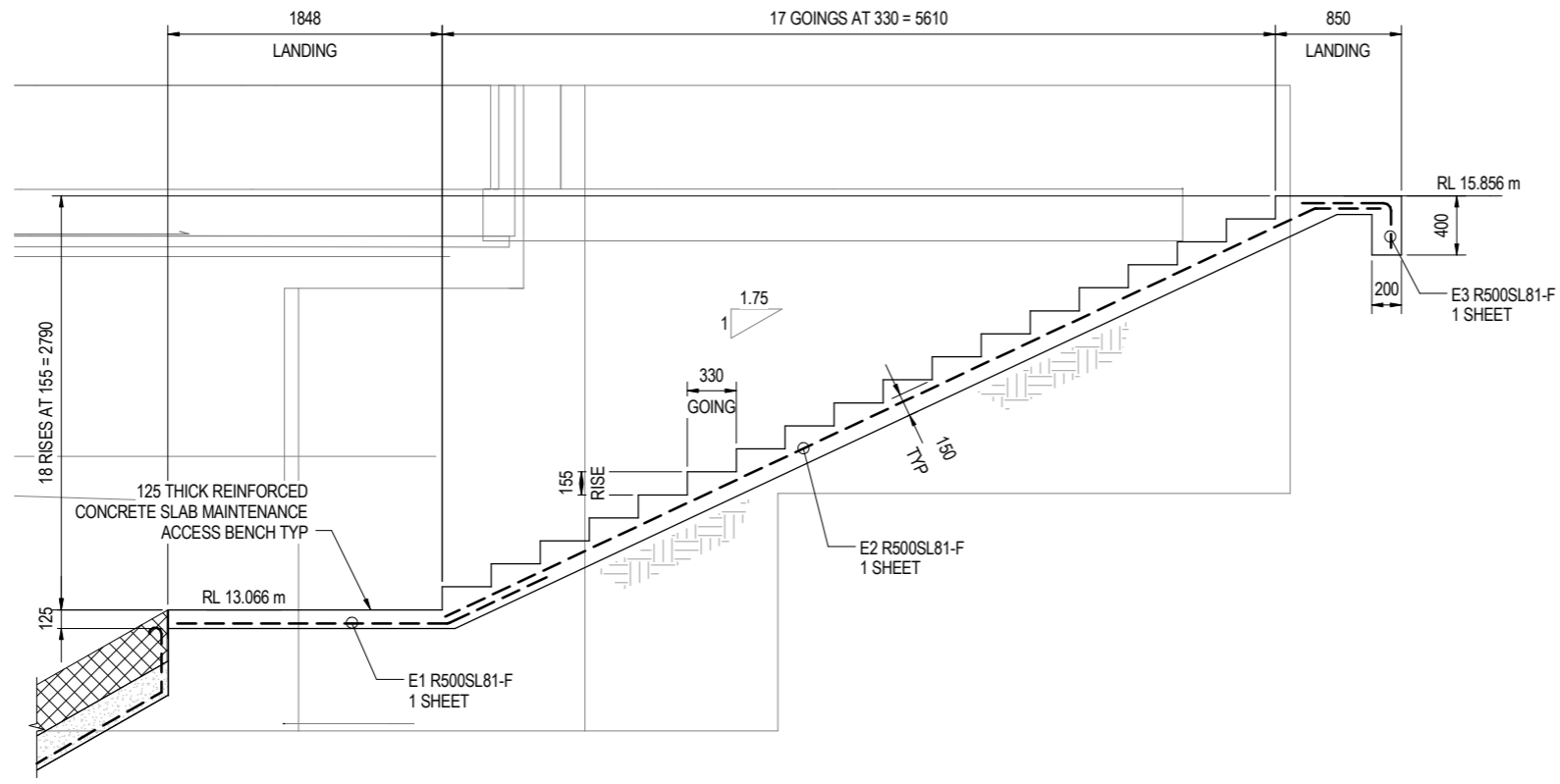
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AS SHOWN	A1

FOR CONSTRUCTION

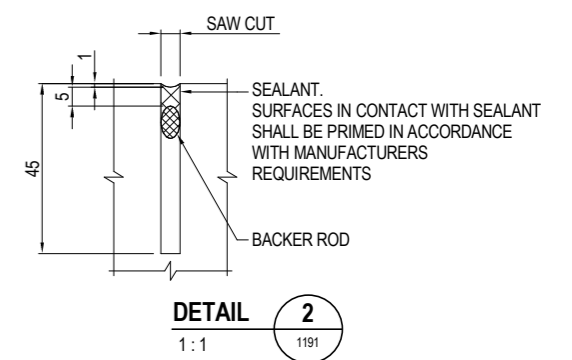
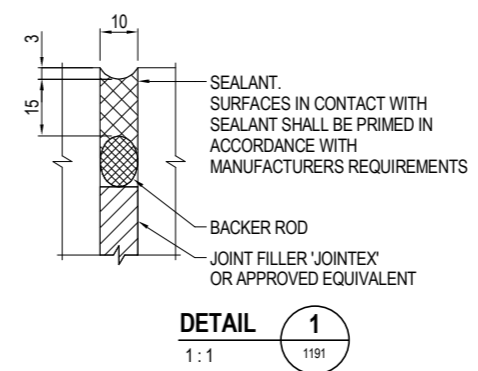
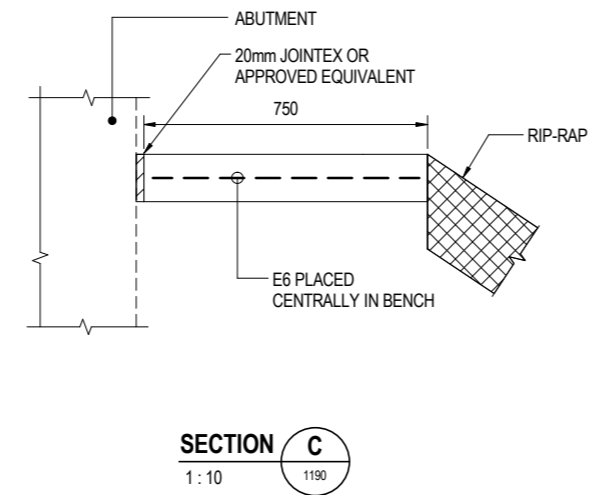
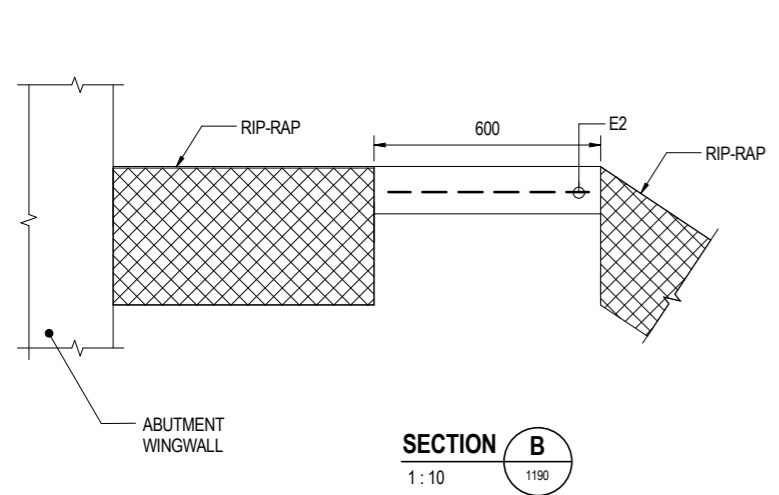
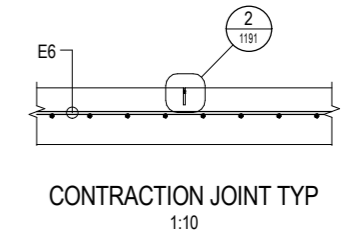
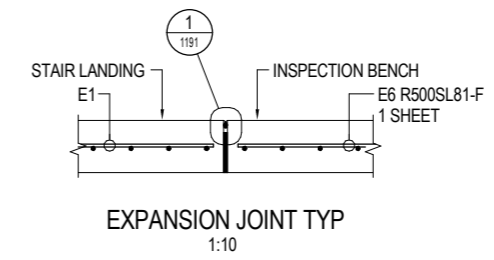
APPROVED

