Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

November 13, 2024

605311-128035

ADDENDUM NO. 6

To Prospective Proposers and Others on:

MARION-WAREHAM
FAP No. HIP(NGB)-003S(786)X
Bridge Replacement, M-05-001=W-06-013 & W-06-016, Marion Road/Wareham Road (Route 6) over Weweantic River
Design-Build

TECHNICAL & PRICE PROPOSALS DUE: Thursday, December 19, 2024, by 2:00P.M.

Transmitting revisions to the RFP Documents as follows:

Responses to Proposer's Questions: 5 pages

RFP Volume I of III – Instructions to Proposers (September 12, 2024)
Revised pages 3 and 57.

RFP Volume II of III – Technical Provisions (September 12, 2024)
Revised pages xi and 93.

Modified the RFP Appendix folder as follows:

\Appendix\C\C.01\605311 BTC BRIDGE PLANS M-05-001=W-06-013.pdf
Revised Plan Sheet Numbers: 1, 2, 4, 6, 7, and 8 of 9.

\Appendix\C\C.01\605311 BTC BRIDGE PLANS W-06-016.pdf
Revised Plan Sheet Numbers: 1, 2, 4, 6, 7, and 8 of 9.

\Appendix\C\C.01\605311_BR(M05001-W06013.zip
Overwrote CAD files:
605311_BR(M05001-W06013 Typical Section).dwg
605311_SK01_BR(M05001-W06013).dwg
605311_SK17_BR(M05001-W06013).dwg
605311_SK19_BR(M05001-W06013).dwg
605311_SK21_BR(M05001-W06013).dwg
605311_SK22_BR(M05001-W06013).dwg
605311_SK23_BR(M05001-W06013).dwg

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

ADDENDUM NO. 6 (Continued)

\Appendix\C\C.01\605311_BR(W06016.zip
Overwrote CAD files:

605311_BR(W06016 Typical Section).dwg
605311_SK01_BR(W06016).dwg
605311_SK22_BR(W06016).dwg
605311_SK24_BR(W06016).dwg
605311_SK26_BR(W06016).dwg
605311_SK27_BR(W06016).dwg
605311_SK28_BR(W06016).dwg

\Appendix\C\C.08\

Deleted files:	Final Hydraulic Rpt_09-30-2024 A-2.pdf
	Hydraulic Rpt Appendix_09-30-2024 A-2 .pdf
Inserted new files:	Marion_Wareham_Hyd_Report_11-05-2024 A-6.pdf
	Hydraulic Rpt update memo 10-31-2024 A-6.pdf

Please take note of the above, substitute the revised pages and plans for the originals, delete the files indicated, insert the new files into the proper folder, overwrite the files indicated, and acknowledge Addendum No. 6 in your Expedite Proposal file before submitting your bid.

Sincerely,

Eric M. Cardone Digitally signed by Eric M. Cardone Date: 2024.11.13 17:07:13 -05'00'

Eric M. Cardone, P.E.
Construction Contracts Engineer

EMC\ltp
cc: Narayana Kolla, P.E., Manager Alternative Procurement and Delivery
Valerie Kilduff, P.E., Design-Build Project Manager

MARION-WAREHAM

Federal-Aid Project No. HIP(NGB)-003S(786)X
Bridge Replacement, M-05-001=W-06-013 & W-06-016, Marion Road/Wareham Road (Route 6)
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Responses To Proposers' Questions ADDENDUM NO. 6, November 13, 2024

Q1) We are in receipt of the final Hydraulics Report via Addendum 2 for the subject project. Previously the Department mentioned that information regarding a waiver related to scour would be provided by Addendum. Can you please advise on the status of this waiver? Is there more information forthcoming?

R1) Two Bridge Design Waivers related to MassDOT Bridge Design Manual Part 1, Section 2.6.5I&J (placement of the top of footing for design scour) and Section 2.6.4 (overtopping) will be provided to the Design-Build Teams in a future addendum upon MassDOT Bridge Section's approval. (A-6)

Q2) Please provide the BTC hydraulic loading calculations for the 25 year storm. The body of the BTC document report provides only the maximum forces and not the associated forces for the 25 year storm. Appendix E currently contains calculations with max force and associated forces and moments for each design case, but only for the 100 and 500 year conditions (not the 25).

