

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

DESIGN-BUILD PROJECT

for

INDIAN RIVER INLET BRIDGE

Replacement of Bridge 3-156,
SR1 over Indian River Inlet
State Contract # 26-073-03 Readvertised
Federal Contract # BRN-S050(14)

SCOPE OF SERVICES PACKAGE

CONTRACT DOCUMENTS

PART 1

PROJECT SCOPE



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1.0 INTRODUCTION

This Part 1 – Project Scope provides a summary description of the physical components of the Project that the Design-Builder shall design, construct, and/or install and the associated management, control, monitoring, compliance, and professional services and other elements of the Work required in accordance with the Design-Build (DB) Agreement included in Appendix A.

The Design-Builder shall not rely solely on the description contained herein to identify all Project components to be designed, constructed, and/or installed. The Design-Builder shall determine the full scope of the Project through thorough examination of the Contract Documents and the Project Site or as may be reasonably inferred from such examination.

The Design-Builder shall, for the generally described improvements, perform all design engineering and analysis; provide construction engineering and inspection services; provide quality control services; and furnish, construct, and/or install all materials and components of the Project required to meet the requirements of the Contract Documents, except where the Department will furnish and/or install items as listed in Section 5.0.

2.0 PROJECT CONFIGURATION

The Project shall include the major components listed in this Project Scope.

2.1 PROJECT LIMITS

The Project will be approximately 0.50 miles in length and is located on new roadway alignment carrying SR 1 over Indian River Inlet. The new alignment is on the Eastern Seaboard between Bethany Beach to the south and Dewey Beach to the north in Sussex County, Delaware. The Proposer will be responsible for limiting his Work to the Project Limits defined herein.

The Proposer must maintain the roadway alignment and geometrics specified in the Directive Plans in Part 6 - Scope of Services Package Plans and provide appropriate details allowing for proper tie-ins of all Work associated with the adjacent Roadway Contract (see As-Built Plans for Roadway Contract #23-073-03 in Part 6 - Scope of Services Package Plans.) The Design-Builder's proposed design shall not include removal or de-construction of any portion of the existing MSE walls and/or approach embankments beyond the Bridge Limits designated for this Contract. The Design-Builder's longitudinal Project Limits shall include the bridge approach slabs on the approach roadway embankments. Design and construction of MSE wall facings, drainage systems, pavement and subgrade, guardrails, sidewalks, traffic barriers and railings, topsoil, seeding, and pavement striping beyond the bridge abutments on the approach embankments shall be the responsibility of the Department and will be performed under a separate contract.

The Bridge Limits are as follows:

- A) Beginning of Bridge – The back face of the south abutment backwall shall be located at Station 1287+00 as measured along the Baseline Construction Bridge as defined in the Directive Plans for this Contract (see Part 6 – Scope of Services Package Plans);
- B) End of Bridge – The back face of the north abutment backwall shall be located at Station 1313+00 as measured along the Baseline Construction Bridge as defined in the Directive Plans for this Contract (see Part 6 – Scope of Services Package Plans); an

- C) Approach Slabs - The Proposer's Project Limits designated for the Work shall include the bridge approach slabs and shall extend from the beginning (southernmost point) of approach slab on the south bridge approach to the end (northernmost point) of bridge approach slab on the north bridge approach

The maximum lateral limits are as follows:

- A) Eastern Limit - The eastern limits of disturbance shall be maintained a minimum of two(2) feet not extend beyond west of the back (western) face of the portable concrete barrier located along the western shoulder of existing Southbound SR 1.
- B) Western Limits - The western limits of disturbance shall extend no more than 75 feet left (west) of the Baseline Construction Northbound SR 1 as defined in Directive Plan B-04A the Plans for Contract 23-073-03 in Part 6 - Scope of Services Package Plans.

Staging areas available to the Design-Builder are depicted on Directive Plan Sheet B-003 and are included in the Part 6 – Scope of Services Package Plans.

All Work shall be limited to existing Right-of-Way (ROW). ROW limits vary throughout the Project Limits. The lateral limits of the Project are shown on the ROW Plans in Part 6 – Scope of Services Package Plans.

Total permanent impact areas shall not exceed those of the original bridge design in Contract 25-073-02. The typical superstructure width shall not exceed 112'-6 1/2". Localized increases in superstructure width are acceptable to accommodate UBIV movement in the area of the main span supports if located within the maximum lateral limits specified above.

