

STAFF SUMMARY

☐ Secretary Approval ☐ MassDOT Board Approval Prepared by: Narayana M. Kolla

Department: Highway Division, Major Projects	Manager: Michael O'Dowd	email: Michael.ODowd@dot.state.ma.us	Telephone: 617-910-8564
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Contract No.119537 – Superstructure Replacement, Maffa Way & Mystic Avenue over Orange & MBTA/BMRR – Design-Build Project	Date Prepared: 12/12/2022
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Implications

☐ Capital Budget ☐ Operating Budget ☐ Legal ☐ Other

PURPOSE:

The purpose of this Staff Summary is to request that the Board of Directors authorize and approve the Secretary/CEO, or her designee, to execute MassDOT Contract No.119537 titled Superstructure Replacement, Maffa Way & Mystic Avenue over Orange & MBTA/BMRR Design-Build Project with Skanska USA Civil Northeast Inc., in the amount of \$39,200,000.00 for a total duration, not to exceed, 1,367 days from Notice to Proceed (NTP).

TOTAL PROGRAM BUDGET:

The Capital program has a total program budget of \$51,756,805.00, which includes the following:

Bid	\$39,200,000.00
Contingencies	\$3,921,355.00
Construction Engineering	\$2,106,450.00
Traffic Police	\$2,775,000.00
Railroad Flaggers	\$150,000.00
Trainees	\$4,000.00
Incentives	\$3,600,000.00

Total	\$51,756,805.00
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DISCUSSION:

Project Description

The proposed Project is being advanced by the Massachusetts Department of Transportation, Highway Division (MassDOT) to replace the deteriorated steel stringer/concrete deck superstructures of Bridges B-16-067 (3GV), Maffa Way and B-16-068=S-17-028 (3GW), Mystic Avenue over Orange Line & MBTA/BMRR with superstructures designed for a 75-year design life, and to rehabilitate the existing

substructures to support the proposed superstructures in Boston and Somerville, MA. The Project limits extend approximately 1,150 feet along Broadway/Maffa Way between Lombardi Street and the Sullivan Square Station, inclusive of work along the I-93 off-ramp, and approximately 1,000 feet along Mystic Avenue/Main Street between Lombardi Street and the beginning of the dedicated bus lane. The project also addresses traffic capacity and multimodal accessibility with improved accommodations for pedestrians, bicycles, and transit vehicles. Lastly, the project will integrate with future projects, including the Rutherford Avenue improvements, One Mystic development, and Assembly Square improvements.

The major elements of work are further described below:

Bridge

The proposed project includes the design and construction of two bridge superstructure replacements and substructure stabilization and modifications. The bridge design will ensure current clearances under over the MBTA Railroad will be maintained. The project also entails the design and construction of retaining walls and moment slabs. Phased construction is anticipated to maintain traffic and facilitate utility relocations.

Roadway

The Project includes the reconstruction and resurfacing of Maffa Way and Mystic Avenue including a portion of the Interstate 93 Southbound Off-Ramp. Roadway functional, geometric, and safety improvements include sections of full depth pavement, pavement milling, and variable depth overlay and/or leveling course as required for development of proposed cross slopes, construction of ADA compliant wheel chair ramps, roadside barriers, guardrail, associated barrier end treatments, fences, granite curb, all clear-zone side slopes, and updates to the drainage system including the design and construction of multiple deep-sump catch basins in accordance with Wetlands Protection Act requirements.

On Maffa Way a raised median is proposed to be constructed on the south side of the roadway creating a buffer between the travel lanes and a proposed 10-foot-wide bike lane. This will provide separate accommodations for each user type including vehicles, bicyclists and pedestrians, creating a safer network. The proposed improvement will extend a continuous eastbound bike lane from Broadway to Maffa Way and will provide a westbound bike lane that will connect to the Rutherford Avenue project. The exclusive bus lane along the south edge of the vehicular travel way will be maintained with slight shortening to accommodate the bike lane development. The proposed bus lane will be over 300 feet.