DATE 20.12.16

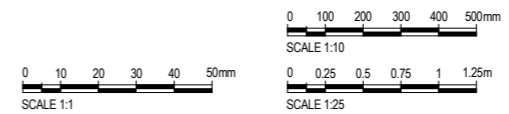
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TITLE	GEORGES RIVER BRIDGE MAINTENANCE STAIRS SHEET A				
DRAWING No.	PROJECT No	WBS	TYPE	DISC	NUMBER
N01031	GRB	DRG	BRD	1190	01



SECTION A
1:25



- GENERAL NOTES**
1. SCALES AS SHOWN.
 2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1190.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE MAINTENANCE STAIRS SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	-	GRB	- DRG - BRD -
NUMBER	REV		
1191	- 01		

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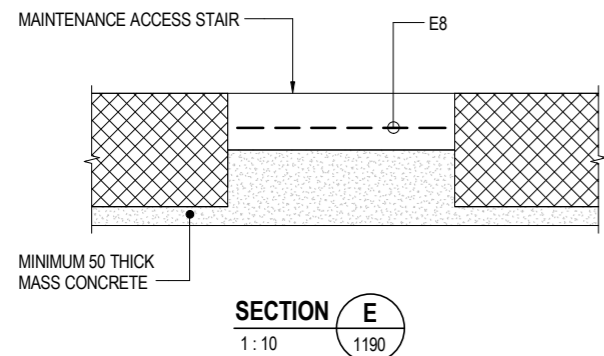
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01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION

