

ESSEX COUNTY COUNCIL

**RINGWAY JACOBS | ESSEX COUNTY
COUNCIL**

**DESIGN SERVICES
HIGHWAYS (STRUCTURES)**

**TECHNICAL APPROVAL OF
THIRD PARTY STRUCTURES**

NOTES FOR GUIDANCE FOR APPLICANTS

CONTENTS

Notes for Guidance for Applicants

1.0	Design Approval.....	Page 1
2.0	Construction Stage.....	Page 5
3.0	Information Required for Record Purposes.....	Page 5
4.0	Provision of Statutory Undertakers Services.....	Page 6
5.0	Legally Enforceable Requirements of Other Authorities.....	Page 7
6.0	General Guidelines.....	Page 7
7.0	Design Guidelines.....	Page 8

Appendix A – Specification for As Constructed Drawings

Appendix B – Specification for Structure Maintenance Manual

Appendix C – Guidance for the Production of an AIP

Sample AIP.....	Page C2
-----------------	---------

Appendix D – Guidance for the Production of Design & Check Certificates

Design & Check Certificate (Category 0 structures that have not required an AIP).....	Page D2
Design & Check Certificate (Cat. 0 and 1 Structures).....	Page D4
Design & Check Certificate (Category 2 Structures).....	Page D6
Design Certificate (Category 3 Structures).....	Page D8
Check Certificate (Category 3 Structures).....	Page D10

Appendix E - Guidance for the Production of Construction Compliance Certificates

Construction Compliance Certificate (Structures to be adopted by Essex County Council).....	Page E2
Construction Compliance Certificate (Structures Remaining in Private Ownership).....	Page E4

Appendix F – Guidance for the Production of a DR

Sample DR.....	Page F2
----------------	---------

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS | ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

TECHNICAL APPROVAL REQUIREMENTS FOR HIGHWAY STRUCTURES WHICH ARE TO BE DESIGNED AND CONSTRUCTED BY THIRD PARTIES, OVER, UNDER OR ADJACENT TO THE HIGHWAY

NOTES FOR GUIDANCE FOR APPLICANTS

Eurocode V14

1 Design Approval

- 1.1 Essex County Council is the Technical Approval Authority (TAA) for all structures, which are to be designed and constructed over, under or adjacent to highways for which Essex County Council are, or are to become, the Highway Authority. The Council's approval to the design of structures is subject to the general principles and procedure laid out in the Highways England's Standards for Highways DMRB CG 300, as amended below.

Essex County Council has employed consulting engineers, Ringway Jacobs, to administer this procedure and to make recommendations. The address of Ringway Jacobs is:

Ringway Jacobs | Essex County Council
Seax House,
2nd Floor
Victoria Road South
Chelmsford
Essex CM1 1HQ

Initial point of contact for third-party structures matters:

Name: [Fereshteh Sanaei](mailto:Fereshteh.Sanaei@essexhighways.org)
Tel: [07849097220](tel:07849097220)
Email: Fereshteh.sanaei@essexhighways.org
Copy Email to: Stuctures.Thirdparties@essexhighways.org
Ashley.game@essexhighways.org

It is recommended that the applicant obtains a copy of CG 300 which is available from:

The TSO Shop
Email: esupport@tso.co.uk
Tel: [+44 \(0\)333 200 2425](tel:+44(0)3332002425)
Text-phone: [+44 \(0\)333 202 5077](tel:+44(0)3332025077)
Online: <https://www.tsoshop.co.uk/Building-and-Infrastructure/Highways-England>

Online viewing of CG 300 and all other Highways England Standards for Highways that comprise the Design Manual for Roads & Bridges (DMRB) is available at:

<https://www.standardsforhighways.co.uk/ha/standards/index.htm>

- 1.2 The applicant is required to get involved in early liaison with the TAA at the Pre-Application Stage, to confirm the category of the structure and discuss the TAA requirements.
- 1.3 Following the agreement of structural form with the TAA and before carrying out technical approval, details of the structures are to be submitted to the appropriate planning authority to obtain planning consent. Written confirmation of planning approval shall be supplied to Development Management.
- 1.4 Technical approval (TA) procedures shall be applied to all proposals, including third party proposals and private developments, that are:
 - within the highway boundary.
 - outside the highway boundary, where the structures are to be adopted by the Overseeing Organization.
 - outside the highway boundary where works can affect the highway or highway structure; and,
 - outside the highway boundary where works can affect the safety of the highway user.

Note: Proposals can relate to construction, widening, assessment, improvement, repair (where structural integrity is implicated), and demolition.

- 1.5 A structure requiring Technical Approval is defined as being over, under, or adjacent to a highway and:
 - It is a bridge, culvert or tunnel or a drainage structure (e.g., chamber, cover slab, shaft, manhole, and soakaway) that has a clear span or internal diameter equal to or greater than 0.9m. (Please note structures <1.2m span will not be maintained by the Structures Team).
 - It is a retaining wall, or headwall, with a retained height from finished ground level in front of the wall to the top of the wall or to the top of the retained embankment, equal to or greater than 1.5m.
 - It is a noise attenuation barrier exceeding 1.8m high (standard ECC/Dept. of Transport barriers would not require Technical Approval).
 - Traffic sign/signal posts equal to or greater than 7.0m in height.
 - It is a high mast of greater than 20.0m in height for lighting/lighting systems and/or television cameras.
 - It is a sign/signal gantry.
 - It is a canopy or building overhanging the highway.
 - It is a basement beneath or adjacent to the highway.
 - It is designated by the County Council to be a highway structure because of its particular construction and status.
 - It is a modification or addition to an existing structure as defined above.
 - It is a buried, water attenuation structure within or adjacent to the highway that has a clear span equal or greater than 0.9m (Please note structures <1.2m span will not be maintained by the Structures Team).
 - Safety critical fixings (as defined in CD 372 [Ref 3.N]).

Structures retaining the highway, which are located **more than 6m from the highway** and are **less than 4m** in height shall not require TA. However, if there is no physical barrier (RRS), highway loading would be applicable to the back of the retaining wall and Technical Approval would be required.

