

VLINE - FOREST CREEK BRIDGE

PROJECT No. MPM23P-04-27

ABUTMENT RECTIFICATION DESIGN OF SDMBGO-BR-124779

MPM ID : 7716

SUNBURY TO BENDIGO - 124.779 km

← TO MELBOURNE

TO CASTLEMAINE →



LOCALITY PLAN
1:1000



FINAL DESIGN

14/11/2024 9:42:13 AM

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
		C	15/11/24	ISSUED FOR FINAL DESIGN	R LANE	R PALLOT	D HUGGETT	
		B	17/09/24	ISSUED FOR PRELIMINARY DESIGN	R LANE	R PALLOT	D HUGGETT	
ACS		A	15/07/2024	ISSUED FOR CONCEPT DESIGN	R LANE	R PALLOT	D HUGGETT	

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**CIVIL STRUCTURAL
CASTLEMAINE**

SDMBGO-BR-124779 - FOREST CREEK BRIDGE
ABUTMENT RECTIFICATION
COVER SHEET AND LOCALITY PLAN

Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z54
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Project Drawing Number CME-C0041		Rev. C
		Drawn By D ALCABAZA Designed By R LANE
Checked By R PALLOT Ind. Review D HUGGETT		Approved Approval Date 15/11/24
File Name CME-C0041.dgn Sheet No. 01 of 01	Drawing Number CME_C0041 Revision C	
Scale 1:1000	Sheet Size A3	NOT FOR CONSTRUCTION

DRAWING LIST

CIVIL STRUCTURAL DRAWINGS

DRAWING No.	DESCRIPTION
CME_C0041	COVER SHEET AND LOCALITY PLAN
CME_C0042	DRAWING LIST
CME_C0043	GENERAL NOTES - SHEET 1
CME_C0044	GENERAL NOTES - SHEET 2
CME_C0045	STRUCTURAL DETAILS - SHEET 1
CME_C0046	STRUCTURAL DETAILS - SHEET 2
CME_C0047	DRAINAGE DETAILS

ASSOCIATED REPORTS

REPORT No.	TITLE
30043502-REP-0002	30043502 - VLINE - FOREST CREEK BRIDGE DESIGN REPORT

Certified By:

(BLOCK LETTERS)

(SIGNATURE)

(DATE)

FINAL DESIGN

14/11/2024 9:44:18 AM

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
		C	15/11/24	ISSUED FOR FINAL DESIGN	R LANE	R PALLOT	D HUGGETT	
		B	17/09/24	ISSUED FOR PRELIMINARY DESIGN	R LANE	R PALLOT	D HUGGETT	
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CIVIL STRUCTURAL CASTLEMAINE		
SDMBO-BR-124779 - FOREST CREEK BRIDGE ABUTMENT RECTIFICATION DRAWING LIST		
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z54

Project Drawing Number CME-C0042		Rev. C
		Drawn By D ALCABAZA
		Designed By R LANE
File Name CME-C0042.dgn		Checked By R PALLOT
Sheet No. 01 of 01		Approved D HUGGETT
Scale N.T.S.		Approval Date 15/11/24
Sheet Size A3		Drawing Number CME_C0042
NOT FOR CONSTRUCTION		Revision C

Certified By:

(BLOCK LETTERS)

(SIGNATURE)

(DATE)

GENERAL NOTES

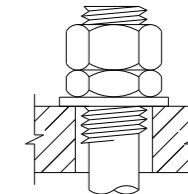
- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ENGINEERING DRAWINGS, THE CONTRACT SPECIFICATION, AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORK. ANY DISCREPANCY SHALL BE REPORTED TO THE DESIGNER BEFORE PROCEEDING WITH THE WORK.
G2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, V/LINE STANDARDS AND DTP STANDARDS SPECIFICATION SECTIONS FOR BRIDGEWORKS.
G3. UNLESS NOTED OTHERWISE: - ALL DIMENSIONS ARE IN MILLIMETRES
G4. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE CONFIRMED AND VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES. THE DRAWINGS SHALL NOT BE SCALED.
G5. THE STRUCTURAL DRAWINGS DO NOT SHOW ALL DETAILS OF FIXTURES, INSERTS, SLEEVES, OPENINGS, ETC. REQUIRED BY THE VARIOUS TRADES. ALL SUCH DETAILS, INCLUDING RECESSES AND CHASES, MUST BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
G6. DURING CONSTRUCTION THE STRUCTURES SHALL BE MAINTAINED IN A SAFE AND STABLE CONDITION AT ALL TIMES AND NO PART SHALL BE OVERSTRESSED.
G7. ALL PROPRIETARY PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. ALTERNATIVE PRODUCTS HAVING EQUIVALENT FUNCTIONS OR PERFORMANCE MAY BE SUBMITTED FOR APPROVAL.
G8. ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE REQUIRED DIMENSIONS OF THE INSTALLED ITEM.
G9. THESE DRAWINGS DO NOT DETAIL TEMPORARY WORKS.
G10. IF ABBREVIATIONS OTHER THAN THOSE IN ACCORDANCE WITH AS 1100.501 ARE USED AND THEIR MEANING IS NOT EXPLICITLY SHOWN ON DRAWINGS, REFER TO THE DESIGNER FOR CLARIFICATION PRIOR TO PROCEEDING.

