

NO.	REVISION	BY	DATE
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WELLINGTON CITY COUNCIL

REPLACEMENT OF BRIDGE No 6

O/S 330 SOUTH KARORI ROAD

KARORI - WELLINGTON

DRAWING REGISTER FOR BRIDGE REPLACEMENT

DRAWING No	REV	DESCRIPTION
E15-0296-00	A	DRAWING REGISTER FOR BRIDGE
E15-0296-01	A	GENERAL SPECIFICATIONS FOR BRIDGES
E15-0296-02	A	STANDARD DETAILS FOR REINFORCED CONCRETE FOR BRIDGES
E15-0296-04	A	GENERAL ARRANGEMENT OF NEW BRIDGE PLAN AND LONGITUDINAL PROFILE
E15-0296-05	A	GENERAL ARRANGEMENT OF NEW BRIDGE AND ROADWAY SECTIONS
E15-0296-06	A	EXISTING TOPO PLAN WITH SPOT LEVELS AROUND EXISTING BRIDGE
E15-0296-07	A	EXISTING BRIDGE PLANS WITH DEMOLITION WORKS
E15-0296-08	A	EXISTING BRIDGE SECTIONS WITH DEMOLITION WORKS
E15-0296-10	A	ALTERED BRIDGE PILING PLAN AND BRIDGE PLAN WITH NEW ABUTMENTS
E15-0296-11	A	NEW BRIDGE PRECAST PLAN AND BRIDGE PLAN WITH BARRIER BASES
E15-0296-12	A	NEW BRIDGE ABUTMENT ELEVATIONS AND PRECAST BRIDGE LONG SECTION
E15-0296-13	A	NEW BRIDGE ABUTMENT ELEVATION AND SECTIONS AT GRID 1
E15-0296-14	A	NEW BRIDGE ABUTMENT ELEVATION AND SECTIONS AT GRID 2
E15-0296-15	A	NEW BRIDGE PRECAST HOLLOWCORE UNIT PLANS WITH RECESS
E15-0296-16	A	NEW BRIDGE PRECAST HOLLOWCORE SECTIONS WITH REINFORCEMENT
E15-0296-17	A	NEW BRIDGE PRECAST SECTIONS AT END BLOCK AND AT DIAPHRAGMS
E15-0296-18	A	NEW BRIDGE PRECAST DECK WITH CONCRETE TOPPING AND BARRIER POSTS

FOR CONSENT
28/08/2015



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WELLINGTON CITY COUNCIL

ARCHITECT

PROJECT
BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON

DRAWING TITLE
DRAWING REGISTER
FOR BRIDGE

DESIGNED APNG
DRAWN BB
CHECKED
DATE

FIELD BOOK =
DATE =

E15-0296-00
AUG 2015

SCALE	AS SHOWN	SIZE	A1
DRAWING NUMBER	E15-0296-00	REV	A

RESOURCE MANAGEMENT • LAND PLANNING • SURVEYING • STRUCTURAL • CIVIL • FIRE

PRELIMINARY AND GENERAL

THIS PAGE SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL SPECIFICATION DOCUMENT, 150296S01 STRUCTURAL SPECIFICATION.

REFER TO THE PRELIMINARY AND GENERAL CLAUSES OF THIS SPECIFICATION AND TO THE GENERAL CONDITIONS WHICH ARE EQUALLY BINDING TO ALL TRADES.

DRAWINGS ARE NOT TO BE SCALED OFF, IF IN DOUBT, SEEK CLARIFICATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE ACCURATE SETTING OUT OF THE WORKS TRUE TO LINE AND LEVEL. THE CONTRACTOR SHALL EMPLOY QUALIFIED STAFF TO DO THIS WORK. WHERE NEW WORKS IS TO TIE INTO EXISTING STRUCTURE, THE CONTRACTOR IS RESPONSIBLE FOR MEASURING THE EXISTING STRUCTURE. THE EXISTING TOP OF ABUTMENTS ARE TO BE TRIMMED AS REQUIRED FOR NEW WORKS.

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT CODES OF PRACTICE EXCEPT WHERE VARIED BY THE SPECIFICATION AND/OR DRAWINGS.

CONSTRUCTION METHODOLOGY

THE CONTRACTOR SHALL HAVE A CONSTRUCTION METHODOLOGY PRIOR TO BEGINNING WORKS ON-SITE. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION METHODOLOGY TO SPENCER HOLMES LIMITED FOR RECORD PURPOSES. THE CONTRACTOR AND SUBCONTRACTORS SHALL FOLLOW THE CONSTRUCTION METHODOLOGY.

TEMPORARY WORKS DESIGN

THE TEMPORARY WORKS CONSISTS OF THE PREPARATION OF PROGRAMMES, METHODOLOGY STATEMENTS AND "FALSEWORK" DESIGN THAT DEFINE THE METHOD AND SEQUENCE IN WHICH THE BUILDING OR STRUCTURE IS TO BE BUILT. IN THIS CONTEXT, FALSEWORK REFERS TO ALL STAGING, TEMPORARY PROPPING AND BRACING, SCAFFOLDING AND ACCESS, THAT IS, THAT THERE IS AT LEAST ONE METHOD AND SEQUENCE THAT CAN BE FOLLOWED TO CONSTRUCT THE DESIGN, SHOP DRAWING, SHORING, CRANAGE, SITE ACCESS AND THE LIKE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL APPROPRIATE TEMPORARY WORKS FOR THE PROJECT TO BE UNDERTAKEN AND COMPLETED IN A SAFE AND SECURE MANNER.

SUPPORT AND BRACE THE EXISTING STRUCTURE DURING THE CUTTING OF NEW OPENINGS OR THE REPLACEMENT OF STRUCTURAL PARTS, PREVENT DEBRIS FROM OVERLOADING ANY PART OF THE STRUCTURE. DO NOT REMOVE SUPPORTS UNTIL THE NEW WORK IS STRONG ENOUGH TO SUPPORT THE EXISTING STRUCTURE. ENSURE ALL WORK REMAINS STRUCTURALLY STABLE AND SOUND.

DRAWINGS

THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND DIMENSIONS HAVE BEEN MADE TO SCALE. WHERE DIMENSIONS HAVE NOT BEEN GIVEN, SCALED DIMENSIONS SHALL NOT BE USED. CONFIRM ALL DIMENSIONS WITH ON-SITE MEASUREMENTS.

IF ANY DISCREPANCIES ARE FOUND WITHIN THE DRAWINGS REFER TO THE ENGINEER FOR INSTRUCTIONS BEFORE PROCEEDING.

SCOPE OF WORKS

THE WORKS OF THIS CONTRACT INCLUDE THE SUPPLY OF ALL LABOUR, MATERIALS, PLANT AND EQUIPMENT ASSOCIATED WITH THE REPLACEMENT OF SOUTH KARORI BRIDGE No 6, LOCATED OUTSIDE 330 SOUTH KARORI ROAD, KARORI, WELLINGTON

THE CONTRACT FOR THE STRENGTHENING WORKS SHALL INCLUDE THE PARTIAL DEMOLITION OF THE EXISTING BRIDGE, CONSTRUCTION OF A NEW BRIDGE AND ASSOCIATED CIVIL WORKS.

DESIGN BASIS

DESIGN STANDARD

APPENDIX A LIGHTLY TRAFFICKED RURAL BRIDGES, NEW ZEALAND TRANSPORTATION AUTHORITY BRIDGE MANUAL (UP TO AND INCLUDING AMENDMENTS TO SEPTEMBER 2014).

TRAFFIC LOAD

0.85 HN.
SLS 1a LOAD FACTOR FOR LIVE LOAD OF 1.35.
SINGLE LANE

SEISMIC DESIGN

DESIGN LOAD IN ACCORDANCE WITH NZS 1705 WITH $C_o = C_h(T_o) Z R_u S_p = 1.00 \times 0.4 \times 1.3 \times 0.9 = 0.468$.
SOIL CLASS B

WIND DESIGN

DESIGN LOAD IN ACCORDANCE WITH AS/NZS 1170.2 WITH SITE WINDSPEED $V_{sit} = 53m/s$.

BARRIER DESIGN

ON BRIDGE TEST LEVEL 3.

PRESTRESSED GIRDERS

PRESTRESSED GIRDERS ARE DESIGNED TO CLASS C AS DEFINED BY NZS 3101.

CONSTRUCTION MONITORING

THE PRIMARY RESPONSIBILITY FOR COMPLETING THE CONTRACT WORKS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS IS THE CONTRACTOR'S. SPENCER HOLMES LIMITED HAVE BEEN ENGAGED TO UNDERTAKE CONSTRUCTION MONITORING TO LEVEL CM3 IN ACCORDANCE WITH ACENZ CONDITIONS OF ENGAGEMENT OF THE STRUCTURAL ASPECTS WHICH HAVE BEEN SPECIFICALLY DESIGNED.

CONTACTS: SPENCER HOLMES LIMITED - ANDRE DE GROOT.
PHONE 04 472 2261

INSPECTION SCHEDULE


THE FOLLOWING SCHEDULE OF ON-SITE INSPECTIONS IS TO BE MET IN ORDER TO MEET THE REQUIRED LEVEL OF CONSTRUCTION MONITORING, AND TO ENSURE THE INTENT OF THE DESIGN IS MET:

- TEMPORARY PROPPING.
- DEMOLITION OF EXISTING BRIDGE SUPERSTRUCTURE.
- MODIFICATION OF EXISTING ABUTMENTS.
- INSTALLATION OF PILES AND ROCK ANCHORS
- EXCAVATION OF ABUTMENTS AND PLACING OF REINFORCING.
- REINFORCING FOR HOLLOWCORE BRIDGE BEAMS.
- REINFORCING FOR DECK POUR.
- INSTALLATION OF GUARDRAILS.
- PAVEMENT RECONSTRUCTION HOLDPOINT PRIOR TO SEALING.
- ASPHALT.

COMPLETION

THE CONTRACTOR SHALL PROVIDE SPENCER HOLMES LIMITED WITH A SIXTH SCHEDULE FORM OF PRODUCER STATEMENT - CONSTRUCTION IN ACCORDANCE WITH NZS 3910 ON COMPLETION OF THE STRUCTURAL WORKS.

SPENCER HOLMES LIMITED WILL PROVIDE A PRODUCER STATEMENT PS4 CONSTRUCTION REVIEW, ALONG WITH COPIES OF THE SITE INSPECTION REPORTS, ON COMPLETION OF THE STRUCTURAL WORKS.



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WELLINGTON CITY COUNCIL

ARCHITECT

PROJECT
**BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON**

DRAWING TITLE
**GENERAL SPECIFICATION
FOR BRIDGES**

<input type="checkbox"/> DESIGNED SHL	<input type="checkbox"/> CAD FILE E15-0296-01
<input type="checkbox"/> DRAWN SHL	<input type="checkbox"/> FIELD BOOK =
<input type="checkbox"/> CHECKED	<input type="checkbox"/> DATE AUG 2015

SCALE AS SHOWN	SIZE A1
DRAWING NUMBER E15-0296-01	REV A

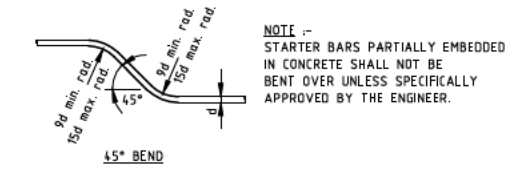
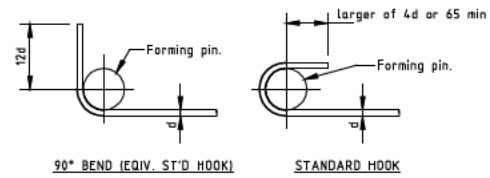
BENDS AND ANCHORAGES

MINIMUM DIAMETER OF BENDS (INSIDE FACE)

YIELD STRENGTH	BAR DIA. d	MAIN REINFORCEMENT
300 OR 500	6 - 20	5d
300 OR 500	25 - 40	6d

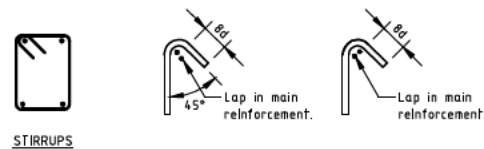
YIELD STRENGTH	BAR DIA. d	STIRRUPS AND TIES	
		PLAIN	DEFORMED
300 OR 500	6 - 20	2d	4d
300 OR 500	25 - 40	3d	6d

NOTE :-
d = DIAMETER OF BAR BEING BENT.



STIRRUPS FOR WALLS

- NOTE :-
1 : First wall stirrup positioned 50 mm from the column face.
2 : All to be plain round bars grade 300E.



COVERS TO REINFORCEMENT

ITEM	IN CONTACT WITH GROUND		ABOVE GROUND LEVEL	
	CAST AGAINST GROUND	AGAINST APPROVED BOXING, SITE CONCRETE OR D.P.M.	EXPOSED TO WEATHER	AGAINST VOIDS
CAST INSITU	75	50	40	30
PRECAST HOLLOWCORE UNITS	-	-	35	30

USE THESE COVERS FOR ALL REINFORCING UNLESS NOTED OTHERWISE ON THE DRAWINGS.

CONCRETE STRENGTHS

ITEM	STRENGTH *
SITE CONCRETE	10 MPa
CAST INSITU	40 MPa
PRECAST HOLLOWCORE UNITS	50 MPa

* CONCRETE STRENGTHS SHALL BE COMPRESSIVE CYLINDER STRENGTHS TESTED AT 28 DAYS

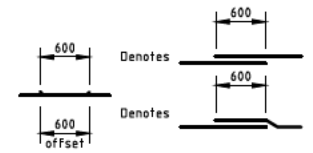
SURFACE FINISHES

ITEM	FINISH *
EXPOSED CONCRETE	F5
BURIED CONCRETE	F2/U2
TOP SURFACE OF DECK SLAB	U6 **
TOP SURFACE OF UNFORMED ITEMS	U3 ***

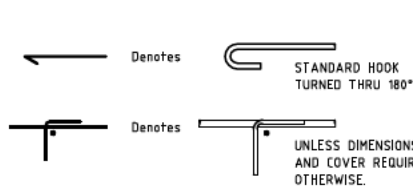
- * SURFACE FINISHES IN ACCORDANCE WITH NZS 3114
** BROOM DIRECTION SHALL BE TRANSVERSE TO TRAFFIC DIRECTION
*** EXCEPT CONSTRUCTION JOINTS WHICH SHALL BE TYPE B ACCORDING TO NZS 3109

PICTORIAL REPRESENTATION OF REINFORCING BARS ON DRAWINGS.

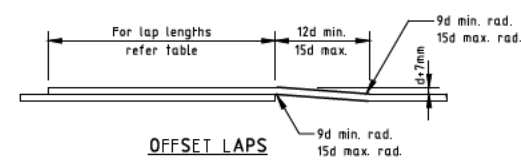
(A) PARALLEL AND OFFSET LAPS



(B) HOOKS AND BENDS

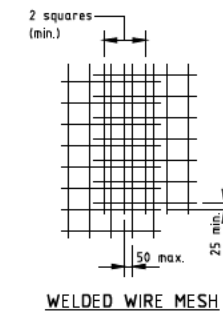


REINFORCEMENT NOTATIONS :-
30-D12-250 DENOTES 30 NO. 12mm DIA. DEFORMED BARS AT 250 CRS.
30-R12-250 DENOTES 30 NO. 12mm DIA. PLAIN ROUND BARS AT 250 CRS.
30-HD12 250 DENOTES 30 NO. 12mm DIA. GRADE 500 DEFORMED BARS AT 250 CRS.



NOTE :-
WHERE LAP POSITIONS ARE NOT SHOWN ON THE DRAWINGS, LAPS IN WALL AND SLAB REINFORCEMENT ARE TO BE LAPPED AT RANDOM IN A STAGGERED PATTERN, IN POSITIONS OF LOW STRESS.

WHEN TWO BARS OF DIFFERING SIZES LAP, THE LAP LENGTH OF THE SMALLER OF THE TWO BARS SHALL APPLY.