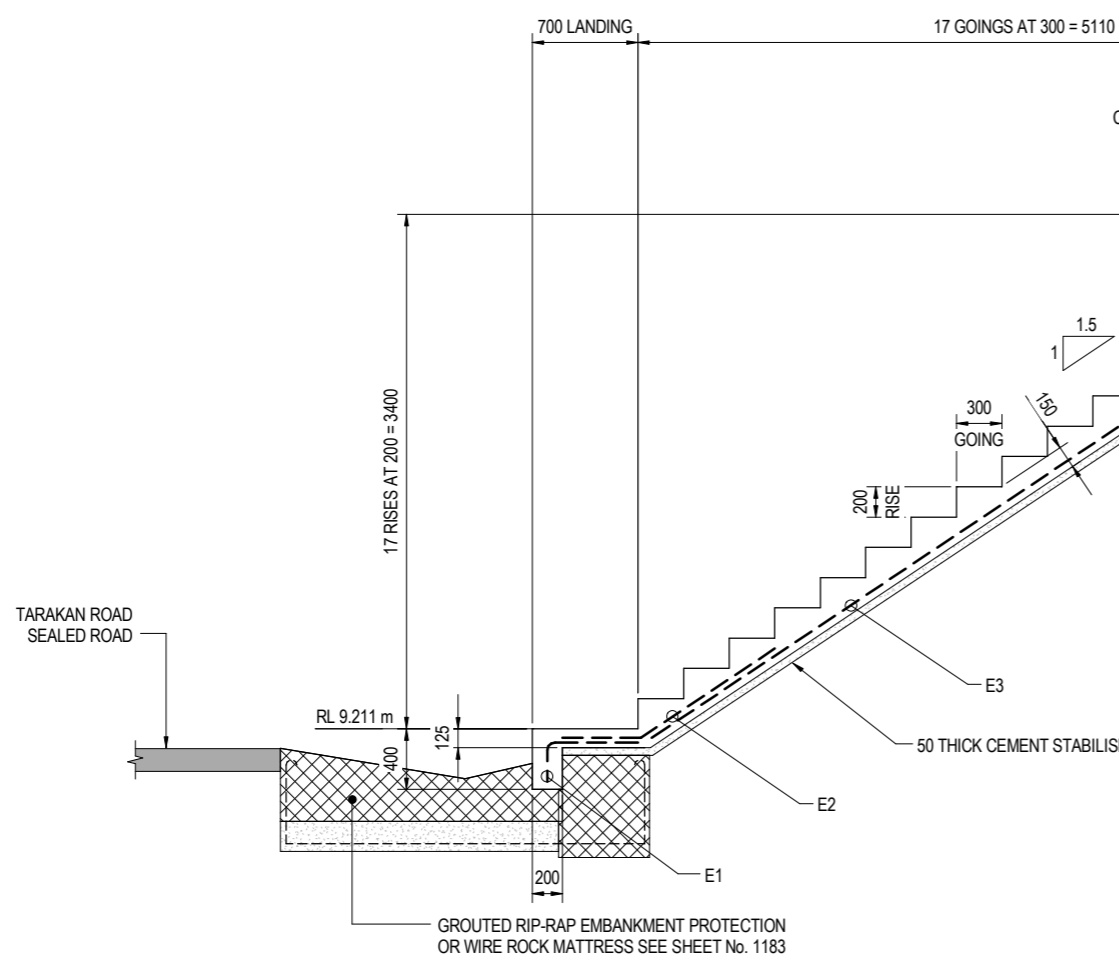
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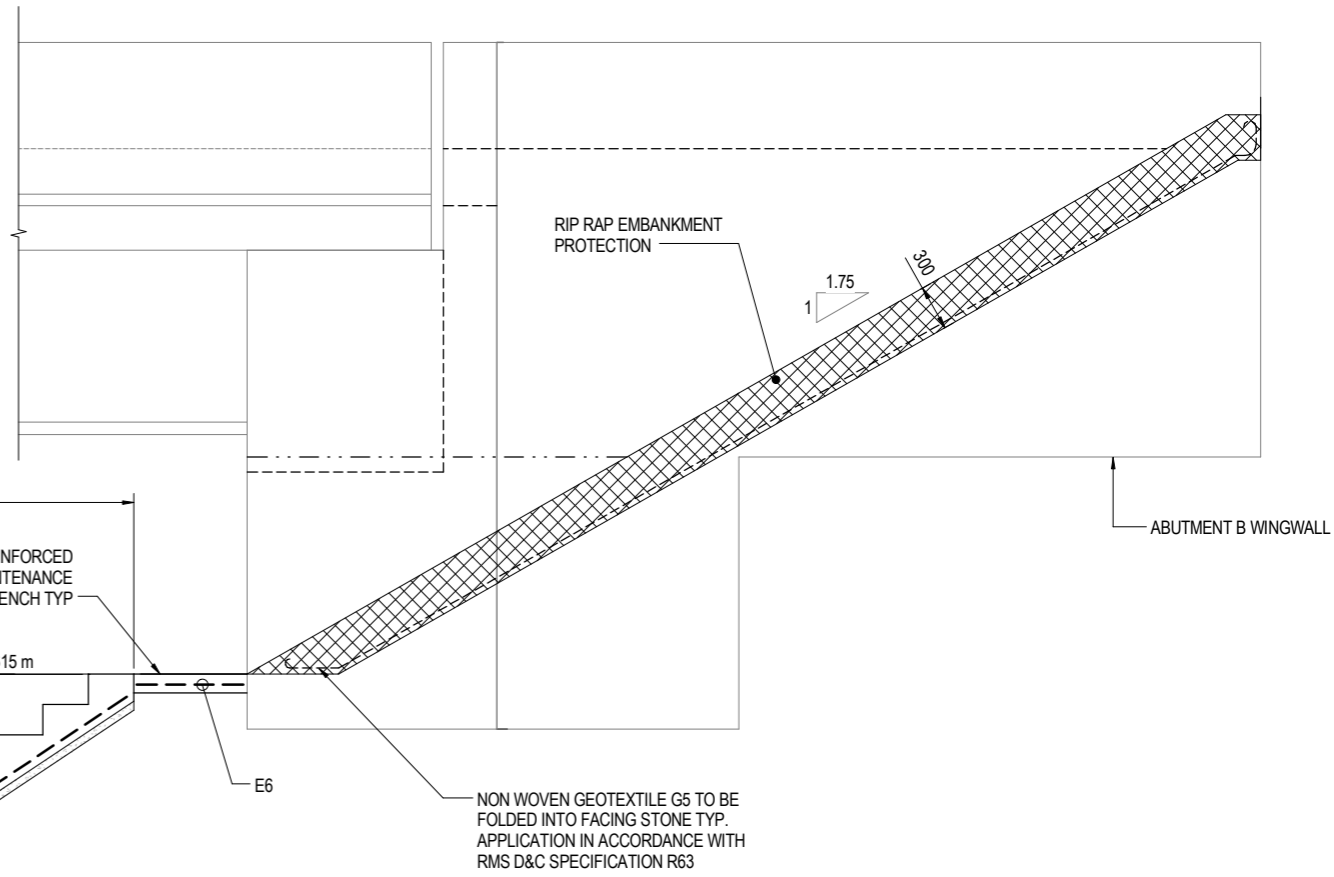
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SECTION E
1:10



SECTION D
1:25



- GENERAL NOTES**
1. SCALES AS SHOWN.
 2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1190.



ARTC DRAWING No		TNSW EDMS No	
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE MAINTENANCE STAIRS SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031		GRB	DRG
			DISC
			BRD
			NUMBER
			1192
			REV
			01



REV	DATE	REVISION DETAILS	APPROVAL
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS

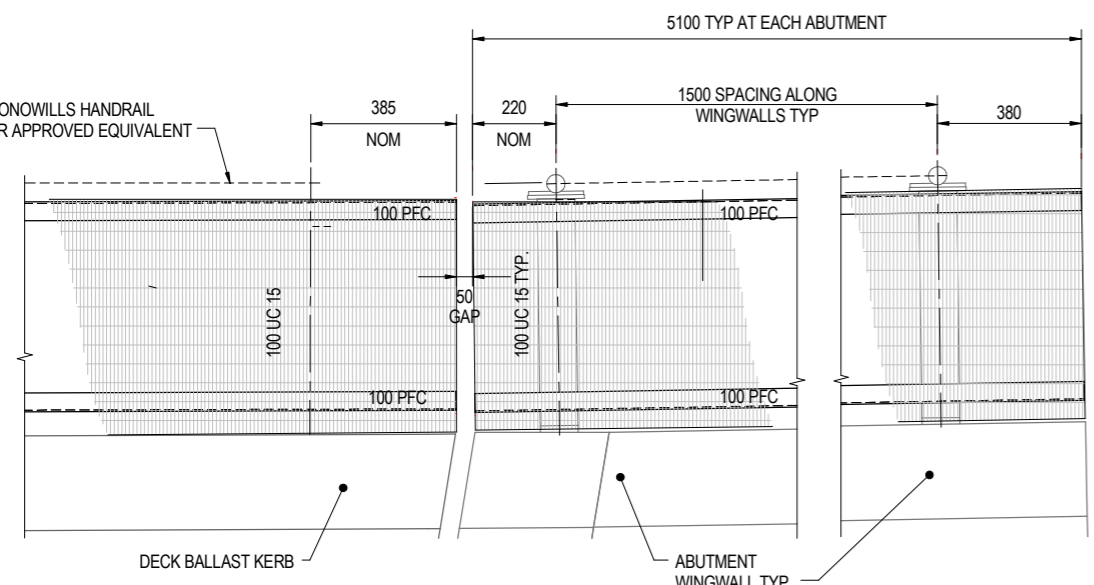
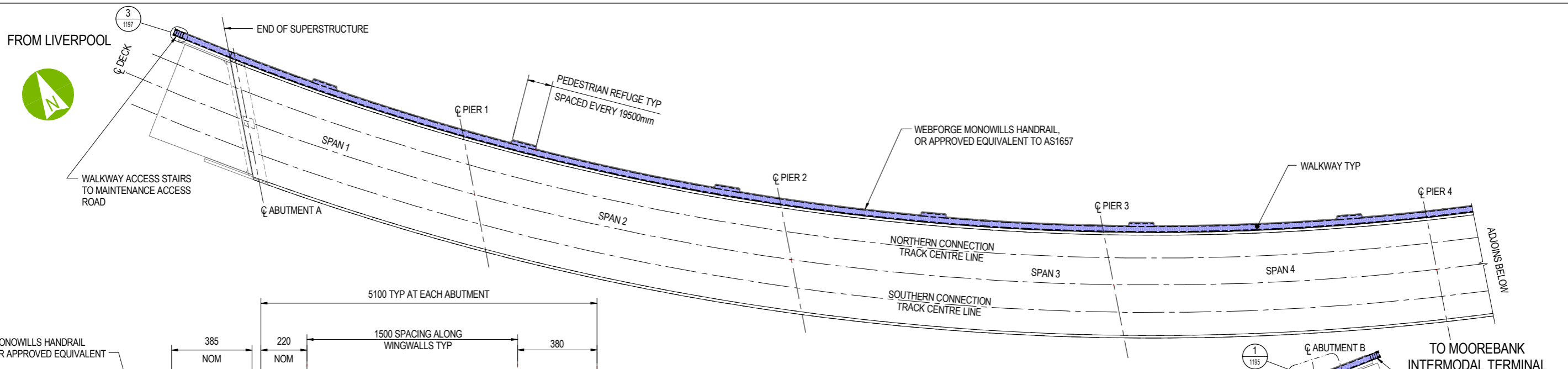
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SIZE A1

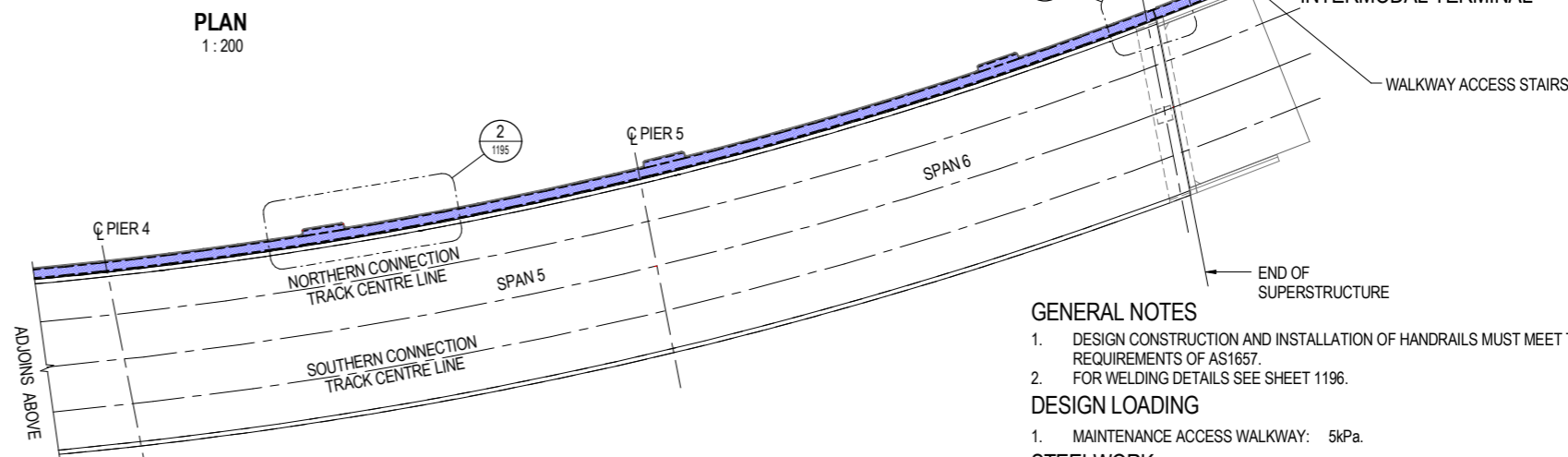
FOR CONSTRUCTION

APPROVED

DATE 20.12.16



DETAIL 1
1:10
1195
TYPICAL WALKWAY DETAIL AT WING WALLS



PLAN 1:200
PLAN 1:200

- GENERAL NOTES**
- DESIGN CONSTRUCTION AND INSTALLATION OF HANDRAILS MUST MEET THE REQUIREMENTS OF AS1657.
 - FOR WELDING DETAILS SEE SHEET 1196.

- DESIGN LOADING**
- MAINTENANCE ACCESS WALKWAY: 5kPa.