STEELWORK

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100-2020, AS 5100-2017, AS 4600-2018, AS 1554-2014, AS/NZS 5131-2016 AND THE CONTRACT SPECIFICATION.
S2. SUPPLY STEEL ELEMENTS ACCORDING TO THE FOLLOWING TABLE, U.N.O:
S3. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AND SHALL INDICATE:
S4. MARKINGS WHICH ARE NECESSARY FOR THE IDENTIFICATION OF STEEL ELEMENTS AND WHICH CAUSE THE METAL SURFACE TO BE MODIFIED ARE PROHIBITED ON RAIL BRIDGES AS THESE MARKINGS CAN CONSTITUTE A DEFECT AND A FATIGUE RISK (E.G. PUNCHED LETTERS AND NUMBERS OR WRITING USING WELDING ARCHS). SUCH MARKS ARE PERMITTED ON OTHER STRUCTURES.
S5. ALL COPES TO BE RADIUS = 20 mm U.N.O.
S6. STEEL PLATES NOT DEFINED ON THE DRAWINGS SHALL BE 12 mm MINIMUM.
S7. TEMPORARY ATTACHMENTS SHALL NOT BE LEFT IN PLACE AND SHALL BE REMOVED BEFORE THE STRUCTURE IS BROUGHT INTO SERVICE. WHERE TEMPORARY ATTACHMENTS ARE REMOVED, THE SURFACE SHALL BE PREPARED TO CLAUSE 5.9 AS/NZS 1554.5
S8. THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL, TIMBER OR OTHER ELEMENTS TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS.
S9. U.N.O. ALL STEELWORK SHALL BE HOT DIP GALVANISED. ALL EXPOSED STEELWORK SHALL BE PAINTED IN ACCORDANCE WITH DTP SPECIFICATION - 631 WITH SYSTEM PSL1 AND COLOUR MATCHED ("HERITAGE RED") TO SUIT EXISTING STEELWORK - PAINT SHALL BE COLOUR MATCHED ("HERITAGE RED") TO THE EXISTING BRICK ABUTMENT WALL.
S10. ITEMS SHOWN AS GALVANISED SHALL BE HOT-DIP GALVANISED IN ACCORDANCE WITH AS 1214, AS 1559, AS 4680, AS 4791 AND AS 4792 AFTER FABRICATION. TAP THREADED HOLES AFTER GALVANISING.
S11. TO MAXIMISE THE INTEGRITY OF THE PROTECTIVE COATING (WHETHER PAINT OR GALVANISING) THE SHOP FABRICATOR SHALL GRIND ALL STEEL EDGES WHICH ARE TO BE PROTECTIVE-COATED TO A SMOOTH RADIUS OF 2 mm.
S12. REPAIR ANY SITE DAMAGE TO GALVANISING BY POWER TOOL CLEANING TO AS 1627.2, OR IF INACCESSIBLE, BY HAND TOOL CLEANING TO AS 1627.7 FOLLOWED BY SOLVENT CLEANING/DEGREASING TO AS 1627.1 AND BRUSH APPLY 2 COATS OF AN ORGANIC ZINC-RICH PRIMER EACH WITH 60 MICRONS DRY FILM THICKNESS OVERLAPPING SOUND METALLIC ZINC.
S13. PASSIVATE GALVANISED STEEL IN CONTACT WITH CONCRETE BY DIPPING IN 0.2% SODIUM DICHROMATE SOLUTION.
S14. BOLT DESIGNATION IS AS FOLLOWS:
S15. PROVIDE BOLTS AND THREADED RODS OF SUFFICIENT LENGTH THAT AT LEAST TWO FULL THREADS ARE EXPOSED BEYOND THE NUT AFTER THE NUT HAS BEEN TIGHTENED. A MINIMUM OF ONE WASHER SHALL BE USED UNDER THE NUT IN ALL SITUATIONS. IF TIGHTENING IS CARRIED OUT AT THE HEAD AN ADDITIONAL WASHER SHALL BE USED UNDER THE HEAD.

Table with 3 columns: COMPONENT, STANDARD, GRADE. Rows include HOT ROLLED SECTIONS, STIFFENERS, CLEATS, GUSSETS ETC., CHS, RHS, SHS, FLAT BARS AND RODS, HOT ROLLED STEEL FLATS.

S16. ALL LOCKNUTS SHALL BE HALF NUT LOCKNUTS. THE LOCKNUT SHALL BE THE BOTTOM NUT IN THE ASSEMBLED JOINT AS SHOWN BELOW. THE LOCKNUT SHOULD BE INSTALLED FIRST AND SNUG-TIGHTENED ONLY. THE STANDARD NUT IS THEN INSTALLED AND TIGHTENED ONLY. THE STANDARD NUT IS THEN INSTALLED AND TIGHTENED SO THAT THE THREADS IN THE LOCKNUT FIRST BEAR UPWARDS ON THE BOLT THREADS, THEN ARE FREE, THEN FINALLY BEAR DOWNWARDS ON THE BOLT THREADS WHILE THE THREADS ON THE TOP NUT BEAR UPWARDS ON THE BOLT THREADS. DURING TIGHTENING OF THE TOP NUT WITH A WRENCH, THE LOCKNUT SHOULD BE HELD TO PREVENT IT FROM TURNING.



BOLT WITH LOCKNUT DETAIL

S17. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANISED IN ACCORDANCE WITH AS/NZS 4680.

DESIGN REQUIREMENTS

GENERAL:

- D1. STRUCTURAL ELEMENTS SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS 5100 (2017) BRIDGE DESIGN FOR THE FOLLOWING IMPOSED LOADINGS:
D2. DESIGN CRITERIA NIST-2616
D3. DESIGN RAILWAY TRAFFIC LOADS: 230LA
D4. MULTIPLE TRACKS:
- FULL DEPTH CONCRETE SLEEPER
- 60 kg RAIL
- MAXIMUM BALLAST DEPTH BETWEEN THE TOP OF STEEL TROUGH AND THE SOFFIT OF SLEEPER IS 220 mm.

DESIGN LIFE:

- D5. 100 YEARS FOR NEW STRUCTURAL ELEMENTS.

FINAL DESIGN

14/11/2024 9:56:13 AM

Table with columns: Revised By, In Serv, Rev, Date, Description, Designed, Checked, Ind. Review, Approved. Includes revision history for final design, preliminary design, and concept design.

Consultant logo for smec and Franchisee/ Lessee logo for V/Line.

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CIVIL STRUCTURAL CASTLEMAINE SDMBGO-BR-124779 - FOREST CREEK BRIDGE ABUTMENT RECTIFICATION GENERAL NOTES - SHEET 1. Includes location and datum information.

Project Drawing Number CME-C0043, Rev. C. Includes logos for PUBLIC TRANSPORT VICTORIA and PT, and drawing details like File Name, Sheet No. (01 of 01), Drawing Number (CME_C0043), and Revision (C).