- 1.6 The applicant shall submit to Ringway Jacobs the name of one person, who, for the purposes of technical approval, shall be nominated as coordinator for the design and construction. Ringway Jacobs will expect to deal only with the nominated co-ordinator.
- 1.7 The applicant shall submit to Ringway Jacobs the name of the principal designer for the Design stage.
- 1.8 In the case of a structure to be adopted, the applicant should note that Essex County Council is the ultimate owner of the structure.
- 1.9 Technical Approval for a highway structure is a certification process that follows several distinct stages:
 - a. *Acceptance of the Approval in Principle (AIP) or Design Rationale (DR) document. These documents agree the form of the proposed structure, the principal details, the traffic loadings, the technical standards to which it will be designed to and the category of the design check. A General Arrangement drawing should be included in the AIP or DR.*
 - b. *Acceptance of a Design Certificate.*
 - c. *Acceptance of a Check Certificate. Or in some circumstances a combined Design and Check Certificate.*
 - d. *Acceptance of detailed design submission, including a copy of check calculation and "For Construction" drawings.*
 - e. *Acceptance of a Construction Compliance Certificate including submission of as constructed drawings and a Maintenance Manual incorporating the Health and Safety File.*

The applicant should note that a review of the applicant's calculations by Essex County Council or Ringway Jacobs **is not included** in the Technical Approval process in the first instance. However, Ringway Jacobs may request that the designer shall submit calculations for review at any time during the Technical Approval process. Note that for approval of the design and check certificate, submission of designer's calculations will be required for **record purposes** for all structures to be adopted by the County Council.

- 1.10 Initially, the applicant shall submit to Ringway Jacobs for their observations, a copy of a draft AIP or DR document (as appropriate) and associated drawings for each structure. The drawings shall include the following:
 - A location plan for the structure showing the structure in relation to nearest town or village. A further larger scale location plan should also be provided to show the location of the structure within a new development if applicable.
 - Extents of the existing Highway Boundary.
 - The structural form, including articulation and preliminary substructure proposals.
 - Proposed construction materials and their properties.
 - The proximity and effect of the proposals on any existing highway structure.
 - If applicable, the structural elements to be eventually offered for adoption by the Highway Authority.
 - The obstacle to be crossed, including clearances.
- 1.11 A single AIP for the whole structure should be submitted to the TAA by the Principal Designer (CG300, 2.44.1).
- 1.12 Ringway Jacobs will review the submission and reply accordingly to the applicant. The applicant should allow 20 working days for each iteration for their submission to be reviewed by the TAA.

- 1.13 The applicant should submit any Departures from Standards with the AIP, to be reviewed by the TAA and signed off prior to AIP approval.
- 1.14 When Ringway Jacobs consider the submission to be acceptable, the applicant will be asked to submit a complete digital copy of the AIP or DR and the associated drawings to Ringway Jacobs. The AIP or DR shall be digitally signed by the designer at the appropriate place. Please note only digital signatures will be accepted. Ringway Jacobs will forward the AIP to Essex County Council with a recommendation for acceptance. The applicant should note and allow in his programme that it may take several draft submissions before Ringway Jacobs are able to recommend a submission for formal approval by Essex County Council.
- 1.15 The applicant should also note that unless agreed otherwise with Ringway Jacobs, Category 0 structures, as defined in CG 300 shall require a Design Rationale.

An example of the layout and detail required for the AIP and DR is shown in Appendix C and Appendix F to these Notes for Guidance, respectively. Each page of the AIP or DR shall have the structure name printed at the top and shall bear original signatures, not photocopies. Schedules of the standards to be used in the design of the structure shall be appended to the AIP. These schedules shall take the form given in Appendix H of CG 300. The schedules comprise a list of British Standards, Eurocodes (including associated UK national annexes) and other design documents. The applicant should strike through those standards which do not apply to the applicant's design.

- 1.16 Following formal approval by Essex County Council, the AIP or DR, signed as accepted by the TAA, will be returned to the applicant.
- 1.17 During the detailed design stage, the designer shall continue to liaise with Ringway Jacobs, and detailed drawings shall be submitted as required. In general terms, the design shall be in accordance with National Standards (Eurocodes) and the documents listed in the Schedule "TAS".
- 1.18 Checking: The applicant should note and allow in his programme that the design and contract drawings together with bar bending schedules shall be checked as follows:
- Structure Categories 0 and 1 (as defined in CG 300): As a minimum, shall be checked by another Engineer within the design team.
 - Structure Category 2: Shall be checked by a checking team, which may be from the same office but must be independent of the design team.
 - Structure Category 3: Shall be checked by a checking team from a separate organisation, proposed by the designer and agreed by the TAA, having knowledge and experience relating to the type of structure it is to examine.
- 1.19 Following Approval in Principle or Design Rationale and upon completion of the design, the designer shall forward the relevant design and check certificates to Ringway Jacobs. Examples of the certificates relevant for each category of structure are shown in Appendix D to these Notes for Guidance. All certificates shall have the structure name at the top of each page and shall bear original signatures. The signed copy, as accepted by the TAA, will be returned to the designer.
- 1.20 The applicant should note that temporary works shall go through the same process and get reviewed by the TAA before works can commence on site (this includes AIP, Design & Check Certificate and Construction Compliance Certificate if applicable).

- 1.21 The applicant should submit a Specification for Highway Works to the Development Management, for review and approval. The Specification for the works shall be in accordance with the latest published edition of the Specification for Highway Works (SHW) as part of the HE Manual of Contract Documents for Highway Works (MCHW), in accordance with the Notes for Guidance on The Specification for Highway Works. The Specification should include all contract specific appendices.
- 1.22 Design changes made subsequent to the Technical Approval, shall be submitted as an addendum to the TAA for approval.
- 1.23 The Approval in Principle and Design Rationale are valid for three years from the date of acceptance by the TAA. If the construction has not commenced within this period, the AIP or DR shall be reviewed by the designer against current standards and amended as necessary. The document shall then be submitted to Ringway Jacobs and Essex County Council for review and acceptance as if it were a new submission.
- 1.24 Any previously agreed Design and Check Certificates are also required to be updated and resubmitted.

