

SWING BRIDGE DECK REPAIRS

EXTENT OF WORK

THE WORK INCLUDED IN THIS CONTRACT IS AS FOLLOWS:

1. SITE ESTABLISHMENT, SITE SURVEY AND SETOUT.
2. PERPENDICULAR SAW CUT OF EXISTING ASPHALT ALONG THE DEMOLITION BOUNDARY.
3. REMOVE AND DISPOSE OF EXISTING ASPHALT AND UNDERLYING MEMBRANE SHEET.
4. BREAK OUT AND DISPOSE OF CONCRETE IN TROUGHS OF STEEL DECKING, TAKING CARE NOT TO DAMAGE STEELWORK.
5. REINSTATE THE DECK AS SHOWN ON THESE DRAWINGS.
6. REINSTATE ROAD DRAINAGE AS SHOWN ON THESE DRAWINGS.
7. CLEAN UP SITE AND DEMOBILISE ALL PLANT AND EQUIPMENT.
8. USE OF HEAVY EQUIPMENT IS DISCOURAGED.

GENERAL

1. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED.
2. WHERE APPROVAL IS REQUIRED, THIS SHALL BE OF THE SUPERINTENDENT OR HIS REPRESENTATIVE.
3. ANY AMBIGUITY OR DISCREPANCY SHALL BE REFERRED FOR CLARIFICATION BEFORE WORK PROCEEDS.
4. REFER TO THE DRAWING DIMENSIONS FOR SETTING OUT THE WORKS. HOWEVER, ALL EXISTING DIMENSIONS AND LEVELS ARE APPROXIMATE AND SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE.
5. UNLESS NOTED OTHERWISE, ALL LEVELS ARE TO OD. SET OUT IS TO BNG 2000.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF THE STRUCTURE UNTIL ITS COMPLETION AND SHALL ENSURE THAT NO PART OF THE STRUCTURE IS OVERSTRESSED DURING THE WORKS.
7. WHERE STANDARDS ARE REFERRED TO, THEY SHALL BE THE LATEST EDITION.
8. WHERE PROPRIETARY ITEMS ARE REQUIRED, THEY SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WHERE NO SPECIFIC TYPE IS SPECIFIED, ANY SYSTEM SHALL BE APPROVED BEFORE USE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING WORK AREAS.
10. ALL DEMOLITION SHALL BE IN AN ACCEPTABLE MANNER UNDER THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS 2009. ALL SURPLUS MATERIAL SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER.

DEMOLITION

1. PROVIDE TEMPORARY SUPPORT TO ADJACENT STRUCTURES WHERE REQUIRED.
2. REMOVE AND DISPOSE OF ALL DEMOLITION MATERIALS OFF SITE, UNLESS BEING RE-USED.
3. REMOVE AND DISPOSE OF HAZARDOUS MATERIALS IN ACCORDANCE WITH STATUTORY REQUIREMENTS.
4. REPAIR ANY DAMAGE TO ADJACENT STRUCTURES TO A QUALITY NOT LESS THAN EXISTING.
5. DISENGAGE ALL SERVICES PRIOR TO COMMENCEMENT.
6. SALVAGE FOR REUSE ITEMS NOMINATED.

CONCRETE

1. CONCRETE SHALL COMPLY WITH THE FOLLOWING SPECIFICATION:
 - MINIMUM CONCRETE COVER TO REINFORCEMENT
 - DECK SURFACE: = 25mm.
 - TO ADJACENT POURS = 20mm.
 - ELSEWHERE: = 30mm
 - MINIMUM CONCRETE STRENGTH AT SERVICE F'c = 25 MPa
 - MINIMUM CEMENT CONTENT = 440 Kg/m
 - MAXIMUM WATER/CEMENT RATIO = 0.4
2. TRAFFICABLE SURFACES SHALL RECEIVE A BROOM FINISH WITH A TEXTURE OF ±1.5mm PERPENDICULAR TO THE DIRECTION OF TRAVEL.
3. ALL GAPS SHALL BE PROPERLY SEALED BEFORE POURING OF THE DECK SLABS TO AVOID LEAKING AND BLOWOUT.
4. CAST IN ITEMS WITH LESS THAN 25mm COVER TO ATMOSPHERE SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH ASTM A153.
5. CONCRETE SHALL BE WET CURED FOR MINIMUM 7 DAYS USING HESSIAN CLOTH AND/OR PLASTIC SHEET
5. ALL FORMWORK, SHORING AND RESHORING SHALL BE THE RESPONSIBILITY OF AND DESIGNED BY THE CONTRACTOR
4. CONCRETE SHALL BE TESTED FOR SLUMP ON SITE. THE TEST CYLINDERS SHALL BE TAKEN FOR 3, 7 AND 28 DAY STRENGTHS
5. CONCRETE STRENGTH AND SLUMP TO BE AS PER TABLE SHOWN:

MIN. SPECIFIED 28 DAY STRENGTH	SLUMP
25 MPa	75mm ± 25mm

REINFORCEMENT

1. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS. THESE WELDS SHALL DEVELOP THE FULL STRENGTH OF THE REINFORCING ELEMENT.
2. ALL REINFORCING STEEL TO HAVE A MINIMUM YIELD STRENGTH OF 410 MPa AND SHALL BE TYPE 2 DEFORMED BARS
3. ALL REINFORCING STEEL SHALL BE CLASS II GALVANISED IN ACCORDANCE WITH ASTM A767. TIE WIRE SHALL BE GALVANISED.
4. REINFORCEMENT SPACING NOT SHOWN SHALL BE TAKEN AS EQUAL.
5. REINFORCING CHAIRS ARE TO BE CONCRETE AND AS SMALL AS PRACTICABLE. PROPRIETARY PLASTIC COVER SUPPORTS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
6. REINFORCING BARS SHOWN ON THESE DRAWINGS ARE DIAGRAMMATIC ONLY.
7. BARS SHOWN MAY REPRESENT MORE THAN ONE LENGTH AND/OR PROFILE.
8. BARS MAY NOT BE SHOWN IN TRUE POSITION FOR CLARITY. ALL HOOKS, BENDS AND COGS ARE STANDARD AND SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE.
9. LAP SPLICES TO ALTERNATE AND NO MORE THAN 50% OF SPLICES SHALL BE IN ANY ONE SECTION.
10. BARS SHALL NOT BE CUT NOR BENT ON SITE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
11. BARS SHALL BE BENT COLD BY MACHINE OR OTHER APPROVED MEANS PRODUCING A GRADUAL AND EVEN MOTION. BARS INCORRECTLY BENT SHALL NOT BE RE-BENT AND INCORPORATED IN THE WORKS AND NO REINFORCEMENT SHALL BE BENT WHEN IN POSITION IN THE WORKS, WHETHER OR NOT IT IS PARTIALLY EMBEDDED IN HARDENED CONCRETE.
12. CONTRACTOR TO PROVIDE 24 HOURS NOTICE FOR THE INSPECTION OF ALL REINFORCING PRIOR TO POURING CONCRETE.
13. LAP LENGTHS SHALL BE AS TABULATED BELOW UNLESS SHOWN OTHERWISE ON THE DRAWINGS:

BAR DIAMETER	MIN LAP LENGTH
12	450
16	550
20	700
24	900

FASTENERS AND ANCHORS

1. FASTENERS:
 - STAINLESS-STEEL COMPONENTS:
FASTENER TYPE = [304] [316] STAINLESS-STEEL.
 - STEEL COMPONENTS:
FASTENER TYPE = PLATED-STEEL FASTENERS COMPLYING WITH ASTM B 633, CLASS FE/ZN 25 FOR ELECTRODEPOSITED ZINC COATING.
 - DISSIMILAR METALS:
FASTENER TYPE = [304] [316] STAINLESS-STEEL FASTENERS.
2. ANCHORS:
PROVIDE CAST-IN-PLACE ANCHORS, FABRICATED FROM CORROSION-RESISTANT MATERIALS WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO SIX TIMES THE LOAD IMPOSED WHEN INSTALLED IN UNIT MASONRY AND EQUAL TO FOUR TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE, AS DETERMINED BY TESTING PER ASTM E 488.