Certified By:

(BLOCK LETTERS)

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CONCRETE

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 5100:2017 AND THE CONTRACT SPECIFICATION.
- C2. CONCRETE SHALL BE FROM AN APPROVED SOURCE AND SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING STANDARDS:
 - AS 5100.5 BRIDGE DESIGN PART 5 CONCRETE
 - AS 3972 PORTLAND CEMENT
 - AS 1379 READY-MIXED CONCRETE
 - AS 2758.1 CONCRETE AGGREGATES
- C3. MANUFACTURE AND DELIVERY OF CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATION AND VICROADS STANDARD SPECIFICATION.
- C4. CONCRETE SHALL BE SPECIAL CLASS PERFORMANCE CONCRETE AS SPECIFIED IN THE CONTRACT SPECIFICATION. CONCRETE GRADE AND MINIMUM COVER TO REINFORCEMENT SHALL BE AS NOTED BELOW U.N.O. ON THE DRAWINGS:

ELEMENT	CONCRETE GRADE	CHARACTERISTIC COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	EXPOSURE CLASSIFICATION	CONCRETE COVER TO REINFORCEMENT (mm)		
				CAST AGAINST MASONRY	CAST AGAINST BLINDING	CAST AGAINST GROUND
CONCRETE WALL	VR 330/32	32	B1	45	55	75

- A. PRECAST DENOTES RIGID FORMWORK AND INTENSE COMPACTION
 - B. CAST AGAINST FORMS DENOTES TIMBER AND CONCRETE FORMS WITH STANDARD COMPACTION
 - C. COVER IS THE CLEAR DISTANCE BETWEEN ANY REINFORCING (INCLUDING FITMENTS) AND THE FACE OF THE STRUCTURAL ELEMENT.
 - D. FOR ALL EXTERNAL SURFACES, PROVIDE APPROVED BAR CHAIRS. NAILED TIE STEEL SYSTEM SHALL NOT BE USED TO TIE THE FORMS.
 - E. THE COVERS SHALL BE MAINTAINED USING APPROVED BAR CHAIRS AT MAX 800 mm CENTRES U.N.O. IN SLABS BAR CHAIRS SHALL BE AT 800x800 mm MAXIMUM CENTRES. BAR CHAIRS SHALL BE PROVIDED ALONG THE EDGES OF ALL CONSTRUCTION JOINTS.
 - F. EXTERNAL ELEMENTS ARE THOSE EXPOSED TO WEATHER, RAIN AND WATER PENETRATION
 - G. COVER REQUIREMENTS ARE BASED ON EFFECTIVE, CONTINUOUS AND UNINTERRUPTED CURING AS PER AS 5100.5 CLAUSE 4.4.2.1.
- C5. ALL CEMENT SHALL BE "GP" GENERAL PURPOSE OR "GB" GENERAL PURPOSE BLENDED CEMENT OR "SR" SULPHATE RESISTANT CEMENT, AS REQUIRED AND SHALL COMPLY WITH AS 3972.
 - C6. CONCRETE TEMPERATURE AT TIME OF PLACEMENT SHALL NOT BE LESS THAN 10°C OR GREATER THAN 32°C.
 - C7. CONCRETE SHALL BE CURED AS PER THE REQUIREMENTS OF DTP SPECIFICATION 610
 - C8. PLACEMENT, COMPACTION, CONSTRUCTION JOINTS, AND CURING OF CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATION.
 - C9. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF AIR POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
 - C10. EXTERNAL FORMWORK MAY NEED TO BE RETIGHTENED AFTER COMPACTION AND BEFORE REUSE. THE INITIAL DISCHARGE FROM THE CONCRETE PUMP SHALL NOT BE USED UNTIL A CONSISTENT WORKABLE APPROVED MIX, IN ACCORDANCE WITH THE CONTRACT SPECIFICATION, IS DISCHARGED.

- C11. THE CONTRACTOR IS TO SEEK APPROVAL IN WRITING IF ANY ADMIXTURES ARE TO BE USED IN THE CONCRETE MIX. CALCIUM CHLORIDE IS NOT PERMITTED UNDER ANY CIRCUMSTANCES.
- C12. NO HOLES, CHASES OR EMBEDMENT OF PIPES AND CONDUITS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- C13. CONSTRUCTION JOINTS SHALL BE LOCATED AND DETAILED AS SHOWN ON THE DRAWINGS OR SHALL BE LOCATED AND FORMED TO THE APPROVAL OF THE ENGINEER AND IN ACCORDANCE WITH THE CONTRACT SPECIFICATION. CONCRETE AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE INTENTIONALLY ROUGHENED IN ACCORDANCE WITH THE CONTRACT SPECIFICATION TO EXPOSE THE COARSE AGGREGATE TO ENSURE A SATISFACTORY BOND BETWEEN ADJACENT CONCRETE SURFACES U.N.O. ALL CONCRETE SURFACES SHALL BE CLEAN AND FREE OF LAITANCE. THOROUGHLY MOISTEN THE ROUGHENED SURFACE IMMEDIATELY PRIOR TO PLACING CONCRETE. NO CONSTRUCTION JOINT SHOWN ON DRAWINGS SHALL BE OMITTED WITHOUT APPROVAL.
- C14. THE MINIMUM STRENGTH OF CONCRETE LOAD-RESISTING ELEMENTS SHALL BE PROVEN PRIOR TO THEIR LOADING BY CONCRETE CYLINDER TESTING. CONCRETE LOAD-RESISTING ELEMENTS SHALL ACHIEVE THE MORE STRINGENT MINIMUM STRENGTH REQUIREMENTS OF THE DRAWINGS AND THE CONTRACT SPECIFICATION.
- C15. CURING OF CONCRETE SHALL COMMENCE IMMEDIATELY AFTER FINISHING OPERATIONS HAVE BEEN COMPLETED. THE CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE CONTRACT SPECIFICATION.
- C16. SPOIL GENERATED ON SITE SHALL BE MINIMISED.

FINAL DESIGN

14/11/2024 9:58:15 AM

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
		C	15/11/24	ISSUED FOR FINAL DESIGN	R LANE	R PALLOT	D HUGGETT	
		B	17/09/24	ISSUED FOR PRELIMINARY DESIGN	R LANE	R PALLOT	D HUGGETT	
ACS		A	15/07/2024	ISSUED FOR CONCEPT DESIGN	R LANE	R PALLOT	D HUGGETT	