2 Construction Stage

- 2.1 Construction shall not proceed until the design approval procedures have been completed.

THE APPLICANT SHOULD BE AWARE THAT ESSEX COUNTY COUNCIL MAY NOT ADOPT STRUCTURES THAT HAVE BEEN CONSTRUCTED BEFORE THE TECHNICAL APPROVAL PROCEDURES HAVE BEEN COMPLETED.

- 2.2 During construction, Ringway Jacobs will undertake site monitoring to ensure compliance with standards and the approved design. The applicant will be required to supply up to date drawings and information to Ringway Jacobs as construction proceeds.
- 2.3 The applicant shall submit to Ringway Jacobs a works programme.
- 2.4 The applicant shall submit to Ringway Jacobs the name of the principal designer for the Construction stage.

3 Information Required for Record Purposes

- 3.1 For structures to be adopted by Essex County Council, the applicant will be required to supply, to Ringway Jacobs, the following documentation on completion of construction:
 - A Certificate of Construction Compliance with original signatures shall be submitted confirming that the structure has been built in accordance with the agreed drawings and specifications. This Certificate shall follow the format set out in the Appendices to CG 300 and list the unique numbers of all "As Constructed" drawings and bar bending schedules to CG302. The requirements for other information to be included within the Health and Safety File is included in Appendix 4 of "Managing Health and Safety in Construction" CDM Regulations 2015 Guidance on Regulations
 - A full set of as constructed drawings for each structure, in accordance with Appendix A of these notes.

- A Structure Maintenance Manual for each structure in accordance with Appendix B of these notes. The applicant should note that information for the Health and Safety File will be required to be gathered during the construction phase.
- One complete set of calculations, separately bound for each structure, with all sections of the design separately titled and indexed with page numbers.
- An interpretive geotechnical report (a geotechnical report already submitted with the AIP will satisfy this requirement).
- The Health and Safety File and "As Constructed" records shall be provided to the TAA **within four weeks** of the construction completion date (as agreed with the TAA) **of that structure and not the scheme as a whole**. The "As Constructed" records should comprise drawings and a maintenance report, together with a copy of the final calculations.

THE APPLICANT SHOULD NOTE THAT RECOMMENDATION FOR ADOPTION WILL ONLY BE MADE ON RECEIPT OF ALL OF THE RELEVANT DOCUMENTATION.

- 3.2 The applicant should also note that the Health and Safety File (as required by the Construction (Design and Management) Regulations 2015.) shall be passed to Essex County Council at the time of adoption.
- 3.3 For structures, which are to remain in private ownership, the applicant will be required to supply to the Council the following documentation on completion of construction:
- A certificate stating that the structure has been constructed in accordance with the approved documents and drawings (Construction Compliance Certificate).
 - A full set of as constructed drawings for each structure in the format specified in Appendix A.
 - A Structure Maintenance Manual for each structure in accordance with Appendix B of these notes.

THE APPLICANT SHOULD NOTE THAT FOR STRUCTURES WITHIN THE HIGHWAY BOUNDARY THAT ARE TO REMAIN IN PRIVATE OWNERSHIP, A LICENCE FOR THE STRUCTURE SHALL ALSO BE REQUIRED FROM THE COUNCIL. FOR MATTERS CONCERNING THE LICENCE, THE APPLICANT SHALL LIAISE DIRECTLY WITH ESSEX COUNTY COUNCIL.

- 3.4 Examples of Construction Compliance Certificates are given in Appendix E to these Notes for Guidance.

4 Provision of Statutory Undertakers Services

Where possible, services shall be sited away from structures. The accommodation of services on a structure shall be subject to the approval of Ringway Jacobs. When services can be located within the fill material over a structure, without interference with expansion joints, then this approval is likely to be given.

5 Legally Enforceable Requirements of Other Authorities.

- 5.1 The requirements of all other authorities shall be notified to Ringway Jacobs and copies of those authorities' written approval to the design proposals shall be supplied to Ringway

Jacobs. Details shall be provided under clause 4.4 of the Approval in Principle submission.

- 5.2 For Structures affecting main rivers, an agreement in principle from the Environment Agency is required before the AIP/DR can be approved and signed off.
- 5.3 For Structures affecting non main rivers, an agreement in principle from the local drainage authority is required before the AIP/DR can be approved and signed off.

6 General Guidelines

- 6.1 The Applicant's Consultant MUST be a Chartered Civil or Structural Engineer, competent in highway structure works.
- 6.2 The category of the structure should be confirmed by the TAA prior to the proposal being Approved in Principle. These categories are graded from 0 to 3 depending on complexity of the structure as defined in CG 300, but TAA may request a change of category.
- 6.3 Where doubt on Category exists, e.g., if a Departure from Standards is proposed, which may result in change in category, the applicant should contact the TAA for guidance.
- 6.4 Once the AIP/DR is agreed to by the TAA, the document should be **signed digitally** and submitted to the TAA. When approved, the AIP will be endorsed and returned to the designer.
- 6.5 Detailed Design work should ONLY commence once the design principles are agreed, and the AIP is formally signed and approved.
- 6.6 The Design and Check certificate should make reference to the approved AIP (signed by the TAA) and include the date in which the AIP was signed off by the TAA.
- 6.7 For CAT 1 structures, where the "design/assessment" and the "check" have been completed by engineers within the same team, the Team Leader for that team could sign the "Design/Assessment Team Leader" and "Check Team Leader". For CAT 2 and 3 structures, two certificates are required, one signed by design team leaders and one by check team leader (both need to be chartered).