GENERAL NOTES

UNLESS OTHERWISE SPECIFIED OR DETAILED ON THE DRAWINGS, THESE NOTES AND DETAILS SHALL APPLY, BUT INCLUSION OF THIS DRAWING IN THE CONTRACT SET DOES NOT IMPLY THAT ALL DETAILS OCCUR IN THIS CONTRACT.
THE CONTRACTOR MUST NOT POUR CONCRETE BEFORE THE REINFORCING HAS BEEN INSPECTED IN PLACE BY THE CONSULTING ENGINEER WHO SHALL BE GIVEN A MIN. OF 24 HOURS NOTICE OF POURING.

WHERE ALTERNATIVES ARE SHOWN ON THIS DRAWING THE CONTRACTOR MUST OBTAIN APPROVAL FOR THE USE OF ONE OR ANY OF THESE DETAILS AND SHALL NOT CHANGE FROM THIS APPROVAL WITHOUT FURTHER APPROVAL.

THE STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DRAWINGS OF OTHER SPECIALISTS I.E. ARCHITECTS, MECHANICAL, BUILDING SERVICES, ELECTRICAL ETC.

FORM FILLETS TO ALL CORNERS OF CONCRETE WORK, EITHER INSITU OR PRECAST, AS REQUIRED BY THE SPECIFICATION UNLESS NOTED OTHERWISE.

REINFORCEMENT

R and D BARS ARE GRADE 300E COMPLYING WITH AS/NZS 4671.

HR, HD AND RB BARS ARE GRADE 500 E MA (MICRO-ALLOYED) COMPLYING WITH AS/NZS 4671.

WELDED WIRE REINFORCEMENT SHALL BE CLASS E-DUCTILE MESH ACCORDING TO AS/NZS 4571.

COUPLERS

ALL COUPLERS SHALL MEET THE REQUIREMENTS OF THE NZTA BRIDGE MANUAL.

SUBMIT PROPOSED COUPLERS TO THE DESIGN ENGINEER FOR APPROVAL.

ABBREVIATIONS

- ALT. = ALTERNATE
- B = BOTTOM
- C = COVER
- C.J. = CONSTRUCTION JOINT
- CL = CENTRE LINE
- COL = COLUMN
- CRS = CENTERS
- d = NOMINAL BAR DIAMETER
- D = DEFORMED BAR GRADE 300
- D.P.C. = DAMP PROOF COURSE
- D.P.M. = DAMP PROOF MEMBRANE
- E.F. = EACH FACE
- E.J. = EXPANSION JOINT
- E.W. = EACH WAY
- F.F. = FAR FACE
- FD'N = FOUNDATION
- HD = DEFORMED BAR GRADE 500E MICROALL
- HR = PLAIN ROUND BAR GRADE 500E MICRO
- I.J. = ISOLATION JOINT
- L.A.R. = LAP AT RANDOM
- MAX = MAXIMUM
- MIN = MINIMUM
- N.F. = NEAR FACE
- N.T.S. = NOT TO SCALE
- PC = PRECAST CONCRETE
- R = PLAIN ROUND BAR GRADE 300E
- RL = REDUCED LEVEL
- RB = REIDBAR GRADE 500E MICROALLOYED
- S.J. = SAWN JOINT
- STRP = STIRRUP
- T = TOP
- TYP = TYPICAL
- U.N.O. = UNLESS NOTED OTHERWISE

LAP LENGTHS

500 GRADE REINFORCING

MINIMUM LAP LENGTHS FOR 40 MPa CONCRETE			
BAR SIZE	ANCHORAGE	BEAMS AND COLUMNS TYPICAL STEEL	BEAMS TOP STEEL
10	400	400	550
12	500	500	650
16	650	650	850
20	800	800	1050
25	1000	1000	1300
32	1300	1300	1650

USE THESE LAP LENGTHS FOR ALL REINFORCING UNLESS NOTED OTHERWISE ON THE DRAWINGS.

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PROJECT

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0/S 330 SOUTH KARORI
ROAD, WELLINGTON

DRAWING TITLE

STANDARD DETAILS FOR
REINFORCED CONCRETE
FOR BRIDGES

DESIGNED SHL
DRAWN SHL
CHECKED
DATE

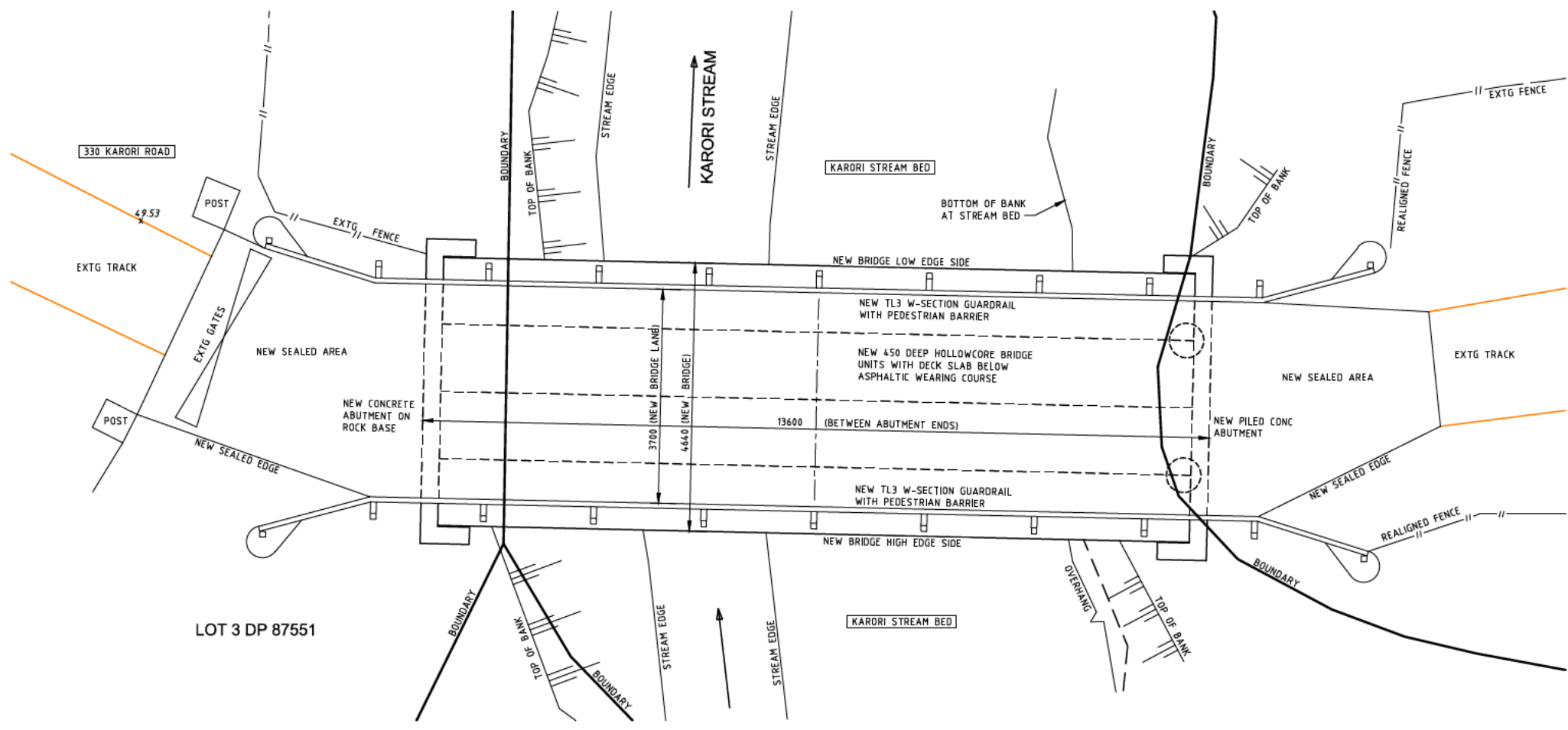
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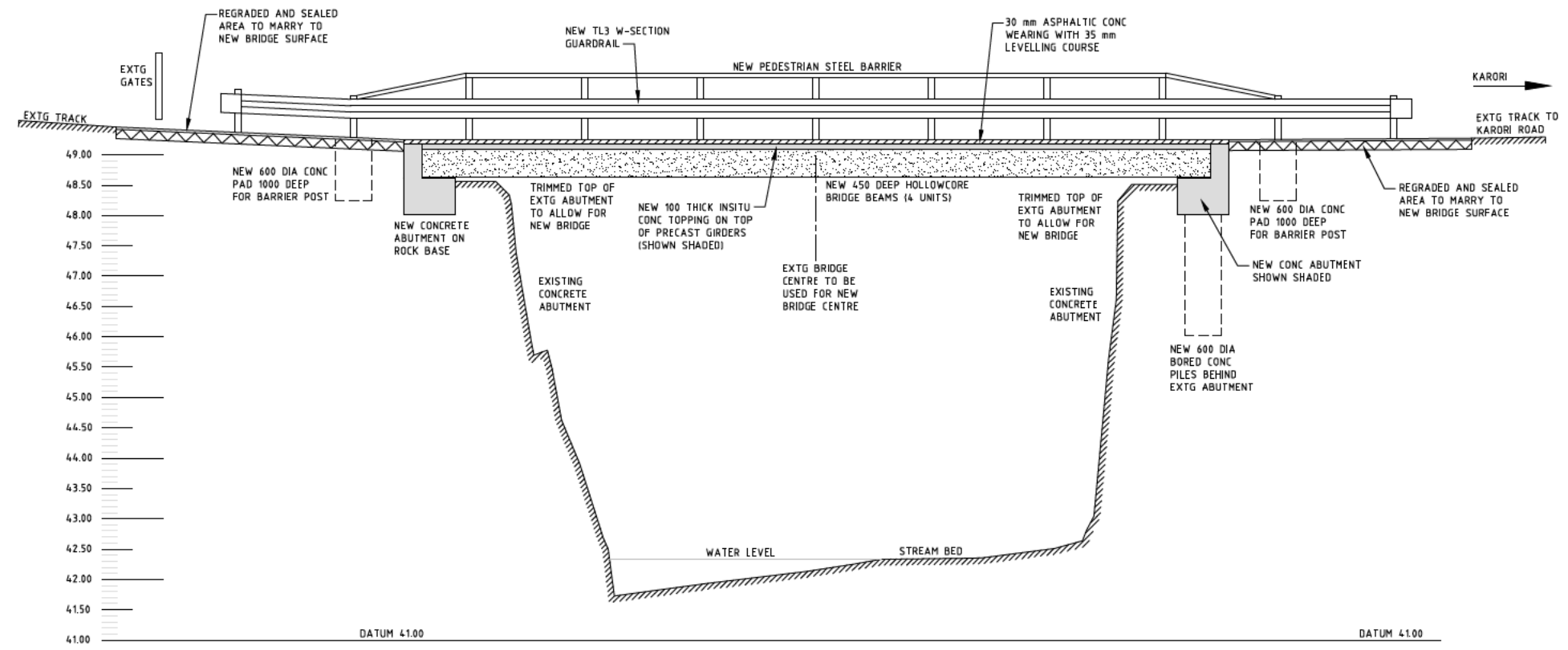
SIZE A1
REV A

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GENERAL ARRANGEMENT PLAN FOR NEW BRIDGE
SCALE 1:50 AT A1 AT 1:100 AT A3



GENERAL ARRANGEMENT OF NEW BRIDGE IN LONGITUDINAL PROFILE
SCALE 1:50 AT A1 AT 1:100 AT A3

NOTE:
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DRAWING TITLE
GENERAL ARRANGEMENT OF NEW BRIDGE PLAN AND LONGITUDINAL PROFILE

DESIGNED APNG
DRAWN BB
CHECKED
DATE

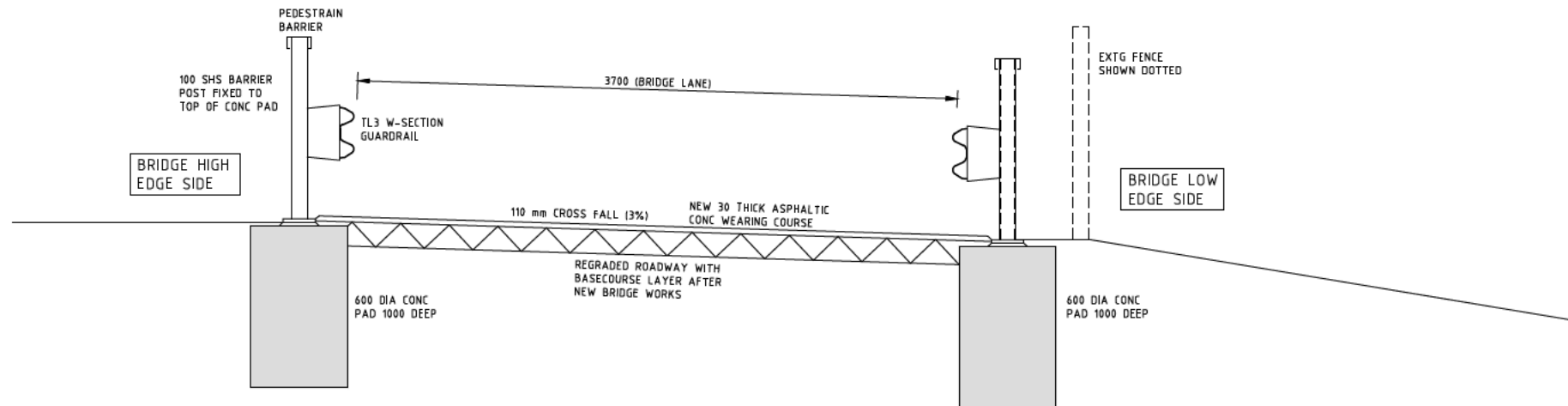
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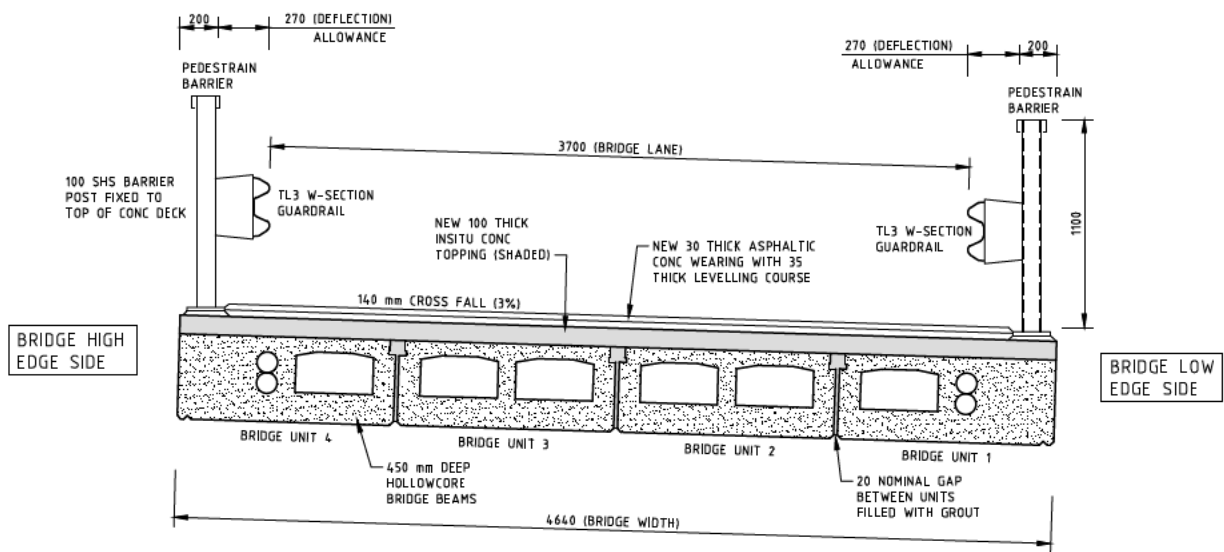
RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

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ROAD SECTION WITH BARRIER POSTS AND SEAL
SCALE 1:20 AT A1 (1:40 AT A3)



BRIDGE SECTION WITH BARRIER POSTS AND SEAL
SCALE 1:20 AT A1 (1:40 AT A3)