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CIVIL STRUCTURAL

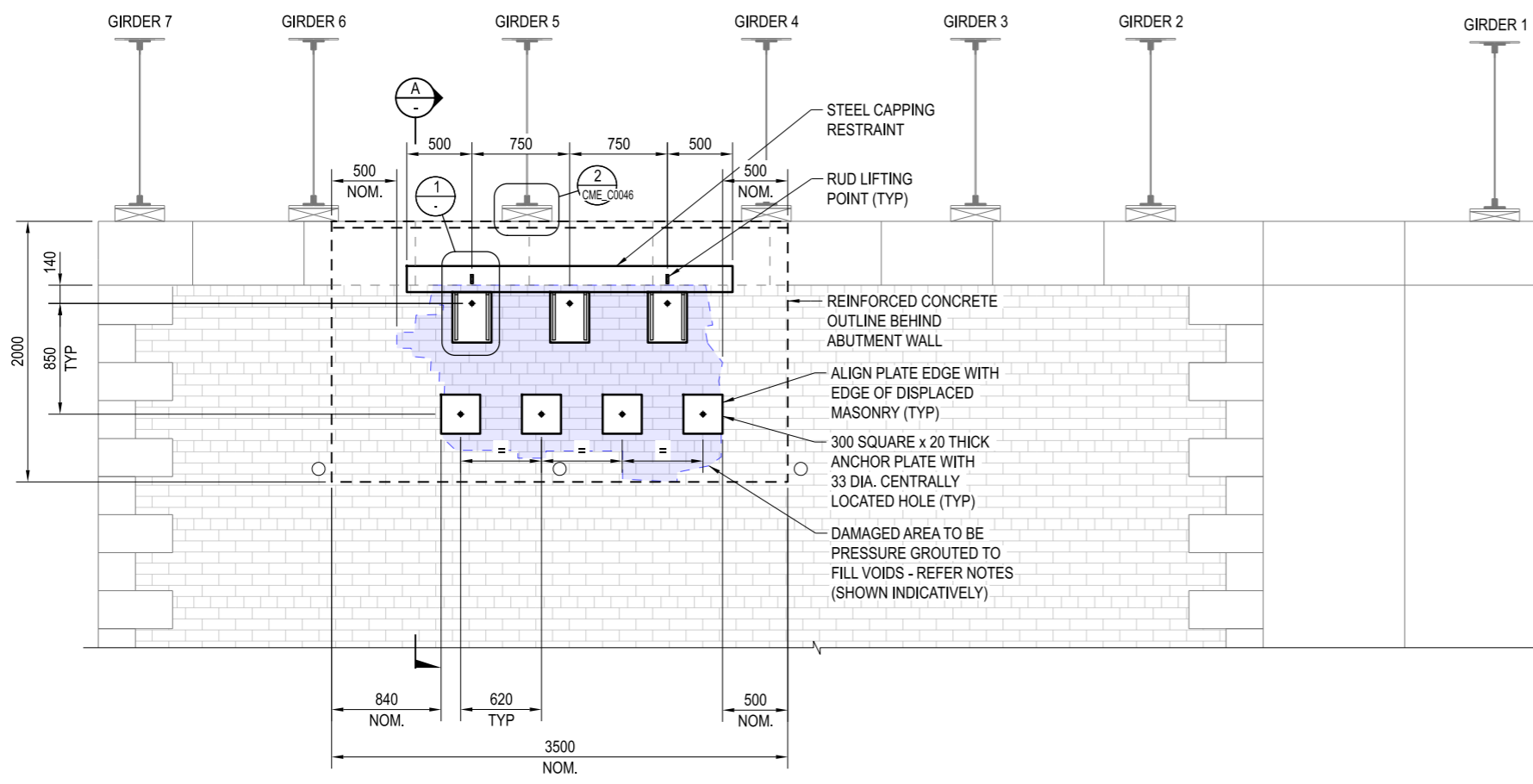
CASTLEMAINE

SDMBGO-BR-124779 - FOREST CREEK BRIDGE
ABUTMENT RECTIFICATION
GENERAL NOTES - SHEET 2

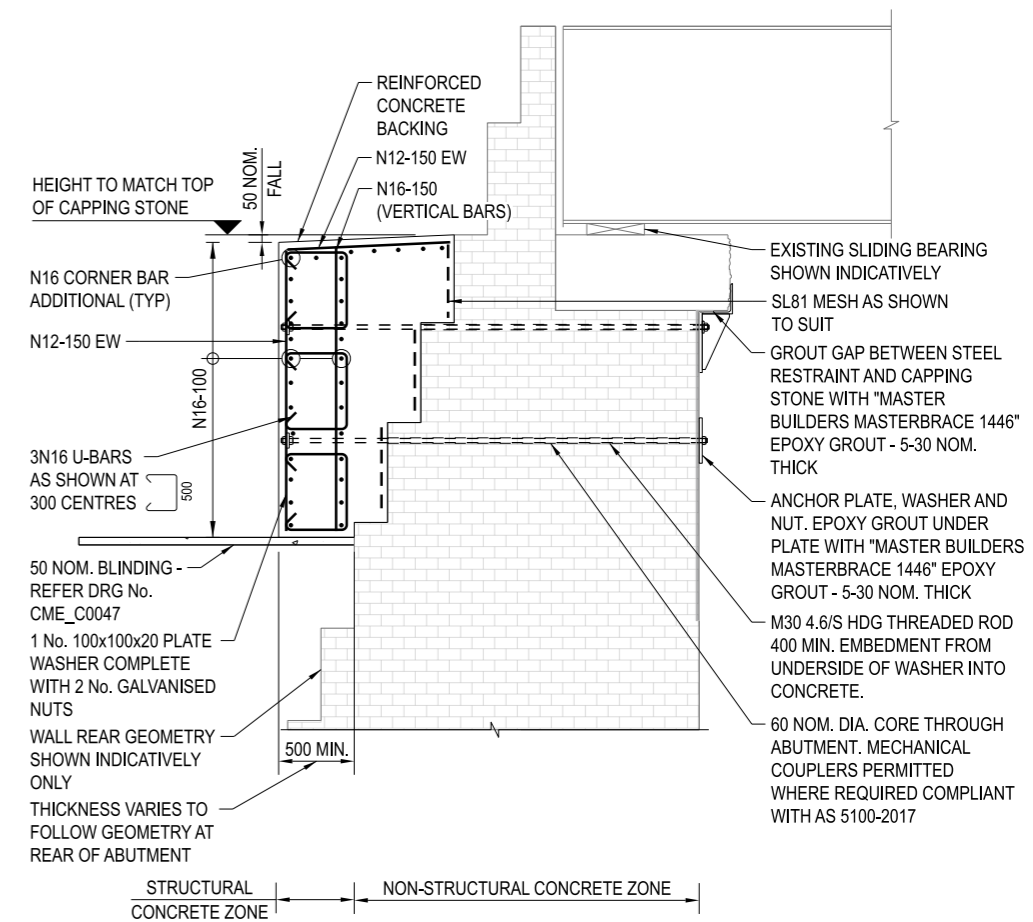
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z54
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Project Drawing Number CME-C0044		Rev. C
Drawn By D ALCABAZA	Designed By R LANE	
Checked By R PALLOT	Ind. Review D HUGGETT	
Approved	Approval Date 15/11/24	
File Name CME-C0044.dgn	Sheet No. 01 of 01	
NOT FOR CONSTRUCTION		
Scale N.T.S.	Sheet Size A3	Drawing Number CME_C0044
		Revision C