<p>9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE</p> <p>We confirm that details of the temporary works design will be/have been¹ passed to the permanent works designer for review.¹⁶</p> <p>Signed _____</p> <p>Name _____ Design/Assessment¹ Team Leader</p> <p>Engineering Qualifications _____¹⁷</p> <p>Name of Organisation _____</p> <p>Date _____</p> <p>Signed _____</p> <p>Name _____ Check Team Leader</p> <p>Engineering Qualifications _____¹⁷</p> <p>Name of Organisation _____</p> <p>Date _____</p>
--

6.8 The designer should include an additional signature page (sections 10 and 11) for Ringway Jacobs and TAA Approval.

10 - THE ABOVE IS REJECTED/ ACCEPTED¹ AND RECOMMENDED FOR ACCEPTANCE	
Signed	_____
Name	_____
Engineering Qualifications	_____
Name of Organisation	Ringway Jacobs
Date	_____
11 - THE ABOVE IS REJECTED/AGREED¹ SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW	
Signed	_____
Name	_____
Position held	_____
TAA	Essex County Council
Date	_____

6.9 The applicant should give at least two weeks' notice of commencement of construction to the Development Management team and the TAA.

6.10 The applicant should give at least 4 working days' (excluding weekends) notice to the TAA for any site visits for inspections and testing.

6.11 If the structure is to be adopted, a commuted sum to cover future maintenance (usually 60 years – TBC with the TAA) and replacement, will be payable by the applicant prior to adoption. The commuted sum calculation carried out by ECC will be based upon the principles of the “ADEPT” guidance.

6.12 If the technical approval procedures have not been followed and endorsed by the TAA, construction will not be permitted and approval for adoption would not be given, in cases where the highway is proposed to be adopted.

7 Design Guidelines

7.1 The design life of all highway structures shall be 120 years.

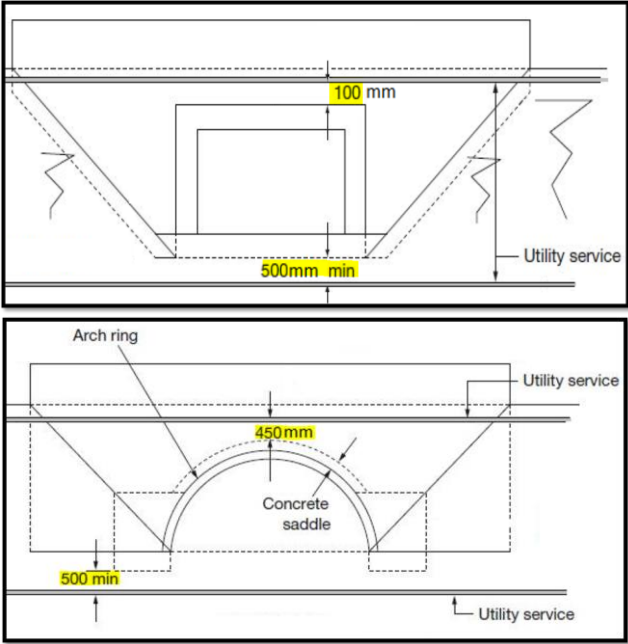
7.2 In addition to complying with all appropriate standards, the applicant must bear the following additional objectives in mind:

- Safe passage for pedestrians, cyclists and other vehicles
- Minimising future maintenance
- Minimising risk of vandalism
- Aesthetics and harmony with the surroundings.

7.3 Careful consideration must be given when designing supporting structures for areas such as footways, verges, etc. If TAA agrees that a physical barrier could be eliminated, the retaining structure must be designed for the appropriate accidental vehicle load and surcharge.

7.4 Long culverts (in excess of 20 metres length) and/or low headroom (less than 1.8 metres above invert, which could become classified as a confined space, shall be avoided unless agreed in advance with the TAA (to avoid the health and safety risks associated with confined spaces).

- 7.5 All highway structures must be designed for Full Highway Loading and the relevant SV vehicles (Level of SV to be confirmed with TAA).
- 7.6 To enable access for future inspection and maintenance, the applicant shall ensure that a hardstanding easement of 3 metres minimum width is provided.
- 7.7 The use of high containment kerbs (Trief Kerbs) must be avoided as a permanent solution.
- 7.8 A Design Rationale shall be provided for making redundant any structure supporting or upholding the highway e.g., filling-in of buried structures. This shall be accompanied by all necessary design documentation e.g., drawings, specification, method statements, risk assessments etc. to satisfy the TAA on the suitability of the proposed works to make the structure redundant. The designer shall confirm to the TAA in a design and check certificate that the design meets the requirements of the Design Rationale. On completion of the works a Construction Compliance Certificate should be provided to the TAA with as built information.
- 7.9 The requirement to provide protection for errant vehicles in the event of an accident should be assessed wherever:
 - The highway cross-section is altered
 - A new hazard is introduced
 - Works are undertaken in the vicinity of an existing road restraint system, which has reached the end of its serviceable life.
 - A Risk Assessment should be carried out in accordance with the RRRAP (Road Restraints Risk Assessment Process) for all sites. Where the RRRAP is not applicable, and only with the agreement of the TAA, the Design and Maintenance Guidance for Local Authority Roads may be used.
- 7.10 For concrete structures, a minimum of 100mm gap is required between the waterproofing and the bottom of a service duct. For masonry arched structures, a minimum of 450mm clearance is required from the crown of the arch to the top of the duct (NRSWA 1991 Code of Practice, Appendix D Works near highway structures).



7.11 Chambers within or upholding the highway:

- Standard proprietary manufactured drainage chamber rings, cover slabs, bases etc. within or upholding the highway greater than or equal to 1.2m clear span will require full structures technical approval with the exception of those that comply with the requirements of the Construction Products Regulations (CPR) and are used for their intended purpose.
- Where the chamber is considered compliant with the CPR requirements, sufficient information shall be provided with a Design Rationale by the Design Organisation to the Overseeing Organisation to confirm compliance with CPR (under a CE mark) and that the intended use is appropriate. The designer shall confirm to the TAA in a certificate that they have inspected the declared performance under the CE mark and that the declared performance of the item meets the requirements of the Design Rationale accepted by the TAA.