Similar to Maffa Way, improvements along Mystic Avenue are proposed to provide designated space for bicyclists that does not exist across the structure today. On the east side of the bridge, traveling westbound from Dorrance Street to Sherman Street, it is proposed that a 6-foot-wide striped bike lane separated from the travel lanes by a 2-foot striped buffer be constructed. From the west side of Sherman Street to the intersection with Alfred A. Lombardi Street/Assembly Square Drive, it is proposed that the sidewalk be widened to 11.5 feet to accommodate pedestrians and bicyclists. This will create a raised buffer between the motorists and pedestrians/bicyclists. These improvements will increase the safety of the corridor.

Project Impacts

Utilities

The Project involves the coordination with utility companies and required site preparation to facilitate access for the relocation of underground and structure supported utility facilities including MBTA, electric, and telephone; the design and relocation of water transmission lines; the coordination with a gas utility company for relocation and adjustment of their infrastructure; the relocation, design, and installation of streetlights; and the removal and abandonment of existing manholes, vaults, and conduits.

Traffic

The project requires the maintenance of at least two travel lanes (EB on Maffa Way and WB on Mystic Avenue) as well as maintenance of access to and from all I-93 ramps. During any MBTA Orange Line or Commuter Rail shutdown, the project requires maintenance of at least two travel lanes including one dedicated bus lane in each direction (EB on Maffa Way and WB on Mystic Avenue. Additionally, the Design-Builder shall maintain pedestrian and bicycle accommodations including, sidewalks, ADA compliant ramps, and driveways throughout construction. Off-peak lane closures are allowed in accordance with Temporary Traffic Control Requirements and shall be mitigated through continuous public outreach.

In order to facilitate demolition and erection of the Maffa Way and Mystic Avenue bridge superstructures, various outages have been coordinated with the MBTA. Two nine-day surges, one in the summer of 2024 and one in the summer of 2025, will allow the Design-Builder to accelerate the work over the Orange Line tracks. During these surges, orange line services will be suspended, and substitute bussing will be provided between Wellington Station and North Station. Following each of these surges, four (4) weekend closures of the Commuter Rail will be allowed during 2024 and four (4) weekends during 2025 for a total of eight (8) weekends, to facilitate demolition and construction over these tracks.

As part of the project, significant public outreach will be undertaken leading up to these surges to brief affected communities and businesses.

Stakeholder Engagement

Significant public engagement and coordination with MBTA and the cities of Boston and Somerville was undertaken during the preliminary design phase and will continue throughout construction. A Design Public Hearing was conducted in March of 2022.

This contract requires the Design Builder to deploy construction phase air, noise, water, and dust controls to limit the impacts of construction on abutters.

BEST VALUE PROCUREMENT:

This project will be delivered utilizing the Design-Build methodology, as stipulated in MGL c 149A § 14 et seq and as implemented in accordance with MassDOT's Design-Build Guidelines approved by the Inspector General's office. This selection is Phase 2 of the two-Phase selection process and is an evaluation of the Technical and Price Proposals from the three (3) Proposers listed under the Contract Solicitation section. The apparent Best Value Design-Build was determined by dividing the Price amount submitted with the Proposal by the Technical Score provided by the Selection Committee. The lowest Overall Value Rating of the three (3) Proposers is the apparent Best Value Design-Build. Phase 1 of the two-Phase process

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was the Request for Qualifications and Phase 2 is the Request for Proposals. Following is the process for review of the Requests for Proposals (RFPs):

- Develop Proposal Evaluation Form
- Confidential Draft Request for Proposals Meeting one on one with the proposers to get feedback on the project risks.
- Confidential Meetings with Proposers to evaluate Alternate Technical Concepts (ATCs)
- Accept/Reject ATCs
- Receive Proposals from three (3) short-listed Proposers and verify complete/ review Pass/Fail requirements
- Review Technical Proposal and prepare preliminary evaluations
- Meet to discuss preliminary evaluations/prepare questions for Oral Presentations
- Oral Presentations by Proposers
- Finalize Technical Scores prior to Price Proposal opening
- Open Price Proposals, divide by Technical Score for lowest Overall Value Rating
- Provide recommendation of Best Value Design-Build

A Draft RFP was issued on July 06, 2022 followed by the Final RFP on August 3, 2022. Fourteen (14) addenda were issued and distributed to the Proposers. The addenda responded to Proposer questions submitted by a specified date and time, and provided data not contained in the RFP. All parties receiving these addenda were required to acknowledge receipt.