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 Certified By:



ELEVATION - UP ABUTMENT
1:50



SECTION A
1:50

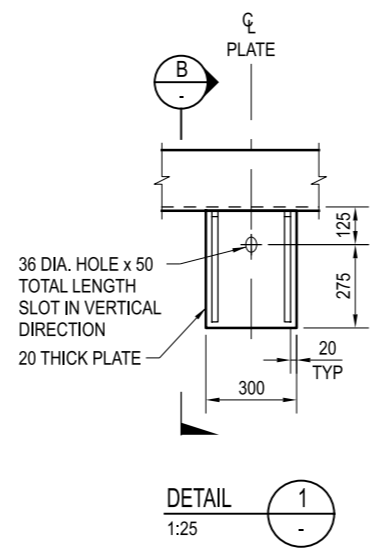
BACKFILL, GIRDER, BALLAST, SLEEPERS AND TRACK NOT SHOWN FOR CLARITY

CONSTRUCTION SEQUENCE

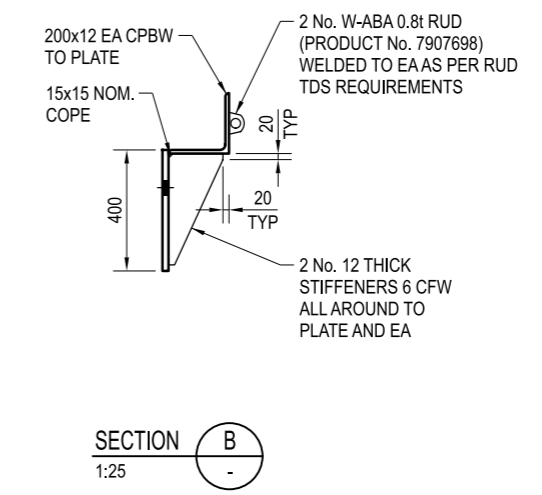
- STAGE 1**
1.1 RAIL OCCUPATION TO COMMENCE.
- STAGE 2**
2.1 TRACK REMOVAL, REFER TO NOTE 4.
2.2 REMOVE EXISTING ABUTMENT BACKFILL
2.3 CORE HOLES THROUGH MASONRY, INSTALL THE GALVANISED THREADED RODS.
2.4 POUR BLINDING AND CONSTRUCT REINFORCED CONCRETE BACKING.
2.5 INSTALL REMAINING DRAINAGE COMPONENTS AS DRG No. CME_C0047.
2.6 GROUT BETWEEN STEEL PLATES AND MASONRY.
2.7 BACKFILL, REINSTATE FORMATION, BALLAST, TRACK, SLEEPERS AND END RAIL OCCUPATION.
- STAGE 3**
3.1 GROUT ANNULUS BETWEEN CORED HOLES AND THREADED RODS AND DRAINAGE CHS RESPECTIVELY.
3.2 PRESSURE GROUT THE MASONRY DAMAGED BLOCK TO FILL VOIDS - REFER ELEVATION FOR EXTENTS.
3.3 UNDERTAKE BEARING RELEASE WORKS AS PER DETAIL AND NOTES.

SURVEY AND SITE CONTROLS

- PRIOR TO WORKS UNDERTAKE SURVEY OF:
 - TRACK AND SLEEPER
 - ABUTMENT WALL EXTERNAL FACE
- COMMENCE EXCAVATION BEHIND THE ABUTMENT:
 - STRUCTURAL ENGINEER ON SITE SHALL MONITOR ABUTMENT FOR ROTATION OR LATERAL MOVEMENT DURING WORKS TO ENSURE STRUCTURAL STABILITY.
 - SURVEY ABUTMENT WALL BEFORE EXCAVATION EVERY 72 HOURS UNTIL BACKFILL IS REINSTATED.
 - STOP WORKS IF LATERAL MOVEMENT >20 mm IS OBSERVED.
 - SEEK DIRECTION FROM THE ENGINEER IF THE STRUCTURAL FORM AT THE BACK OF ABUTMENT IS INCOMPATIBLE WITH DESIGN INTENT.



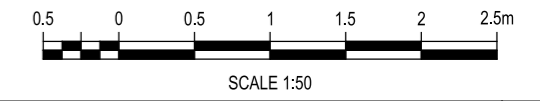
DETAIL 1
1:25



SECTION B
1:25

NOTES:

- FOR DRAWING LIST REFER TO DRG No. CME_C0042.
- FOR GENERAL NOTES REFER TO DRG No. CME_C0043 AND CME_C0044.
- VISIBLE STEELWORK SHALL BE PAINTED AS PER DTP SPECIFICATION 631 WITH SYSTEM PSL-1 AND SHALL BE COLOUR MATCHED ("HERITAGE RED") TO THE EXISTING BRICK ABUTMENT WALL (INCLUDING WASHERS).
- PRIOR TO TRACK REMOVAL, V/LINE DELIVERY TEAM TO PREPARE WELDING/DE-STRESSING PLANS AS PART OF EXECUTION WORKS WHICH IS TO BE REVIEWED AND APPROVED BY V/LINE NETWORK ENGINEERING.
- STEEL DECK U-TROUGH UNITS TO BE ON-HAND DURING THE CONSTRUCTION OCCUPATION AND TO BE INSTALLED WHERE REQUIRED TO CLOSE-OFF-GAPS BETWEEN THE ABUTMENT BACKFILL/CAPPING/BALLAST AND THE FENDERWALL/WINGWALLS/KEEPERWALLS. REFER STD_S0051, 0056 - 0060.
- STEEL WASHERS SHALL INCLUDE GROUT AND VENT HOLES TO FACILITATE THE GROUTING OF THE CORED HOLE AS PER THE CONSTRUCTION SEQUENCE NOTES.