APPENDIX A

SPECIFICATION FOR AS CONSTRUCTED DRAWINGS FOR ECC BRIDGE RECORD SYSTEM

A full set of as constructed drawing for the structure are required. These drawings are required to be supplied in digital format, one copy in **.pdf** format and one copy in Autocad© **.dwg** format

APPENDIX B

SPECIFICATION FOR STRUCTURE MAINTENANCE MANUAL

Where the bridgeworks have been undertaken as part of a roadwork's scheme and a Health and Safety File is to be produced for the scheme, the Structure Maintenance Manual shall be a separate document forming part of that Health and Safety File. The Structure Maintenance Manual shall be incorporated into the Health and Safety File by reference and shall be of A4 format with hard cover and as a minimum contain the following elements:

- a) Cover page, with Structure Name, ECC Number and date when completed.
- b) List of contents.
- c) Location plan and grid reference.
- d) Copy of accepted Approval in Principle form complete with TA Schedule and Appendix.
- e) Copy of accepted Design and Check Certificates.
- f) Copy of Construction Compliance Certificate.
- g) Description of structure with small general arrangement drawing.
- h) Copy of any licenses required for construction.
- i) Plan showing the highway boundary, and any agreement for access for future inspection and maintenance.
- j) Details of any plant running over or under the structure.
- k) Details of construction methods used for the structure where these may have health and safety implications for future work.
- l) Details of materials used in the construction of the structure where these may have health and safety implications for future work.
- m) Details of specific maintenance requirements and procedures for the structure.
- n) Details of access to the structure for Inspection.
- o) List of designers, principal designer, principal contractor, sub contractors and suppliers for all work and materials used in the construction of the structure, together with their addresses.
- p) List of As Constructed drawings.
- q) Copies of test results and certificates (cube results, Agrément Certificates etc.) for all materials used in the construction of the structure.
- r) Copies of proprietary products brochures and pamphlets (Annotated).
- s) If applicable, a diagram showing minimum headroom over carriageways, footways and central reserve.
- t) Photographs showing the bridge elevations and the road scene.

Further guidance can be obtained from CG 302.

APPENDIX C

GUIDANCE FOR THE PRODUCTION OF AN AIP.

Third Party Approval in Principle submissions shall take the following format. Text in italics is intended as a guide to the response required.

1. The following format shall be retyped, with the applicant answering all relevant questions, or stating “not applicable”, under the headings and sub-headings shown below.
- 2 Each page shall be numbered.
- 3 The Project Name, Structure Name, ECC Structure number shall appear at the top of pages, as shown in the following example.
- 3 A version number or letter and issue date shall be included on each page as a footer.
- 4 Add as appendices to the AIP, drawings, diagrams of the idealised structure, schedule of standards (TAS) and any supporting documents and correspondence.
- 5 Drawings shall clearly show plans, elevations and sections of the proposed highway structure in accordance with paragraph 1.7 of the Notes for Guidance. The applicant shall note that this is particularly important in the case of buildings or parts of buildings that are to uphold the highway. In this case, the drawings shall clearly show that part of the building that will uphold the highway. Extraneous details of the remainder of the building are not required unless requested. **The applicant is advised to contact Ringway Jacobs prior to preparing the submission in these cases.** The proximity of the highway shall also be clearly shown

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

APPROVAL IN PRINCIPLE

Name of Project: _____

Name of Structure: _____

ECC Structure No: _____

Summary: set out a brief summary of what this AIP covers, why it is necessary and anticipated construction dates.

1.0 HIGHWAY DETAILS

- 1.1 Type of highway
- 1.2 Design traffic speed
Give speed over and or under bridge - depending on type
- 1.3 Existing Restrictions

2.0 SITE DETAILS

- 2.1 Obstacles crossed

3.0 PROPOSED STRUCTURE

- 3.1 Description of structure and design working life
- 3.2 Structural type
- 3.3 Foundation type
Include reasons for choice
- 3.4 Span arrangements
- 3.5 Articulation arrangements
- 3.6 Classes and levels
 - 3.6.1 Consequence class
 - 3.6.2 Reliability class
 - 3.6.3 Inspection Level
- 3.7 Road restraint system requirements

- 3.8 Proposals for water management
- 3.9 Proposed arrangements for future maintenance and inspection
 - 3.9.1 Traffic Management
 - 3.9.2 Arrangements for future maintenance and inspection of structures. Access arrangements to structure.
- 3.10 Environment and sustainability
- 3.11 Durability - Materials and Finishes
- 3.12 Risks and hazards considered for design, execution, maintenance and demolition. Consultation with and/or agreement from Overseeing Organisation.
- 3.13 Estimated cost of proposed structure together with other structural forms considered (including where appropriate proprietary manufactured structure) and the reasons for their rejection (including comparative whole life costs with date of estimates). Reference should be made to any options reports done.
- 3.14 Proposed arrangements for construction
 - 3.14.1 Construction of Structure
 - 3.14.2 Traffic Management
 - 3.14.3 Service Diversions
 - 3.14.4 Interface with Existing Structures
- 3.15 Resilience and security

4.0 DESIGN CRITERIA

- 4.1 Actions
 - 4.1.1 Permanent Actions
 - 4.1.2 Snow, wind and thermal actions
 - 4.1.3 Actions relating to normal traffic under AW regulations and C&U regulations
 - 4.1.4 Actions relating to General Order traffic under STGO regulations.
 - 4.1.5 Footway or footbridge variable actions
 - 4.1.6 Actions relating to Special Order traffic, provision for exceptional abnormal indivisible; loads including location of vehicle track on deck cross-section.
 - 4.1.7 Accidental actions.
 - 4.1.8 Actions during construction.
 - 4.1.9 Any special action not covered above.
- 4.2 Heavy or high load route requirements and arrangements being made to preserve the route, including any provision for future heavier loads or future widening
- 4.3 Proposed minimum headroom provided
- 4.4 Set out measures that will be incorporated into design to minimise maintenance
- 4.5 Authorities consulted and any special conditions required
- 4.6 Standards and documents listed in the technical approval schedule (TAS)
- 4.7 Proposed departures from standards listed in 4.6

4.8 Proposed departures from standards concerning methods for dealing with aspects not covered by standards listed in 4.6

4.9 Proposed safety critical fixings

5.0 STRUCTURAL ANALYSIS

5.1 Methods of analysis proposed for superstructure, substructure and foundations

5.2 Description and diagram of idealised structure to be used for analysis
Include a diagram of the idealised structure or model used for computer analysis. The diagram may be included as an Appendix.