Significant Dates

The table below details the significant dates of the RFP selection process.

Draft RFP Issued to Short-Listed Proposers	07/06/2022	
Confidential one-on-one Draft RFP Meetings	07/13/2022	
Final RFP Released	08/03/2022	
Mandatory Pre-Proposal Meeting	08/10/2022	10:00 AM
Confidential ATC Meeting-1	8/17/2022	
Confidential ATC Meeting-2	9/7/2022	
Confidential ATC Meeting-3	9/19/2022	
Last Day to Submit Final ATC Submission for Approval	09/27/2022	
RFP Close Date for Questions	10/12/2022	5:00 PM
Technical & Price Proposals Due	10/26/2022	2:00 PM
Oral Presentations	11/09/2022	
Public Price Proposal Opening Date/BVDB	11/30/2022	2:00 PM

Technical Proposal Evaluation Criteria (100% of Technical Proposal)

The qualitative evaluation of the technical aspects of the Proposal will count for 100% of the total technical score. It will be focused on the following criteria:

DB Project Management and Coordination (40% of Technical Criteria)

The Committee will evaluate the following elements:

Project Management and Personnel Experience (10%)

Quality Control System (10%)

Design Management (5%)

Construction Management (10%)

Schedule and Cost Control (5%)

DB Technical Approach (60% of Technical Criteria)

The Committee will evaluate the following criteria:

Civil / Traffic (10%)

Environmental (5%)

Utilities (10%)

Structures (20%)

Construction Staging (15%)

CONTRACT SOLICITATION:

On March 12, 2022, the MassDOT Highway Division posted to CommBUYS a public solicitation (a Request for Letters of Interest) for the Maffa Way and Mystic Ave Superstructure Replacement Design-Build Project. By April 25, 2022, MassDOT Highway Division received letters of interest from Eleven (11) construction and design firms. On April 26, 2022, A Request for Qualifications (RFQ) was sent to those interested firms. By May 31, 2022, the due date, Statement of Qualifications (SOQs) from four (4) Prospective Proposers were received.

A Selection Committee of Six (6) individuals representing diverse disciplines was assembled and approved by the Chief Engineer:

The Statement of Qualifications were evaluated and ranked by the Selection Committee according to the criteria set forth in the RFQ. On June 29, 2022 the Selection Committee determined that three (3) Proposers would be included on the short list of teams asked to submit Technical and Price Proposals. The Proposers were:

- The Middlesex Corporation and TranSystems
- Skanska USA Civil Northeast Inc. and CHA Consulting, Inc.
- SPS New England, Inc. and WSP USA Inc.

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The short-listed Proposers were notified in writing on July 1, 2022, that they were selected to receive a Request for Proposal (RFP) for the Maffa Way and Mystic Ave Superstructure Replacement Design-Build Project. A Draft RFP was issued to the three (3) Design-Builders on July 06, 2022. A Final RFP was issued to the three (3) Design-Builders on August 3, 2022.

The Proposers were advised the deadline for submittal of the Proposals. Before the Proposals were received, the Selection Committee developed a spreadsheet, outlining the evaluation criteria and weight factors identified in the RFP to be used in the Selection Process. The Proposers were advised in the RFP of the format the Proposals were to follow and the content for which they would be scored.

Technical and Price Proposals were received on October 26, 2022 from the three (3) Proposers. The electronically submitted Price Proposals were locked while the Selection Committee reviewed the Technical Proposals. The three (3) Proposers gave Oral Presentations on November 9, 2022, each Proposer was given up to one (1) hour to present their Technical Proposal and followed by half an hour of clarifying questions from selection committee.