FINAL DESIGN

1:05:46 PM
 14/11/2024

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CASTLEMAINE**

SDMBGO-BR-124779 - FOREST CREEK BRIDGE
ABUTMENT RECTIFICATION
STRUCTURAL DETAILS - SHEET 1

Up Location	Down Location	Datum
East.	East.	MGA Z54
North.	North.	
ID#	ID#	

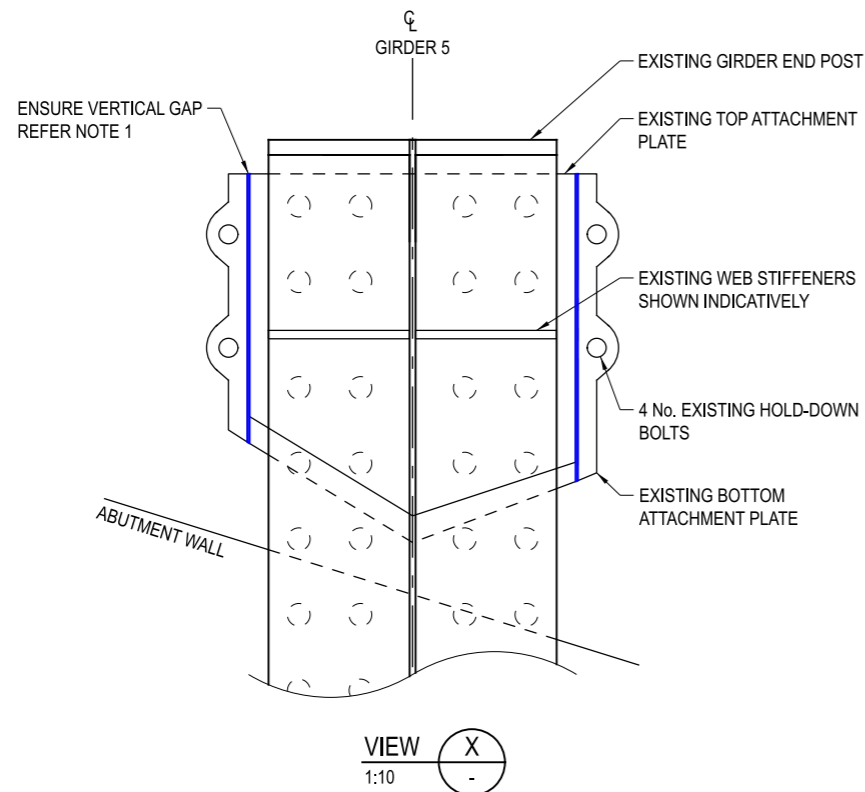
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		Drawn By D ALCABAZA Designed By R LANE
Checked By R PALLOT Approved Approval Date 15/11/24		Drawing Number CME_C0045 Revision C
File Name CME-C0045.dgn	Sheet No. 01 of 01	Scale 1:50
<div style="border: 2px solid red; padding: 5px; text-align: center; color: red; font-weight: bold;">NOT FOR CONSTRUCTION</div>		Sheet Size A3

(DATE)

(SIGNATURE)

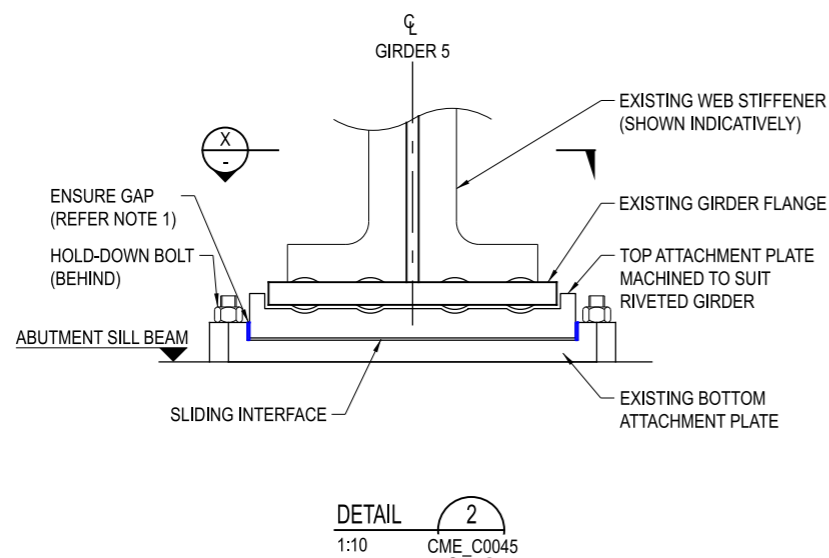
(BLOCK LETTERS)

Certified By:



INTERFACE (REFER NOTE 1)

SITE PHOTOGRAPH (JUNE 2024) - GIRDER No. 5
N.T.S.



BEARING WORKS

- GIRDER No. 5 (ONLY) BEARING RESTRAINT PLATE GAPS:
 - INSPECT THE INTERFACE BETWEEN THE SIDES OF THE BEARING BOTTOM RESTRAINT PLATE AND THE SIDES OF THE BEARING TOP RESTRAINT PLATE.
 - WHERE THE HORIZONTAL GAP BETWEEN THE VERTICAL SIDES OF THESE ELEMENTS IS LESS THAN 5 mm ACROSS THE FULL DEPTH OF THE PLATES THEN LOCALLY GRIND BACK THE EXISTING METAL (IRON) TO PROVIDE THIS GAP ACCORDINGLY. FILL GAP WITH GENERAL PURPOSE (GP) GREASE.
- ALL UP-ABUTMENT BEARINGS SHALL BE CLEANED, GREASED AND MADE FREE FROM OBSTRUCTIONS.

NOTES:

- FOR DRAWING LIST REFER TO DRG No. CME-C0042.
- FOR GENERAL NOTES REFER TO DRG No. CME-C0043 AND CME-C0044.