NOTE:
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ROAD, WELLINGTON**

DRAWING TITLE
**GENERAL ARRANGEMENT
OF NEW BRIDGE AND
ROADWAY SECTIONS**

DESIGNED APNG
DRAWN BB
CHECKED

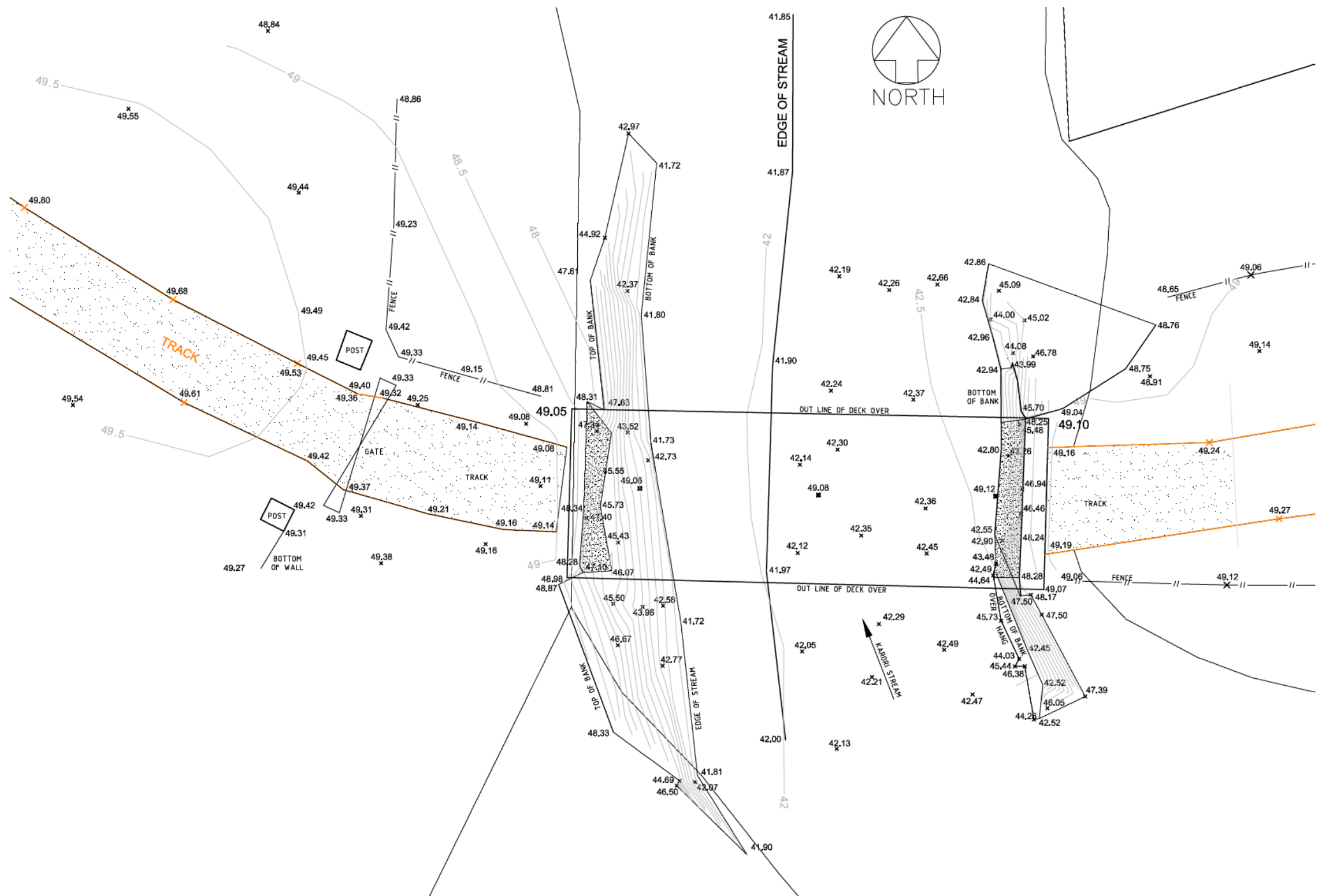
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DATE AUG 2015

SCALE	AS SHOWN	SIZE	A1
DRAWING NUMBER	E15-0296-05	REV	A

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

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EXISTING TOPO PLAN WITH SPOT LEVELS AROUND BRIDGE
SCALE 1:50 AT A1 (1:100 AT A3)

**TO BE READ IN CONJUNCTION WITH
SPENCER HOLMES TOPOGRAPHICAL
SURVEY PLAN S15-0391-T1**

NOTE:
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DRAWING TITLE
**EXISTING TOPO PLAN
WITH SPOT LEVELS
AROUND BRIDGE**

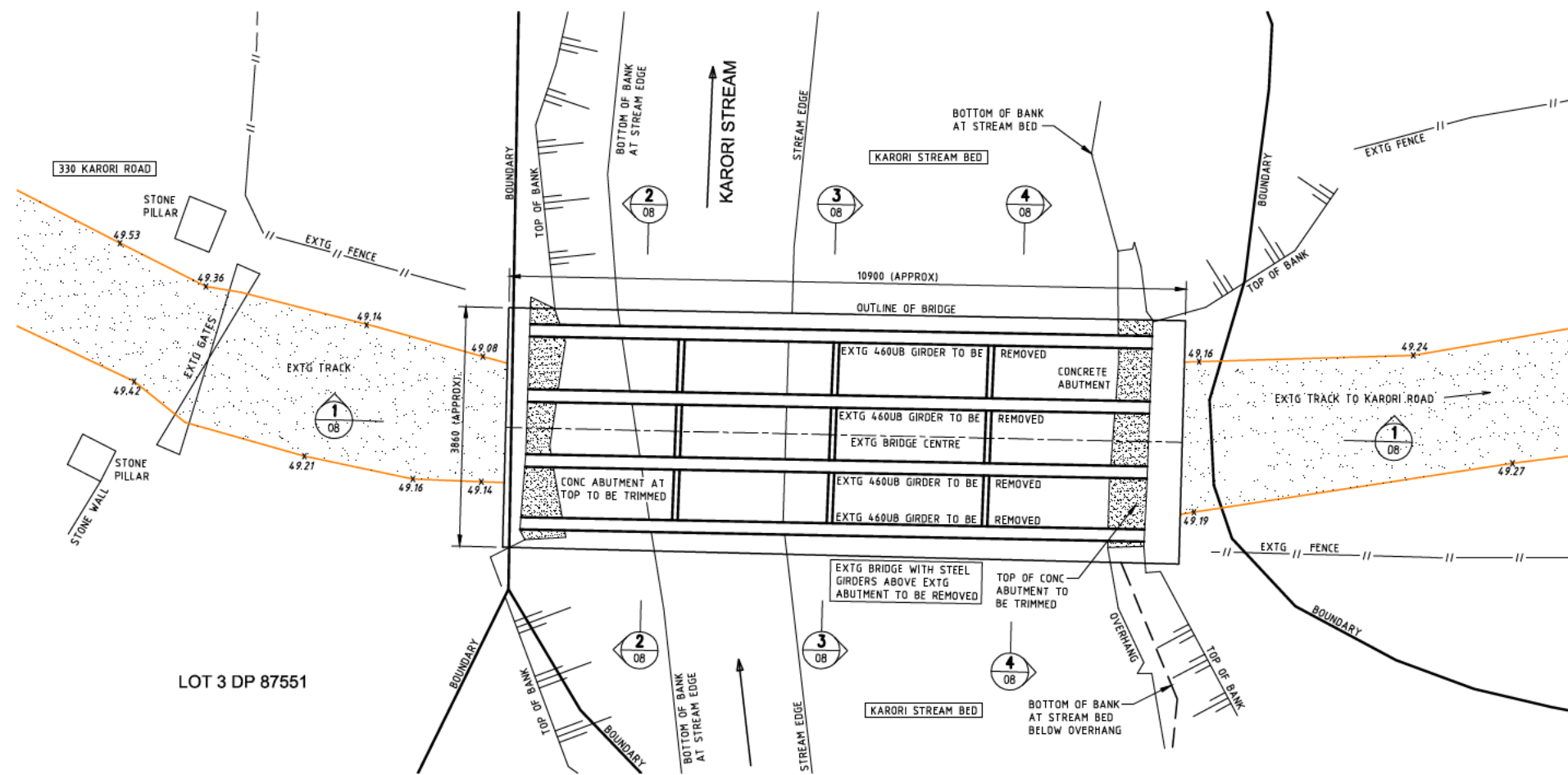
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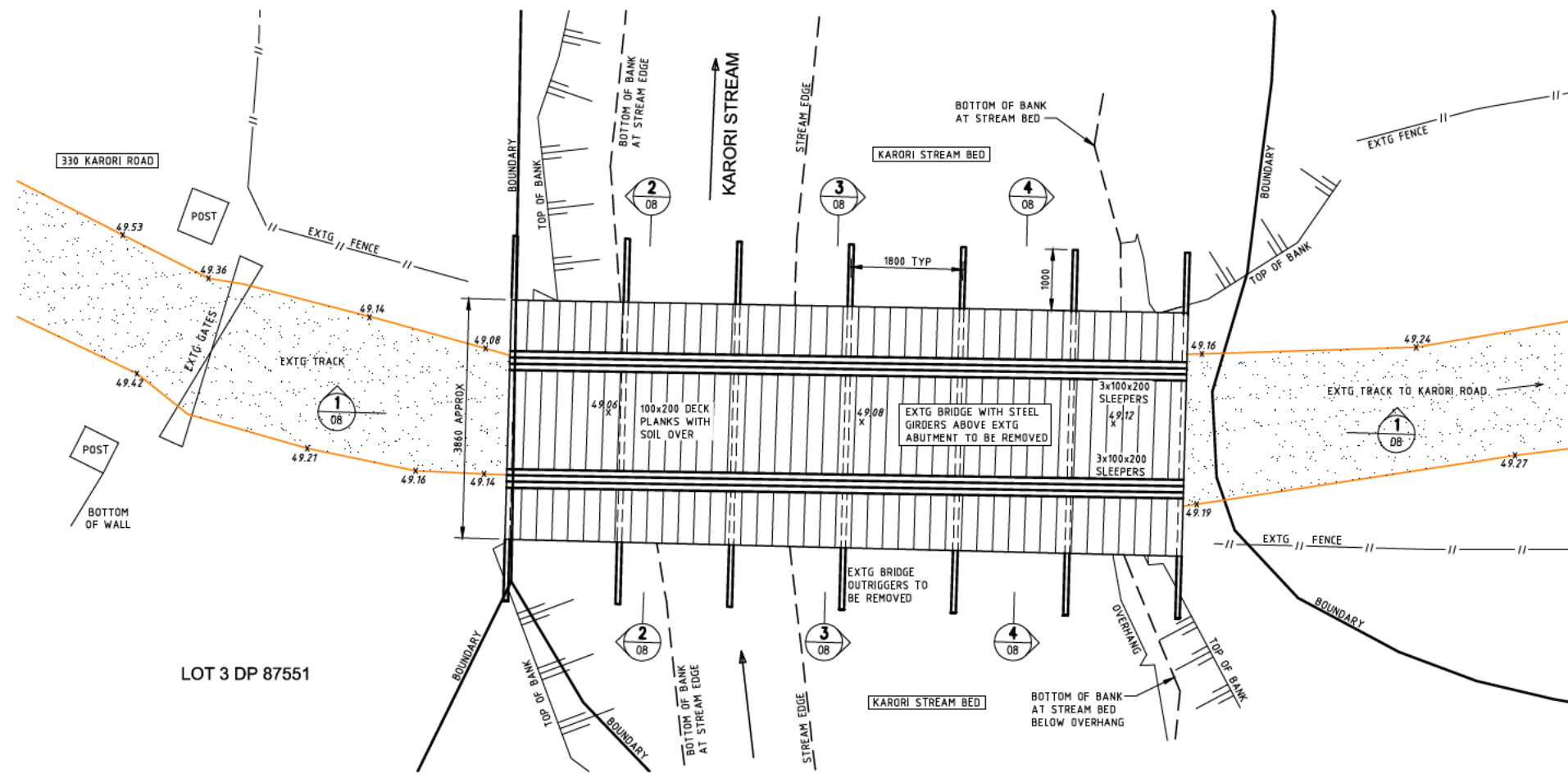
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EXISTING BRIDGE PLAN WITH ABUTMENT AND BEAM LAYOUT
SCALE 1:50 AT A1 (1:100 AT A3)



EXISTING BRIDGE PLAN WITH DECK AND BARRIER LAYOUT
SCALE 1:50 AT A1 (1:100 AT A3)

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DRAWING TITLE
**EXISTING BRIDGE PLANS
WITH DEMOLITION WORKS**

DESIGNED APNG
DRAWN BB
CHECKED
CADD FILE E15-0296-04+20
FIELD BOOK
DATE AUG 2015

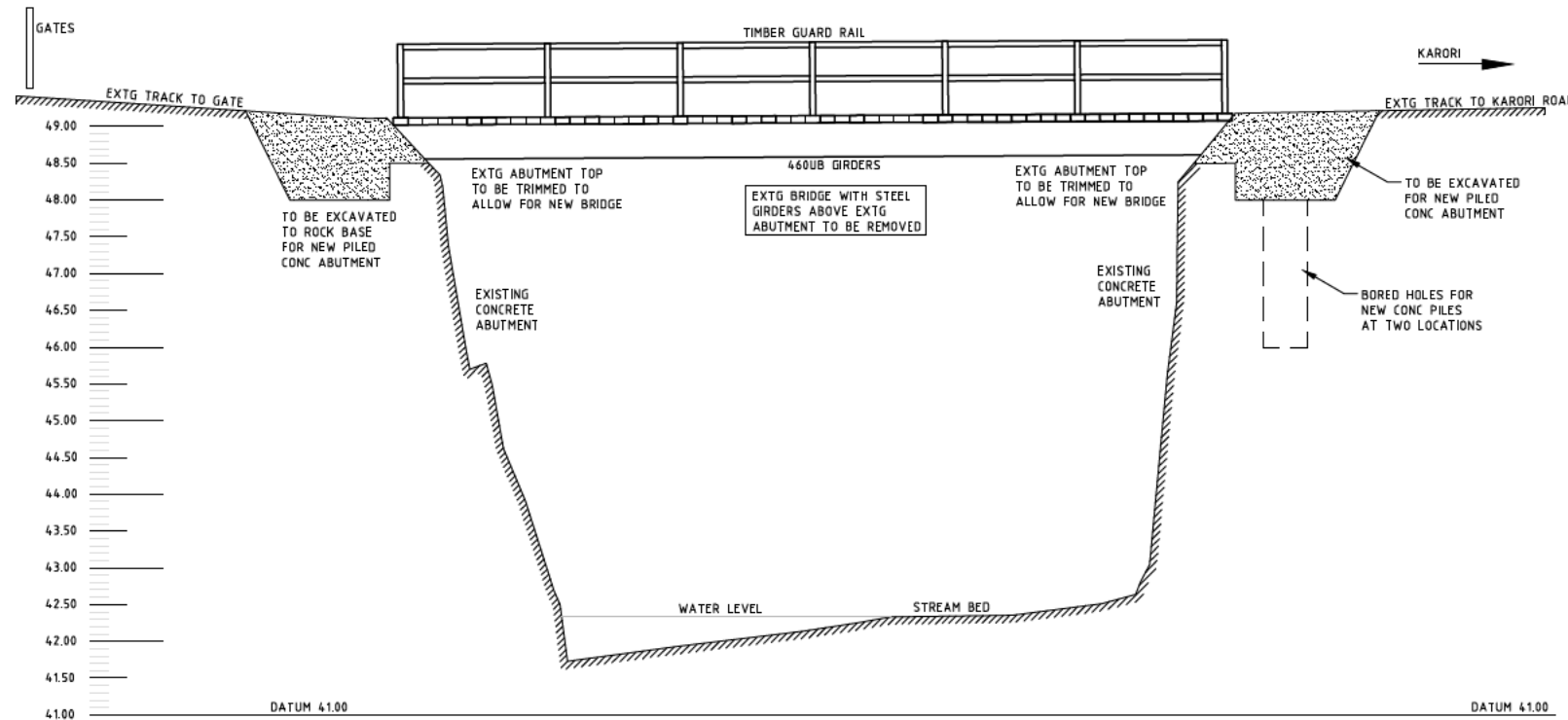
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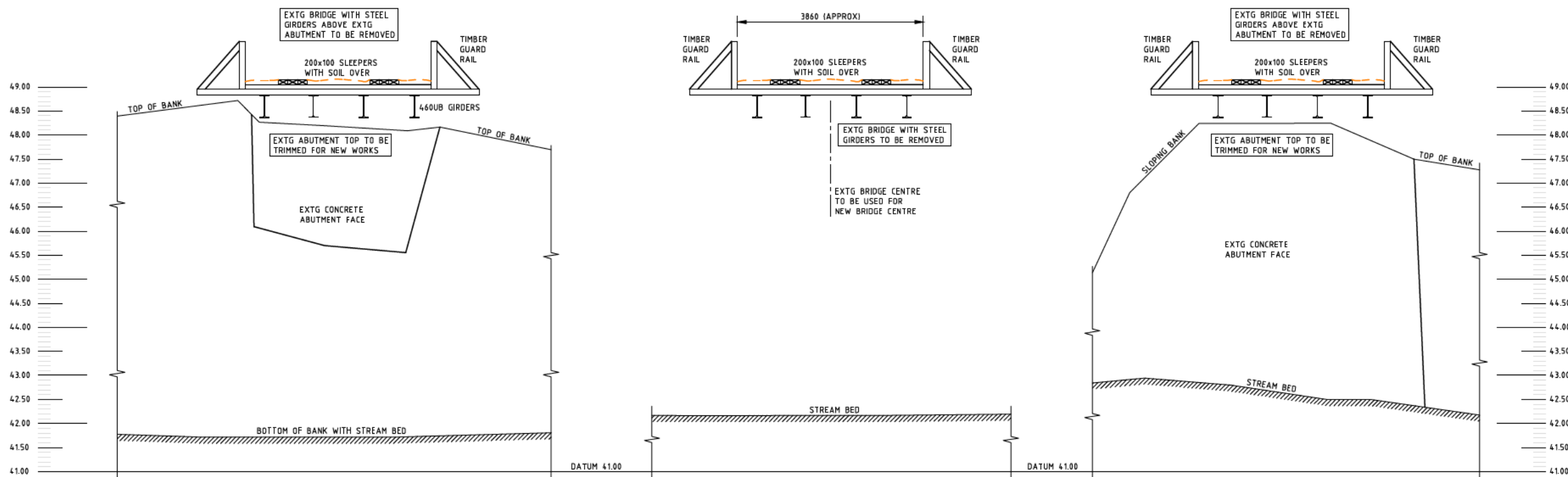
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SECTION 1
1:50 AT A1
1:100 AT A3