R2) Associated forces for the 25-year storm is provided in the final Hydraulic Report issued this addendum. (A-6)

Q3) Please clarify the Appendix E calculations "B1" and "B2" for which bridge is intended to be B1 and B2.

R3) B1 is bent 1 of 2-span Bridge. B2 is for bents 2 & 3 of 3-span bridge. (A-6)

Q4) Please provide the wavelength and/or the wave velocity that was used for the calculations in Appendix E.

R4) See BVCS section 6.2.2.4 for Design Wave Parameters (also refer commentary C6.1.1 for additional clarification). (A-6)

Q5) Please confirm that the calculations in appendix E were completed for the bridge cross sections and elevations that were provided in the BTC bridge plans.

*R5) Confirmed. The Design-Builder to use BTC provided hydrodynamic wave forces **as minimum unless their models show higher demands for their proposed bridge configuration**. The Design-Builder to verify that their bridge structures satisfy **strength and extreme events** loadings using both, i). AASHTO LRFD TABLE 3.4.1-1 Load Combinations considering hydrodynamic wave forces from 25-year storm event; ii). an additional **extreme event** Load Combination from Guide Specifications for Bridges Vulnerable to Coastal Storms (BVCS, 2008) Section 5.2 considering hydrodynamic wave forces from 100-year storm event for typical bridges (non-critical/non-essential, refer to BVCS Section 5.1, 6.1.1 & C6.1.1). Consider Scour Design Flood (25-yr flood) and Scour Check Flood (100-yr flood) per Bridge Manual Section 3.2.10.5 for bridge capacity and stability verification. (A-6)*

Q6) Can you clarify if riprap is required in front of the abutments and across the entire channel? Section 6 of the Draft Hydraulic Report (page 80) notes "…. Therefore the entire width of the channel should be riprapped for both bridges.". However, Section 7 (page 82) notes "Therefore, this scour investigation of the proposed bridge designs recommends the proposed bent piles should be placed either to a depth below the scour and check scour envelope, securely embedded into bedrock, OR have scour countermeasures designed, installed, maintained, and checked after every large storm event.".

R6) Response to be provided in a future addendum. (A-6)

Q7) The BTC plans show a 'smooth' transition between the bridge rail and approach rail, however, the standard Highway Guardrail Transition would not be smooth and would extend into the adjacent SUP. Will other non-standard transitions be allowed, or is the intent to construct with the standard HGT block?

R7) Refer to the Standard Construction Drawings for a CM-TL3 bridge rail highway guardrail transition which is available on the MassDOT Website. (A-6)

Q8) Addendum No. 2 provided the final Hydraulic Report. Please confirm that Design Builder Team will not be responsible / design of record for hydraulics if there are no design changes that require revisions to the Hydraulic Report provide by MassDOT.

R8) Confirmed. Final stamped and dated hydraulic report to be provided by this addendum. If no design changes to the hydraulic characteristics of either bridge crossing, as shown in the BTC, further re-evaluation will not be required. See also RFP Volume II, Section 4.12. (A-6)

Q9) What modifications will require the Design Builder Team to submit a revised Hydraulic Report? Is it ANY revision to vertical profile, horizontal alignment, bridge opening, etc, or are minor revisions exempt from triggering a new Hydraulic Report?

R9) In the event the Design-Builder makes changes to the hydraulic characteristics of either bridge crossing, including, but not limited to, vertical under clearance, low chord elevation, horizontal clearance, bridge alignment, or design substructure configurations, supplemental hydraulic scour and hydraulic loading evaluation and documentation shall be conducted and submitted for MassDOT review and acceptance. Supplemental evaluation and documentation shall be based on using the same coastal and riverine hydraulic modeling used in the final stamped HDR report. Submitted hydraulic evaluation and documentation shall be prepared and approved by a Professional Engineer licensed in the Commonwealth of Massachusetts. (A-6)

Q10) Clarify the requirements for minimum navigable width both during construction and in the final condition.

