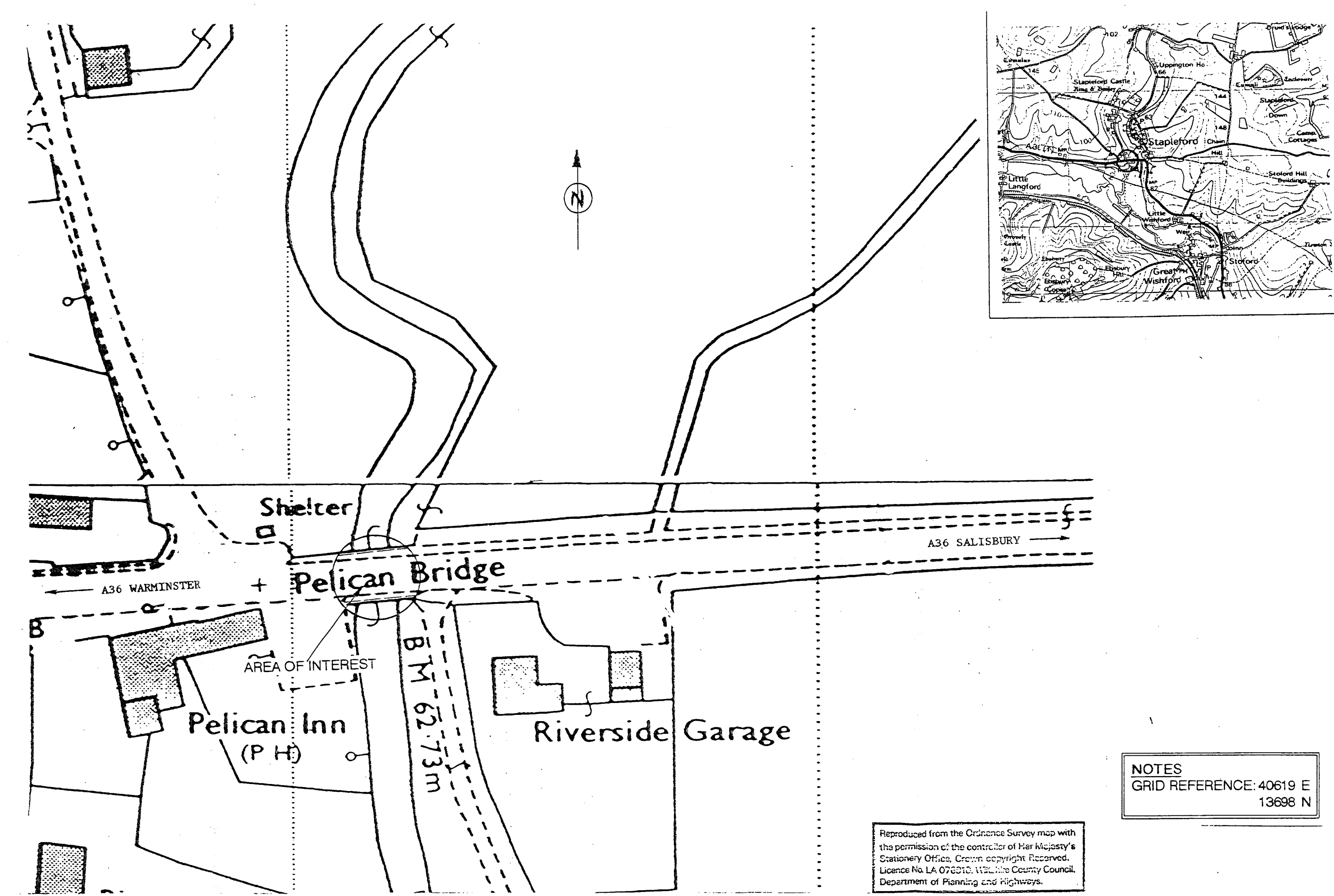
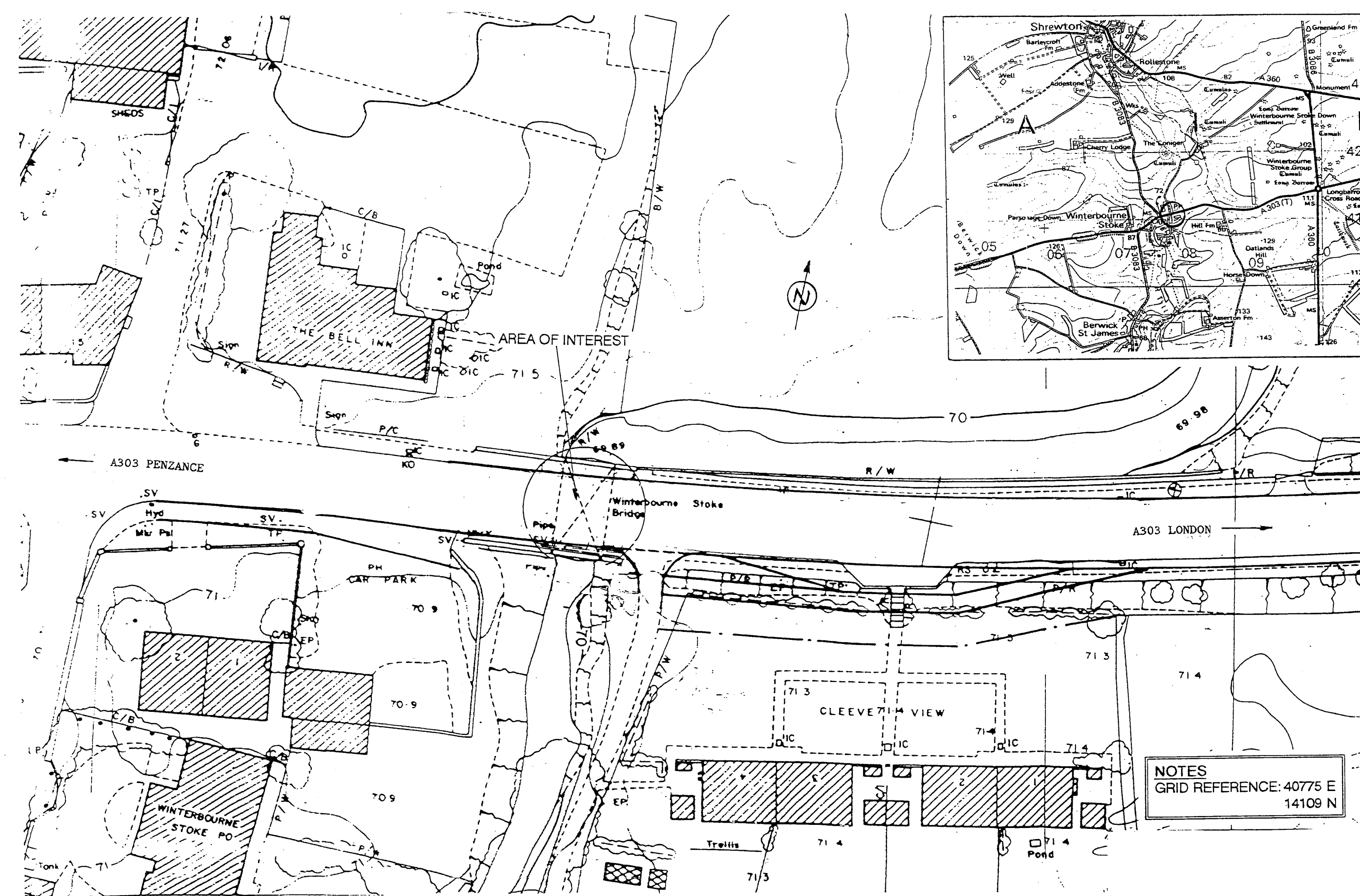