SECTION 2
1:50 AT A1
1:100 AT A3

SECTION 3
1:50 AT A1
1:100 AT A3

SECTION 4
1:50 AT A1
1:100 AT A3

NOTE:
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PROJECT
**BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON**

DRAWING TITLE
**EXISTING BRIDGE SECTIONS
WITH DEMOLITION WORKS**

DESIGNED APNG
DRAWN BB
CHECKED

CAD FILE E15-0296-04+20
FIELD BOOK =
DATE AUG 2015

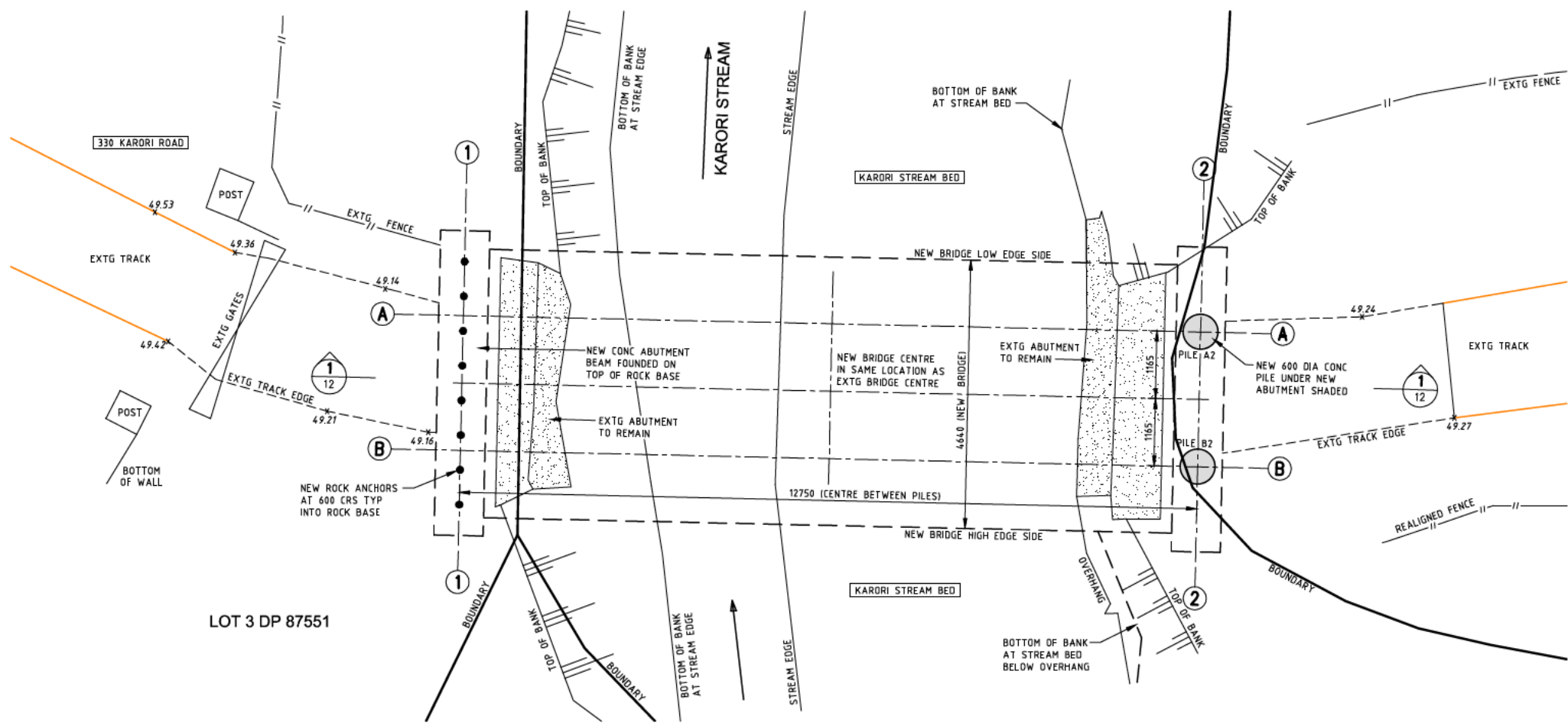
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DRAWING NUMBER E15-0296-08 REV A

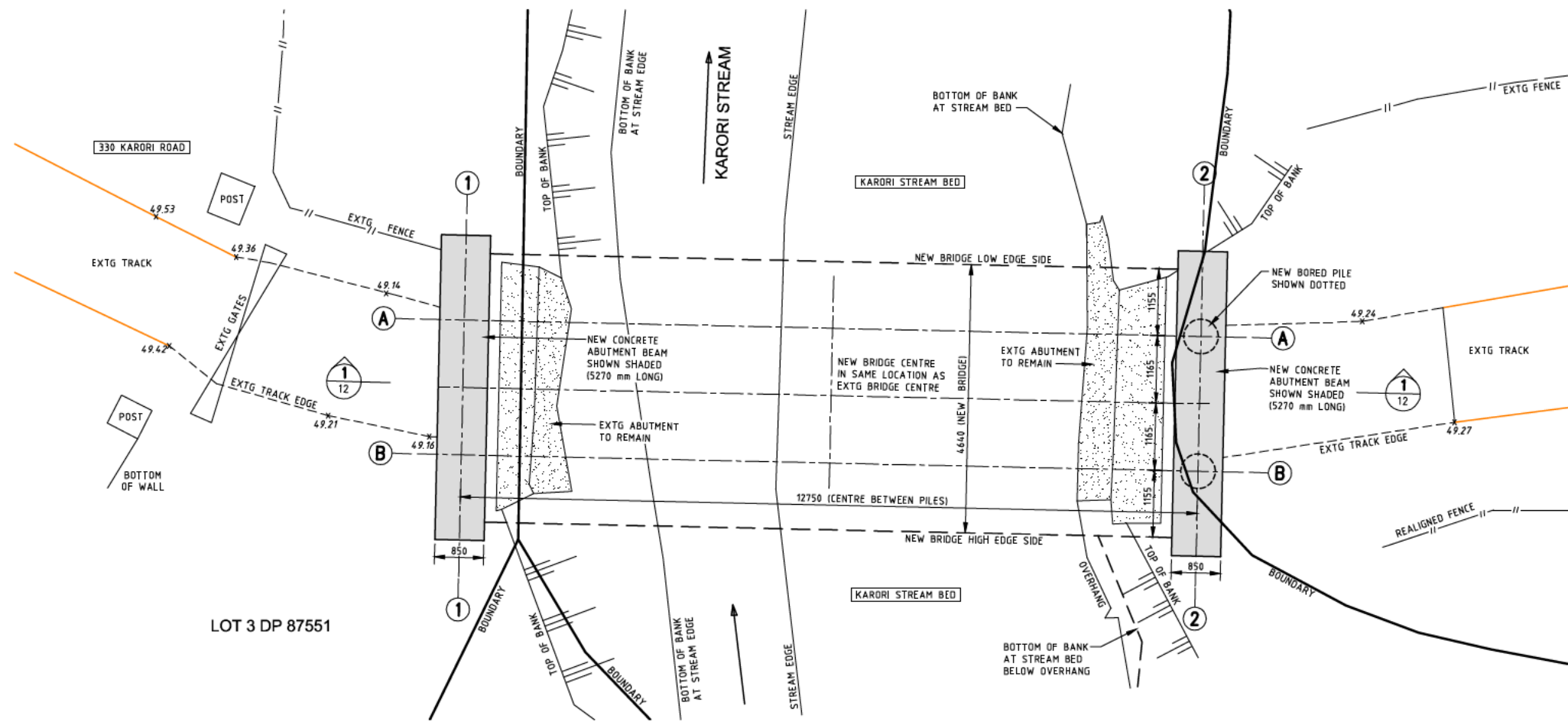
RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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ALTERED BRIDGE PLAN WITH NEW PILES BEYOND EXISTING ABUTMENTS
SCALE 1:50 AT A1 (1:100 AT A3)



ALTERED BRIDGE PLAN WITH NEW ABUTMENTS
SCALE 1:50 AT A1 (1:100 AT A3)

NOTE:
-ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO FABRICATION.

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PROJECT
**BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON**

DRAWING TITLE
**ALTERED BRIDGE PILING
PLAN AND BRIDGE PLAN
WITH NEW ABUTMENTS**

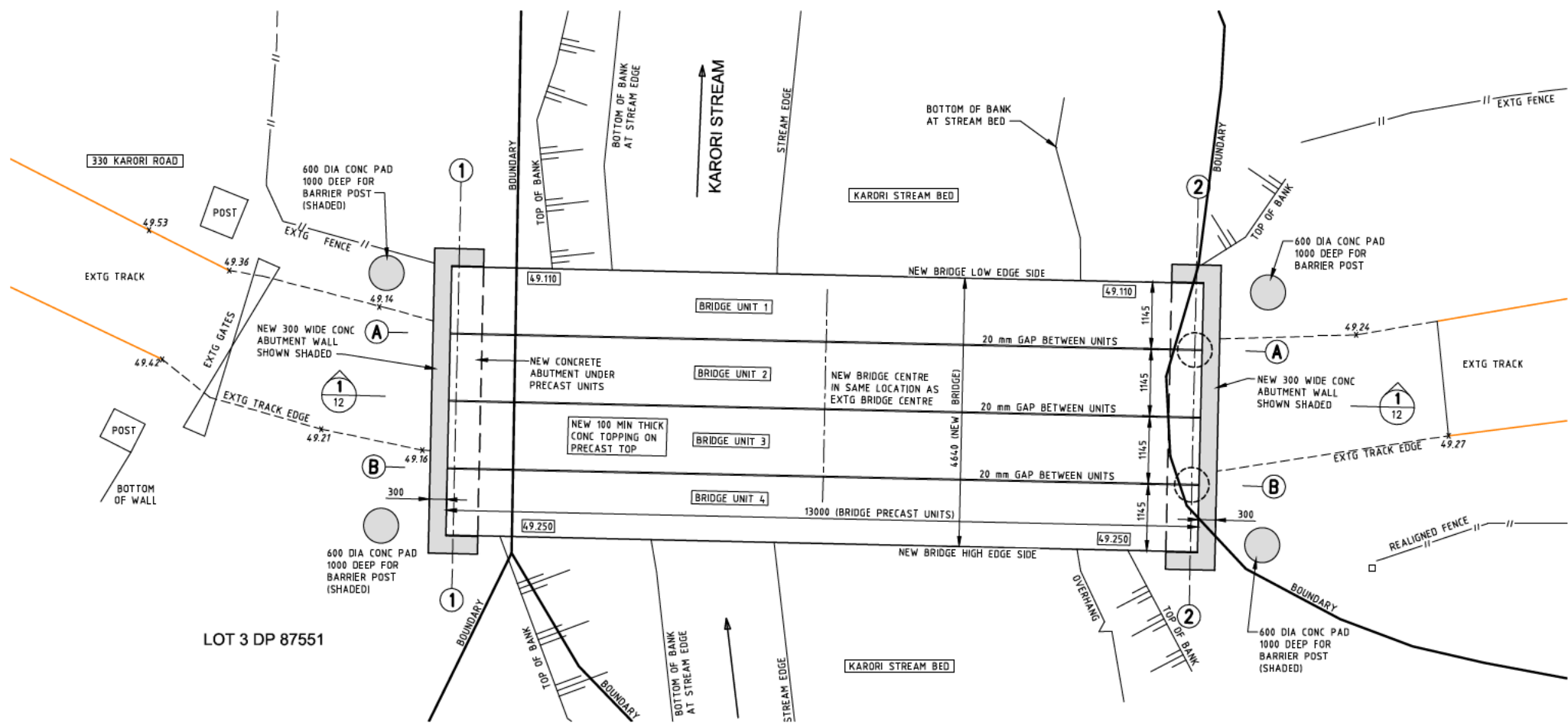
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CHECKED
CAD FILE E15-0296-04+20
FIELD BOOK
DATE AUG 2015

SCALE AS SHOWN
DRAWING NUMBER **E15-0296-10**
SIZE A1
REV **A**

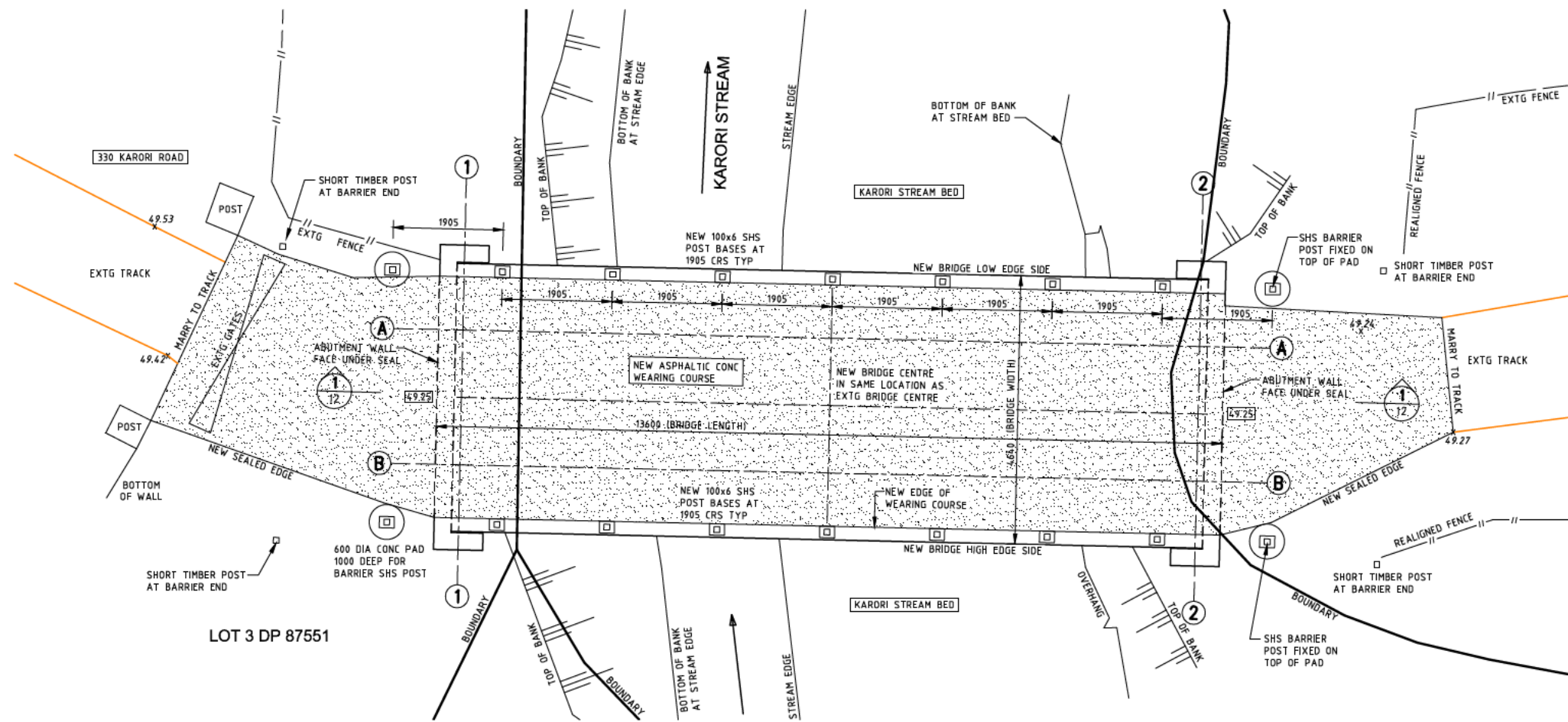
RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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NEW BRIDGE PLAN WITH NEW PRECAST BRIDGE UNITS
SCALE 1:50 AT A1 (1:100 AT A3)