R10) Response to be provided in a future addendum. (A-6)

Q11) The final Hydraulic Report does not address erosion protection design for the approach and causeway embankments due to overtopping/wave action. The BTC plans show 1.5H:1V to 1.25H:1V M2.02.2 dumped riprap landward of the sheetpiles. Please confirm it is intended that the Design Builder Team is only to construct the riprap slopes as shown per the BTC design and no design/evaluation is required by the Design Builder Team?

R11) Response to be provided in a future addendum. (A-6)

Q12) The hydraulics report does not provide a recommended water level for design of lightweight fill materials on the approach and causeway embankments. Can the design water level used for the BTC be provided. Additionally, can the type of lightweight fill specified for the BTC be provided.

R12) Response to be provided in a future addendum. (A-6)

Q13) Section 4.11.3 of the RFP requires the subsurface explorations meet AASHTO LRFD Bridge Design Specifications Article 10.4 and Table 10.4.2-1. Some of the BTC bridge borings did not core bedrock or did not core bedrock deep enough to comply with AASHTO Table 10.4.2-1. Will the Design Builder Team be required to perform additional explorations where this requirement was not met in the BTC borings?

R13) Response to be provided in a future addendum. (A-6)

Q14) Section 4.11.6 of the RFP requires a bi-directional axial compressive load test to determine nominal side and tip resistances. Given the shafts will derive the geotechnical resistance in hard, bedrock would MassDOT allow the Design Builder Team at their option to forgo conducting a load test provided the shafts are designed using the lower resistance factors in AASHTO Table 10.5.5.2.4-1 for compression and tension of a single shaft.

R14) No. One (1) Bi-directional Axial Compressive Load Test must be completed on a sacrificial (non-production) drilled shaft. (A-6)

Q15) Section 4.11.6 of the RFP refers to draft special provision 945 but does not appear to be included in appendix C.09. Please confirm if this draft special provision is applicable to the RFP.

R15) See revised Section 4.11.6 of RFP Volume 2 issued with this addendum (A-6)

Q16) The final hydraulics reports provides the design and check scour depths in Table 38 and 39 for the abutments and piers; however a referenced mudline elevation to convert to a design scour elevation is not provided. Can the preliminary designer amend Tables 38 and 39 to also provide the design and check scour elevations for the respective piers and abutments.

R16) Response to be provided in a future addendum. (A-6)

Q17) Section 4.11.8 of the RFP refers to Draft BTC Special Provision Subitem 981.01 but does not appear to be included in appendix C.09. Please confirm if this draft special provision is applicable to the RFP.

R17) Response to be provided in a future addendum. (A-6)

Q18) Section 4.11.8 of the RFP indicates the allowable lateral deflection of permanent retaining walls shall be less than 1 inch, measured at the top of the wall relative to the bottom of the wall. Please clarify if this criteria is for total wall height or exposed wall height and is it intended to be "post-construction" deflection similar to the settlement criteria in the preceding paragraphs.

R18) Response to be provided in a future addendum. (A-6)

Q19) How long after construction completion and at what frequency does the DB team need to continue the post construction causeway settlement monitoring for?

R19) Response to be provided in a future addendum. (A-6)

MARION-WAREHAM

Federal-Aid Project No. HIP(NGB)-003S(786)X
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Q20) Vol II, Section 5.6.10 states the DB is to test the paint/coating on the existing concrete for lead. The appendix C.04 Hazardous Materials Review document states that if it does test positive to follow OSHA 29 CFR 1926.62, and MassDOT Standard Specs 961.68 and 961.69. Will a bid item be provided for lead paint removal on concrete structures or will lead paint removal on concrete be treated as a changed condition pending the test results?

R20) Response to be provided in a future addendum. (A-6)

Q21) Addendum 02, Section 4.9.1 provides a table for lane restriction hours. There appears to be gaps 1etween the windows in the table (i.e. two lanes open from 8am-7pm, and one lane open from 10pm-6am, leaving 5 hours unaccounted for). Can you please clarify?