2.2 PROJECT-WIDE REQUIREMENTS

The Project includes the following:

- A) A new bridge structure with a minimum 100-year design life, centered over the navigational channel west of the existing structure and provides the minimum above deck and below deck clearance envelopes specified in the Directive Plans (*see* Part 6 – Scope of Services Package Plans);
- B) Joining the new bridge and approach slabs to the new roadway approaches being constructed north and south of the inlet within the Project Limits and within the existing ROW;
- C) Provisions for maintaining minimum navigational clearance of 200 feet horizontally (measured perpendicular to the flow of the Indian River Inlet and centered on the navigational channel) and 45 feet vertically above mean high water (Elev. 0.84 feet), with;
- D) No temporary piers, supporting elements, or other temporary bridge components located in the waters of the existing 500-foot wide inlet;
- E) Capacity to withstand extreme weather events during construction and after completion in accordance with the *Bridge Design Requirements* Performance Specification included in Part 3 of the Contract Documents;
- F) A bridge section of adequate width designed to carry four 12-foot traffic lanes (two traffic lanes in each direction), one 12-foot acceleration lane (northbound lane, south approach structure only), two 10-foot outside shoulders, two 4-foot inside shoulders, one 12-foot combined use recreational bicyclist and pedestrian walkway (on ocean side of structure), a continuous sand by-pass system utility corridor over the mainspan

adjacent to the ocean-side walkway, and all traffic barriers, end attenuators, and railings required by the AASHTO Code and the Contract Documents;

- G) Design and construction of scour protection systems within the Project Limits;
- H) Safe and efficient accommodations for bicycles and pedestrians in accordance with the Design Criteria, including, but not limited to, appropriate rail height, bicycle-safe bridge joints, and separation from vehicular traffic, and American Disabilities Act (ADA) compliance;
- I) Provisions for utility conveyance across the bridge including, but not limited to, electrical service and maintenance lighting, mechanical and natural ventilation, DelDOT Intelligent Traffic Management Systems (ITMS), bridge monitoring instrumentation, and the design and installation of a sand-bypass system over the main span of the bridge (*See Part 5 – Utility Requirements*);
- J) Provisions for the positive prevention of vermin/bird habitat/nesting within and on any and all bridge components and/or elements;
- K) Development of a Context Sensitive Bridge Design that gives consideration to previous and/or future public preferences, as specified in the *Aesthetic Requirements Performance Specification* in Part 3 of the Contract Documents, and as determined through the Department’s earlier Public Involvement Process for the Bridge; and
- L) Provisions for corrosion-resistant expansion joint assemblies, bridge bearings, access doors, equipment, bridge railings, casings, lighting, and all other bridge incidentals. The use of structural steel members directly exposed to the environment shall not be permitted.

The plan layout of the Project shall allow for the future widening of the Indian River Inlet up to 800 feet centered on the navigational channel and shall be within the ROW limits shown on the ROW Plans in Part 6 – Scope of Services Package Plans. Accordingly, no below surface bridge components may be located within 50 feet of the limits of the potential future inlet widening, requiring a clear area of 900 feet beneath the bridge main span. The minimum clearance envelopes to be provided above and below the bridge deck shall be as shown in the Directive Plans, Part 6 – Scope of Services Package Plans.

2.2.1 Adjacent and Concurrent Projects



The Replacement of Bridge 3-156, SR 1 Over the Indian River Inlet Design-Build Project is just one component of ~~four~~ several concurrent but separate Indian River Inlet contracts as listed below (Construction start and completion dates and durations are approximate and subject to change):

Contract	Contract Title	Anticipated Construction Start	Estimated Completion
23-073-03	BR 3-156 on SR 1 Over Indian River Inlet (Roadway and Approaches) – Phase I	In progress	Spring 2008
TBD	BR 3-156 on SR 1 Over Indian River Inlet (Roadway and Approaches) – Phase II	Fall 2010	Winter 2012
28-073-02	BR 3-156 SR 1 Over Indian River Inlet, Embankment Removal	April 2008	July 2008
25-073-03	BR 3-156, Indian River Inlet Park Enhancements	Fall 2011	Fall 2013

Contract	Contract Title	Anticipated Construction Start	Estimated Completion
25-073-04	BR 3-156, Indian River Inlet Bridge Demolition	Summer 2012	Spring 2013
26-073-03	Replacement of BR 3-156, SR 1 Over Indian River Inlet (Design-Build)	Summer 2008	Winter 2011
DNREC	Delaware Seashore State Park Administration Building	Summer 2008	Summer 2009
TBD	Sand-Bypass System Installation	Spring 2011	Fall 2011
-	Relocation of Electric Distribution Lines	TBD Winter 2011	TBD Spring 2012

The Department reserves the sole right to unilaterally alter the scope, nature, construction start and completion dates of all future Contracts.

The Design-Builder is hereby alerted and advised that any of the above and/or other contracts may be ongoing simultaneously with this Contract. All Contractors, including Design-Builders, working on any portion of the Indian River Inlet Project shall coordinate and cooperate with the Department and Contractors and/or other Design-Builders working on the associated and/or adjacent contracts in accordance with DB Section 105 – Control of Work in Part 2. Contractors and/or Design-Builders shall not impede or limit access to the work being performed by others. All costs associated with the Design-Builder’s coordination and cooperation shall be included in the Lump Sum Contract Price.



2.2.2 Work Hour Limitations

The following work hour restrictions shall apply for the duration of the contract:

Memorial Day through September 30th – All noise-related construction activities shall be limited to the hours of 7:00 A.M. and 7:00 P.M. During this time frame, no floodlights will be permitted for use without written approval from the DNREC Division of Parks & Recreation.