PERFORMANCE REQUIREMENTS

1. PROVIDE RAILINGS CAPABLE OF WITHSTANDING THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:

HANDRAILS:

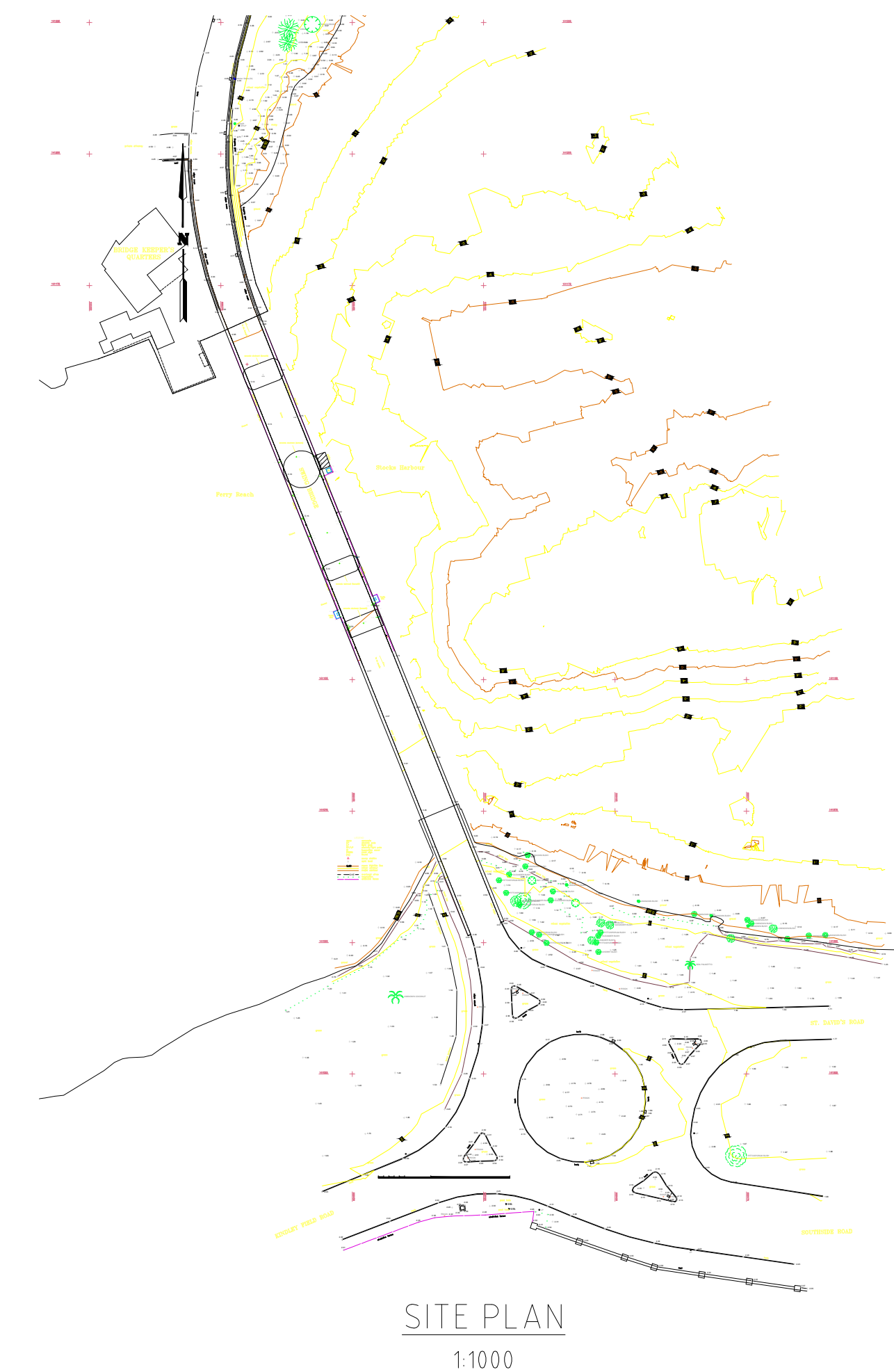
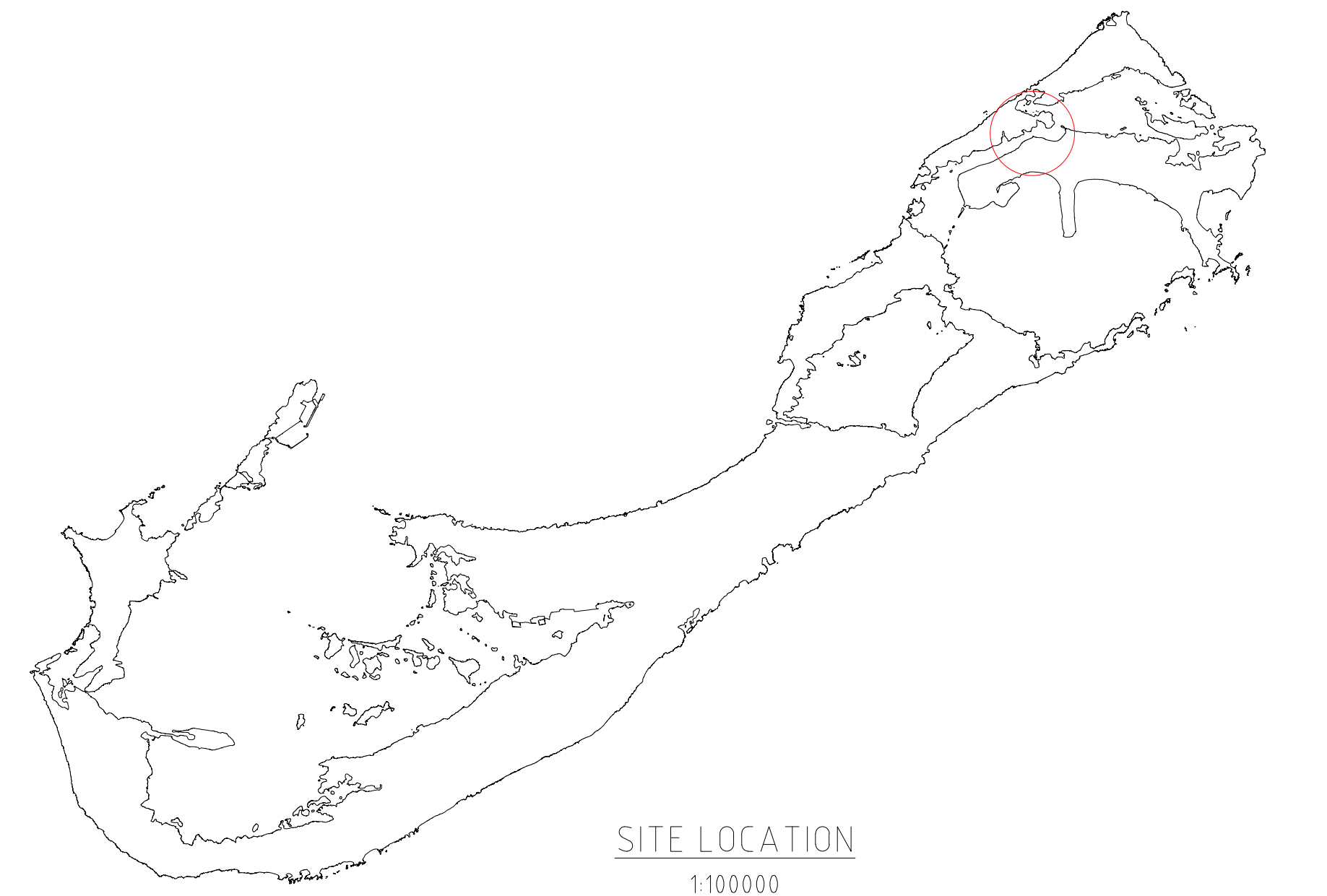
- a. UNIFORM LOAD OF 50 LBF/ FT. (0.73 KN/M) APPLIED IN ANY DIRECTION.
- b. CONCENTRATED LOAD OF 200 LBF (0.89 KN) APPLIED IN ANY DIRECTION.
- c. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