5.3 Assumptions intended for calculation of structural element stiffness

5.4 Proposed range of soil parameters to be used in the design of earth retaining elements

6.0 GEOTECHNICAL CONDITIONS

6.1 Acceptance of recommendations of the ground investigation report (reference/dates) to be used in the design and reasons for any proposed changes

6.2 Summary of design for highway structure in the ground investigation report

6.3 Differential settlement to be allowed for in the design of the structure

6.4 If the ground investigation report is not yet available, state when the results are expected and list the sources of information used to justify the preliminary choice of foundations

7.0 CHECK

7.1 Proposed category and Design Supervision level

7.2 If category 3, name of proposed independent checker

7.3 Erection proposals or temporary works for which Types S and P proposals will be required, listing structural parts of the permanent structure affected with reasons

8.0 DRAWINGS AND DOCUMENTS

8.1 List of Drawings (including numbers) and documents accompanying the submission

9.0 THE ABOVE IS SUBMITTED FOR ACCEPTANCE

We confirm that details of the temporary works design will be/have been passed to the permanent works designer for review

Signed:

Name:
Design Team Leader

Engineering Qualifications:

Name of Organisation:
.....
.....

Date:

Signed:

Name:
Check Team Leader

Engineering Qualifications:

Name of Organisation:
.....
.....

Date:

10.0 THE ABOVE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:
Name:
Engineering Qualifications:
Name of Organisation: Ringway Jacobs
Date:

11.0 THE ABOVE IS ACCEPTED SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW:

Signed:
Name:
Position held:
TAA Essex County Council
Date:

APPENDIX D

GUIDANCE FOR THE PRODUCTION OF DESIGN & CHECK CERTIFICATES.

Design and Check Certificates shall take the following format. Text in italics is intended as a guide to the response required.

- 1 The following format shall be retyped.
- 2 Each page shall be numbered.
- 3 The Project Name, Structure Name, ECC Structure number shall appear at the top of pages, as shown in the following examples.
- 4 A version number or letter and issue date shall be included on each page as a footer

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

DESIGN AND CHECK CERTIFICATE
(Category 0 Structures that have not required an AIP)

Name of Project: _____
Name of Structure: _____
ECC Structure No: _____

Form of Certificate to be used by the Design Office for structures in Categories 0 where it has been agreed with Ringway Jacobs that a formal Approval in Principle submission is not required.

Section 1

1. We certify that reasonable professional skill and care has been used in the design of(Name of Structure) * with a view to securing that: -

i. It has been designed in accordance with the following standards:

List relevant standards from the following:

- British Standards;*
- Eurocodes and associated UK national annexes;*
- BSi Published Documents;*
- Execution Standards referenced in British Standards or Eurocodes;*
- Product Standards referenced in British Standards or Eurocodes;*
- The Manual of Contract Documents for Highway Works (MCHW);*
- The Design Manual for Roads and Bridges (DMRB);*
- Interim Advice Notes (IAN);*
- Specific documents required by the Overseeing Organisation.*

ii. It has been checked for compliance with the relevant standards in i.

iii. It has been accurately translated into Construction Drawings and Bar Bending Schedules (all of which have been checked). The unique numbers of these Drawings and Schedules are as given in the attached drawing register:

Signed:

Name:
Team Leader - Design Office

Engineering Qualifications:

Date:

Signed:
Partner/Director (Consulting Engineer)

Name:

Name of Organisation:
.....

Date:

Section 2

2. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

Section 3

3 THE CERTIFICATE IS AGREED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

DESIGN AND CHECK CERTIFICATE
(Category 0 and 1 Structures)

Name of Project: _____
Name of Structure: _____
ECC Structure No: _____

Form of Certificate to be used by the Design Office for structures in Categories 0 and 1 which have been given Approval in Principle by Essex County Council.

Section 1

1. We certify that reasonable professional skill and care has been used in the preparation of the design / assessment and / or check of.....(*Name of Structure*) with a view to securing that: -

i. It has been designed / assessed and / or checked in accordance with: -

- The Approval in Principle dated.....* including the following: -

** Insert the date of agreement of the AIP by the TAA*

List any departures and additional methods, criteria or specification clauses with dates

ii It has been checked for compliance with: -

- The relevant standards in i.; or
- The assessed capacity of the structure, or elements of the structure, is as follows:

iii. The design has been accurately translated into Construction Drawings and Bar Bending Schedules (all of which have been checked). The unique numbers of these Drawings and Schedules are as given in the attached drawing register

Signed:

Name:
Team Leader - Design Office

Engineering Qualifications:

Date:

Signed:
Partner/Director (Consulting Engineer)

Name:

Name of Organisation:

Date:

Section 2

2. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

Section 3

3. THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

Drawing List		
Drawing Number	Drawing Title	Revision

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

DESIGN AND CHECK CERTIFICATE
(Category 2 Structures)

Name of Project: _____
Name of Structure: _____
ECC Structure No: _____

Form of Certificate to be used by the Design Team and Checking Team for structures in Category 2 which have been given Approval in Principle by Essex County Council.

Section 1

1. We certify that reasonable professional skill and care has been used in the preparation of the design / assessment of.....(*Name of Structure*) with a view to securing that: -
 - i. It has been designed in accordance with the Approval in Principle dated.....* including the following:

** Insert the date of agreement of the AIP by the TAA*
List any addenda to the AIP with dates
List any Departures and additional methods or criteria.
 - ii It has been checked for compliance with the relevant standards in i.
 - iii. The design has been accurately translated into Construction Drawings and Bar Bending Schedules (all of which have been checked). The unique numbers of these Drawings and Schedules are given in the attached drawing register

Signed:

Name:
Team Leader - Design Team

Engineering Qualifications:

Date:

Signed:

Name:
Team Leader - Checking Team

Engineering Qualifications:

Date:

Signed:
Partner/Director (Consulting Engineer)

Name:

Name of Organisation:

Date:

Section 2

2. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

Section 3

3 THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

Drawing List		
Drawing Number	Drawing Title	Revision

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

DESIGN CERTIFICATE
(Category 3 Structures)

Name of Project: _____

Name of Structure: _____

ECC Structure No: _____

Form of Certificate to be used by the Design Office for structures in Category 3, which have been given Approval in Principle by Essex County Council.