R21) Response to be provided in a future addendum. (A-6)

Q22) Please confirm the existing 24-4" Fiber Duct Bank that is to be removed is not encased in concrete?

R22) Response to be provided in a future addendum. (A-6)

⑥ ADDENDUM NO. 6, November 13, 2024

1.3 SCHEDULE OF EVENTS

The following table provides the Proposed Schedule of Events for this Project through Notice to Proceed.

Table 1: Schedule of Events

Phase 1: Letter of Interest (LOI) and Request for Qualifications (RFQ)		
EVENT	**DATE**	**TIME**
⑥ Advertisement of Project Request for Letter of Interest in: MassDOT Weekly AD, COMMBUYS, Local Newspapers / Central Register	1/27/2024 1/31/2024	
⑥ Letters of Interest Due	3/11/2024	12:00 PM
RFQ Mailed to Interested Parties Submitting a LOI	2/28/2024	
RFQ Briefing (Virtual by email invitation)	3/13/2024	10:00 AM to 12:00 PM
MassDOT A&E Construction Prequalification Applications Due	3/8/2024	5:00 PM
RFQ Close date for questions	3/15/2024	12:00 PM
Statements of Qualifications Due	3/29/2024	12:00 PM
Design-Builders Short-Listed	6/26/2024	
Design-Builders Notified	5/1/2024	
Phase 2: Request for Proposals (RFP)		
EVENT	**DATE**	**TIME**
FINAL RFP Issued to Short-Listed Design-Builders	9/12/2024	
Confidential RFP Meeting (Virtual)	9/24/2024	
Mandatory Pre-Proposal Meeting (Virtual, by email invitation)	10/08/2024	10:00AM - 12:00 PM
ATC Meeting – 1	10/16/2024	TBD
ATC Meeting – 2	11/06/2024	TBD
ATC Meeting **– 3**	TBD	
Last Day to Submit Final ATCs	11/19/2024	
RFP Close date for Questions	12/03/2024	
Technical & Price Proposals Due	12/19/2024	2:00 PM
Oral Presentations	01/08/2025	TBD
Public Price Proposal Opening Date	1/23/2025	2:00 PM
Anticipated Award Date	TBD	
Anticipated Notice to Proceed	03/20/2025	

***Schedule will be provided in advance of the Presentations**

⑥ ADDENDUM NO. 6, November 13, 2024
① ADDENDUM NO. 1, September 30, 2024

5.6 DISADVANTAGED BUSINESS ENTERPRISES (DBE) PARTICIPATION

Disadvantaged Business Enterprises (DBEs), as defined by 49 CFR 26, shall have the opportunity to participate in the performance of Design-Build Contracts financed in whole or in part with Federal funds.

The DBE participation Goal for this Project is as follows:

① • DBE firms perform no less than fourteen (14%) percent of design services.

① • DBE firms perform no less than fourteen (14%) percent of construction services. A minimum of one-half of the goal for construction shall be met in the form of construction activity. The DBE participation goal shall remain in effect throughout the life of the Contract.

⑥ Each Proposer is required to identify in its Proposal the DBE(s) selected and work to be performed by each DBE. DBE participation to be counted toward the goal must be in the form of independent work and DBE firms must be certified by the Massachusetts Uniform Certification Program (MassUCP), at the time of the Proposal.

If MassDOT finds that the percentage of DBE participation submitted by the Proposer will not meet the DBE goal of the Contract and that the Proposer has not made good faith efforts to meet the goal, MassDOT may, at its discretion, cease all further action with the Proposer.

Certified Disadvantage Business Enterprises (DBEs) may be located at https://www.diversitycertification.mass.gov/BusinessDirectory/BusinessDirectorySearch.aspx

DBE Special Provisions are included in RFP Volume I, Attachment C. Forms B00853 and B00854, included in Attachment C, must be submitted in accordance with Document 00719 for both design **and** construction participation goals.