LANDFORD BRIDGE

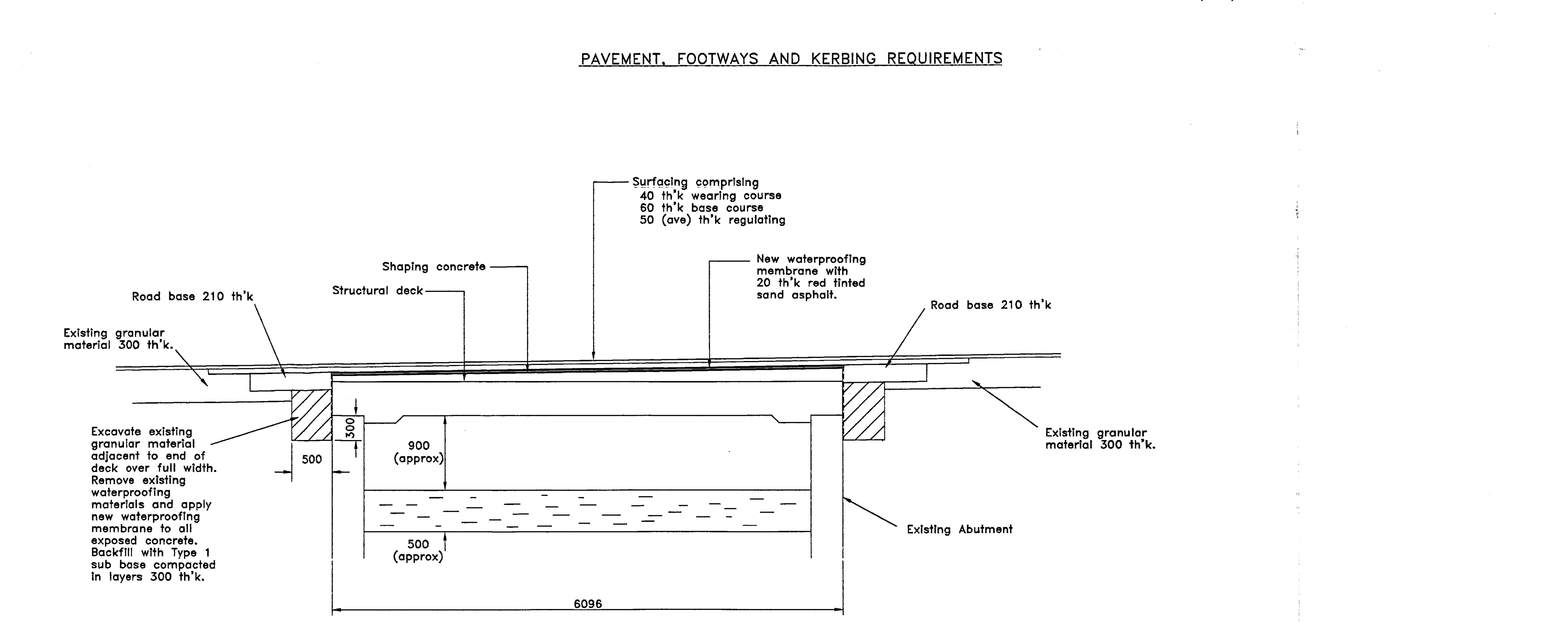
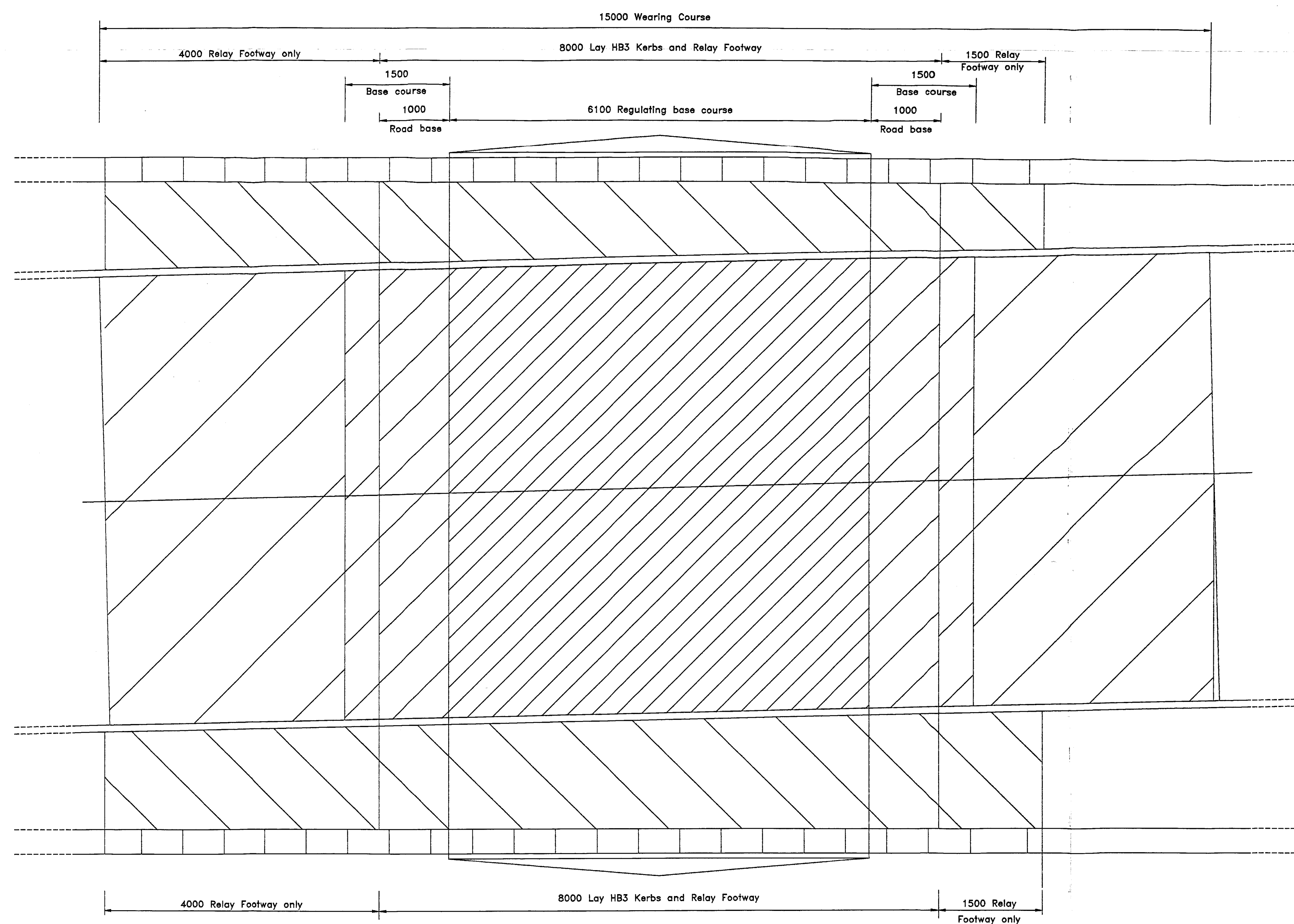
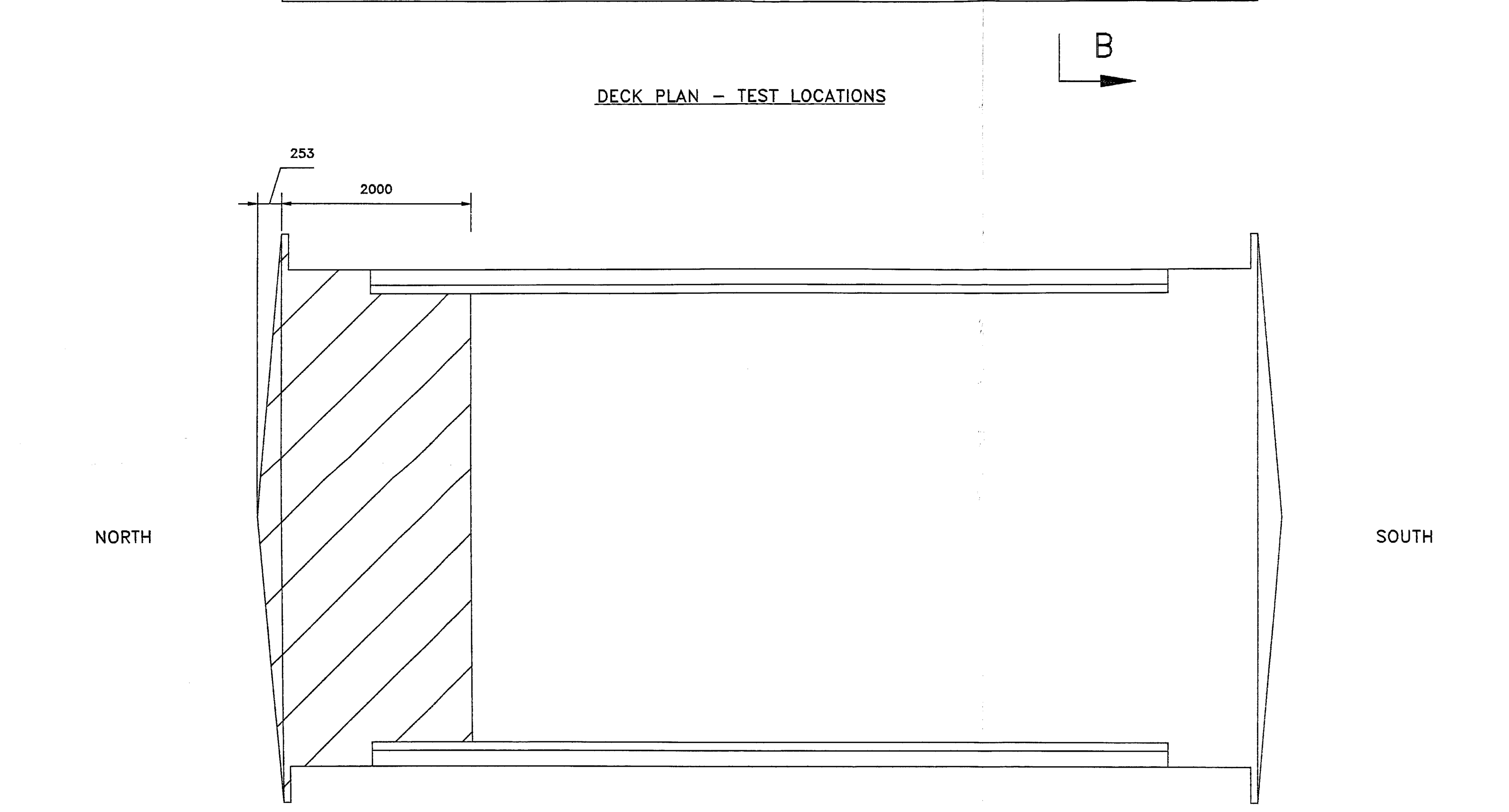