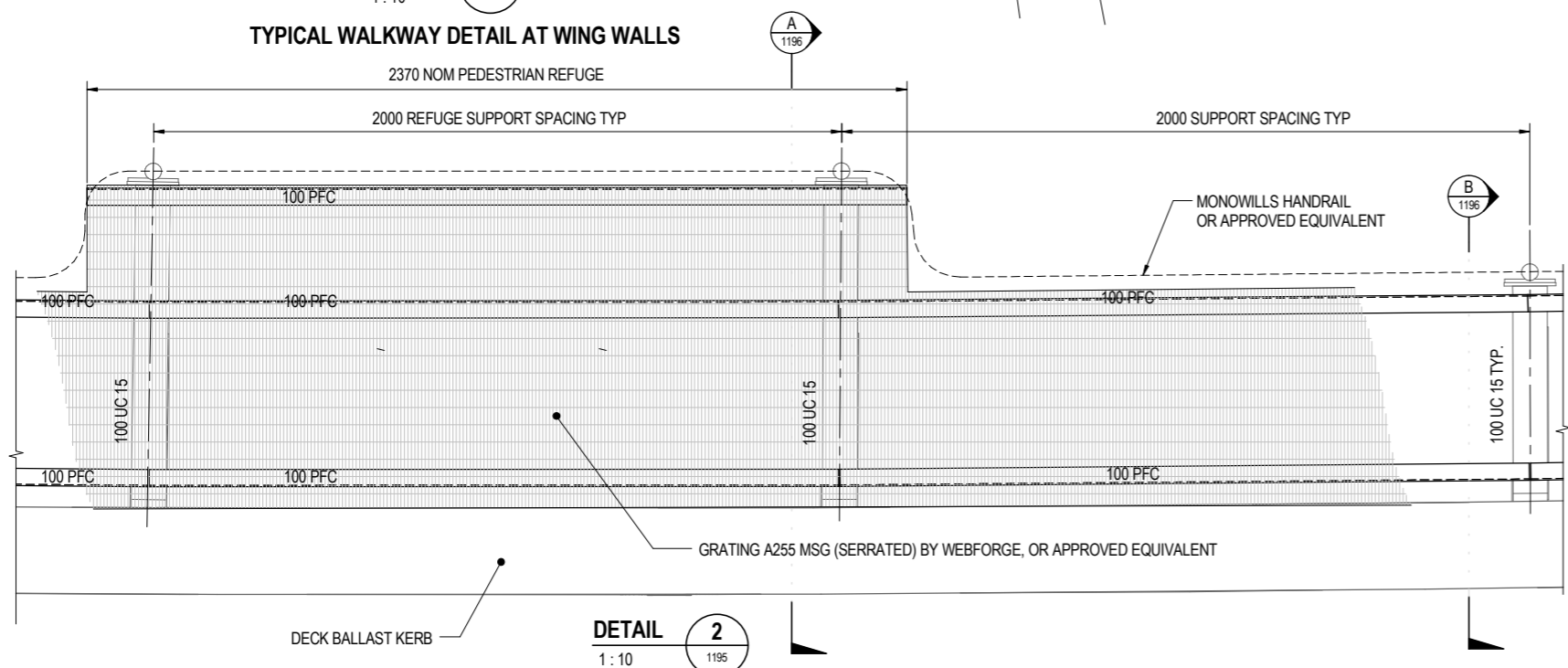
- STEELWORK**
- ALL STRUCTURAL STEELWORK SHALL COMPLY WITH AS 4100.
 - ALL ROLLED STEEL SECTIONS SHALL COMPLY WITH AS 3679 GRADE 300 PLUS.
 - ALL STEEL PLATE SHALL COMPLY WITH AS 3678 GRADE 250.

- PROTECTIVE COATING**
- ALL STEELWORK TO BE HOT DIP GALVANISED, AND ANY DAMAGED/UNCOATED AREA TO BE REPAIRED, IN ACCORDANCE WITH AS/NZS 4680 1999.
 - ALL NUTS, BOLTS AND WASHERS SHALL BE GALVANISED TO AS1214.

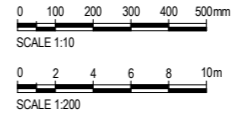
- BOLTING**
- ALL STRUCTURAL BOLTS SHALL BE GRADE 8.8/S (GALV) WITH NUTS AND SPRING WASHERS (GALV.) IN ACCORDANCE WITH AS 1252 AND AS 1214.
 - ALL HANDRAIL BOLTS SHALL BE M16 GRADE 8.8/TB (GALV.) WITH NUTS IN ACCORDANCE WITH AS 1252 AND AS 1214.
 - "LOCTITE 262" OR APPROVED EQUIV. TO BE APPLIED TO ALL BOLTS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - PROVIDE GALV FLAT WASHERS ALL OVER ELONGATED HOLES.

- EPOXY ADHESIVE**
- EPOXY ADHESIVE FOR JOINING RUBBER TO STEEL USE EPIREZ D5-070NS OR APPROVED EQUIVALENT.

- HANDRAILS, KICKPLATE AND GRATING**
- ALL HANDRAIL, FIXTURES, FITTINGS AND CONNECTIONS AS WELL AS STEEL GRATING SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS, (WEBFORGE OR APPROVED EQUIVALENT).
 - GRATING SHALL BE A253 MSG (SERRATED) U.N.O. BY WEBFORGE OR APPROVED EQUIVALENT.
 - GRATING SHALL BE SECURELY CLAMPED DOWN WITH GALVANISED LINDAPTER FASTENERS TYPE 'GF10' TO MANUFACTURERS WRITTEN INSTRUCTION OR APPROVED EQUIVALENT.
 - GRATING PANELS SHALL BE FULLY BANDED.
 - INDIVIDUAL PANEL WEIGHT NOT TO EXCEED 20kg.



DETAIL 2
1:10
1195
TYPICAL WALKWAY DETAIL AT WING WALLS



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 Plot Date: 19/12/2016 4:02:04 PM Office