The determination of the Technical Score for each of the short-listed Proposer was calculated in accordance with the Design-Build Procurement Guide.

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Request For Proposal (RFP) - Design-Build Score Sheet



Boston-Somerville Maffa Way & Mystic Ave Bridge Rehabilitation
Design-Build Project

	Shortlisted DB Teams		
	Skanska/CHA	Middlesex/TranSystems	SPS/WSP
DB Project Management and Coordination (40%)			
Project Management and Personnel Experience - 10%	9.30	9.05	8.60
Quality Control System - 10%	9.22	8.90	8.65
Design Management - 5%	4.53	4.28	4.56
Construction Management - 10%	8.73	8.53	8.97
Schedule and Cost Control - 5%	4.64	4.59	4.31
DB Technical Approach (60%)			
Civil/Traffic - 10%	8.68	8.92	8.93
Environmental - 5%	4.49	4.40	4.40
Utilities - 10%	9.17	9.02	8.73
Structures - 20%	18.57	17.87	17.73
Construction Staging - 15%	13.80	13.58	12.38
Total Score:	91.13	89.13	87.26

A public Price Proposal opening was held on November 30, 2022, at 2:00 pm via Microsoft Teams virtual meeting. The total Technical Scores were displayed on the screen within the spreadsheet template. Prices were downloaded from BidX. The prices are as follows:

- Skanska USA Civil Northeast Inc. and CHA Consulting, Inc. **\$39,200,000.00**
- The Middlesex Corporation and TranSystems **\$40,728,200.00**
- SPS New England, Inc. and WSP USA Inc. **\$41,998,425.00**

The Overall Value Rating was determined by dividing the Price by the Technical Score. The scores and calculations are provided below:

Skanska USA Civil Northeast Inc. and CHA Consulting, Inc. **\$39,200,000.00/ 91.13 = 430,154.724**
The Middlesex Corporation and TranSystems **\$40,728,200.00/ 89.13 = 456,952.766**
SPS New England, Inc. and WSP USA Inc. **\$41,998,425.00/ 87.26 = 481,302.143**

Skanska USA Civil Northeast Inc. and CHA Consulting, Inc. was determined to be the apparent Best Value Proposer with a low Overall Value Rating of 430,154.724. The Price Proposal packages were reviewed, and it has been determined that the Skanska USA Civil Northeast Inc. and CHA Consulting, Inc. Team is the Best Value Proposer.

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The Price Proposals were reviewed by engineers in the Construction, Construction Contracts and Design-Build Sections. A Price Proposal Review was conducted by the Preliminary Design Consultant, Pare Corp, for the Design Build documents for the project. The Highway Division has accepted the Price Proposal submitted by Skanska USA Civil Northeast Inc. and CHA Consulting, Inc at \$39,200,000.00 which is within 1% of the Office Estimate of \$38,999,644.20.

MILESTONES:

The project has the following six (6) Milestones:

- Milestone No. 6: Release of Orange Line Reservation Area, Surge No. 1
- Milestone No. 5: Restore Traffic on Maffa Way and Mystic Avenue, Surge No. 1
- Milestone No. 4: Release of Orange Line Reservation Area, Surge No. 2
- Milestone No. 3: Restore Traffic on Maffa Way and Mystic Avenue, Surge No. 2
- Milestone No. 2: Full Beneficial Use and Substantial Completion
- Milestone No. 1: Contractor Field Completion

These Milestones are defined and restricted as identified below:

Milestone No. 6 – Release of Orange Line Reservation Area, Surge No. 1

The Design-Builder shall achieve Milestone No. 6 by 1:00AM on the second Monday of Surge No. 1.

Milestone No. 5 – Restore Traffic on Maffa Way and Mystic Avenue, Surge No. 1

The Design-Builder shall achieve Milestone No. 5 by 5:00 AM on the second Monday of Surge No. 1.

Milestone No. 4 – Release of Orange Line Reservation Area, Surge No. 2

The Design-Builder shall achieve Milestone No. 4 by 1:00 AM on the second Monday of Surge No. 2.