TOP RAILS OF GUARDS:

- a. UNIFORM LOAD OF 50 LBF/ FT. (0.73 KN/M) APPLIED IN ANY DIRECTION.
- b. CONCENTRATED LOAD OF 200 LBF (0.89 KN) APPLIED IN ANY DIRECTION.
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INFILL OF GUARDS:

- a. CONCENTRATED LOAD OF 50 LBF (0.22 KN) APPLIED HORIZONTALLY ON AN AREA OF 1 SQ. FT. (0.093 SQ. M).



ISSUED FOR: INFORMATION

AMENDMENTS:

NO:	REVISION	DATE:
0	FOR CONSTRUCTION	01/09/23

SCALE: AS SHOWN AT ANSI D

SURVEY

PREPARED: - DATE: -

DESIGN

PREPARED: C.FRASER DATE: 17/08/2023
CHECKED: A.KENNY DATE: 17/08/2023

DRAWING

PREPARED: C.FRASER DATE: 17/08/2023
CHECKED: A.KENNY DATE: 17/08/2023

APPROVED BY:
A.KENNY

PROJECT NUMBER:
44-02-115-C

PROJECT NAME:
**SWING BRIDGE
TEMPORARY
REPAIRS 2023**

ST GEORGE'S

SHEET TITLE:
**SITE LOCATION
AND GENERAL NOTES**

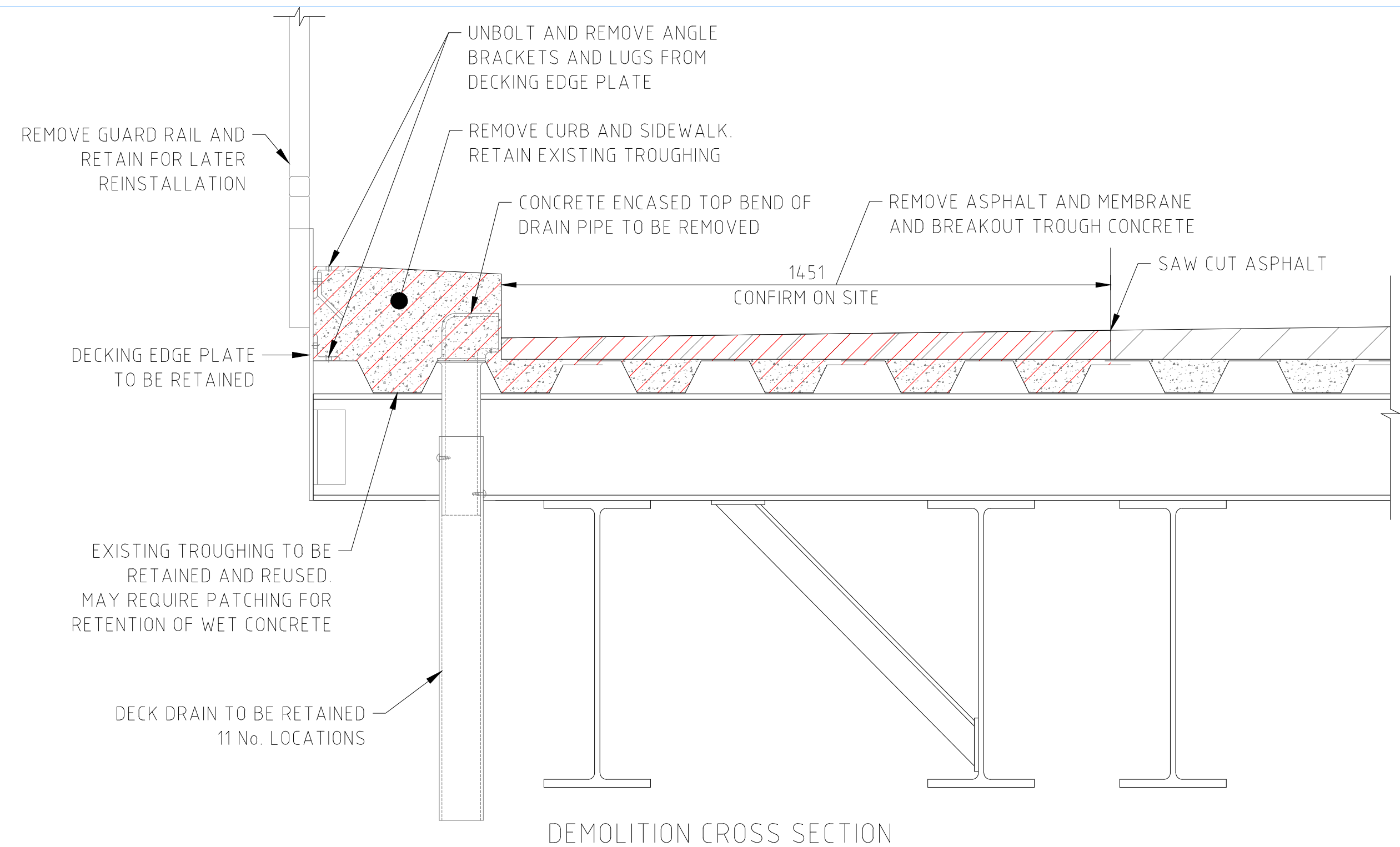
SHEET NUMBER:

S300

REVISION

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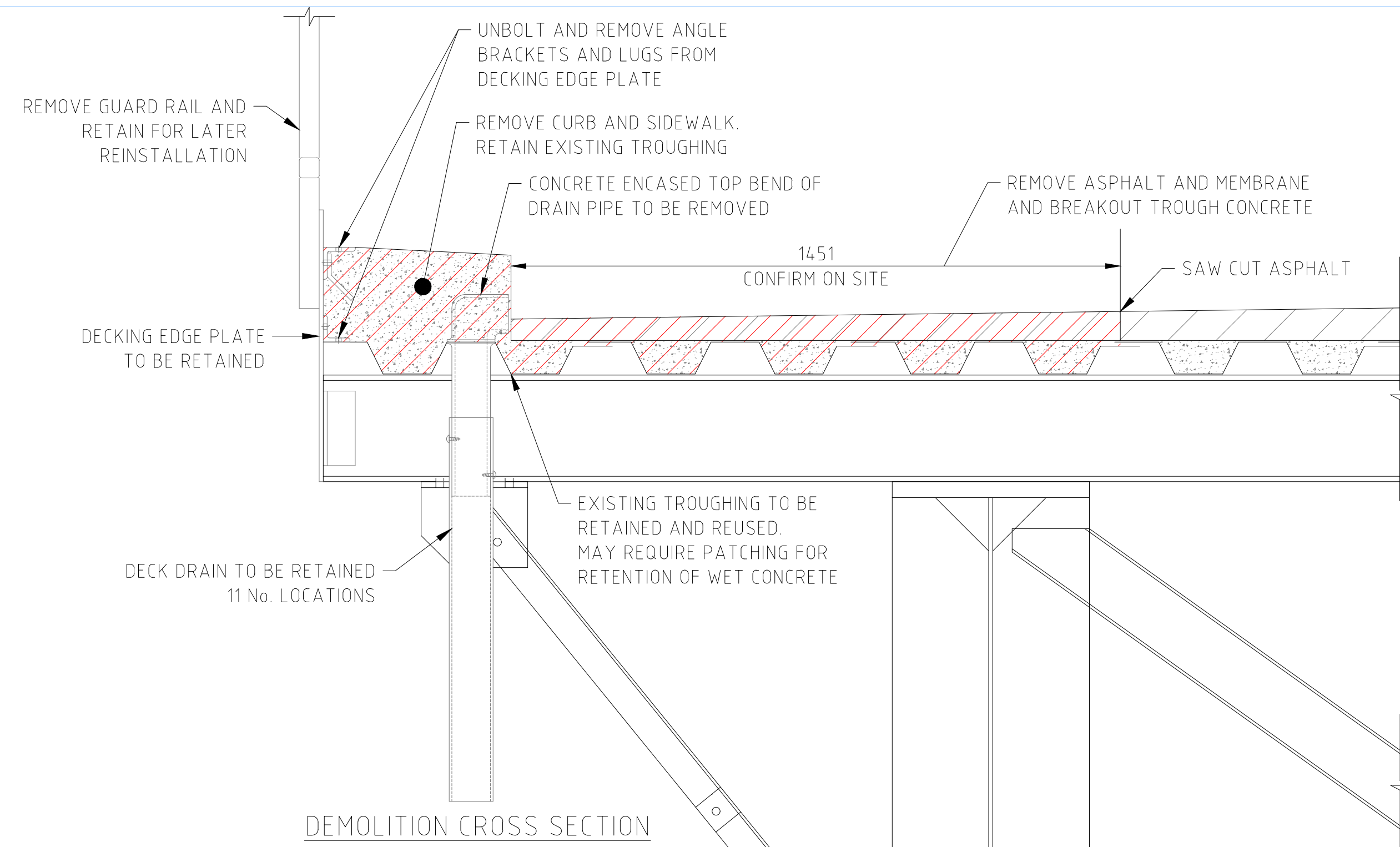
- GENERAL NOTES:
- REFER TO SHEET S200 FOR FULL NOTES
 - SURVEY GRID IS BNG2000
 - LEVELS ARE IN METERS ABOVE ORDINANCE DATUM
 - CONTRACTOR TO ENSURE STABILITY OF THE STRUCTURE DURING ALL PHASES OF THE WORKS DEMOLITION
 - USE OF HEAVY EQUIPMENT IS DISCOURAGED
 - EXISTING TROUGHING MAY REQUIRE PATCHING FOR RETENTION OF WET CONCRETE