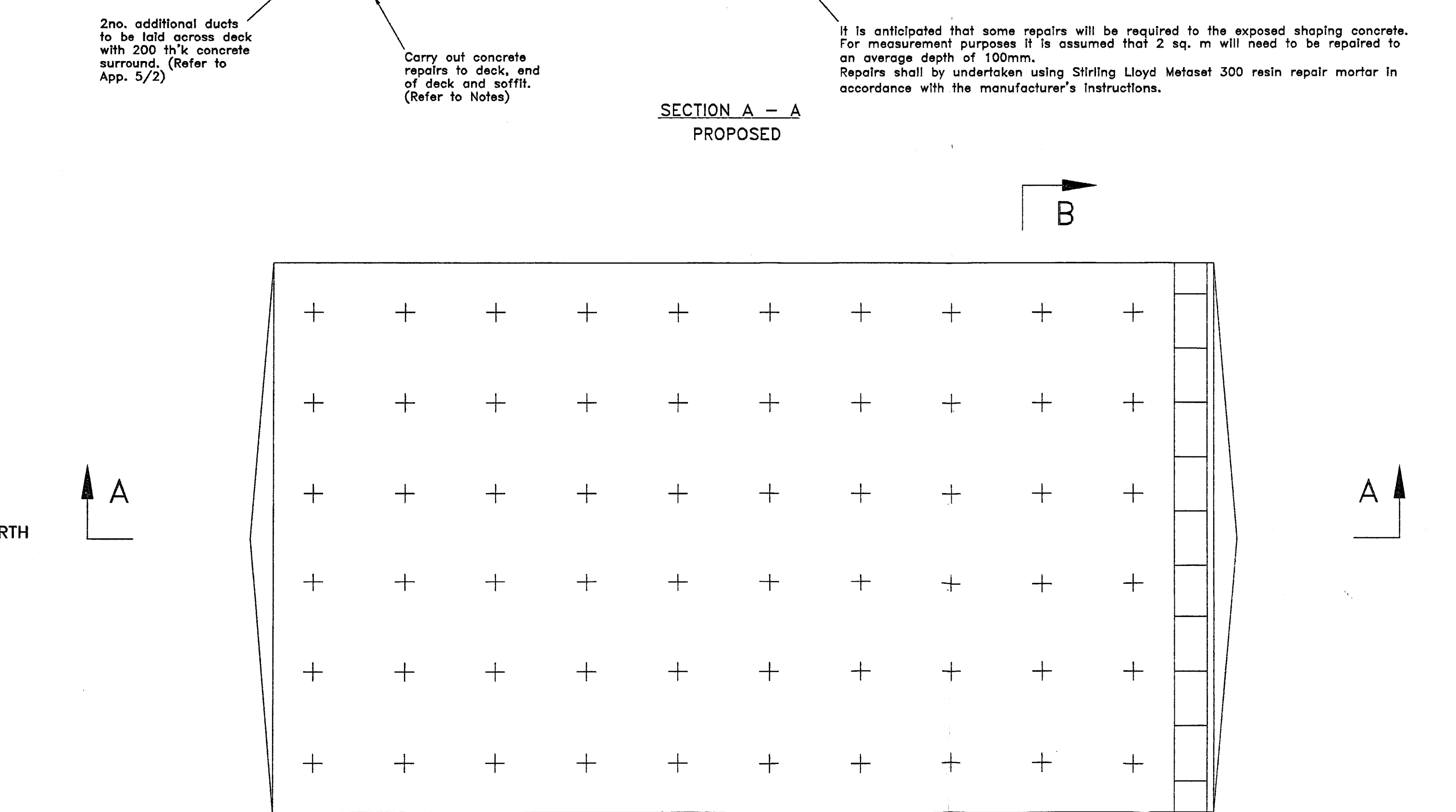
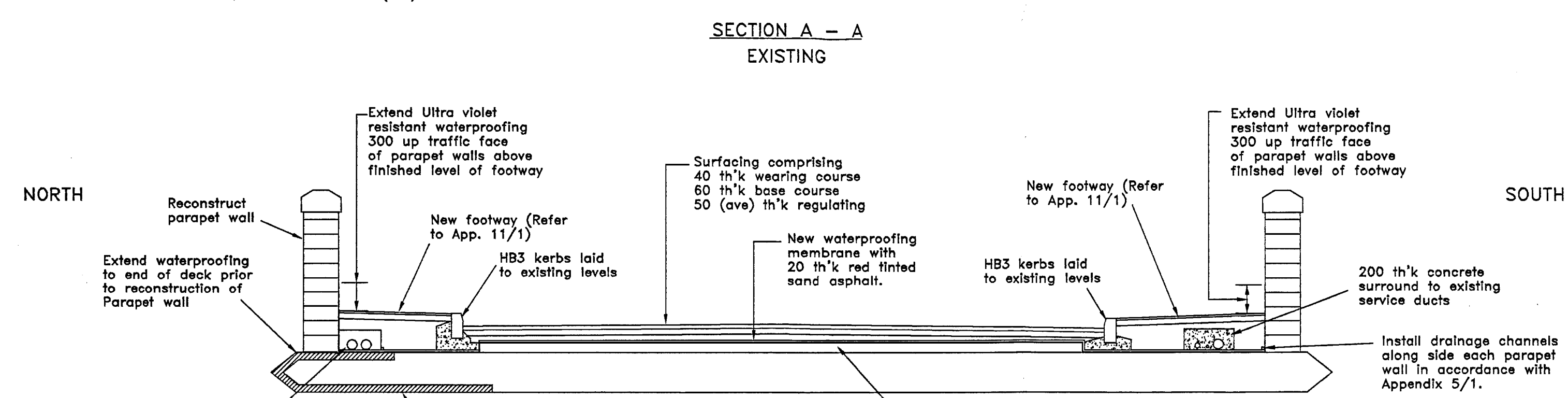
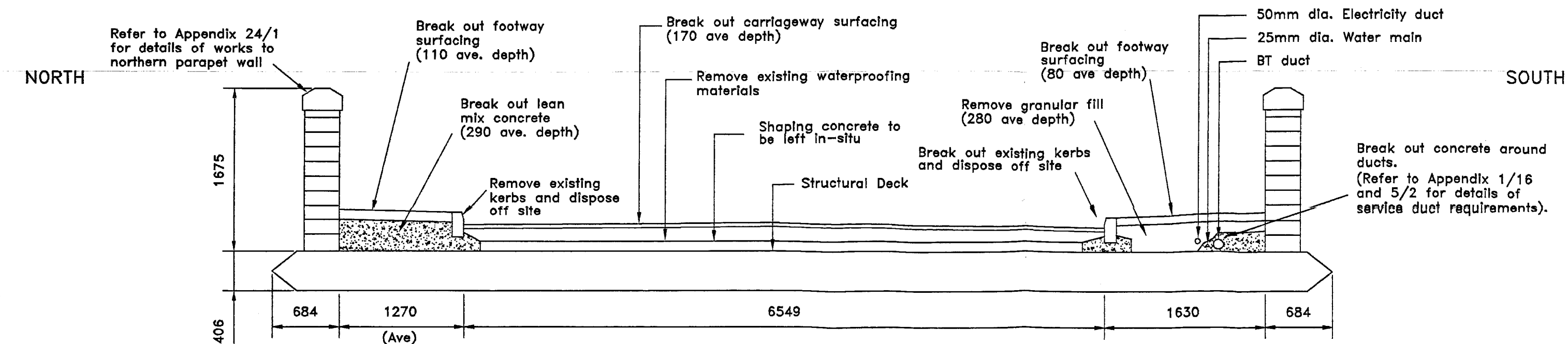