FINAL DESIGN

14/11/2024 1:11:20 PM

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
		B	15/11/24	ISSUED FOR FINAL DESIGN	R LANE	R PALLOT	D HUGGETT	
ACS		A	15/07/2024	ISSUED FOR CONCEPT DESIGN	R LANE	R PALLOT	D HUGGETT	

Consultant

an s.j. company

Franchisee / Lessee

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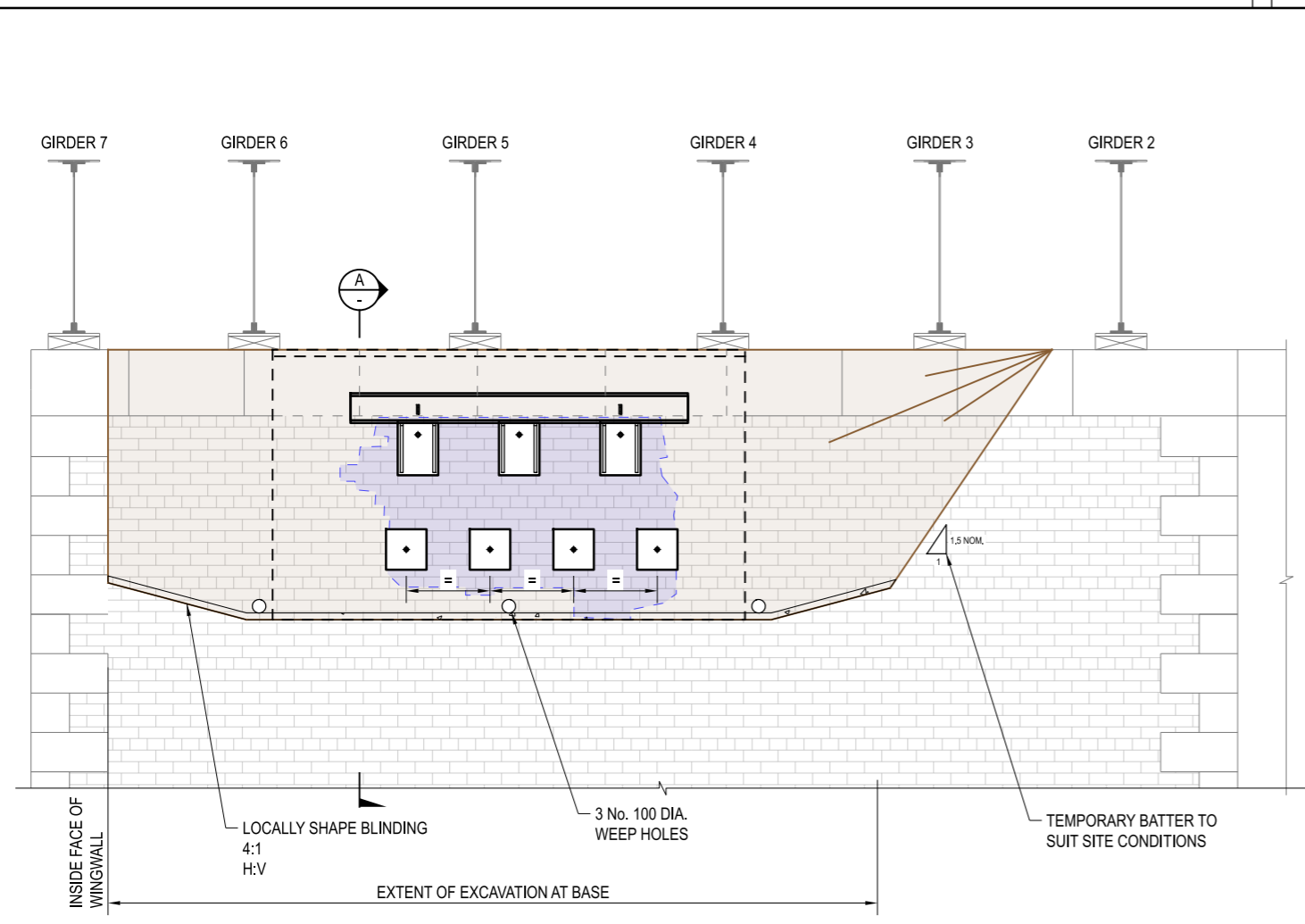
**CIVIL STRUCTURAL
CASTLEMAINE**

SDMBO-BR-124779 - FOREST CREEK BRIDGE
ABUTMENT STRENGTHENING
STRUCTURAL DETAILS - SHEET 2

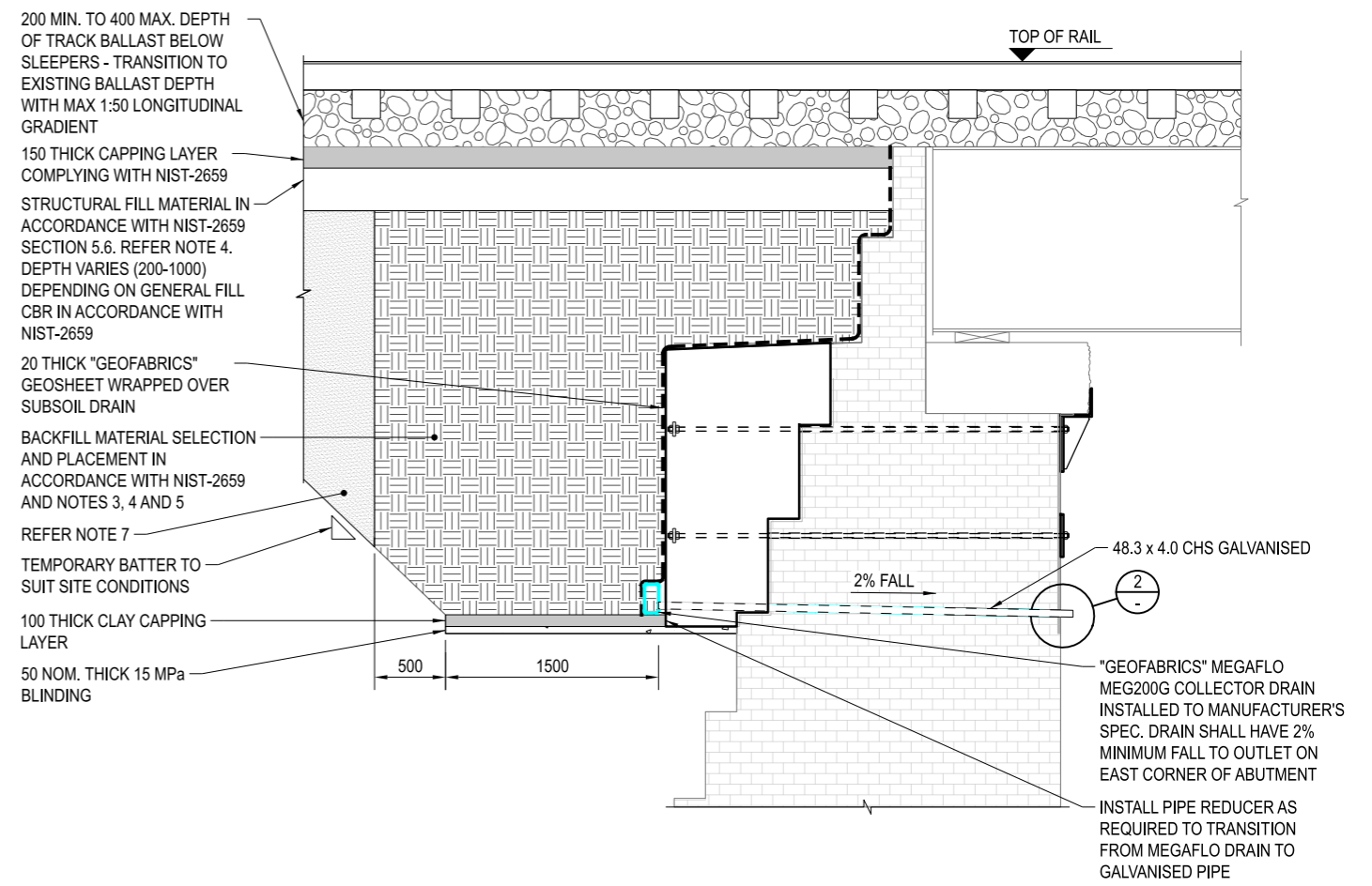
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z54
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Project Drawing Number CME-C0046		Rev. B
		Drawn By D ALCABAZA Designed By R LANE
File Name CME-C0046.dgn Sheet No. 01 of 01		Checked By R PALLOT Ind. Review D HUGGETT
Scale 1:10 Sheet Size A3		Approved Approval Date 15/11/24
NOT FOR CONSTRUCTION		Drawing Number CME_C0046 Revision B