Section 1

1. We certify that reasonable professional skill and care has been used in the preparation of the design / assessment of(*Name of Structure*) with a view to securing that: -

i. It has been designed in accordance with the Approval in Principle dated.....* including the following:

** Insert the date of agreement of the AIP by the TAA
List any addenda to the AIP with dates
List any Departures and additional methods or criteria.*

ii. The design has been accurately translated into Construction Drawings and Bar Bending Schedules (all of which have been checked). The unique numbers of these Drawings and Schedules are as given in the attached drawing register.

Signed:

Name:
Team Leader - Design Office

Engineering Qualifications:

Date:

Signed:
Partner/Director (Consulting Engineer)

Name:

Name of Organisation:

Date:

Section 2

2. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

Section 3

3 THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

Drawing List		
Drawing Number	Drawing Title	Revision

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.
CHECK CERTIFICATE
(Category 3 Structures)

Name of Project: _____
Name of Structure: _____
ECC Structure No: _____

Form of Certificate to be used by the independent Checking Office for structures in Category 3, which have been given Approval in Principle by Essex County Council.

Section 1

1. We certify that reasonable professional skill and care has been used in the checking of the design / assessment of(Name of Structure) with a view to securing that: -

i. It complies with the Approval in Principle dated.....* including the following:

** Insert the date of agreement of the AIP by the TAA
List any addenda to the AIP with dates.
List any Departures and additional methods or criteria.*

ii. The design has been accurately translated into Construction Drawings and Bar Bending Schedules (all of which have been checked). The unique numbers of these drawings and schedules are as given in the attached drawing register.

Signed:

Name:
Team Leader – Checking Office

Engineering Qualifications:

Date:

Signed:
Partner/Director (Consulting Engineer)

Name:

Name of Organisation:

Date:

Section 2

2. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

Section 3

3 THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

Drawing List		
Drawing Number	Drawing Title	Revision

APPENDIX E

GUIDANCE FOR THE PRODUCTION OF CONSTRUCTION COMPLIANCE CERTIFICATES.

Construction Compliance Certificates shall take the following format. Text in italics is intended as a guide to the response required.

1. The following format shall be retyped.
2. Each page shall be numbered.
3. The Project Name, Structure Name, ECC Structure number shall appear at the top of pages, as shown in the following examples.
4. A version number or letter and issue date shall be included on each page as a footer

ESSEX COUNTY COUNCIL.
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

CONSTRUCTION COMPLIANCE CERTIFICATE
(Structures to be adopted by Essex County Council)

Name of Project: _____

Name of Structure: _____

ECC Structure No: _____

Form of Certificate to be used by the applicant to verify that structures to be adopted by Essex County Council, have been constructed in accordance with the approved drawings.

Approval in Principle dated (date) and addenda (date):

Construction drawings (permanent and temporary works) and bar bending schedules listed within the design and check certificate/certificates (date):

As constructed drawings and bar bending schedules, the unique numbers of these drawings and schedules are:

Schedule of drawings/bending schedules

Document Number	Title	Revision	Date

The Specification for Highway Works (date), including additional and substituted clauses recorded in certificates for specification variations (date):

Section 1

We certify that (*Name of Structure*) and its equipment:

1. Has been constructed, commissioned and tested in accordance with:
 - a) the construction drawings and bar bending schedules listed within the above design and check certificate/certificates, with any modifications in accordance with the technical approval procedures given in CG300 (date), except (list exception(s) and give appropriate information and reason for non-compliance).
 - b) the above Specification for Highway Works and specification variations, except (list exception(s) and give appropriate information and reason for non-compliance).

2. The execution of the works has been accurately translated into 'As Constructed' drawings and bar bending schedules as listed above.

Signed:

Name:

Contractor's Representative

Engineering qualifications:

Date:

Signed:

Name:

Position Held:

Name of Organisation:

Date:

Section 2

1. We certify reasonable professional skill and care has been used, relating to the execution of (name of structure), in the task described below (choose either 1), 2) or 3)):
 - 1) Examining the execution and that it has been constructed, commissioned and tested in accordance with:
 - a) The above Approval in Principle, Design and Check certificate/certificates, with any modifications in accordance with the technical approval procedures given in CG300 (date), except (list exception(s) and give appropriate information and reason for non-compliance)
 - b) The construction drawings and bar bending schedules listed within the Design and Check certificate/certificates (date), as modified by authorized variations accepted by the Overseeing Organisation, except (list exception(s) and give appropriate information and reason for non-compliance).
 - 2) Hands off audit role assessment to ensure that the correct quality control procedures have been followed.
 - 3) (state task/role required under the contract's work specification or if different, the actual task/role performed and give appropriate information and reason for non-compliance).
2. We confirm that the following have been forwarded to Ringway Jacobs for record purposes:
 - a) Two full sets of as-constructed drawings for each structure (pdf. and dwg.)
 - b) One complete set of calculations, separately bound for each structure, with all sections of the design separately titles and indexed with page numbers.
 - c) One copy of geotechnical report.

3. We understand that acceptance of this Certificate by the Technical Approval Authority is conditional upon the subsequent receipt of the following:
- a) A Maintenance Manual for each structure.

Signed:

Name:
Work Examiner's Representative

Engineering Qualifications:

Position Held:

Name of Organisation:

Date:

4. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

5. THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

ESSEX COUNTY COUNCIL,
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

CONSTRUCTION COMPLIANCE CERTIFICATE
(Structures Remaining in Private Ownership)

Name of Project: _____

Name of Structure: _____

ECC Structure No: _____

Form of Certificate to be used by the applicant to verify that structures that are to remain in private ownership, have been constructed in accordance with the approved drawings.