PELICAN BRIDGE



WINTERBOURNE STOKE BRIDGE

- KEY
- BRITISH TELECOM.
 - BRITISH GAS.
 - / - / - WATER (Wessex).
 - WATER (Bournemouth & West Hampshire).
 - SOUTHERN ELECTRIC.



NOTES

GENERAL

- The work on Winterbourne Stoke Bridge will comprise:
 - (i) removal of existing waterproofing materials by grit blasting.
 - (ii) testing of deck concrete.
 - (iii) concrete repairs involving the removal and replacement of northern parapet wall.
 - (iv) replacement of deck waterproofing, surfacing and kerbs.
 - (v) application of Silane to exposed concrete and masonry.

CONCRETE TESTING

- On completion of the removal of surfacing and waterproofing materials concrete tests shall be carried out at the locations shown.
- Half-cell potential and depth of cover measurements shall be recorded at each grid position shown.
- Resistivity testing shall be carried out at 10 no. grid positions determined by the Engineer.
- 8 no. chloride ion content tests shall be carried out at locations to be determined by the Engineer. For each chloride test 4 no. samples shall be taken at increments of 25mm to a depth of 100mm. The top 5mm of samples shall be discarded. The chloride ion contents of each sample shall be measured by weight of cement, assuming a cement content of 315 kg/cu. m.
- Depth of cover measurements shall be taken at the point of minimum cover adjacent to each grid point.
- 8 no. carbonation tests shall be carried out at locations to be determined by the Engineer.
- A hammer survey shall be undertaken to determine areas of delaminating concrete. The survey will be undertaken by sounding the surface of the concrete on a 300mm square grid using a 1kg club hammer. Where a hollow area is detected, the extent of delamination shall be determined by local sounding and marked on the concrete surface.
- Results of the testing shall be presented to the Engineer at least two days prior to application of waterproofing. See note 11 below.
- All testing shall be carried out by an NAMAS approved testing company.

TEST REPORTS

- Concrete test results shall be presented in the form of an unbound report giving the following details:
 - date and location of testing
 - test methods used
 - no. of 100 x 150mm photographs of each test area
 - test results
 - brief interpretation of results
- 3 no copies of the report shall be provided for the Engineer.

WATERPROOFING

- Existing waterproofing materials shall be removed by grit-blasting, scabbling, flailing or mechanical means. Measures shall be taken to prevent debris from falling into the river or river banks below. Surfaces to be waterproofed shall be prepared in accordance with the manufacturers instructions.
- Concrete surfaces shall be waterproofed with a spray applied two pack, two coat acrylic resin bridge deck waterproofing system complying with Department of Transport requirements and Appendices 20/1 and 20/2.
- Prior to application of waterproofing the existing concrete shall be primed with a primer recommended by the waterproofing manufacturer.
- Prior to laying of red tinted sand asphalt a tack coat shall be applied to the waterproofing in accordance with the manufacturers instructions.
- Exposed waterproofing on the traffic face of masonry parapets shall be ultraviolet resistant. The colour of the upper coat shall match that of the adjacent masonry.

CONCRETE REPAIRS

- Where defective shaping concrete or concrete on the upper surface of the deck is identified the defective area shall be broken out to sound concrete and repaired with Stirling Lloyd Metaset 300 repair material.
- Structural concrete on the side faces and soffit of the deck shall be repaired in accordance with the requirements of BS27/86. Refer to Appendix 17/1.
- Concrete finishes shall be as follows:
 - Upper faces - U3
 - Side faces - U4
 - Soffits - Steel trowelled

LEVEL CONTROL

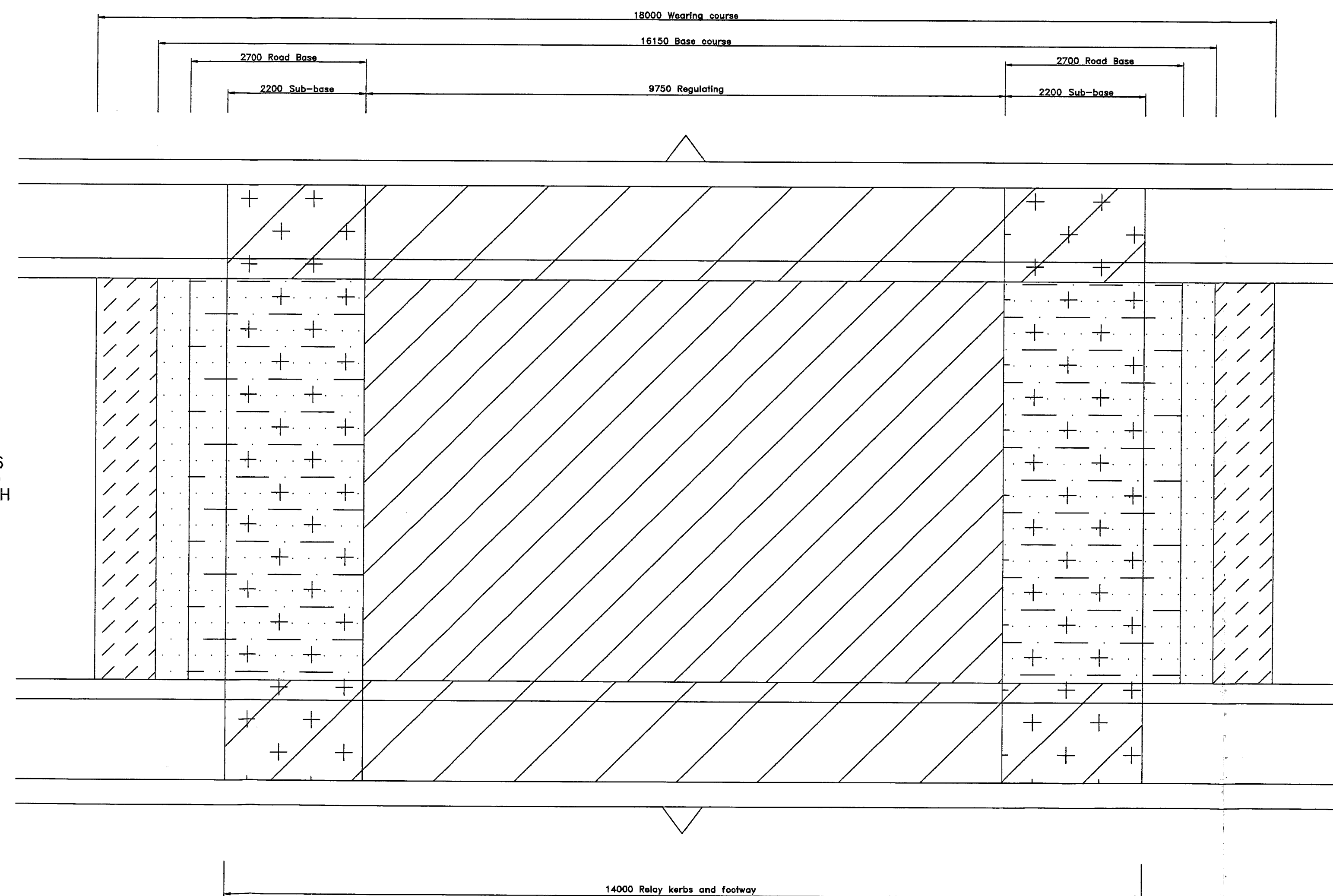
- The Contractor shall carry out a pre-works survey of the carriageway, footways and kerbs so as to ensure that the line and levels of the new works is as existing.

SILANE

- Silane to be applied to all exposed concrete of abutments, southern end and soffit of deck, and masonry parapets in accordance with Clause 1709 of the Specification. Particular precautions shall be taken to prevent contamination of watercourses.

 DT Gardner M.Sc., C.Eng., F.I.C.E., F.I.H.T.	Project:	Client: Director Southern Network Management Division Federated House, London Road, Dorking, Surrey, RH4 1SD - AN EXECUTIVE AGENCY OF THE DEPARTMENT OF TRANSPORT	Consultant: A DIVISION OF PLANNING & HIGHWAYS	<table border="1"> <tr> <td>0</td> <td>Sep 95</td> <td>MGA</td> <td>CPR</td> <td>ORIGINAL</td> </tr> <tr> <td>Rev.</td> <td>Date</td> <td>Drawn by</td> <td>Chkd.</td> <td>Revision</td> </tr> </table>	0	Sep 95	MGA	CPR	ORIGINAL	Rev.	Date	Drawn by	Chkd.	Revision
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Scale: 1:40				Drawing No. 8219/1/D005/0										

TRUNK ROAD BRIDGE REWATERPROOFING 95/96



1. The work on Pelican Bridge will comprise:
 - (i) removal of existing waterproofing materials by grit blasting.
 - (ii) testing of deck concrete.
 - (iii) concrete repairs involving the removal and replacement of northern parapet wall.
 - (iv) replacement of deck waterproofing, surfacing and kerbs.
 - (v) application of Silane to exposed concrete and masonry.

2. On completion of the removal of surfacing and waterproofing materials concrete shall be exposed to the following tests:
3. Half-cell potential and depth of cover measurements shall be recorded at each of the following locations:
4. Resistivity testing shall be carried out at 10 no. grid positions determined at the Engineer's discretion.
5. No. 4 chloride ion content tests shall be carried out at locations to be determined by the Engineer.
6. 100mm depth cover measurements shall be taken at 10 locations. The depth of cover shall be taken at increments of 25mm to a depth of 100mm; the top 50mm shall be measured by depth gauge and the remaining 50mm by weight of cement, which shall be measured by weight of cement, assuming a cement content of 115 kg/m³ of concrete.
7. Depth of cover measurements shall be taken at the point of minimum cover depth to be determined by the Engineer.
8. No. 4 carbonation tests shall be carried out at locations to be determined at the Engineer's discretion.
9. A hammer survey shall be undertaken to determine areas of delaminating concrete. The hammer shall be a Schmidt Hammer, or equivalent, or a 'Club Hammer' on a 300mm range spring grid using a 1kg club hammer. Where a hollow sound is detected, the area shall be marked on the concrete surface.
10. Results of the testing shall be recorded on a form provided at least two days after completion of the testing.
11. All testing shall be carried out by an NRMAS approved testing company.

10. Concrete test results shall be presented in the form of an unbound report giving the following details:

- date and location of testing
- test methods used
- 4 no. 100 x 150mm photographs of each test area
- test results
- brief interpretation of results

3 no copies of the report shall be provided for the Engineer.