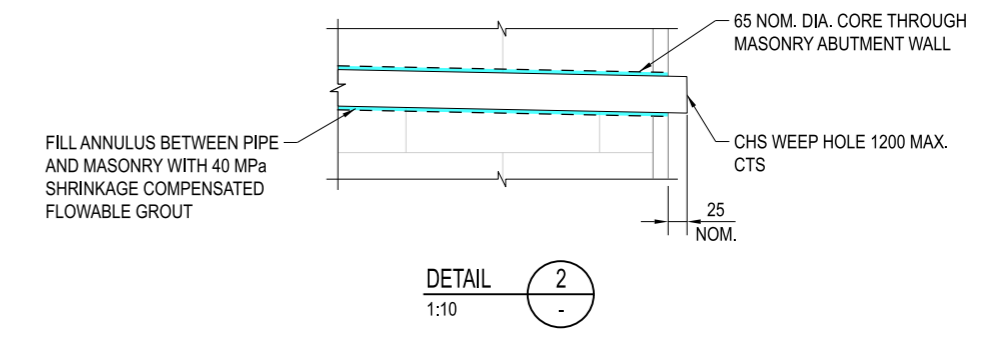
(DATE)
 (SIGNATURE)
 (BLOCK LETTERS)
 Certified By:



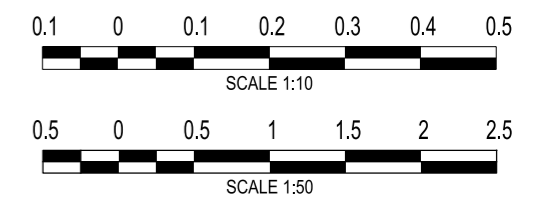
ELEVATION - UP ABUTMENT
1:50



SECTION A
1:50



DETAIL 2
1:10



- NOTES:**
- FOR DRAWING LIST REFER TO DRG No. CME_C0042.
 - FOR GENERAL NOTES REFER TO DRG No. CME_C0043 AND CME_C0044.
 - BACKFILL COMPACTION BEHIND AND ADJACENT TO ABUTMENT SHALL BE COMPACTED WITH HAND HELD EQUIPMENT IN ACCORDANCE WITH NIST-2659 SECTION 5.9.
 - ABUTMENT BACKFILL TO COMPLY WITH THE FOLLOWING GRADING REQUIREMENTS:

AS SIEVE SIZE (mm)	% PASSING
75.0	100
53.0	80-100
2.36	15-100
0.6	10-100
0.075	0-100

LIQUID LIMIT LL (%) ≥ 40
 PLASTICITY INDEX (%) ≥ 20
 MAXIMUM DRY DENSITY MIN 1.8 T/M³

- FILL MATERIAL BEHIND ABUTMENT SHALL HAVE A MINIMUM EFFECTIVE INTERNAL FRICTION ANGLE AT CONSTANT VOLUME OF 36°.
- ALL TRACK LEVELS (INCLUDING RLs, EASTINGS AND NORTHINGS, TRACK CLEARANCES AND EDGES OF TRACK TO EDGE OF DECK) SHALL BE SURVEYED WITHIN THE EXTENT OF WORKS PRIOR TO CONSTRUCTION ACTIVITIES. FOLLOWING EXCAVATION, TRACK SHALL BE REINSTATED TO MATCH SURVEY DATA.
- BACKFILL 2 m OR MORE BEYOND THE MODIFIED ABUTMENT WALL MAY BE EITHER:
 - GENERAL FILL TO NIST-2659, OR
 - STRUCTURAL FILL IN ACCORDANCE WITH NIST-2659 AND NOTES 3, 4 AND 5.
- EXISTING WEEPHOLES AT THE BASE OF THE ABUTMENT WALL SHALL BE NOMINALLY CLEANED OUT USING A MEDIUM TO LOW PRESSURE WATER GURNEY OR SIMILAR.

FINAL DESIGN

14/11/2024
 1:12:59 PM

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
		B	15/11/24	ISSUED FOR FINAL DESIGN	R LANE	R PALLOT	D HUGGETT	
		A	17/09/24	ISSUED FOR PRELIMINARY DESIGN	R LANE	R PALLOT	D HUGGETT	

Consultant

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CIVIL STRUCTURAL
CASTLEMAINE
 SDBMGO-BR-124779 - FOREST CREEK BRIDGE
 ABUTMENT RECTIFICATION
 DRAINAGE DETAILS

Up Location East North ID#	Down Location East North ID#	Datum MGA Z54
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Project Drawing Number CME-C0047		Rev. B
		Drawn By D ALCABAZA Designed By R LANE
Checked By R PALLOT Approved		Ind. Review D HUGGETT Approval Date 15/11/24
File Name CME-C0047.dgn Sheet No. 01 of 01		Drawing Number CME_C0047 Revision B
Scale 1:50	Sheet Size A3	