NEW BRIDGE PLAN WITH NEW BARRIER POSTS
SCALE 1:50 AT A1 (1:100 AT A3)

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PROJECT
**BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON**

DRAWING TITLE
**NEW BRIDGE PRECAST
PLAN AND BRIDGE PLAN
WITH BARRIER BASES**

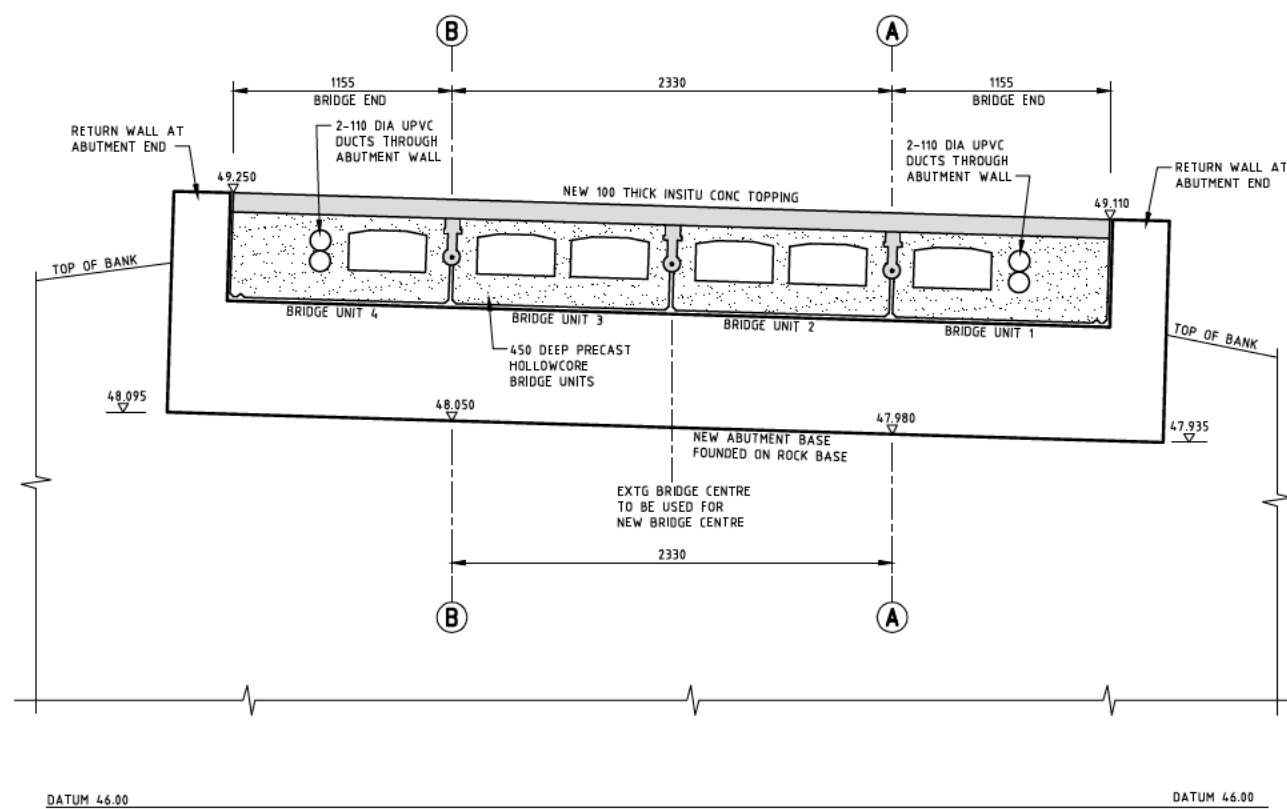
DESIGNED APNG
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CHECKED
OAD FILE E15-0296-04+20
FIELD BOOK
DATE AUG 2015

SCALE AS SHOWN SIZE A1
DRAWING NUMBER REV
E15-0296-11 A

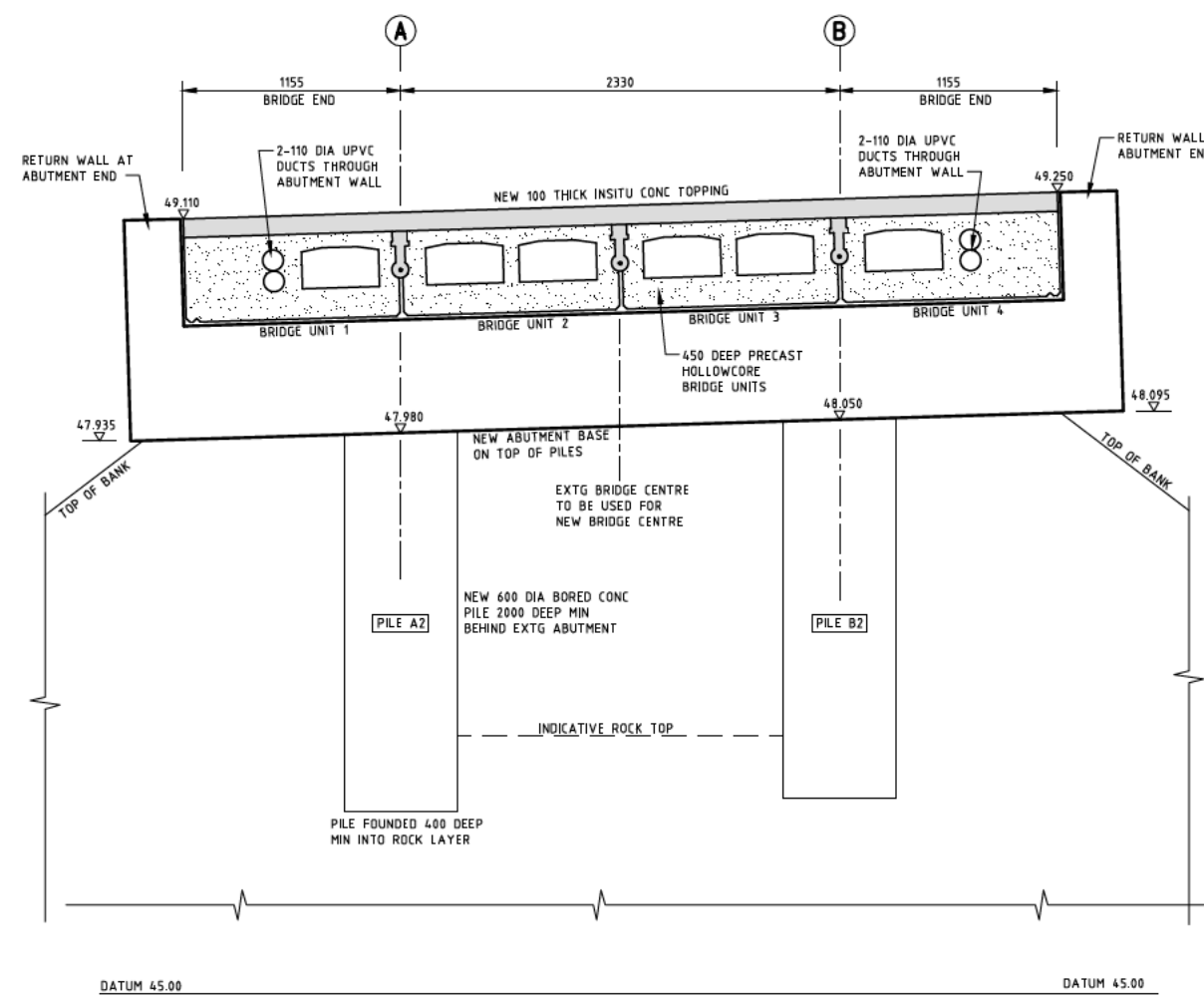
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NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

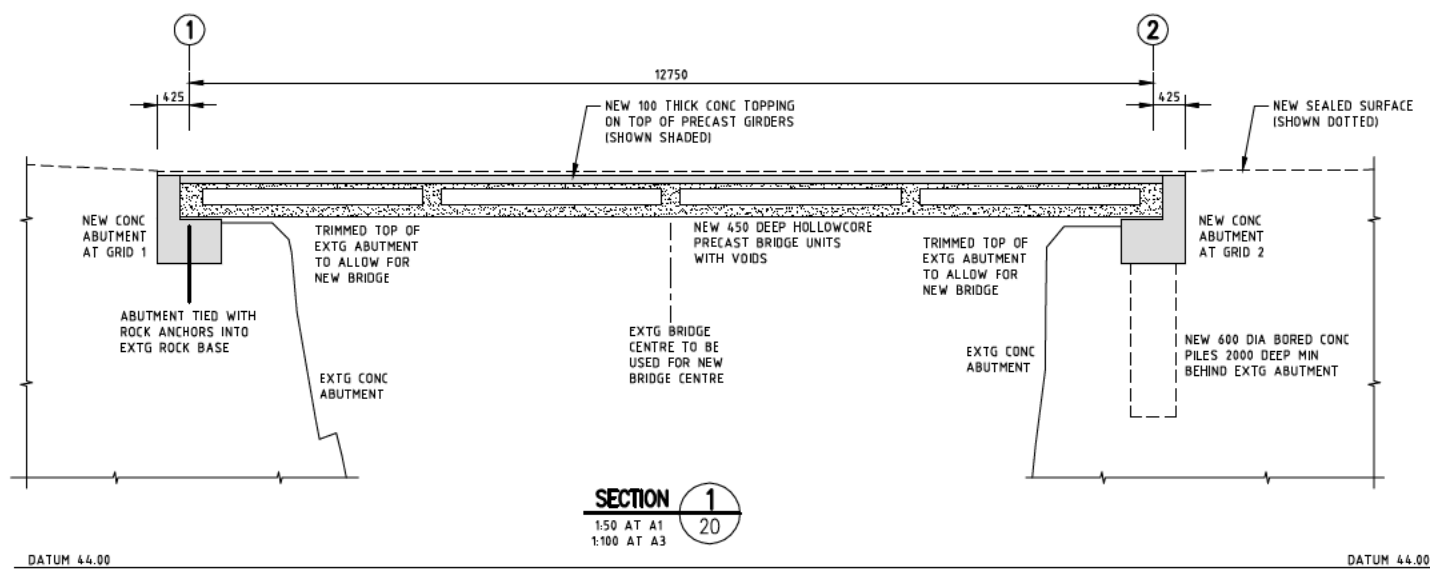
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NEW ELEVATION OF BRIDGE ABUTMENT AT GRID 1
SCALE 1:20 AT A1 (1:40 AT A3)



NEW ELEVATION OF BRIDGE ABUTMENT AT GRID 2
SCALE 1:20 AT A1 (1:40 AT A3)



NEW LONG SECTION OF PRECAST BRIDGE WITH NEW PILED ABUTMENTS
SCALE 1:50 AT A1 (1:100 AT A3)

NOTE:
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PROJECT
BRIDGE No.6
O/S 330 SOUTH KARORI ROAD, WELLINGTON

DRAWING TITLE
NEW BRIDGE ABUTMENT ELEVATIONS AND PRECAST BRIDGE LONG SECTION

DESIGNED APNG
DRAWN BB
CHECKED

FIELD BOOK =
DATE =

SCALE AS SHOWN
DRAWING NUMBER **E15-0296-12**

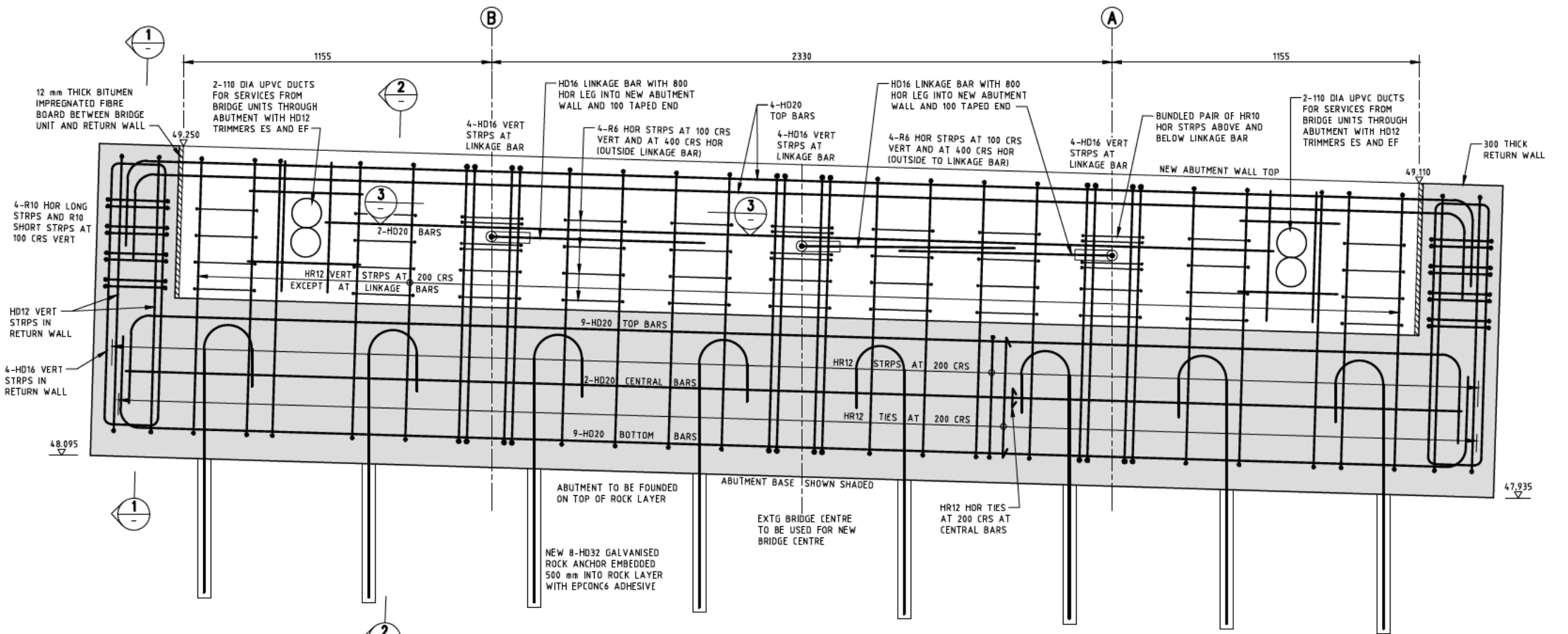
SIZE A1
REV **A**

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

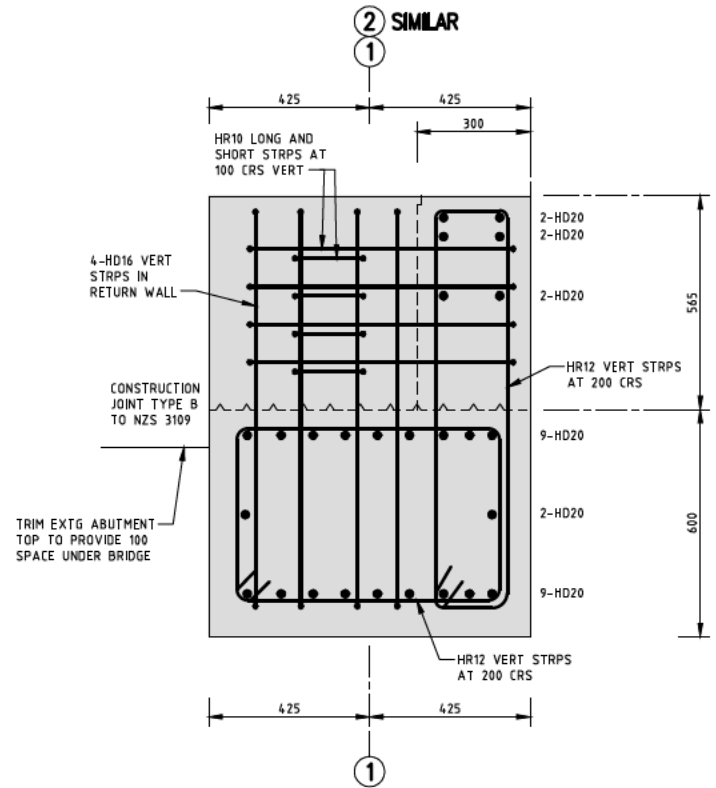
NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