Address questions regarding DBE requirements to:

Darnell L. Williams
Deputy Chief Diversity Officer - External Programs
MassDOT Office of Diversity and Civil Rights (ODCR)
10 Park Plaza, Room 3800
Boston, MA 02116-3973
Telephone: (617) 872-6497
Email: Darnell.Williams@dot.state.ma.us

⑥ ADDENDUM NO. 6, November 13, 2024
② ADDENDUM NO. 2, October 4, 2024
① ADDENDUM NO. 1, September 30, 2024

C.06 GEOTECHNICAL

- 605311 Geotechnical Data Report Bridge No. M-05-001 = W-06-013, W-06-16 and the Causeway over Weweantic River Sept, 2024

C.07 [NOT APPLICABLE]

C.08 HYDRAULICS

⑥②① • Final Hydraulic Report 11-05-2024 (Stamped)
⑥ ② • Hydraulic Report update memo 10-31-2024

C.09 SPECIAL PROVISIONS

- 00713-SubSection 701-Cement Concrete SW-PedCurbs-Driveways 3-31-22
- 00715 Supplemental Specifications 6-30-24
⑥ • A00801 Draft BTC Special Provision
- A00810 MassDOT Herbicide Use Report 7-18-2018
- Watering Log for MassDOT Plantings

C.10 STRUCTURAL

- Bridge Rating Reports
    - Marion SI&A
    - Rating Report M-05-001-45E g180
    - Rating Report W-06-016-45K g180
- Inspection Reports
    - M05001 10-16 Inspection Photo 13 of Steel Conduit
    - W06016 10-16 Inspection Photo 34 of Steel Pipe
    - W06016 10-16 Inspection Photo 35 of Steel Pipe
    - Routine Inspection M-05-001 10-16
    - Routine Inspection W-06-016 10-16
    - Underwater Inspection M-05-001
    - Underwater Inspection W-06-016

⑥ ADDENDUM NO. 6, November 13, 2024
① ADDENDUM NO. 1, September 30, 2024

⑥①

⑥ Refer to Draft BTC Special Provision Subitem 945.01 for additional drilled shaft installation, testing requirements, and for inspection of the bottom of the shafts using a shaft inspection device is a requirement of the Project.

⑥

4.11.7 Ground Improvement

Through a variety of ground treatment methods and geo-construction technologies, weak and unsuitable in-situ soils can be improved to meet specific Project requirements, thus making this alternative method a safe and potentially economical solution.

Design and construction of ground improvement techniques shall be done in accordance with the Ground Modification Methods Reference Manual FHWA-NHI-16-027 and FHWA-NHI-16-028. The manual introduces the web-based GeoTechTools (http://www.geotechtools.org) which is a decision-making tool that identifies many geotechnical solutions for design and construction of embankments on soft soils, embankment widening, and pavement foundations. These tools help select and apply the most appropriate method to the site-specific problems and conditions.

The Design-Builder may consider the following ground improvement techniques for unsuitable/organic soils located below proposed roadway embankments and retaining walls.

1. Lightweight Fills: Reduce settlement and/or improve stability of embankments located above deep unsuitable soil which can't be excavated. Only the fills listed below may be considered for this project.
    - Geofoam – expanded polystyrene (EPS)
    - Low density cellular concrete (LDCC), also known as foamed concrete
    - ①
    - Expanded shale, clay and slate (ESCS)
    - Foamed Glass Aggregate (FGA)

If used, geofoam shall be fully encapsulated with a petroleum resistant membrane.

The selected lightweight fill type shall be proven suitable for use in a marine environment over the design life of the project. The lightweight fill must also be placed with sufficient soil cover as to not be buoyant during extreme flooding events.

2. Aggregate Columns: Increase bearing resistance of underlying soil, reduce settlement, improve slope stability, and reduce liquefaction potential of soil. Aggregate columns shall not be used to support the bridges. Vibro-replacement or Vibro-displacement may be used. Unless Aggregate Columns are used to mitigate liquefaction, an engineered load transfer platform (LTP) will be needed to transfer loads uniformly to the underlying improved soils. Due to the presence of organic soils onsite, aggregate piers, if used, would need to be fully grouted.