DEMOLITION CROSS SECTION

1:10

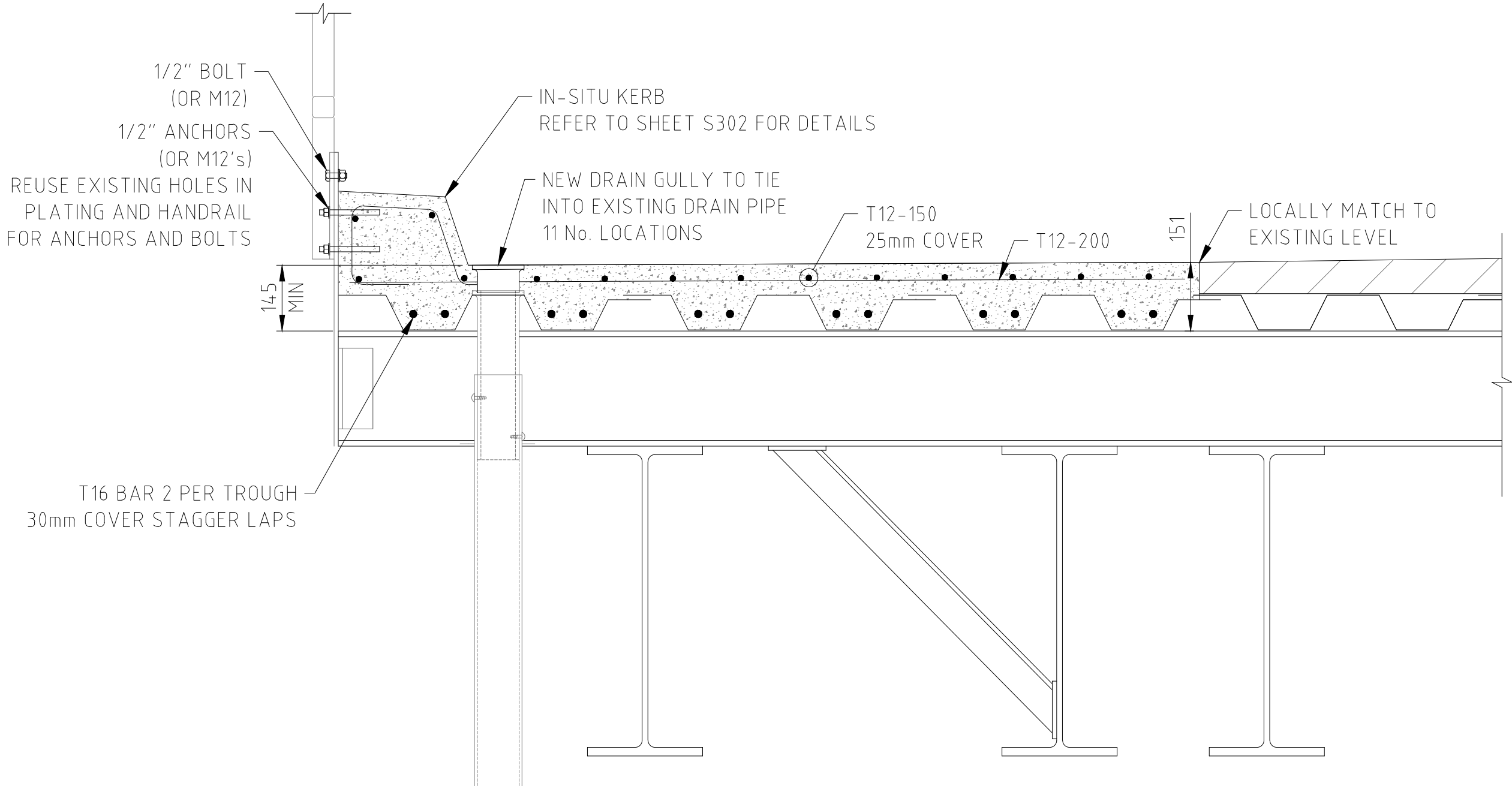
APPROACH SPANS



DEMOLITION CROSS SECTION

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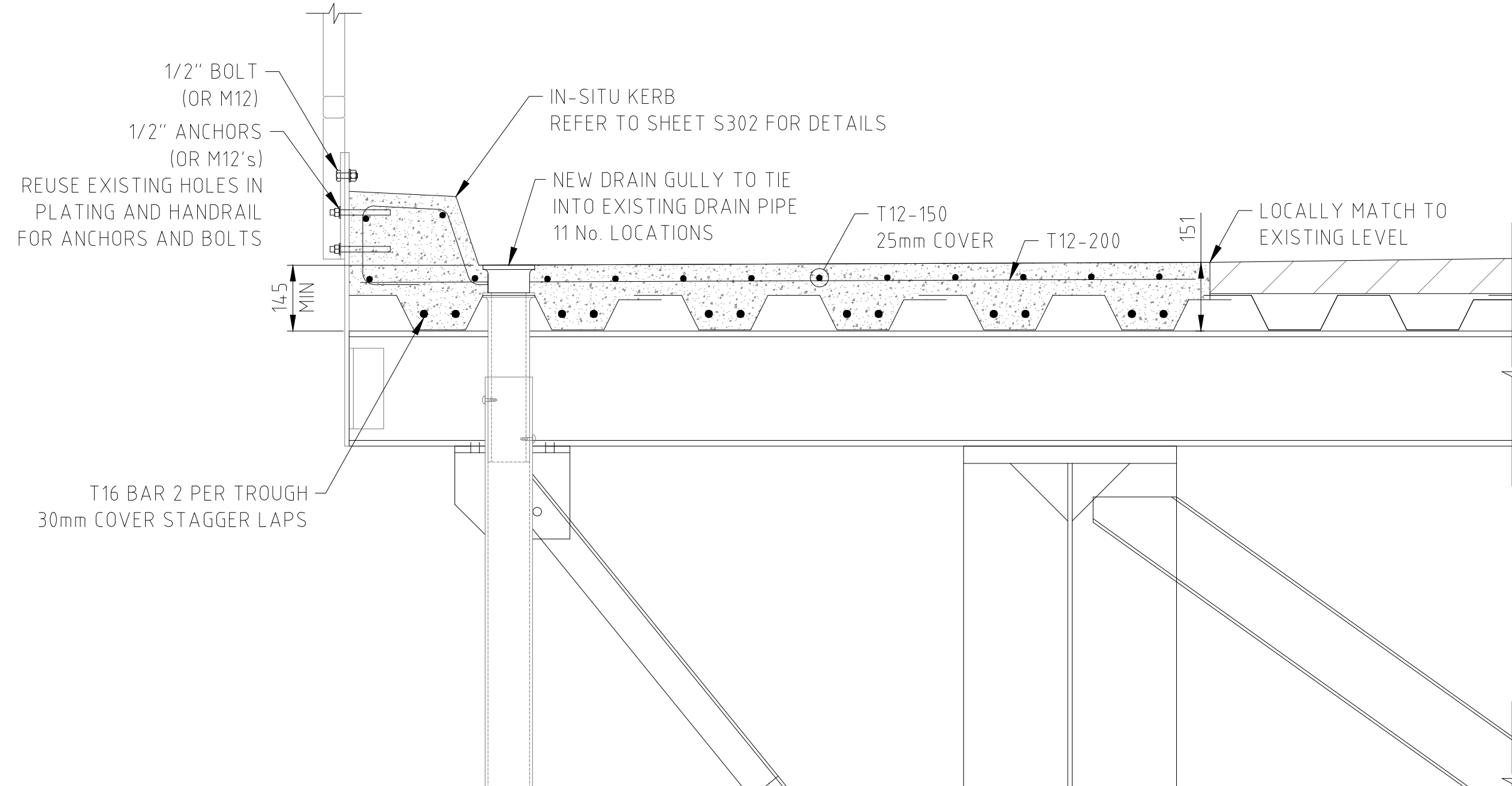
SWING SPAN



REINSTATEMENT CROSS SECTION

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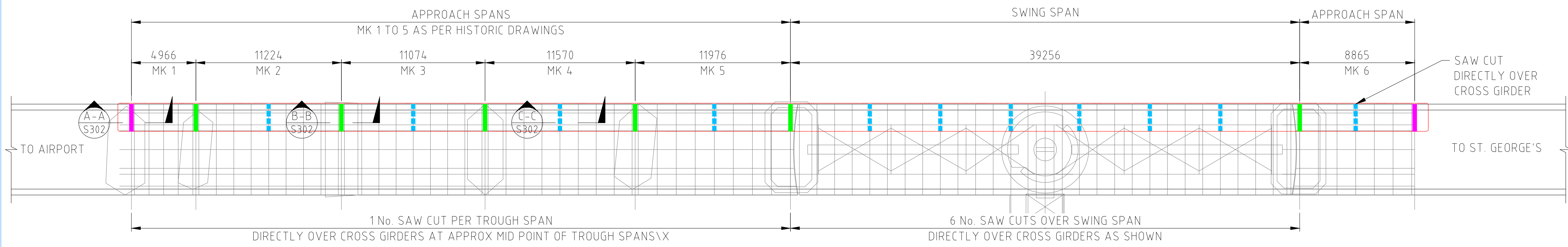
APPROACH SPANS