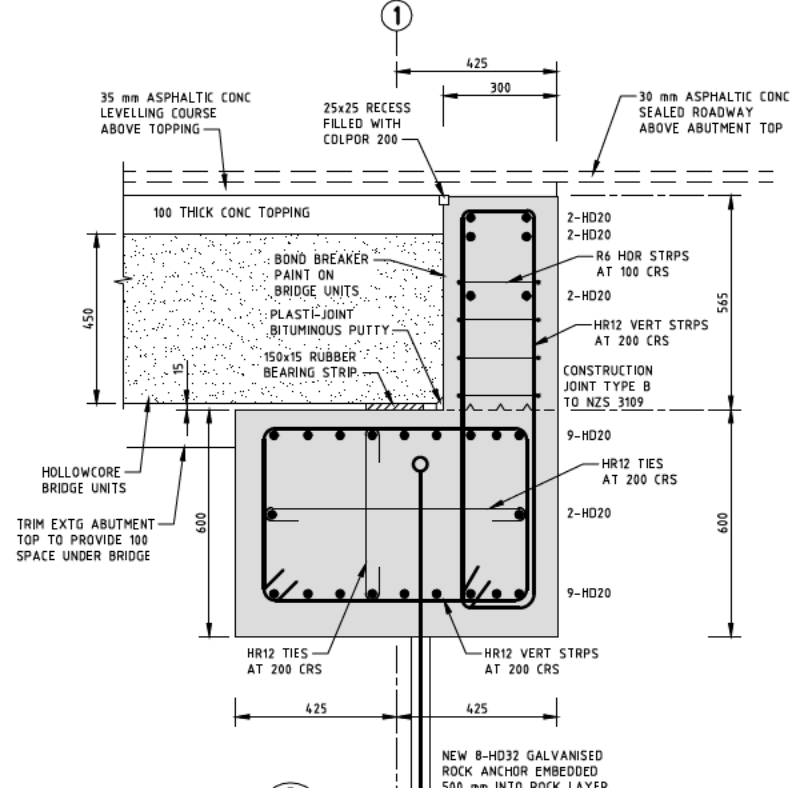


ELEVATION OF BRIDGE ABUTMENT AT GRID 1 SHOWING REINFORCING
SCALE 1:10 AT A1 (1:20 AT A3)

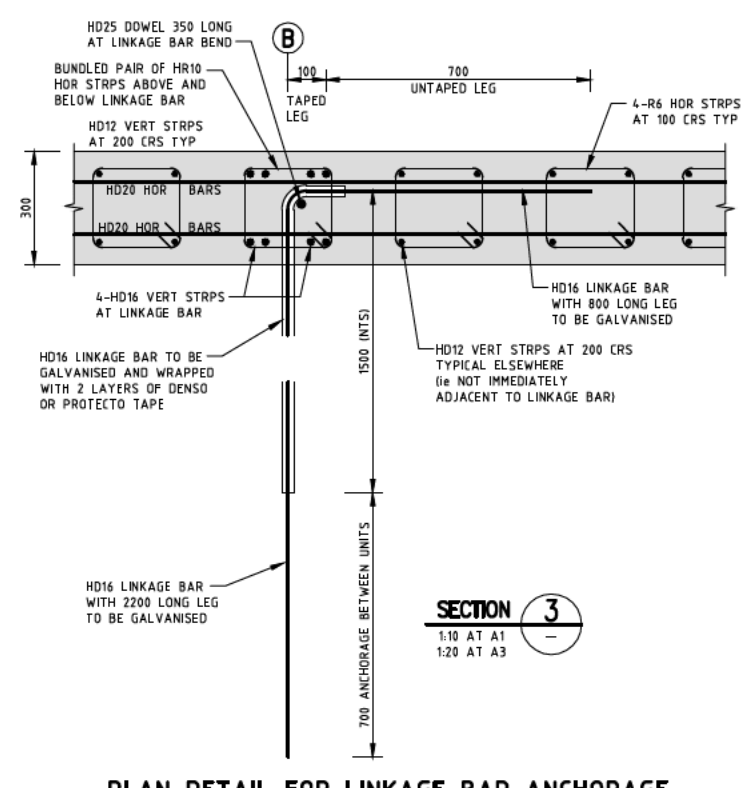


SECTION 1
1:10 AT A1
1:20 AT A3

SECTION 5 SIMILAR
1:10 AT A1
1:20 AT A3



SECTION 2
1:10 AT A1
1:20 AT A3



PLAN DETAIL FOR LINKAGE BAR ANCHORAGE
SCALE 1:10 AT A1 (1:20 AT A3)

SECTION 4 SIMILAR AND HANDED
1:10 AT A1
1:20 AT A3

NOTE:
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BRIDGE No.6
O/S 330 SOUTH KARORI ROAD, WELLINGTON

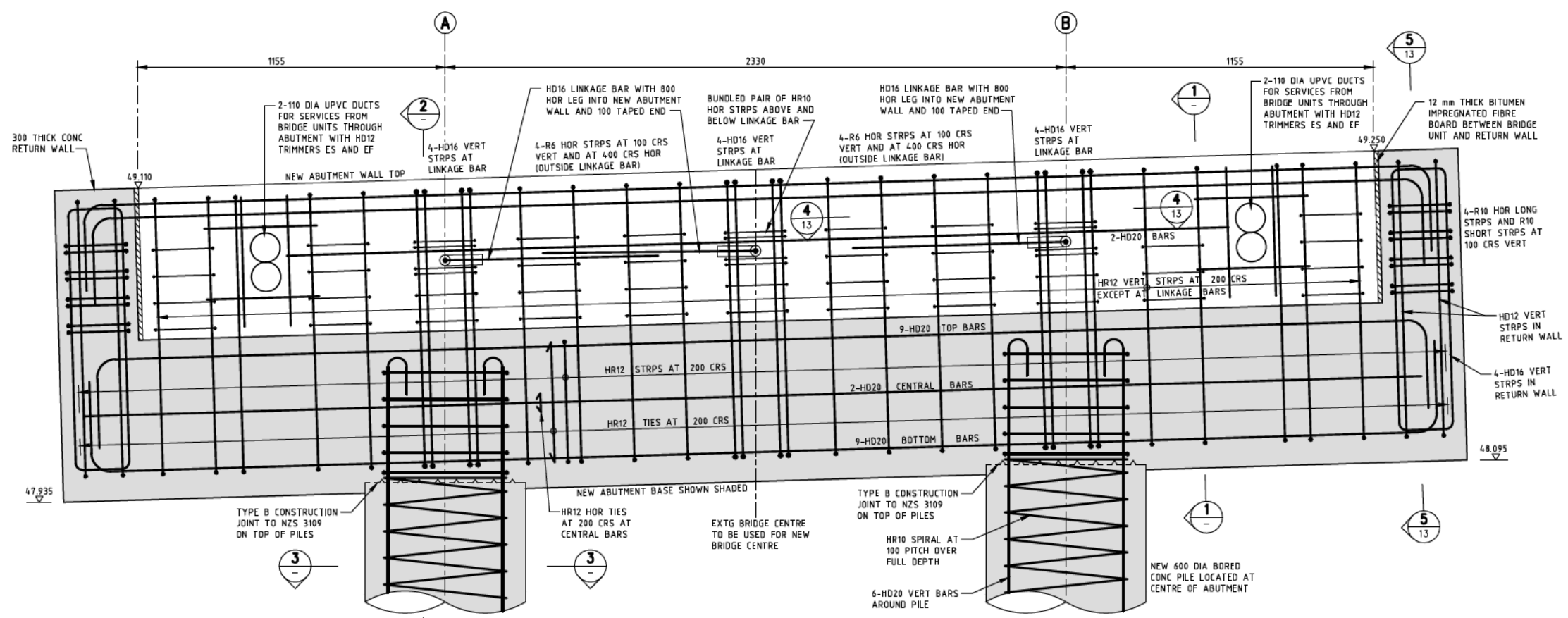
DRAWING TITLE
NEW BRIDGE ABUTMENT ELEVATION AND SECTIONS AT GRID 1

DESIGNED APNG
DRAWN BB
CHECKED
SCALE AS SHOWN
DRAWING NUMBER
E15-0296-13

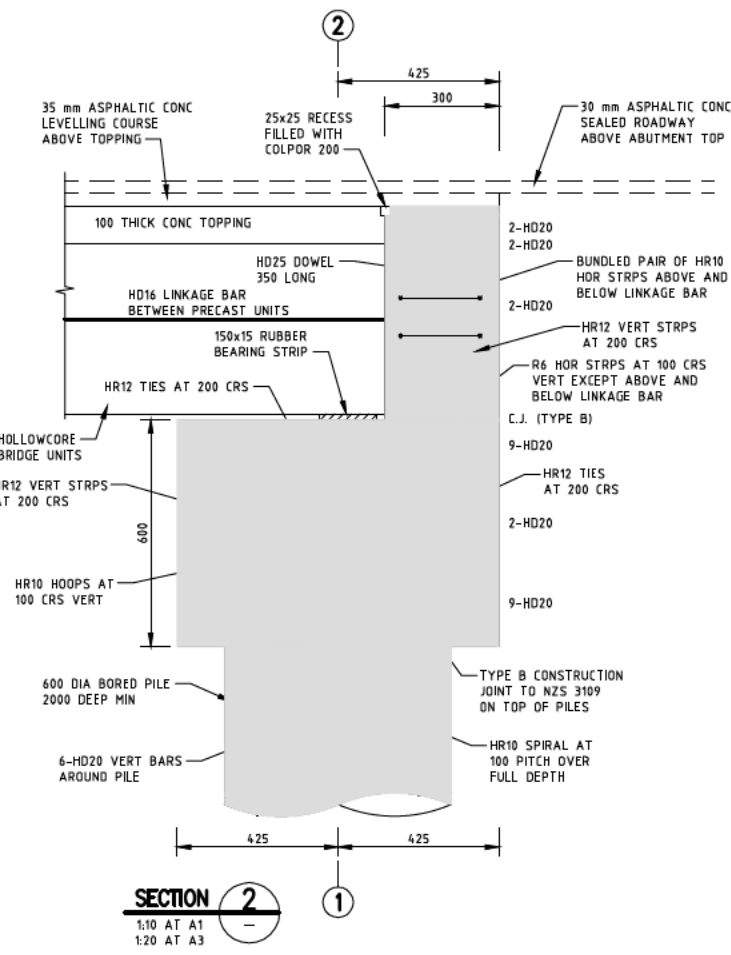
CAD FILE E15-0296-04+20
FIELD BOOK
DATE AUG 2015
SIZE A1
REV A

NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

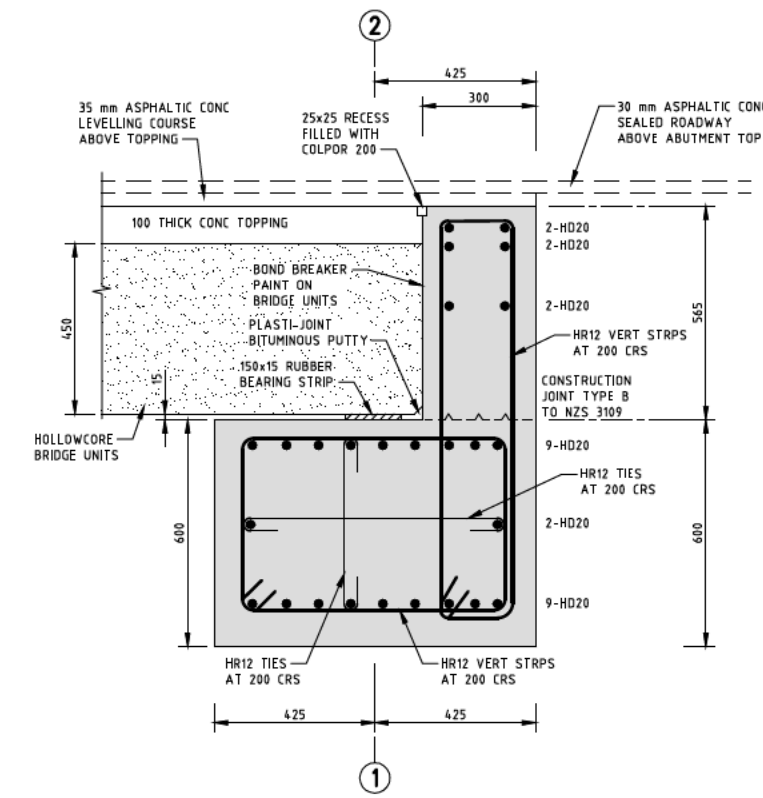
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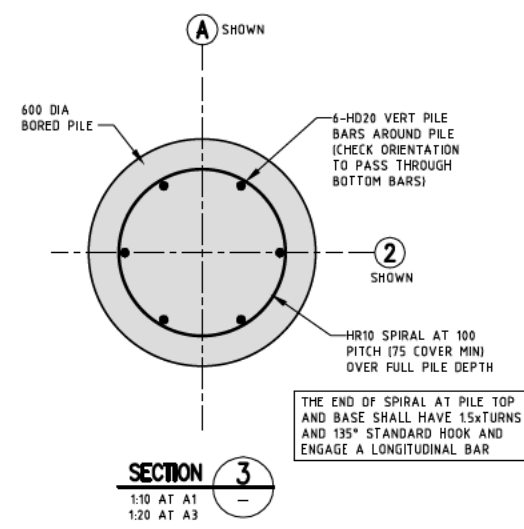
ELEVATION OF PILED BRIDGE ABUTMENT AT GRID 2 SHOWING REINFORCING
SCALE 1:10 AT A1 1:20 AT A3



SECTION 2
1:10 AT A1
1:20 AT A3



SECTION 1
1:10 AT A1
1:20 AT A3



SECTION 3
1:10 AT A1
1:20 AT A3

NOTE:
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DRAWING TITLE
NEW BRIDGE ABUTMENT ELEVATION AND SECTIONS AT GRID 2

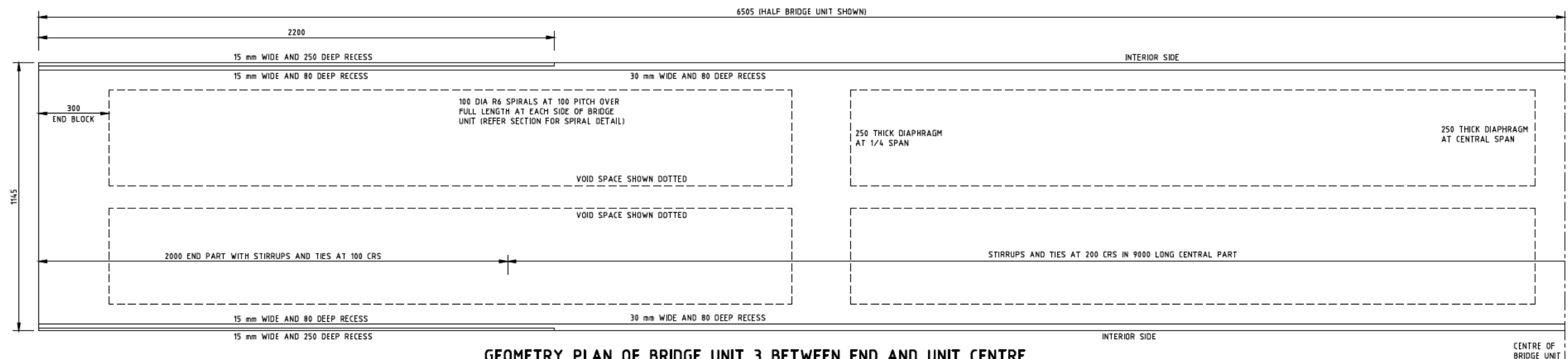
DESIGNED APNG
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SCALE AS SHOWN
DRAWING NUMBER **E15-0296-14**