11. Existing waterproofing materials shall be removed by grit-blasting, scabbling, felling or mechanical means. Measures shall be taken to prevent debris from falling into the river or river banks below. Surfaces to be waterproofed shall be prepared in accordance with the manufacturers instructions.
12. Concrete surfaces shall be waterproofed with a spray applied two pack, epoxy resin based system. The waterproofing system complying with the Department of Transport's resistance to water penetration test D/2.
13. Prior to application of waterproofing the existing concrete shall be primed with a primer recommended by the waterproofing manufacturer.
14. Prior to laying of red tinted sand asphalt a tack coat shall be applied to the waterproofing in accordance with the manufacturers instructions.
15. Exposed waterproofing on the traffic face of masonry parapets shall be finished with a resin based sealant of a colour of the upper coat match that of the adjacent masonry.

16. Where defective shaping concrete or concrete on the upper surface of the deck is identified the defective area shall be broken out to sound concrete and repaired with Sifiling Lloyd Matosef 300 repair material.
17. Structural concrete on the side faces and soffit of the deck shall be repaired in accordance with the requirements of BD27/86. Refer to Appendix 17/1.
18. Concrete finishes shall be as follows:
 - Upper faces - U3
 - Side faces - U4
 - Soffits - Steel trowelled

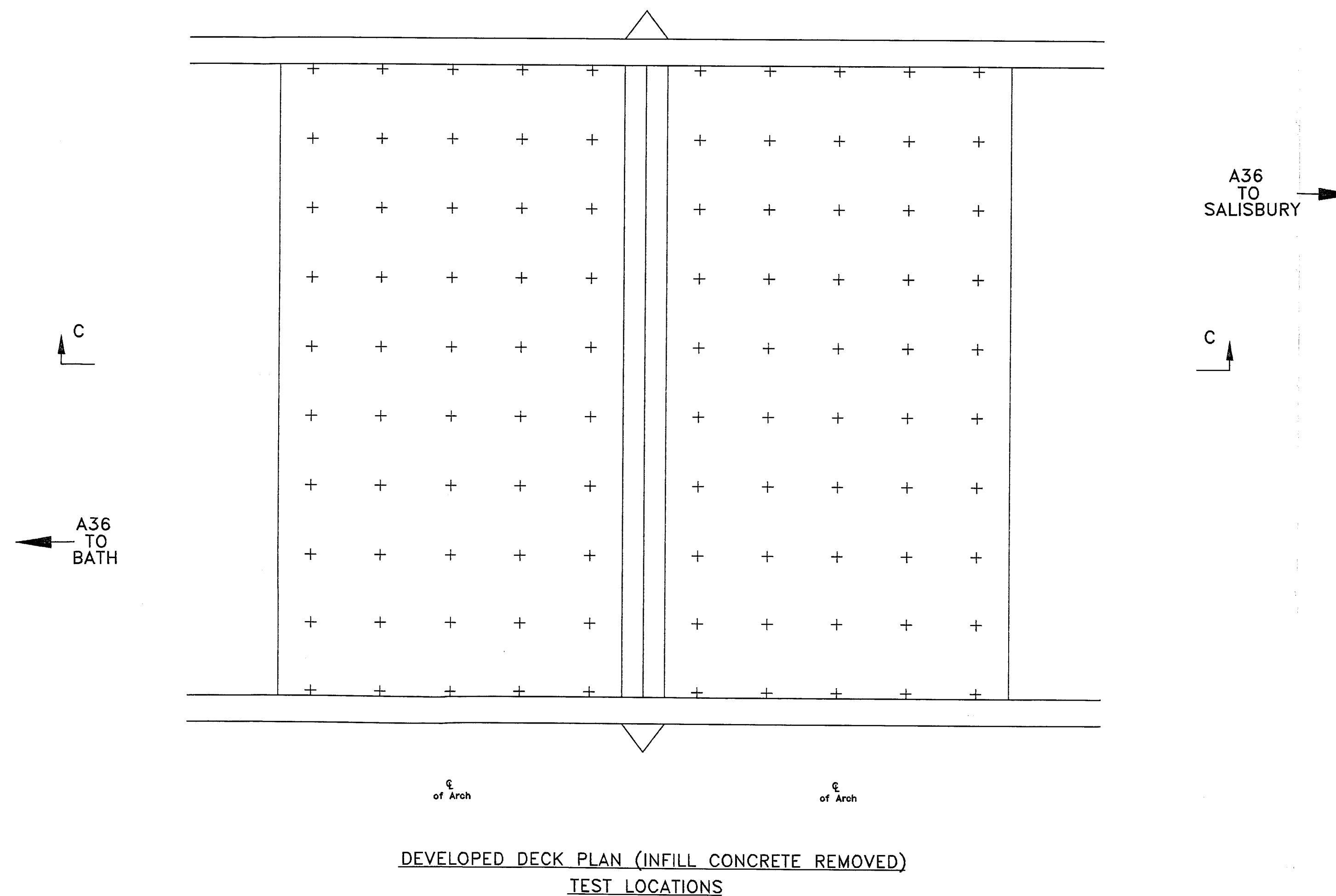
19. The Contractor shall carry out a pre-works survey of the carriageway, footways and kerbs so as to ensure that the line and levels of the new works is as existing.

20. Silane shall be applied to all exposed concrete faces of abutments and arch soffits, and to the masonry parapets in accordance with Clause 1709 of the Specification. Particular precautions shall be taken to prevent contamination of watercourses.

21. Trial holes indicate that the mass infill concrete has deteriorated. It may be necessary to support the excavated face adjacent to the live carriageway during works on the first half of the bridge. A provisional item has been included in the Bill of Quantities for this purpose. The Contractor will be required to submit to the Engineer a temporary works design for the support together with a Clause 8A Certificate.

APPLICATION OF WATERPROOFING TO FRESH CONCRETE

22. New concrete shall cure for a minimum of 48 hours before application of waterproofing.
New concrete shall be treated with a special primer in accordance with the manufacturers instructions.