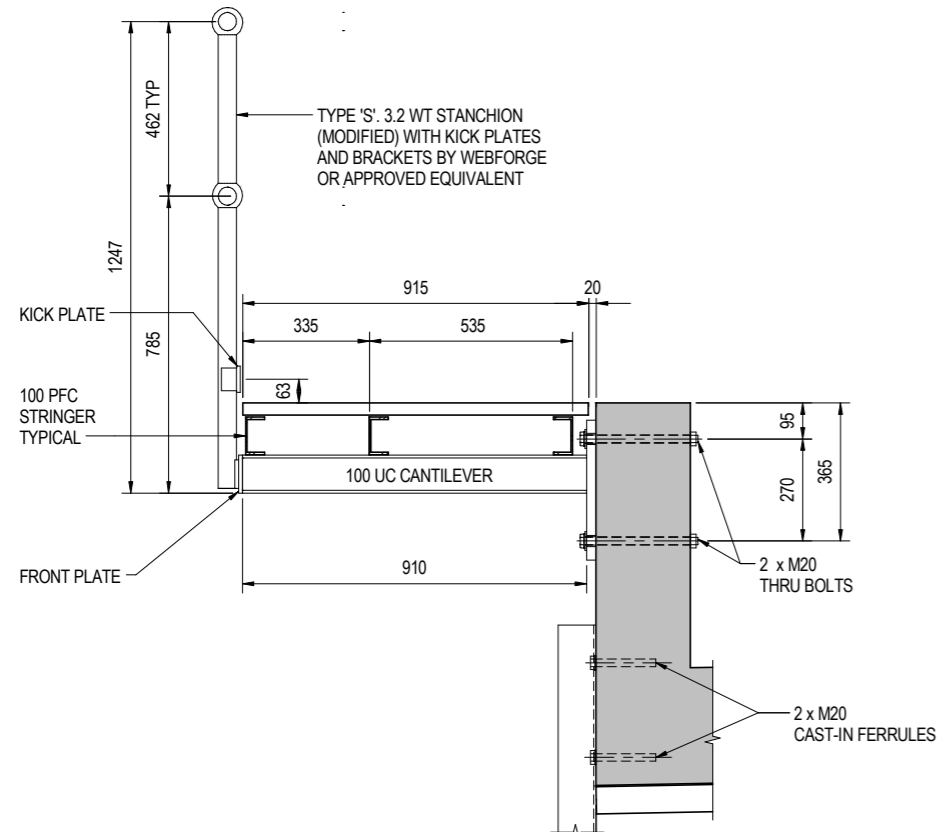
REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION

APPROVED

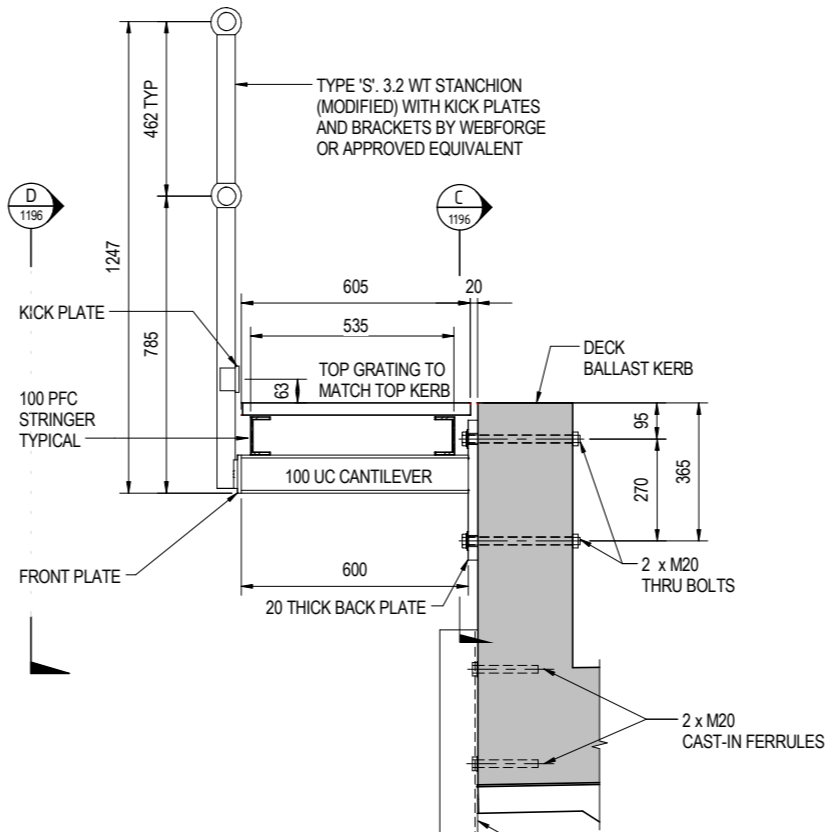
DATE: 20.12.16

ARTC DRAWING No: N/A		TNSW EDMS No: N/A	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE WALKWAY DETAILS SHEET A		
DRAWING No.	PROJECT No.	WBS	TYPE
N01031	GRB	DRG	BRD
NUMBER	REV		
1195	01		