FILE E15-0296-04+20
FIELD BOOK =
DATE AUG 2015
SIZE A1
REV A

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

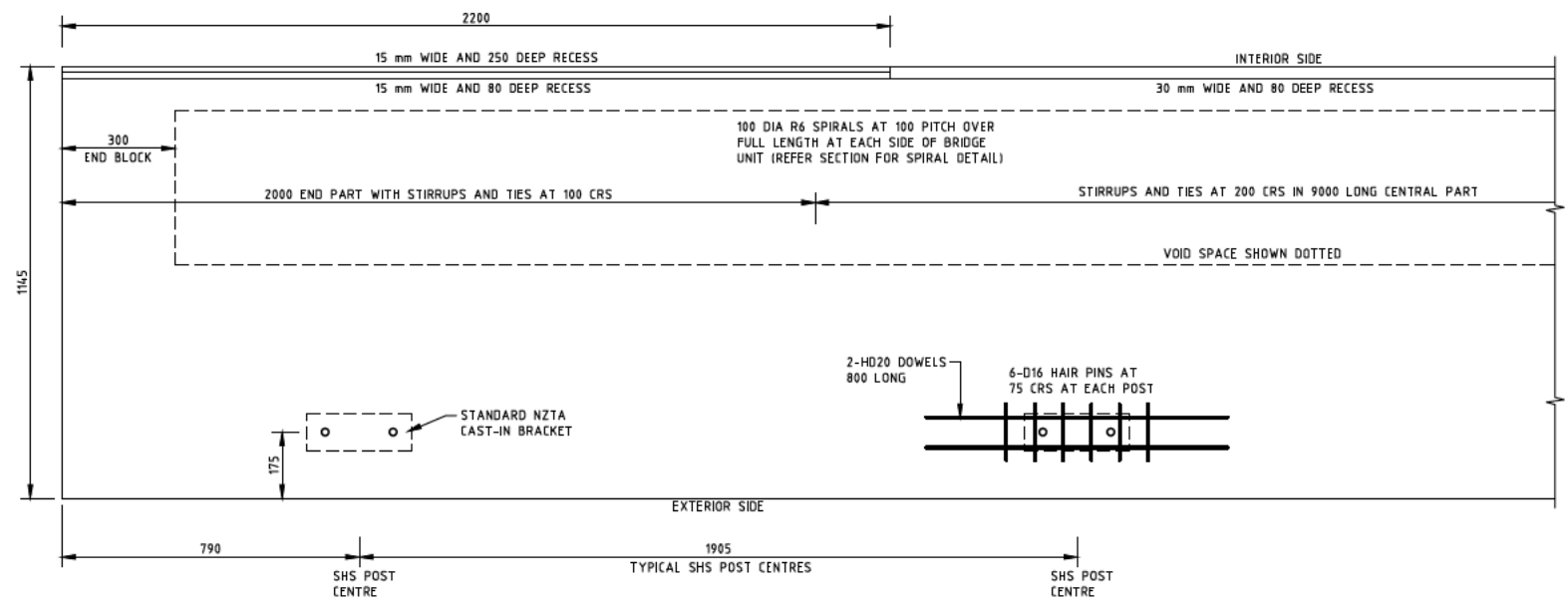
NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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GEOMETRY PLAN OF BRIDGE UNIT 3 BETWEEN END AND UNIT CENTRE
SCALE 1:10 AT A1 (1:20 AT A3)

END OF BRIDGE UNIT 2 SIMILAR



GEOMETRY PLAN AT END OF BRIDGE UNIT 4
SCALE 1:10 AT A1 (1:20 AT A3)

END OF BRIDGE UNIT 1 HANDED

REFER TO DRAWING E15-0296-16 FOR PRECAST HOLLOWCORE SECTIONS WITH REINFORCING

NOTES FOR HOLLOWCORE BEAM REINFORCEMENT

STRANDS

RELAX 2 (LOW RELAXATION SUPER STRAND)
12.9 DIA WITH AN AREA OF 100 mm²
MINIMUM ULTIMATE TENSILE STRENGTH OF 186 KN
INITIAL PRESTRESS FORCE OF 130 KN
ALL STRANDS SHALL COMPLY WITH AS/NZS 4672

STRANDS SHALL BE RELEASED SLOWLY AND AFTER RELEASE SHALL BE CUT AND GROUND FLUSH WITH THE CONCRETE AT THE END OF THE UNIT.
A THICK COATING OF HIGH BUILD EPOXY PAINT SHALL BE APPLIED AFTER GRINDING BEFORE THE UNIT LEAVES THE CASTING YARD.

EACH END OF HOLLOWCORE BRIDGE BEAMS SHALL BE LABELLED EG BEAM 1 EAST END.

CONCRETE STRENGTH SHALL REACH MINIMUM COMPRESSIVE STRENGTH OF 30 MP_a AT TRANSFER.

GIRDERS MAY BE PLACED AT 14 DAYS.

LIFTING POINTS SHALL BE DESIGNED BY THE CONSTRUCTOR.
CAST THE CENTRAL BEAMS FIRST AND MOVE OUTWARDS.

CURING

SUBMIT TO DESIGN ENGINEER THE PROPOSED CURING METHODOLOGY FOR APPROVAL.
INCLUDE EXPECTED INTERNAL AND EXTERNAL TEMPERATURE RISE. THE CONCRETE POUR SHALL BE COMPLETED BEFORE THE HEATING OF FORMS COMMENCES.

ESTIMATED BEAM PROPERTIES	
MASS (TONNES)	11.7
ELASTIC SHORTENING AFTER STRAND RELEASE	6
HOG AFTER STRAND RELEASE	9
HOG AFTER 14 DAYS	15
HOG AFTER 60 DAYS	22
DEFLECTION DUE TO DECK POUR	5
CAST LENGTH IN mm (XX)	13010

XX = INCLUDES ALLOWANCES FOR ELASTIC SHORTENING, CREEP AND SHRINKAGE TO 14 DAYS

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BRIDGE No.6
O/S 330 SOUTH KARORI ROAD, WELLINGTON

DRAWING TITLE
NEW BRIDGE PRECAST HOLLOWCORE UNIT PLANS WITH RECESS

DESIGNED APNG
DRAWN BB
CHECKED

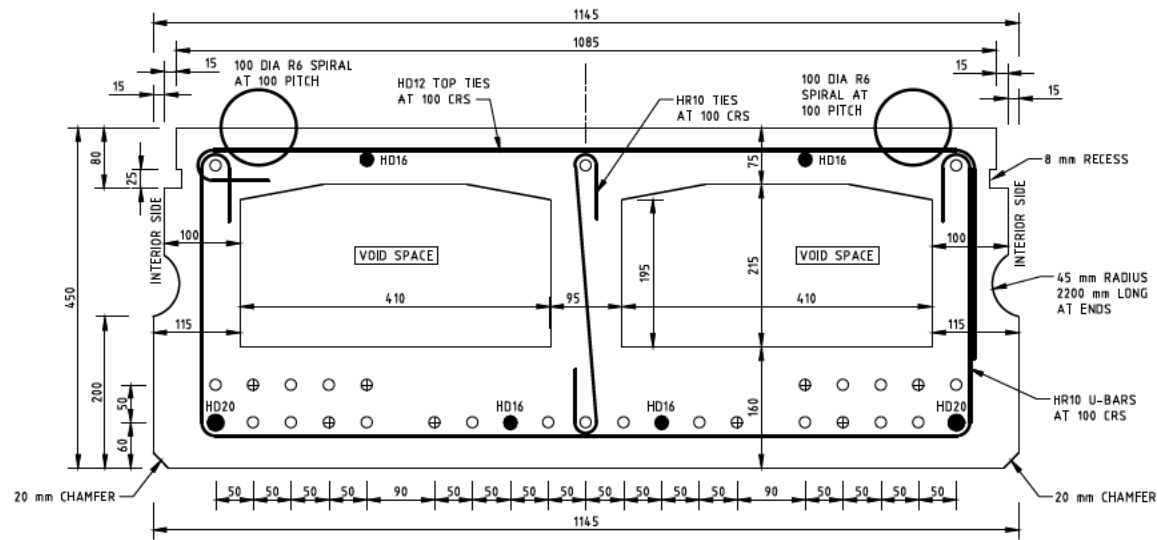
DATE FILE E15-0296-04+20
FIELD BOOK =
DATE AUG 2015

SCALE AS SHOWN SIZE A1
DRAWING NUMBER E15-0296-15 REV A

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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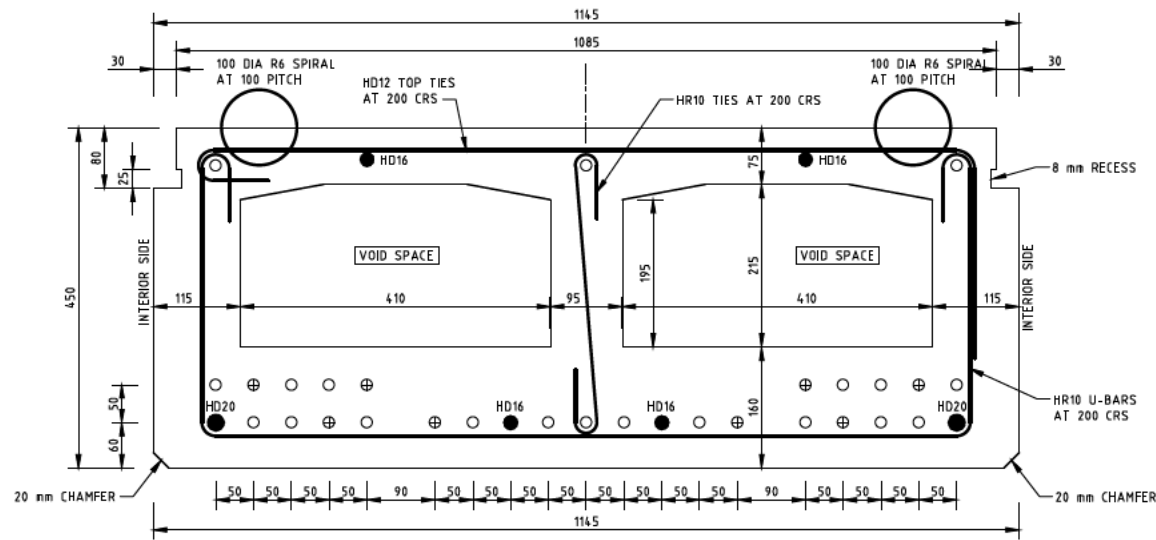