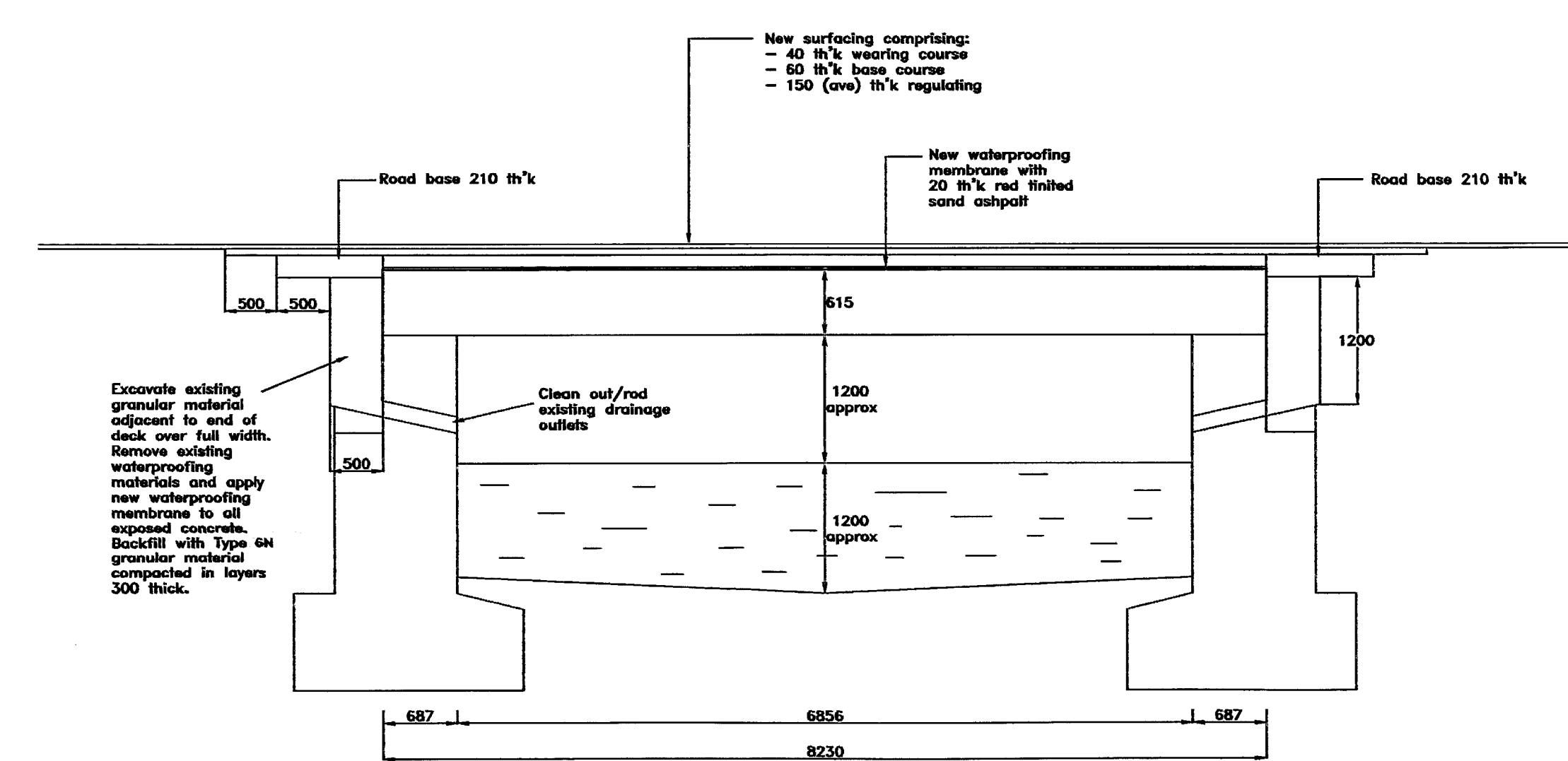
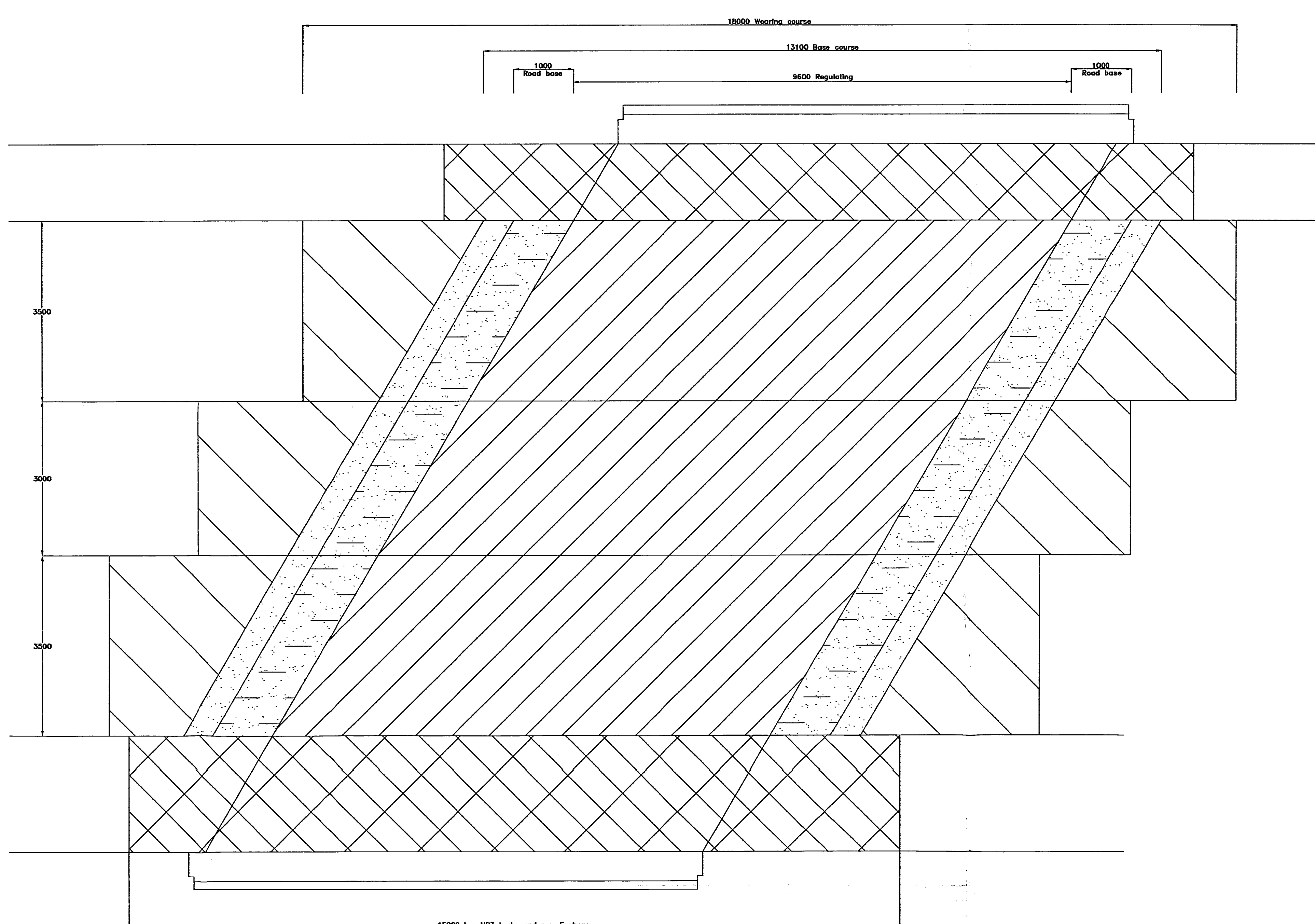
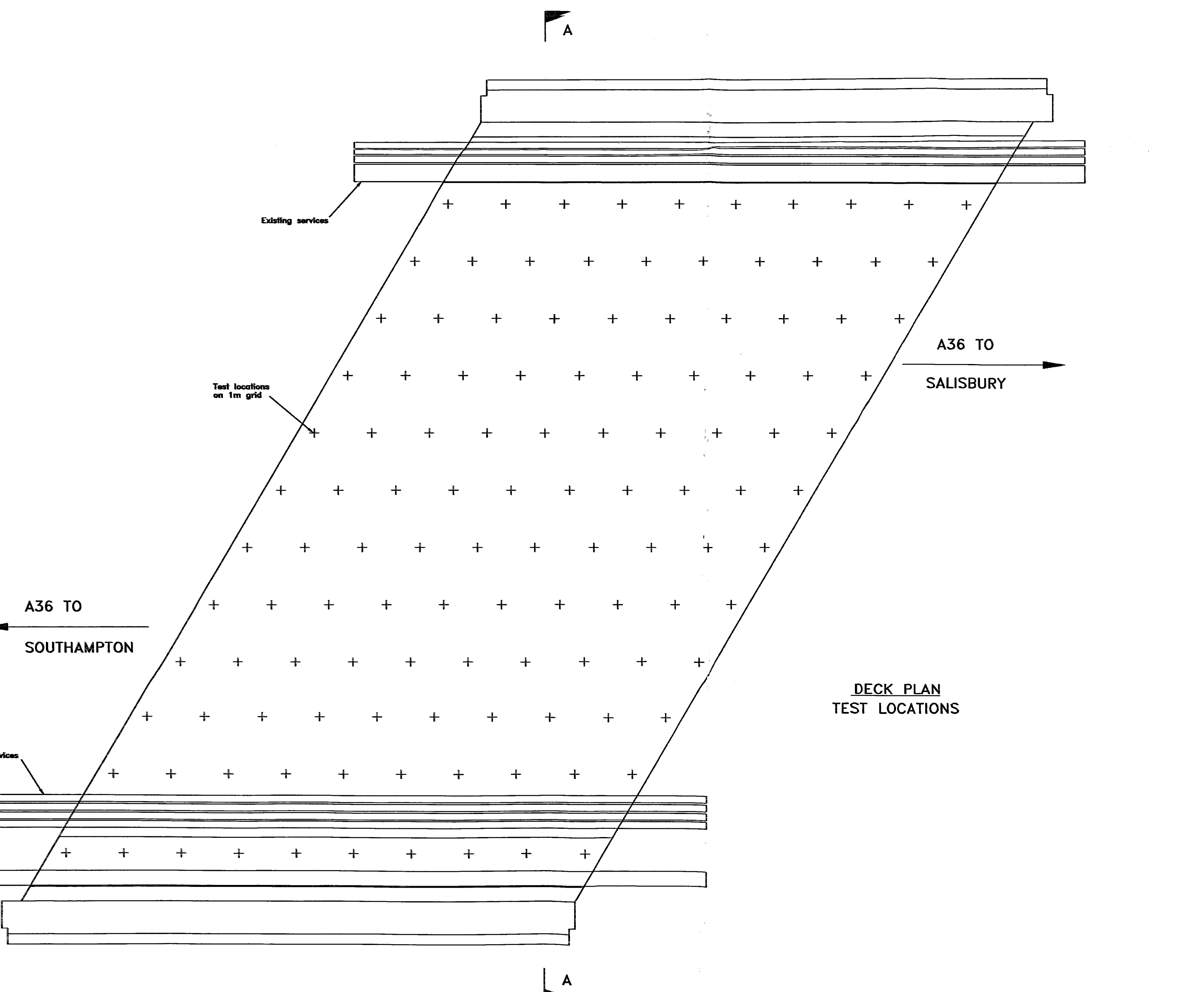
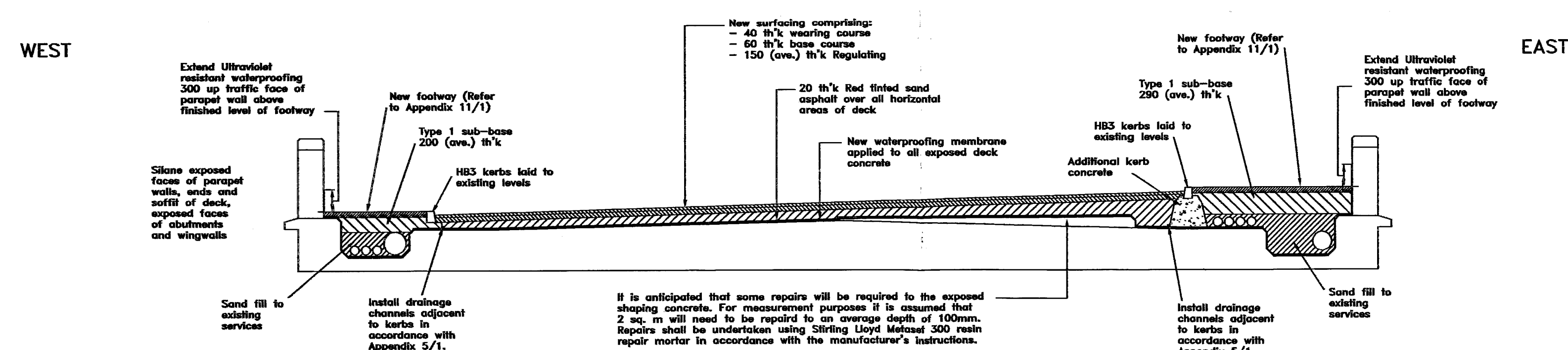
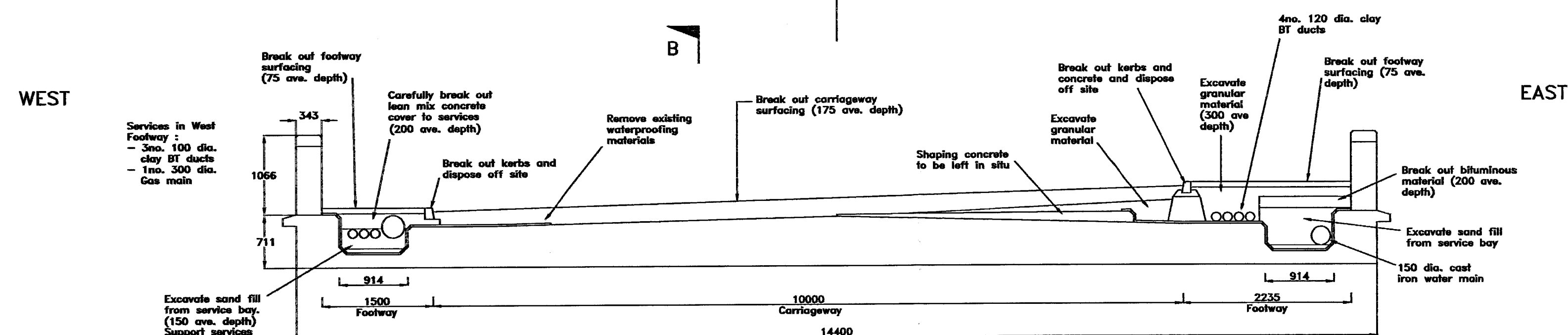