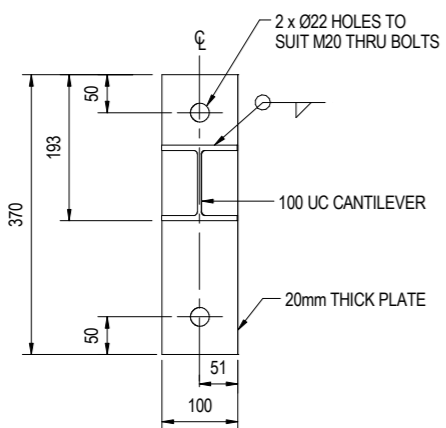
SECTION A
1:10

DETAILS SHOWN ON SECTION A
APPLICABLE TO ALL PEDESTRIAN REFUGE SECTIONS

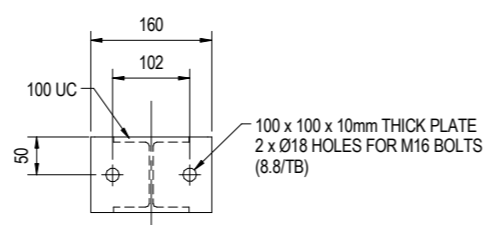


SECTION B
1:10

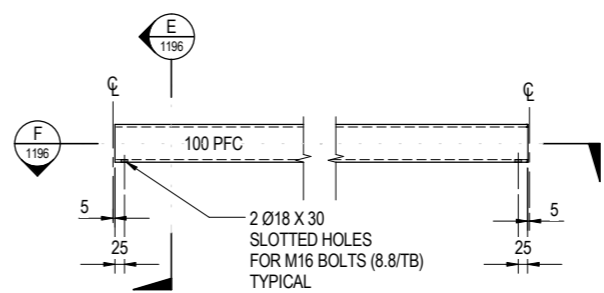
DETAILS SHOWN ON SECTION B
APPLICABLE TO ALL WALKWAY SECTIONS



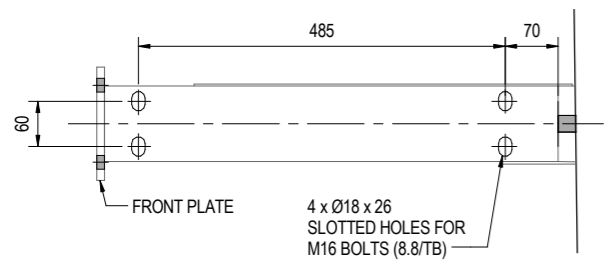
SECTION C
1:5



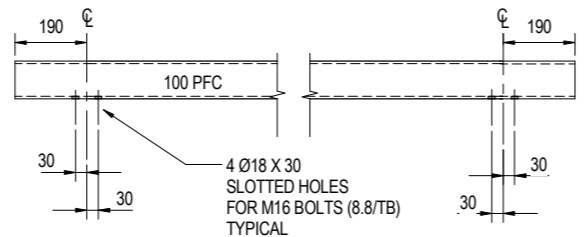
SECTION D
1:5



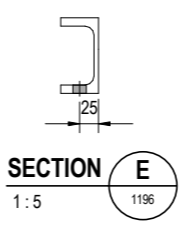
TYPICAL STRINGER - ELEVATION
1:10



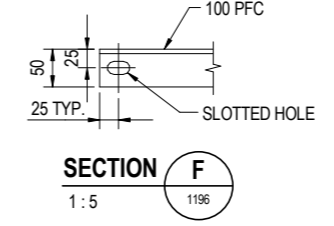
TYP. 100 UC CANTILEVER - PLAN
1:5



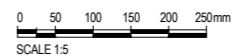
ADDITIONAL PEDESTRIAN REFUGE TYPICAL STRINGER - ELEVATION
1:10



SECTION E
1:5



SECTION F
1:5



GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1195.

WELDING

1. ALL WELDS SHALL COMPLY WITH AS 1554 PART 1, CATEGORY SP.
2. EXTENT OF WELD INSPECTION:
100% VISUAL EXAMINATION
10% NON-DESTRUCTIVE TESTING.
3. ALL FILLET WELDS SHALL BE 6mm CONTINUOUS UNO.
4. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION.
5. WELDING SYMBOLS ARE IN ACCORDANCE WITH AS 1101.3-1987

File Name: C:\Users\j\Documents\1031 Georges River Bridge\CD\TRAIL FILES\1196\pedref.a4
 Plot Date: 19/12/2016 4:02:29PM Office



REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
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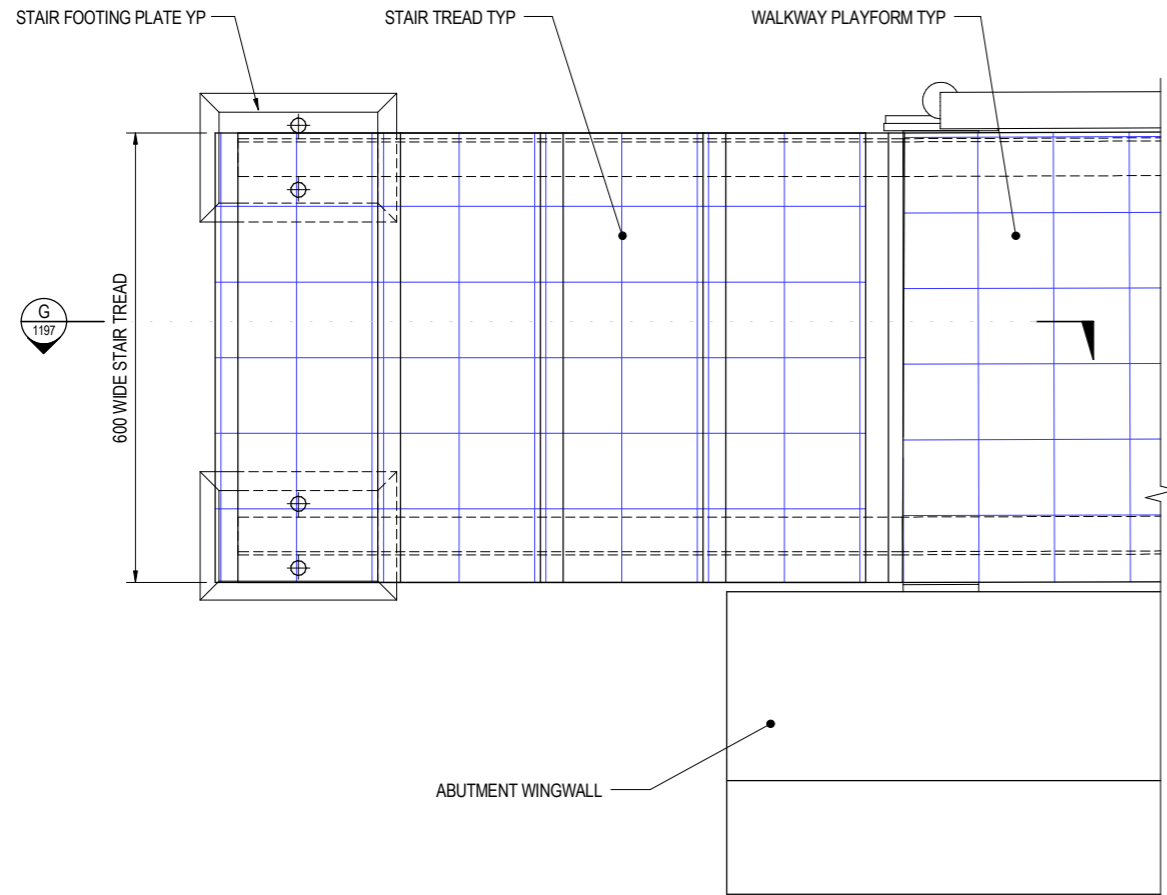
APPROVAL	SCALE	SIZE
[Signature]	AS SHOWN	A1