Approval in Principle dated (date) and addenda (date):

Construction drawings (permanent and temporary works) and bar bending schedules listed within the design and check certificate/certificates (date):

As constructed drawings and bar bending schedules, the unique numbers of these drawings and schedules are:

Schedule of drawings/bending schedules

Document Number	Title	Revision	Date

The Specification for Highway Works (date), including additional and substituted clauses recorded in certificates for specification variations (date):

Section 1

We certify that (Name of Structure) and its equipment:

1. Has been constructed, commissioned and tested in accordance with:
 - a) the construction drawings and bar bending schedules listed within the above design and check certificate/certificates, with any modifications in accordance with the technical approval procedures given in CG300 (date), except (list exception(s) and give appropriate information and reason for non-compliance).
 - b) the above Specification for Highway Works and specification variations, except (list exception(s) and give appropriate information and reason for non-compliance).

2. The execution of the works has been accurately translated into 'As Constructed' drawings and bar bending schedules as listed above.

Signed:

Name:

Contractor's Representative

Engineering qualifications:

Date:

Signed:

Name:

Position Held:

Name of Organisation:

Date:

Section 2

1. We certify reasonable professional skill and care has been used, relating to the execution of (name of structure), in the task described below (choose either 1), 2) or 3)):
 - 1) Examining the execution and that it has been constructed, commissioned and tested in accordance with:
 - a) The above Approval in Principle, Design and Check certificate/certificates, with any modifications in accordance with the technical approval procedures given in CG300 (date), except (list exception(s) and give appropriate information and reason for non-compliance)
 - b) The construction drawings and bar bending schedules listed within the Design and Check certificate/certificates (date), as modified by authorized variations accepted by the Overseeing Organisation, except (list exception(s) and give appropriate information and reason for non-compliance).
 - 2) Hands off audit role assessment to ensure that the correct quality control procedures have been followed.
 - 3) (state task/role required under the contract's work specification or if different, the actual task/role performed and give appropriate information and reason for non-compliance).

2. We confirm that the following have been forwarded to Ringway Jacobs for record purposes:
 - a) Two full sets of as-constructed drawings for each structure (pdf. and dwg.)
 - b) One complete set of calculations, separately bound for each structure, with all sections of the design separately titles and indexed with page numbers.
 - c) One copy of geotechnical report.

- 3. We understand that acceptance of this Certificate by the Technical Approval Authority is conditional upon the subsequent receipt of the following:
 - b) A Maintenance Manual for each structure.

Signed:

Name:
Work Examiner’s Representative

Engineering Qualifications:

Position Held:

Name of Organisation:

Date:

4. THE CERTIFICATE IS AGREED AND SUBMITTED FOR ACCEPTANCE

Signed:

Name:
Principal Engineer - Structures
Ringway Jacobs | Essex County Council

Engineering Qualifications:

Date:

5. THE CERTIFICATE IS ACCEPTED BY THE TECHNICAL APPROVAL AUTHORITY

Signed:

Name:

Position held:

TAA Essex County Council

Date:

APPENDIX F

GUIDANCE FOR THE PRODUCTION OF A DR

Third Party Design Rational submissions shall take the following format. Text in italics is intended as a guide to the response required.

- 1 The following format shall be retyped, with the applicant answering all relevant questions, or stating “not applicable”, under the headings and sub-headings shown below.
- 2 Each page shall be numbered.
- 3 The Project Name, Structure Name, ECC Structure number shall appear at the top of pages, as shown in the following example.
- 4 A version number or letter and issue date shall be included on each page as a footer.
- 5 Add as appendices to the DR, drawings, diagrams of the idealised structure, schedule of standards (TAS) and any supporting documents and correspondence as appropriate.
- 6 Drawings shall clearly show plans, elevations and sections of the proposed highway structure in accordance with paragraph 1.7 of the Notes for Guidance. The applicant shall note that this is particularly important in the case of buildings or parts of buildings that are to uphold the highway. In this case, the drawings shall clearly show that part of the building that will uphold the highway. Extraneous details of the remainder of the building are not required unless requested. **The applicant is advised to contact Ringway Jacobs prior to preparing the submission in these cases.** The proximity of the highway shall also be clearly shown.

ESSEX COUNTY COUNCIL,
RINGWAY JACOBS|ESSEX COUNTY COUNCIL, DESIGN SERVICES,
HIGHWAYS (STRUCTURES).
TECHNICAL APPROVAL OF THIRD PARTY STRUCTURES.

DESIGN RATIONALE STATEMENT

Name of Project: _____

Name of Structure: _____

ECC Structure No: _____

1. Design Element:	
2. Area of Project:	
3. Design Stage:	
4. Project Objectives:	
5. Employer's Requirements:	
6. Design Criteria/Standards Used:	

7. Key Constraints on Design:	
--------------------------------------	--

8. Description of Chosen Solution	
--	--

9. Programme Date for Approval:	
--	--

10. Designer's Risk Assessment:	
--	--

CONSIDERATION OF ALTERNATIVES:

11. Option Assessment:	Option 1	Option 2
Description:		
Design Effects:		
Environmental Effects:		
Buildability / Construction Effects:		
Programme Effects:		
Compliance with Standards:		
Statutory Procedures Effects:		
Consultation and Commitments:		
Cost Effects:		
Summary of Risks:		
H & S Assessment Summary:		

DESIGN RATIONALE STATEMENT
Bridges and Other Highway Structures

Name of Project
Name of Bridge or Structure
ECC Structure No

12. Chosen Option:	
---------------------------	--

13. Additional Notes
<p>Durability</p> <p>Maintenance</p> <p>Ecology</p>

14. Approvals:	Name	Signed	Date
Prepared:			
Checked:			
Reviewed:			

15. Revision	Revision Date	Details	Authorised	Name	Position

16 TAA Approval:	Name	Signed	Date
Recommended by			
Approved/Submitted for Acceptance			
Accepted by TAA			