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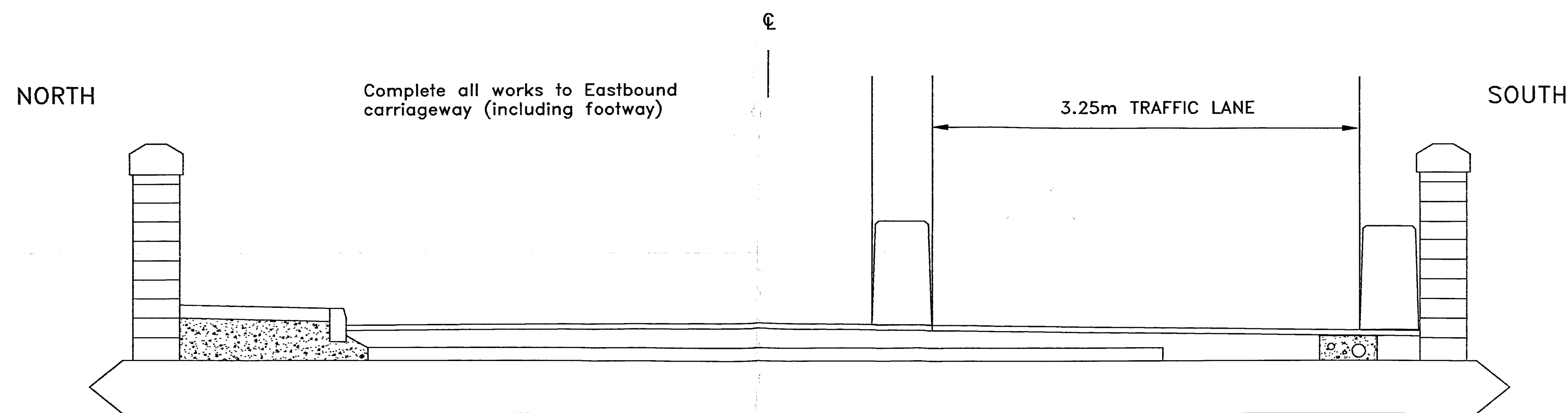
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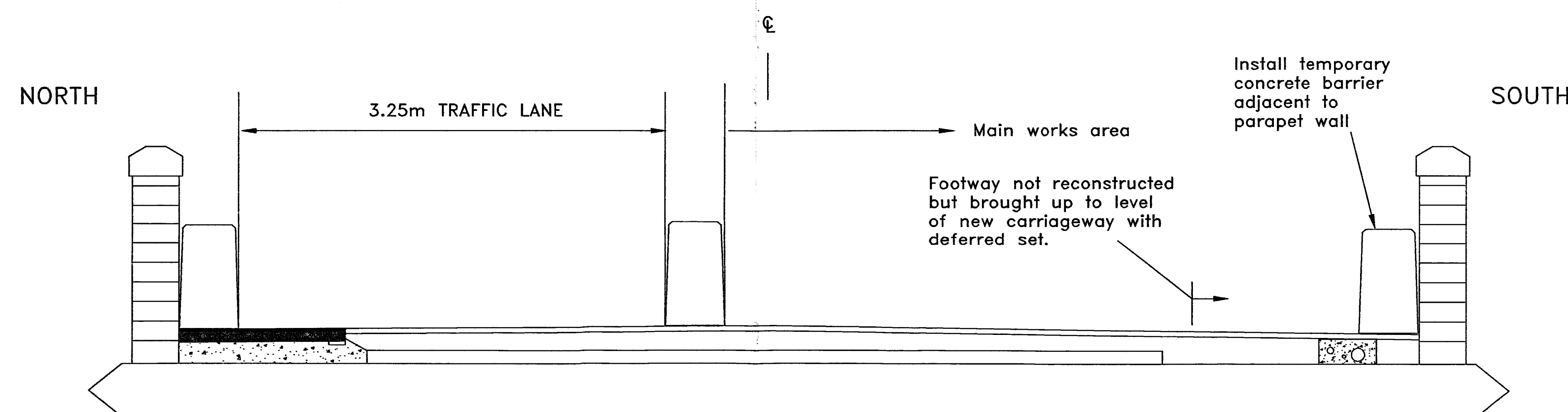
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PELICAN BRIDGE	
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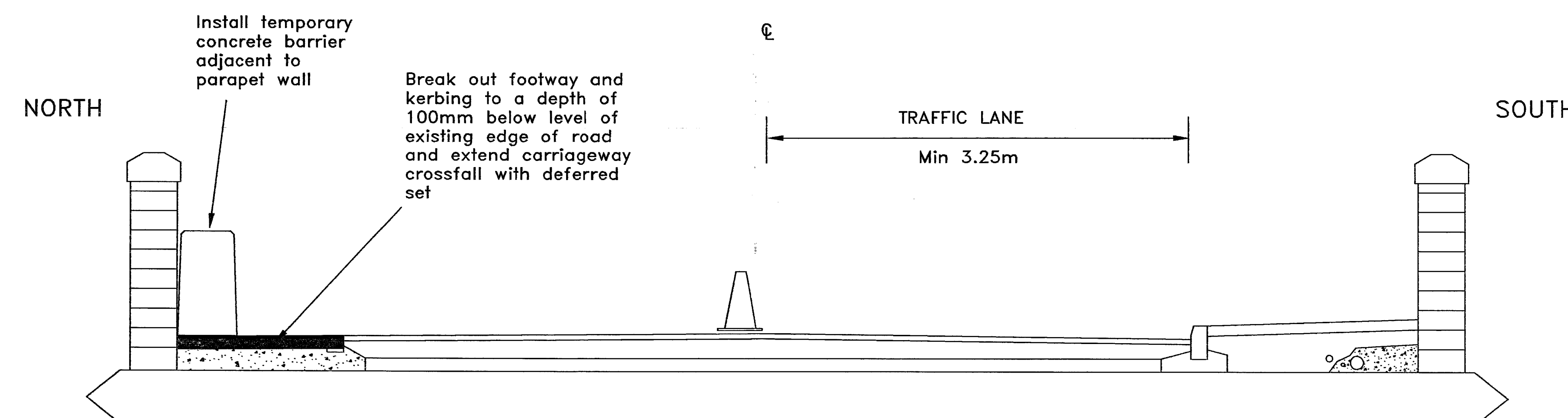
- NOTES**
- GENERAL**
- The work on Landford Bridge will comprise:
 - removal of existing waterproofing materials by grit blasting.
 - testing of deck concrete.
 - concrete repairs involving the removal and replacement of northern parapet wall.
 - replacement of deck waterproofing, surfacing and kerbs.
 - application of Glime to exposed concrete and masonry.
- CONCRETE TESTING**
- On completion of the removal of surfacing and waterproofing materials concrete tests shall be carried out at the locations shown.
 - Test results and depth of cover measurements shall be recorded at each grid position shown.
 - Initially testing shall be carried out at 10 no. grid positions determined by the Engineer.
 - 8 no. chloride ion content tests shall be carried out at locations to be determined by the Engineer. For each chloride test 4 no. samples shall be taken at increments of 20mm to a depth of 100mm. The top 5mm of samples shall be discarded. The chloride ion contents of each sample shall be measured by weight of cement, assuming a cement content of 315 kg/cu. m.
 - Depth of cover measurements shall be taken at the point of minimum cover adjacent to each grid point.
 - 8 no. carbonation tests shall be carried out at locations to be determined by the Engineer.
 - A hammer survey shall be undertaken to determine areas of delaminating concrete. The survey will be undertaken by scoring the surface of the concrete on a 500mm square grid using a 1kg club hammer. Where a hollow sound is detected, the extent of delamination shall be determined by local sounding and marked on the concrete surface. Results of the testing shall be presented to the Engineer at least two days prior to application of waterproofing. See note 11 below.
 - All testing shall be carried out by an NMSA approved testing company.
- TEST REPORTS**
- Concrete test results shall be presented in the form of an unbound report giving the following details:
 - date and location of testing
 - test methods used
 - 4 no. 100 x 150mm photographs of each test area
 - test results
 - brief interpretation of results
- 3 no copies of the report shall be provided for the Engineer.
- WATERPROOFING**
- Existing waterproofing materials shall be removed by grit-blasting, scaffolding, filling or mechanical means. Measures shall be taken to prevent debris from falling into the river or onto the deck below. Surfaces to be waterproofed shall be prepared in accordance with the manufacturer's instructions.
 - Concrete surfaces shall be waterproofed with a spray applied two pack, two coat acrylic resin bridge deck waterproofing system complying with Department of Transport requirements and Appendices 20/1 and 20/2.
 - Prior to application of waterproofing the existing concrete shall be primed with a primer recommended by the waterproofing manufacturer.
 - Prior to laying of red filled sand asphalt a tack coat shall be applied to the waterproofing in accordance with the manufacturer's instructions.
 - Exposed waterproofing on the traffic face of masonry parapets shall be ultraviolet resistant. The colour of the upper coat shall match that of the adjacent masonry.
- CONCRETE REPAIRS**
- Where defective shaping concrete or concrete on the upper surface of the deck is identified the defective area shall be broken out to sound concrete and repaired with Sirling Lloyd Mosaic 300 repair material.
 - Structural concrete on the side faces and soffits of the deck shall be repaired in accordance with the requirements of BS2786. Refer to Appendix 17/1.
 - Concrete finishes shall be as follows:
 - Upper faces - U5
 - Side faces - U4
 - Soffits - Steel trowelled
- LEVEL CONTROL**
- The Contractor shall carry out a pre-works survey of the carriageway, footways and kerbs so as to ensure that the line and levels of the new works is as existing.
- SILANE**
- Silane to be applied to all exposed concrete of abutments and deck soffits, and to masonry parapets in accordance with Clause 1709 of the Specification. Particular precautions shall be taken to avoid contamination of watercourses.