FOR CONSTRUCTION

APPROVED

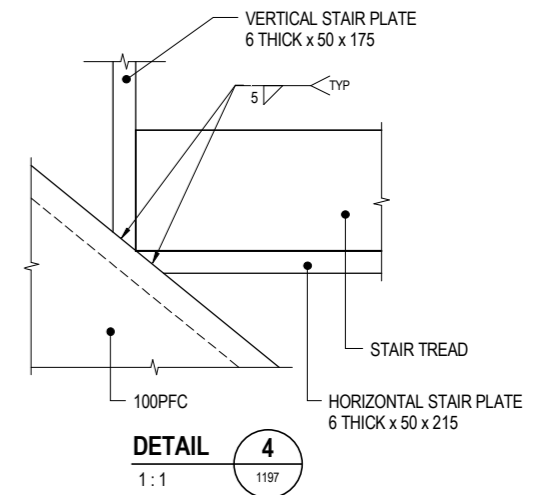
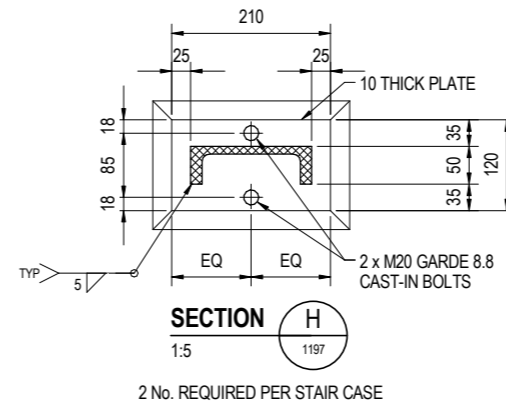
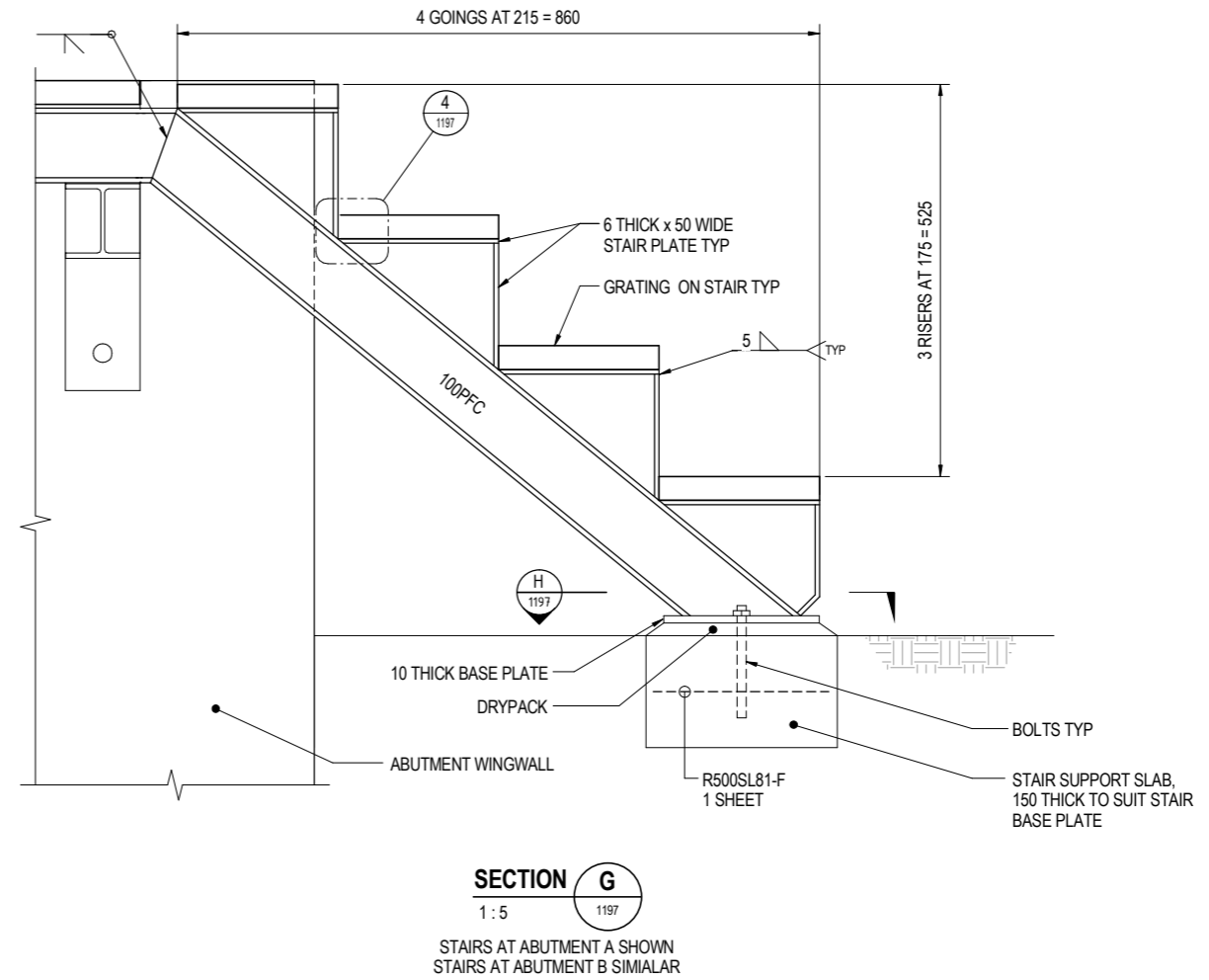
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PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE WALKWAY DETAILS SHEET B		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	-	GRB	- DRG - BRD -
NUMBER	REV		
1196	- 01		



DETAIL 3
1:5

STAIRS AT ABUTMENT A SHOWN
STAIRS AT ABUTMENT B SIMILAR



GENERAL NOTES

1. SCALES AS SHOWN.
2. FOR GENERAL NOTES RELATING TO THIS DRAWING SEE SHEET No. 1195.
3. FOR WELDING NOTES RELATING TO THIS DRAWING SEE SHEET No. 1196.



ARTC DRAWING No	N/A	TNSW EDMS No	N/A
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1 RALP No. 1		
TITLE	GEORGES RIVER BRIDGE WALKWAY DETAILS SHEET C		
DRAWING No.	PROJECT No	WBS	TYPE
N01031	N01031	GRB	DRG
	DISC	BRD	
	NUMBER	1197	
	REV		01

REV	DATE	REVISION DETAILS	APPROVAL	SCALE	SIZE
01	20.12.16	ACCEPTED FOR CONSTRUCTION	AOS	AS SHOWN	A1

FOR CONSTRUCTION
APPROVED
DATE 20.12.16