Milestone No. 3 – Restore Traffic on Maffa Way and Mystic Avenue, Surge No. 2

The Design-Builder shall achieve Milestone No. 3 by 5:00 AM on the second Monday of Surge No. 2.

Milestone No. 2 – Full Beneficial Use and Substantial Completion

The Design-Builder shall achieve Milestone No. 2 within 1,240 Calendar Days from NTP

Milestone No. 1 – Contract Completion

The Design-Builder shall achieve Milestone No. 1 within 1,367 Calendar Days from NTP

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DISADVANTAGE BUSINESS ENTERPRISE PARTICIPATION:

Disadvantaged Business Enterprise (“DBE”) participation is required. The DBE requirement for this Project is 16% of the design component and 16% of the construction component for this Contract. MassDOT’s Office for Diversity and Civil Rights has reviewed the DBE information included in the Proposal of the chosen bidder and recommends award of the DB Contract to this team.

To achieve this goal the Design-Builder, Skanska/CHA, has identified Four (4) design firms and Four (4) construction firms.

The following is a summary of the identified design and construction firms, scope of work and value for this project:

DBE - Design Firms Identified:

<u>Firm</u>	<u>Scope of Work</u>	<u>Amount Eligible</u>
Comprehensive Environment, Inc.	Environmental Eng. Support	\$80,167.00
Lamson Engineering Corporation	Geotechnical Engineering	\$150,372.00
Regina Villa Associates, Inc.	Public Outreach Services	\$235,752.00
Steere Engineering, Inc.	Structural Eng. Support	\$232,500.00
Total Amount		\$698,791.00

The total “DBE” design bid value is \$ \$698,791.00 netting a 16.2% value which meets the goal of 16% as established for the design component of this project.

DBE - Construction Firms identified:

<u>Firm</u>	<u>Scope of Work</u>	<u>Amount Eligible</u>
Don Martin Company	F & I Asphalt Pavement	\$550,000.00
K. DaPonte Construction Corp.	Curb & Sidewalk Installation	\$106,317.00
Saugus Construction	F & I Bridge Steel	\$4,525,000.00
H&A Steel, LLC	Rebar Installation	\$400,000.00
Total Amount		\$5,581,317.00

The total “DBE” Construction bid value is \$5,581,317.00 netting a 16.00 % value which meets the goal of 16% as established for the construction component of this project.

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FINANCIAL IMPACT/BUDGET SOURCE:

This action is funded through various sources:

FA - National Highway Performance Program (NHPP/NHS)

FA - Congestion Mitigation/Air Quality (CMAQ)

NFA - Site Specific (State)

FUTURE ANTICIPATED AUTHORIZATIONS:

None

RECOMMENDATIONS:

It is recommended that the Board of Directors authorize the Secretary, or her designee, to award and execute MassDOT Contract No.119537 titled Superstructure Replacement, Maffa Way & Mystic Avenue over Orange & MBTA/BMRR – Design-Build Project, with Skanska USA Civil Northeast/CHA Consulting Inc., in a form approved by the General Counsel, in the amount of \$39,200,000.00.

COORDINATION WITH:

Office of Diversity and Civil Rights

Engineering and Maintenance

Environmental

Capital Programs

Budget and Finance

Legal Department

SIGNATURE PAGE:

See Page [final page #]

ATTACHMENTS:

Tab A – Vote [to be completed by Legal]

RESOURCE/REFERENCE DOCUMENTS:

[list here]

STAFF SUMMARY SIGNATURE PAGE

☐ Secretary Approval

☐ MassDOT Board Approval

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MBTA/BMRR – Design-Build Project

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☐ Capital Budget

☐ Operating Budget

☐ Legal

☐ Other

RECOMMEND APPROVAL:

[name]
[Project Head]

RECOMMEND APPROVAL:

[name]
[Department Head]

RECOMMEND APPROVAL:

Chief Financial Officer

RECOMMEND APPROVAL:

Susan Cobb
First Deputy
General Counsel

RECOMMEND APPROVAL:

Gina Fiandaca
Secretary/CEO