STAGE 3 – REWATERPROOF EASTBOUND CARRIAGEWAY



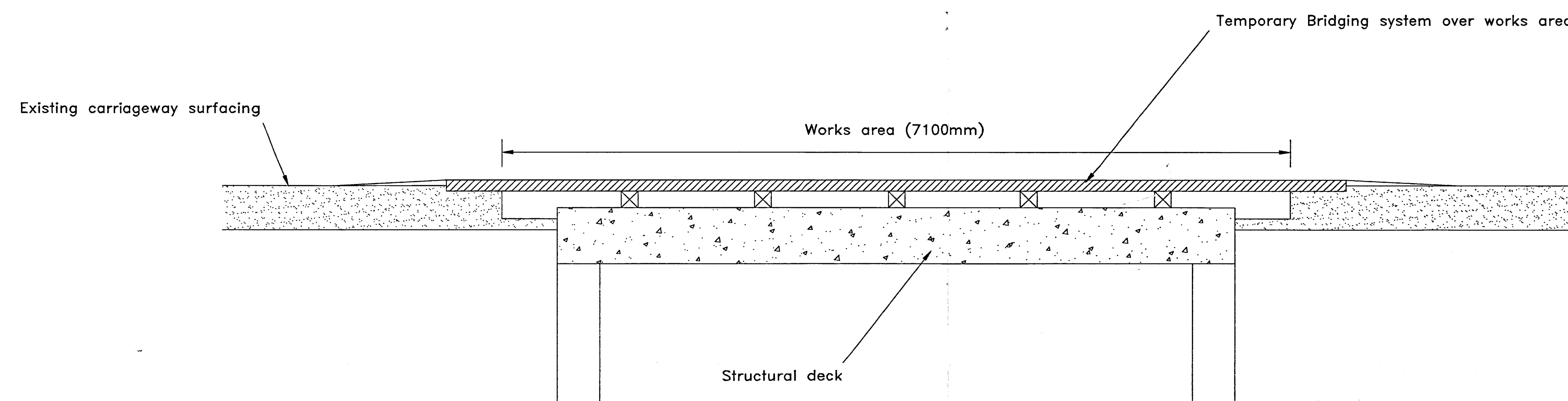
STAGE 2 – REWATERPROOF WESTBOUND CARRIAGEWAY



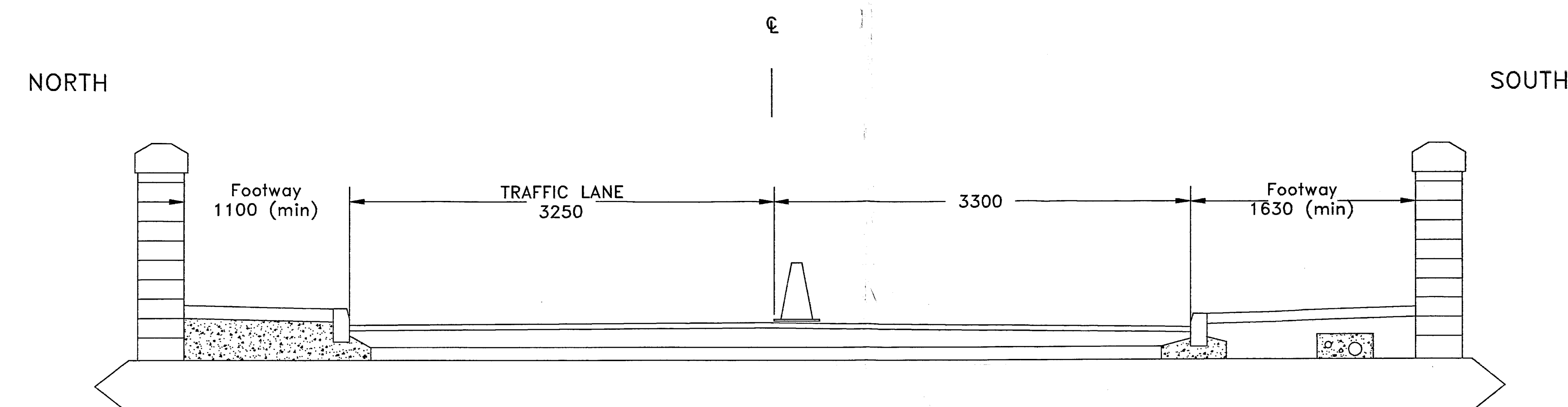
STAGE 1 – REMOVE NORTHERN FOOTWAY

NOTES

1. Refer to Appendix 1/17 for details of traffic safety and management requirements.
2. Single lane traffic operation will only be permitted between 1900 and 0700 hours Monday to Thursday.
3. All lane restrictions shall be removed between 0700 and 1900 hours.
4. To allow two lane traffic operation the Contractor shall provide temporary bridging over the works area. The Contractor shall submit to the Engineer at the commencement of the works a Clause 8A Certificate for the temporary bridging.
5. During single lane traffic operation a minimum running lane width of 3.25m shall be maintained at all times.
6. The Contractor shall take measures to ensure that vehicles in excess of 3.25m wide are prevented from reaching the site.
7. Concrete barriers shall be installed as detailed in HCD Drawing No. GA/201 to protect work force and bridge parapets.
8. Access to properties adjacent to the site shall be maintained at all times.
9. The Contractor shall give at least 24 hours notice to the Engineer before installation or alteration of traffic safety and management measures.
10. The Contractor shall ensure that all members of his staff including sub contractors properly wear Class A High Visibility jackets/coats to BS6629: 1985.
11. All traffic management shall be carried out by an approved traffic management contractor.



SUGGESTED TEMPORARY BRIDGING DETAILS



STAGE 4 – REINSTATE SOUTHERN FOOTWAY

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