REINSTATEMENT CROSS SECTION

1:10

SWING SPAN

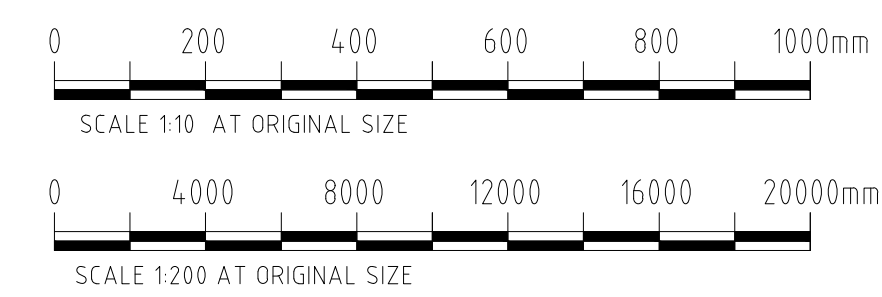


DECK REMEDIATION PLAN

1:200

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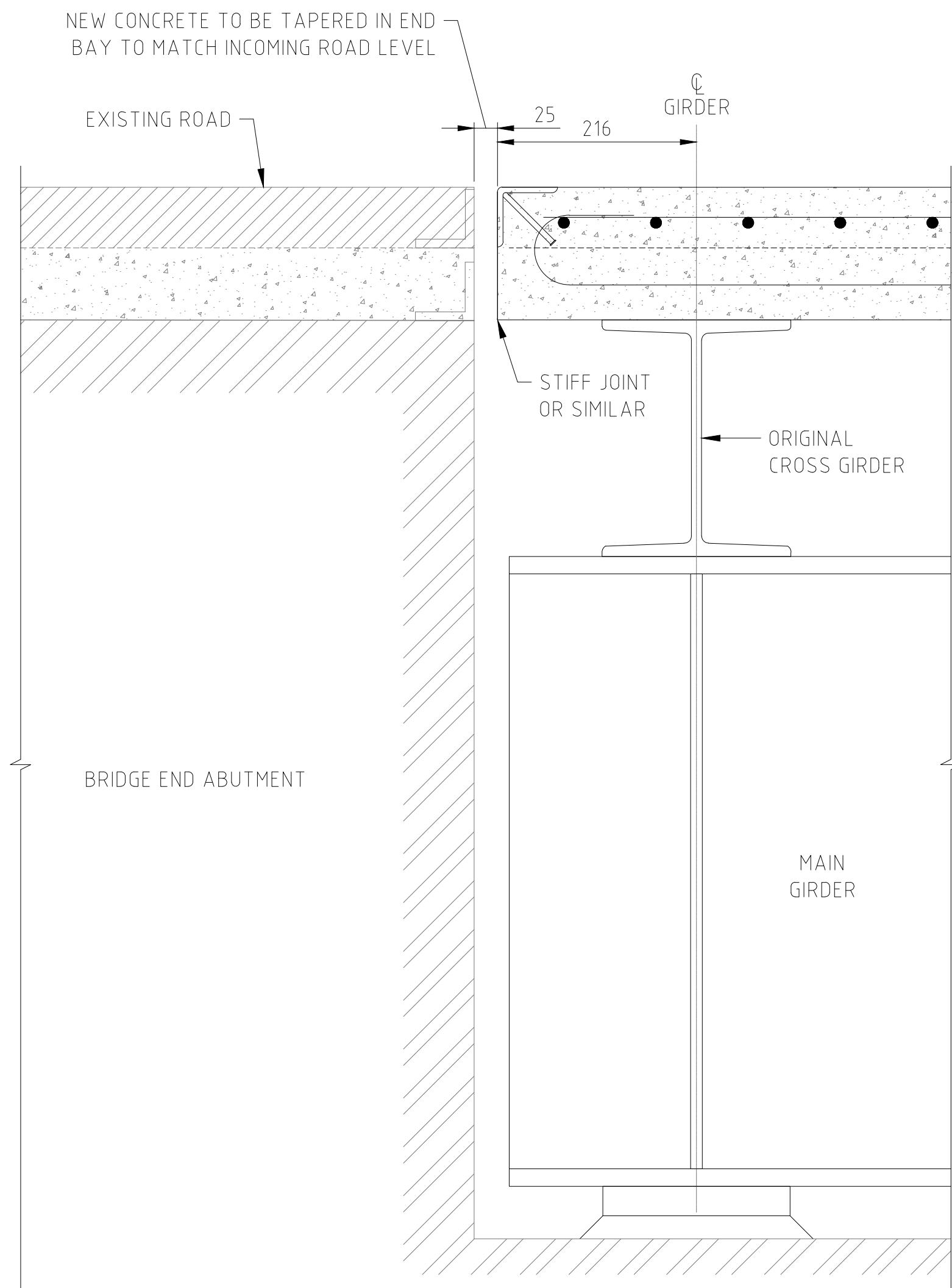
	DECK JOINT (REFER TO SHEET S302 FOR DETAILS)
	BRIDGE END JOINT (REFER TO SHEET S302 FOR DETAILS)
	SAW CUT (REFER TO SHEET S302 FOR DETAILS)



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SURVEY	
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DESIGN	
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DRAWING	
PREPARED: C.FRASER	DATE: 17/08/2023
CHECKED: A.KENNY	DATE: 17/08/2023
APPROVED BY: A.KENNY	
PROJECT NUMBER: 44-02-115-C	
PROJECT NAME: SWING BRIDGE TEMPORARY REPAIRS 2023	
ST GEORGE'S	
SHEET TITLE: DECK REMEDIATION TYPICAL SECTIONS	
SHEET NUMBER: S301	REVISION: 0

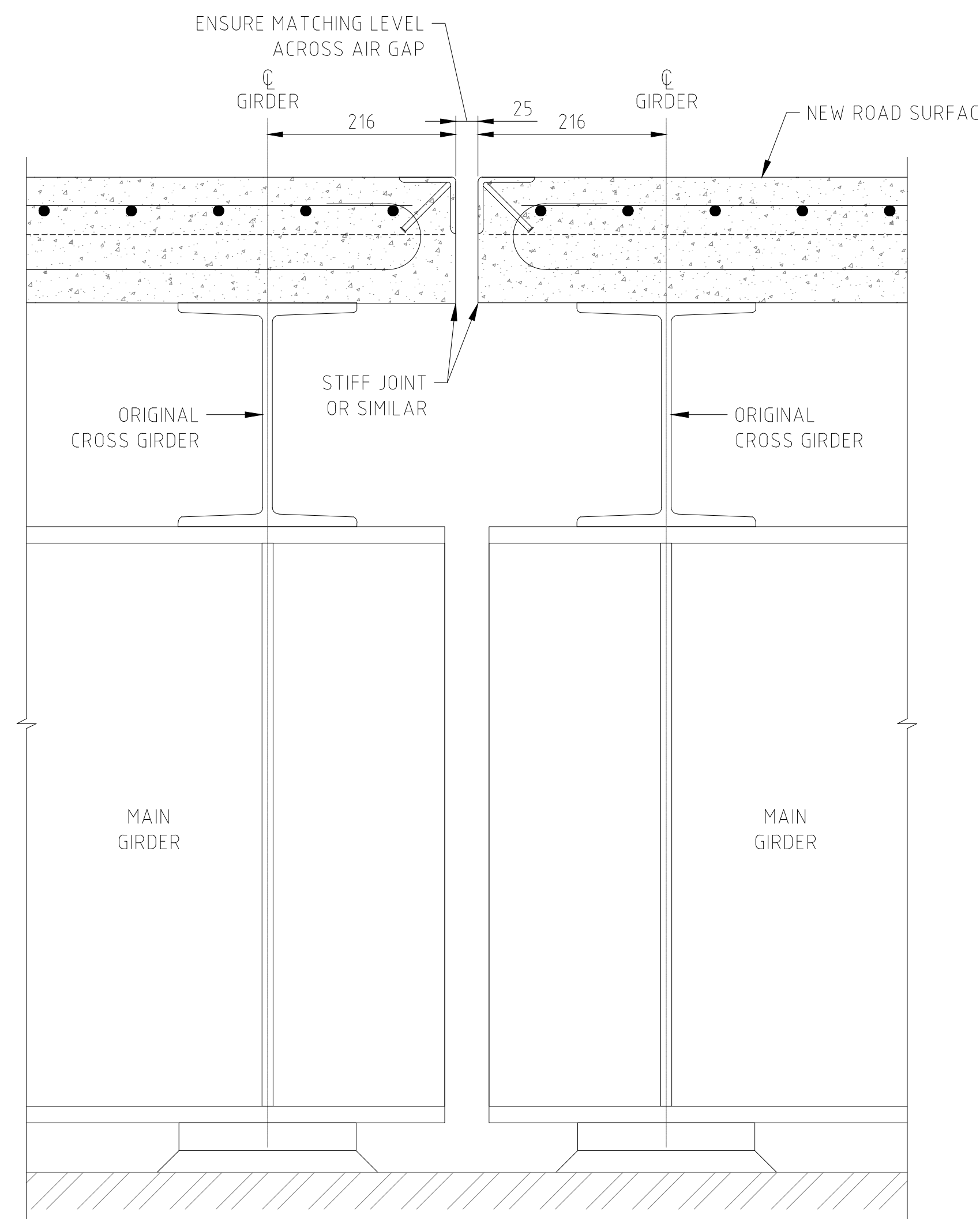
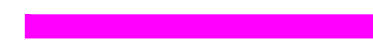
- GENERAL NOTES:
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 3. LEVELS ARE IN METERS ABOVE ORDINANCE DATUM
 4. CONTRACTOR TO ENSURE STABILITY OF THE STRUCTURE DURING ALL PHASES OF THE WORKS DEMOLITION
 5. ALL NEW STEELWORK TO BE SUPPLIED WITH BLAST PRIMER; TOUCHUP WITH ZINC RICH PRIMER