October 1st through one day prior to Memorial Day – No work time or activity restrictions shall be applied.

Holidays – Scheduled Holidays shall be in accordance with Part 2, DB 101.

Traffic Restrictions shall be in accordance with Part 6, Appendix B, Directive Plan B-06

3.0 ASSOCIATED WORK



The Design-Builder shall perform elements of Work in association with the design and construction of the physical components of the Project. The following list is not an exhaustive list, but is representative of the Work required to result in a complete functioning bridge structure in accordance with the Design-Builder’s accepted plans:

- A) Associated aesthetics and landscaping;

- B) Design and construction management;
- C) Project-related Public Outreach (*see* Part 3 – Design Requirements and Performance Specifications, *Public Outreach Requirements Performance Specification*);
- D) Coordination with Project stakeholders and other contractors adjacent to the Work;
- E) Design Quality Control and Design Review (*see* Part 2 – DB Section 111);
- F) Construction Quality Control (*see* Part 2 – DB Section 112);
- G) Environmental mitigation and compliance monitoring (*see* Part 3 – Design Requirements and Part 7 – Permit Requirements);
- H) All additional environmental investigations and monitoring associated with or resulting from the Design-Builder’s actions;
- I) Maintenance of traffic, temporary access to property, permanent access to property (~~both temporary and permanent~~), and maintenance and coordination of inlet and park traffic;
- J) Project safety and security;
- K) All engineering (including, but not limited to, supplemental surveys and geotechnical investigations) in addition to that provided by the Department;
- L) All harmful and hazardous materials remediation created by the design-builder through design and/or construction or as identified in the RFP (none known to exist by the Department);
- M) Drainage and erosion control;
- N) Construction waste disposal and handling;
- O) Required clearances, licenses, construction easements, and permits for the Design-Builder’s Work, Work sites, and storage areas on- or off-site;
- P) All modifications to existing permits previously obtained by the Department as required for the Project and/or as a result of the Design-Builder’s design, actions, and construction scheduling;
- Q) All ancillary Work, such as, access roads, driveways, temporary fencing, relocation of drainage, Work sites, and temporary Work;
- R) Location, acquisition, permits, and transportation for Material;
- S) Coordination of the relocation of any utilities and municipal drainage facilities and the design and relocation of any utilities as designated in Part 5 – Utility and Right-of-Way Statements;
- T) Site clearing and restoration;
- U) Maintenance of the Project during the Contract period;
- V) All other activities, functions, or elements necessary to the successful completion and subsequent approval of the Project by the Department; and
- W) Maintenance of existing traffic control devices as depicted on Contract 23-073-03 Plan Sheets 237a and 237b and as detailed as follows:

Location	Warning Signs SP 743504	Plastic Drums SP 720527	Type III Barricade SP 743506
SR-1 SBR	3		
SR-1 NBR	1		
SR-1 NBR north of BR 156			1
Access Road "A"			4
Access Road "B"		26	8
Totals (Each)	4	26	13
Location	A-Lights SP 743500	B-Lights SP 743501	Temporary Warning Signs SP 743525
SR-1 SBR south of BR 156	3	3	2
SR-1 NBR south of BR 156	2	6	
Road 50A			1
SR-1 NBR north of BR 156		4	
SR-1 SBR north of BR 156		4	
Access Road "A"		4	2
Access Road "B"		8	3
Access Road "C"/Marina Road		6	
Totals (Each)	5	35	8

All traffic control devices noted shall be maintained by the Design-Builder for the duration of the contract in accordance with the applicable Special Provisions. See Part 4 and Part 6 of the Contract Documents for Special Provisions and Plan Details.

4.0 BASIC PROJECT CONFIGURATION

The Basic Project Configuration shall consist of the following:

- A) The Project Limits;
- B) The horizontal and vertical alignments for the roadway surface;
- C) The new bridge;
- D) Number and width of lanes, shoulders, sidewalks, barriers, rails, and tie-ins to planned roadway approaches;
- E) The minimum vertical and horizontal underclearances for navigational and vehicular traffic; and
- F) The Right-of-Way limits.

4.1 STANDARD FOR DETERMINING MATERIALITY OF CHANGE IN BASIC PROJECT CONFIGURATION

The following are the standards for determining materiality of Basic Project Configuration changes:

- A) A change in the Project Limits by more than ten feet longitudinally;
- B) A change in the roadway geometrics accommodated by the bridge;

- C) A change in the proposed bridge type;
- D) Any reduction in minimum vertical and/or horizontal underclearances;
- E) A change in the Contract utility provisions;
- F) Any change in the Project Right-of-Way limits depicted; and/or
- G) Any change in this Section requiring a change in the Environmental Assessment/Finding of No Significant Impact.

5.0 DEPARTMENT-PROVIDED MATERIAL OR EQUIPMENT

The Department will not be providing any design, Material, or Equipment for the Design-Builder's use.

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