GEOMETRY SECTION OF BRIDGE UNIT 3 FOR 2m END PART

SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 2 SIMILAR

- 12.9 DIA STRAND
- ⊕ STRAND DEBONDED 1000 AT EACH END

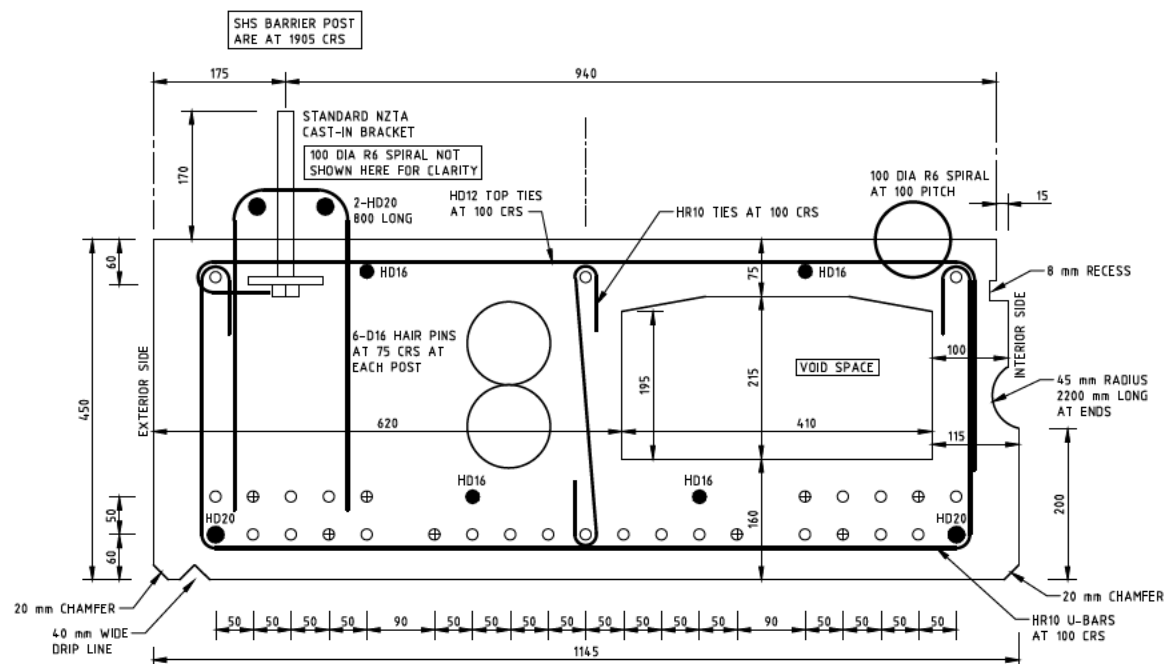


GEOMETRY SECTION OF BRIDGE UNIT 3 CENTRAL PART

SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 2 SIMILAR

- 12.9 DIA STRAND
- ⊕ STRAND DEBONDED 1000 AT EACH END

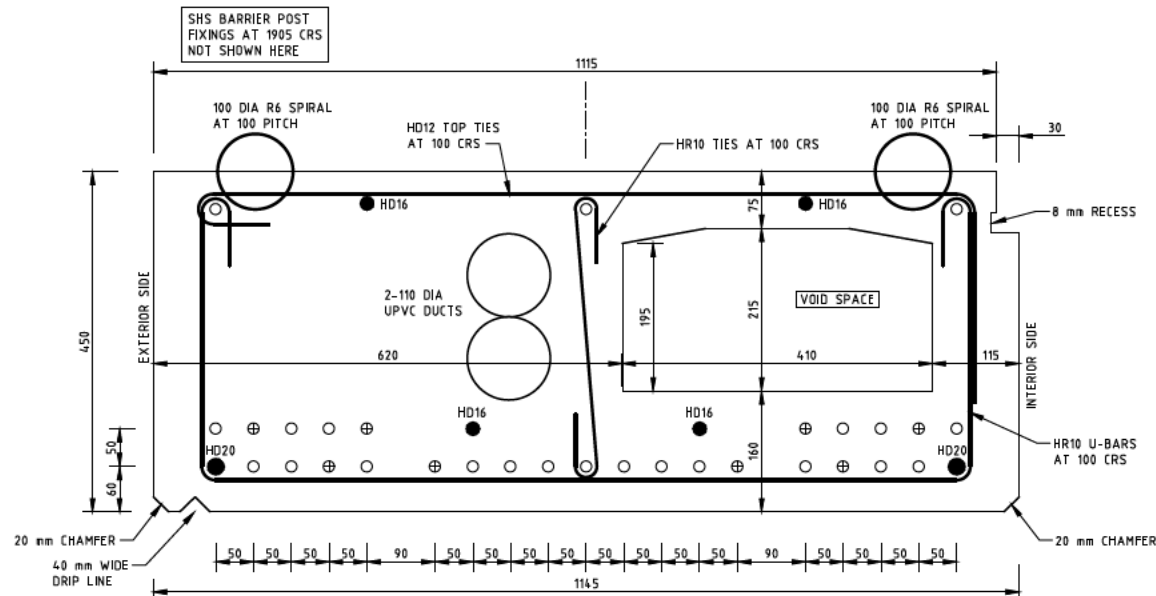


GEOMETRY SECTION OF BRIDGE UNIT 4 FOR 2m END PART

SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 1 SIMILAR BUT HANDED

- 12.9 DIA STRAND
- ⊕ STRAND DEBONDED 1000 AT EACH END



GEOMETRY SECTION OF BRIDGE UNIT 4 CENTRAL PART

SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 1 SIMILAR BUT HANDED

- 12.9 DIA STRAND
- ⊕ STRAND DEBONDED 1000 AT EACH END

NOTE:
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PROJECT

BRIDGE No.6
O/S 330 SOUTH KARORI
ROAD, WELLINGTON

DRAWING TITLE

**NEW BRIDGE PRECAST
HOLLOWCORE SECTIONS
WITH REINFORCEMENT**

DESIGNED APNG
DRAWN BB
CHECKED
CADD FILE E15-0296-04+20
FIELD BOOK =
DATE AUG 2015

SCALE AS SHOWN SIZE A1

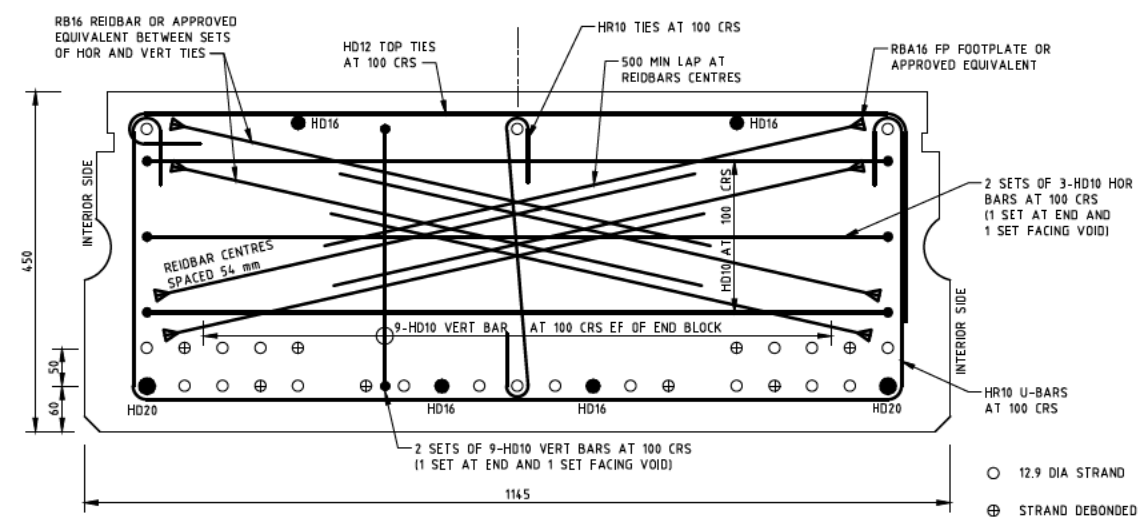
DRAWING NUMBER REV E15-0296-16 A

REFER TO DRAWING E15-0296-15 FOR NOTES FOR HOLLOWCORE BEAM REINFORCEMENT

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

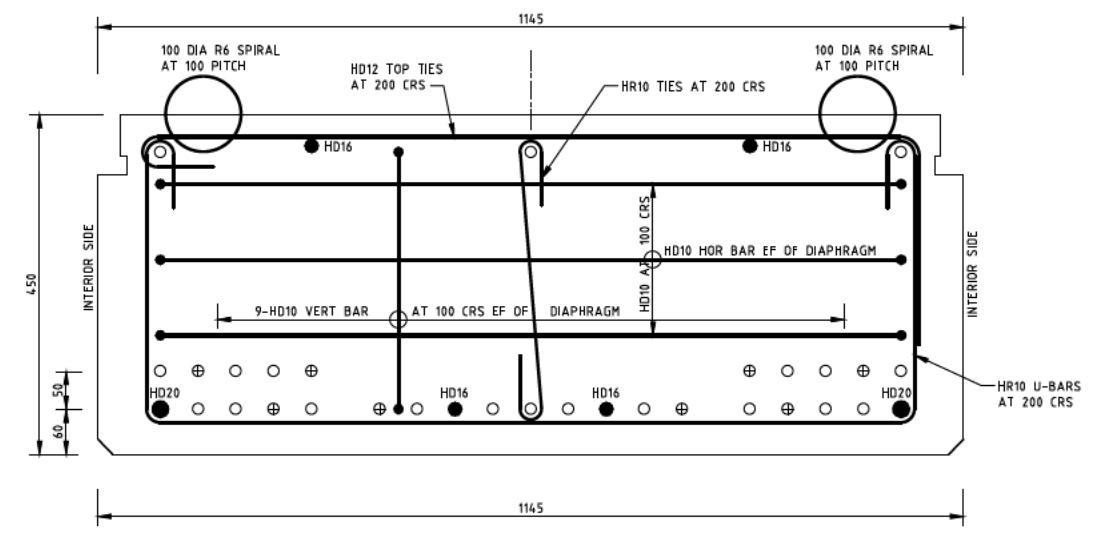
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A	FOR CONSENT	BB	28/8/15

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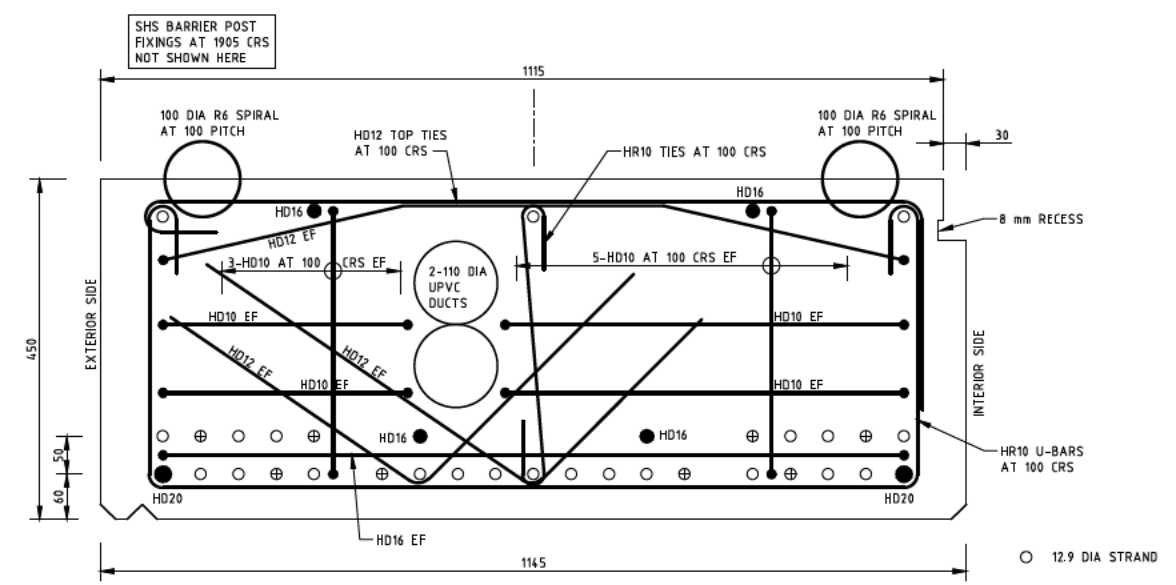
REINFORCING SECTION AT END BLOCK OF BRIDGE UNIT 3 SHOWN
SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 2 SIMILAR BUT HANDED



DIAPHRAGM SECTION OF BRIDGE UNIT 3 SHOWN
SCALE 1:5 AT A1 (1:10 AT A3)

BRIDGE UNIT 2 SIMILAR BUT HANDED



REINFORCING SECTION AT END BLOCK OF BRIDGE UNIT 4 SHOWN
SCALE 1:5 AT A1 (1:10 AT A3)

REINFORCING SECTION AT DIAPHRAGM OF BRIDGE UNIT 4 SIMILAR
BRIDGE UNIT 1 SIMILAR BUT HANDED

NOTE:
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PROJECT
BRIDGE No.6
O/S 330 SOUTH KARORI ROAD, WELLINGTON

DRAWING TITLE
NEW BRIDGE PRECAST SECTIONS AT END BLOCK AND AT DIAPHRAGMS

DESIGNED APNG
DRAWN BB
CHECKED

CAD FILE E15-0296-04+20
FIELD BOOK
DATE AUG 2015

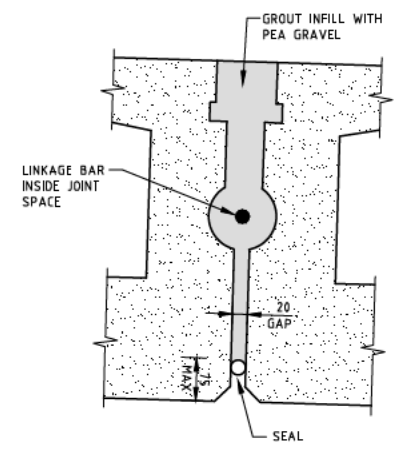
SCALE AS SHOWN SIZE A1

DRAWING NUMBER REV
E15-0296-17 A

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE

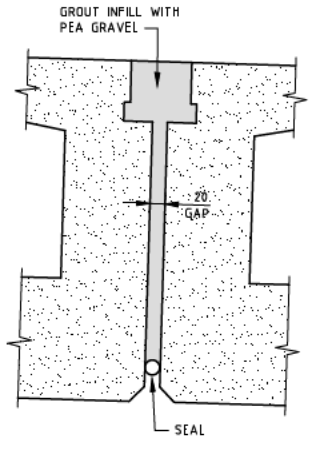
NO	REVISION	BY	DATE
A	FOR CONSENT	BB	28/8/15

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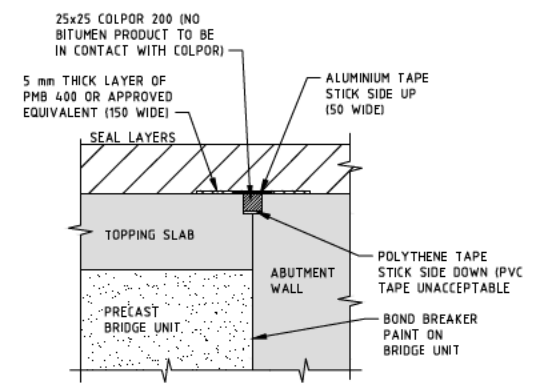


BRIDGE UNIT JOINT WITH LINKAGE BAR
SCALE 1:5 AT A1 (1:10 AT A3)

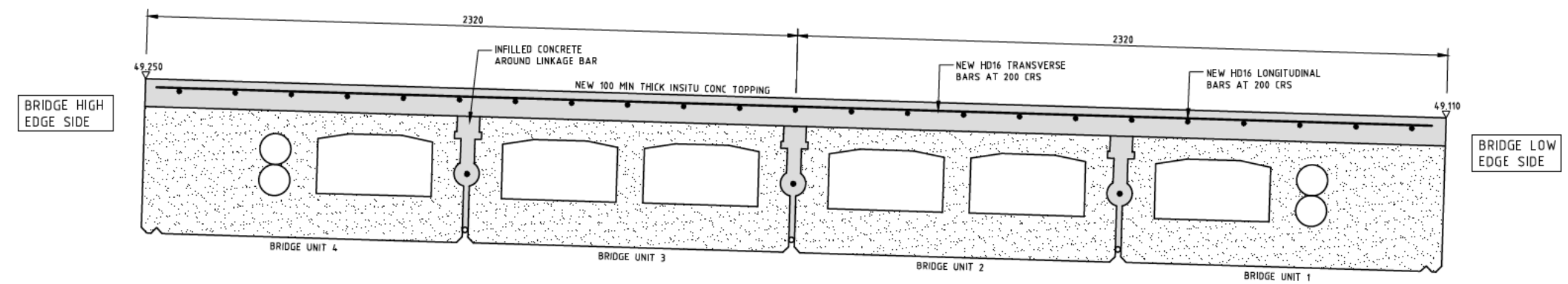
NOTE FOR GROUT
GROUT SHALL BE SHRINKAGE COMPENSATING WITH A MINIMUM STRENGTH OF 40 MPa AT 28 DAYS.
FILL WITH PEA GRAVEL PRIOR TO GROUTING



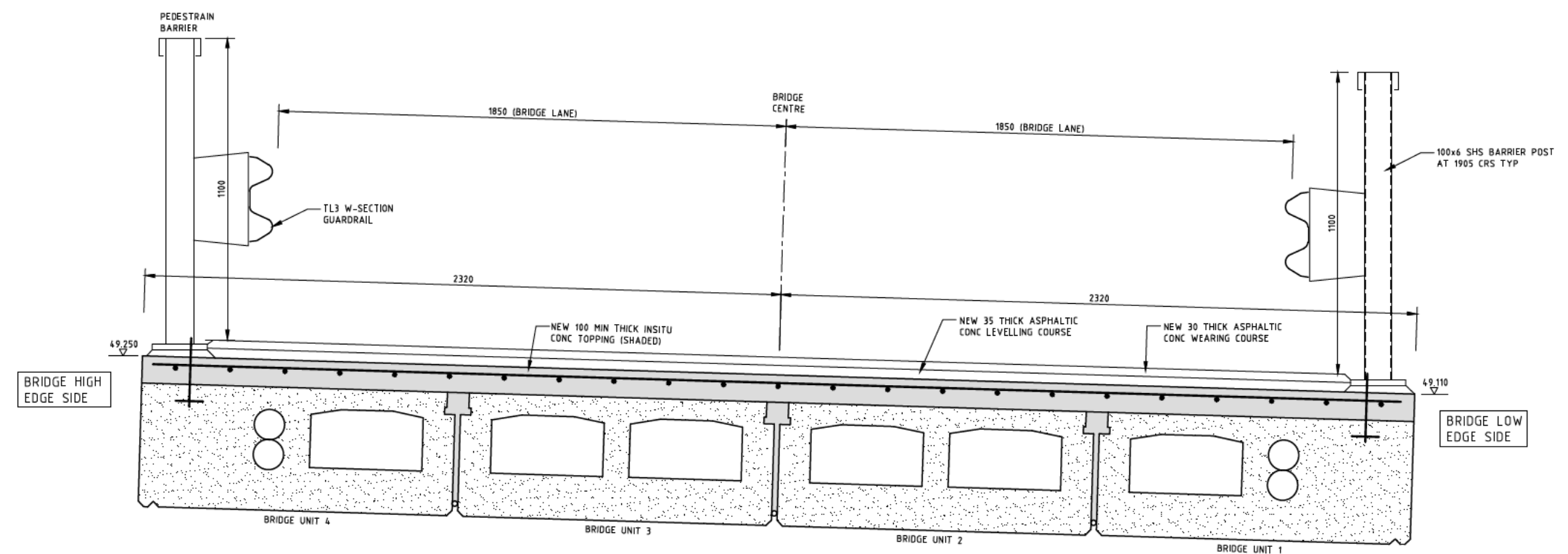
BRIDGE UNIT JOINT IN CENTRAL PART
SCALE 1:5 AT A1 (1:10 AT A3)



RECESS JOINT AT ABUTMENT TOP EDGE BELOW SEAL LAYER
SCALE 1:5 AT A1 (1:10 AT A3)



TYPICAL BRIDGE SECTION WITHOUT BARRIER POSTS AND SEAL
SCALE 1:10 AT A1 (1:20 AT A3)



BRIDGE SECTION WITH BARRIER POSTS AND RAILS
SCALE 1:10 AT A1 (1:20 AT A3)

NOTE:
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**BRIDGE No.6
O/S 330 SOUTH KARORI ROAD, WELLINGTON**

DRAWING TITLE
NEW BRIDGE PRECAST DECK WITH CONC TOPPING AND BARRIER POSTS

DESIGNED APNG
DRAWN BB
CHECKED
SCALE AS SHOWN
DRAWING NUMBER **E15-0296-18**

FILED E15-0296-04+20
FIELD BOOK =
DATE AUG 2015
SIZE A1
REV A

RESOURCE MANAGEMENT - LAND PLANNING - SURVEYING - STRUCTURAL - CIVIL - FIRE