TYPICAL DETAIL A-A
BRIDGE END JOINT

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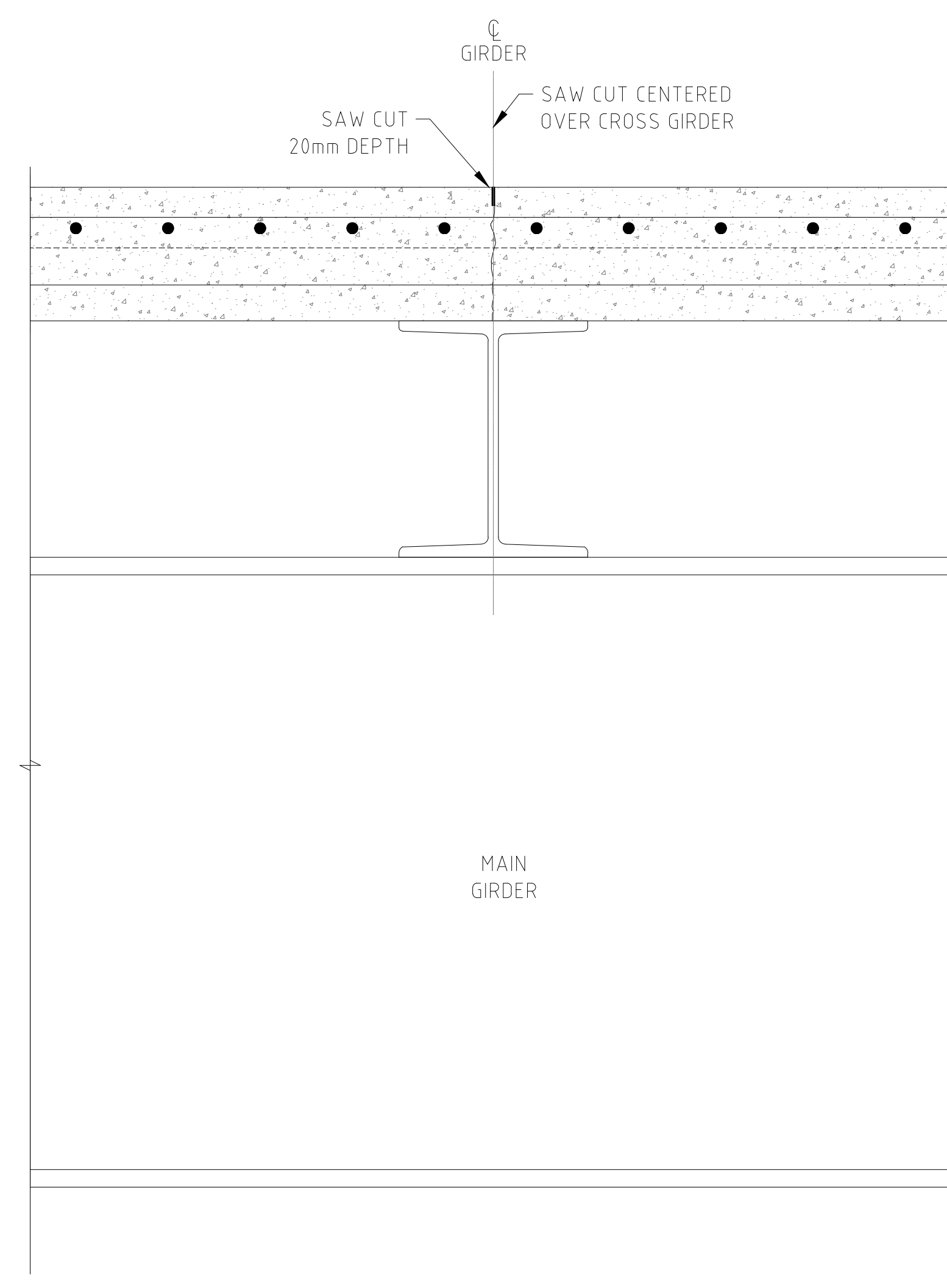
SHOWN ON PLAN BY LINE TYPE:



TYPICAL DETAIL B-B
DECK JOINT

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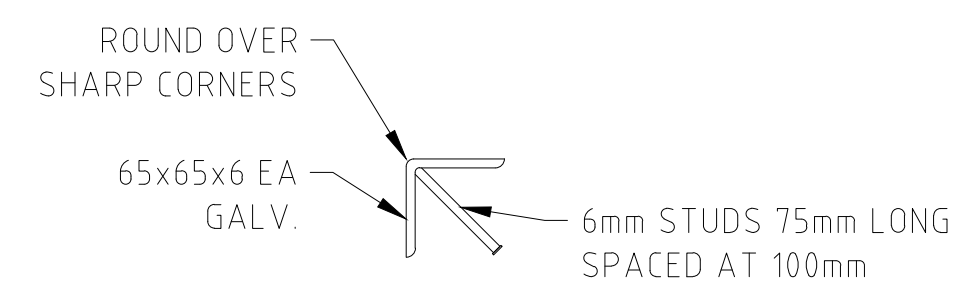
SHOWN ON PLAN BY LINE TYPE:



TYPICAL DETAIL C-C
SAW CUT

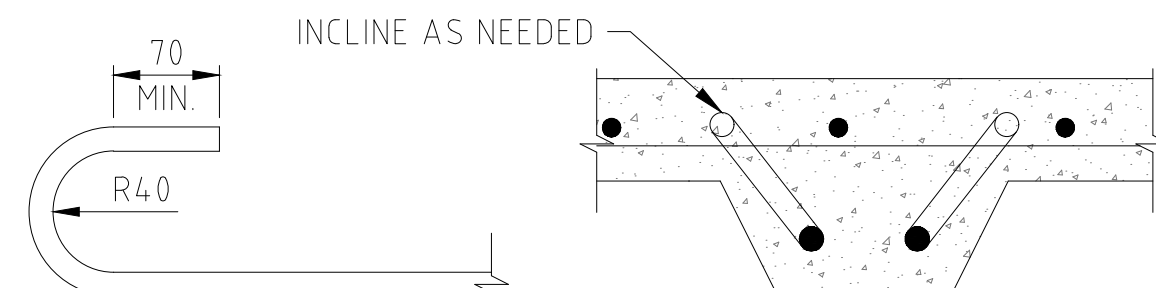
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SHOWN ON PLAN BY LINE TYPE:



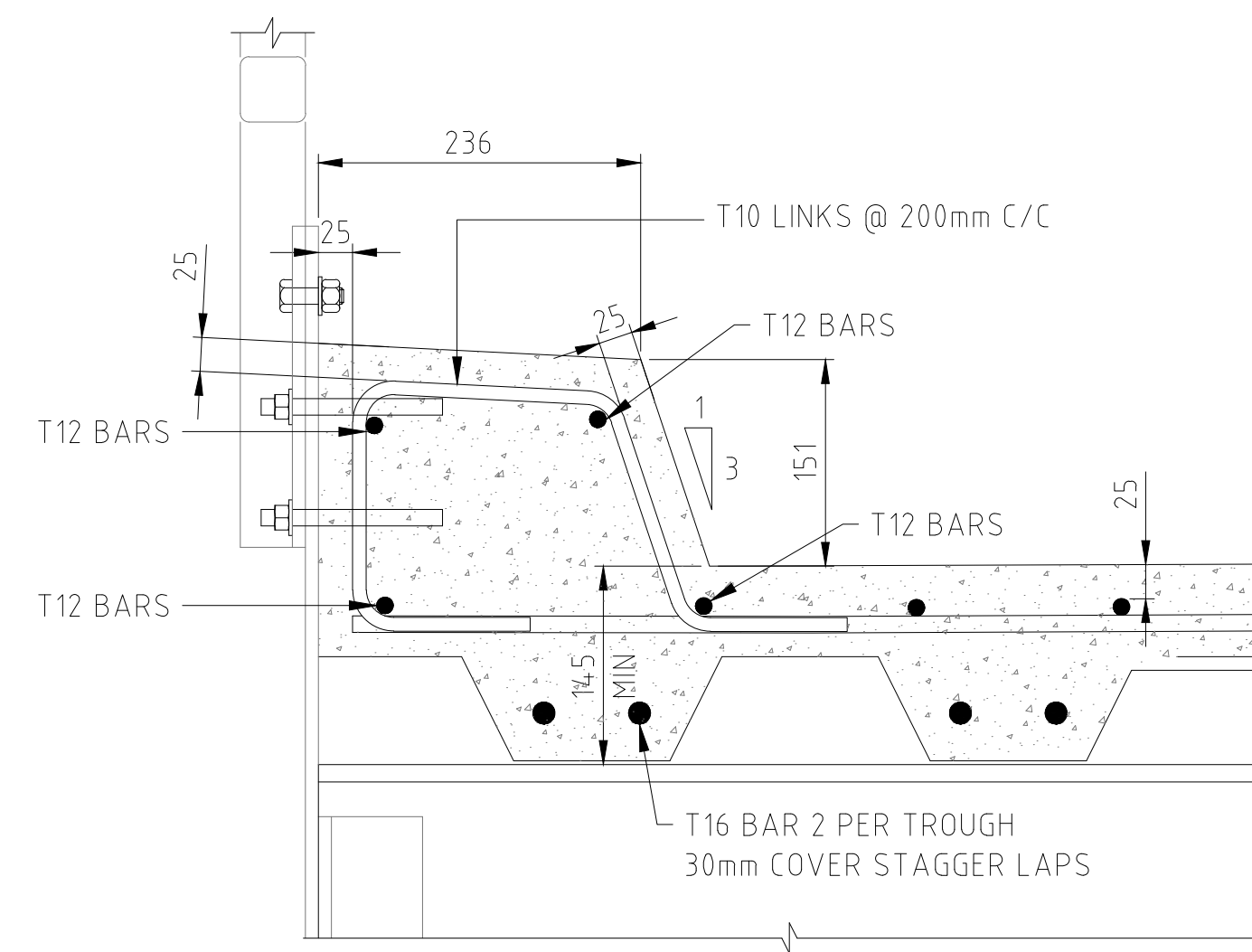
EDGE PROTECTION

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T16 END HOOK

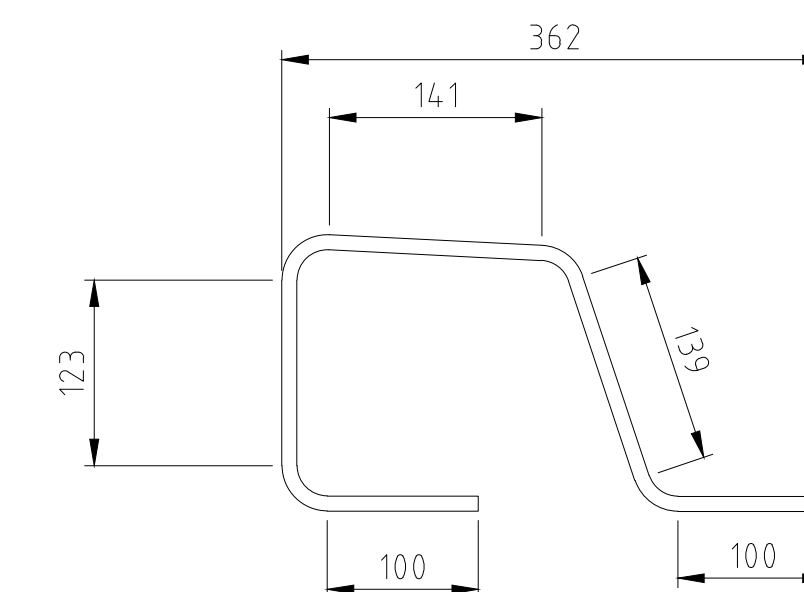
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IN-SITU KERB DETAIL

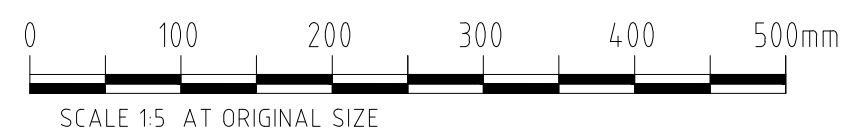
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DRAINAGE HIDDEN FOR CLARITY



IN-SITU KERB LINKS
BENDING DIMENSIONS

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PREPARED: C.FRASER	DATE: 17/08/2023	
CHECKED: A.KENNY	DATE: 17/08/2023	
APPROVED BY: A.KENNY		

PROJECT NUMBER:
44-02-115-C

PROJECT NAME:
**SWING BRIDGE
TEMPORARY
REPAIRS 2023**

ST GEORGE'S	
SHEET TITLE:	
TROUING REPAIR DETAILS	
SHEET NUMBER:	REVISION
S302	0