



MEMO

7/13/2022

To: CRA Board
From: Cecelia Cobb – Project Planner
RE: Galaxy Park Streetscape Redesign

BACKGROUND

Three years ago the CRA launched an effort to develop 10% concept design options for the streetscapes of Broadway, Main Street, and Third Street within the KSURP area, building off the Alta designs completed earlier (BMT Streetscape Plan). Most sections of the BMT Streetscape Plan will be reconstructed by developers such as Boston Properties, MITIMCo and BioMed Realty, as these improvements are included as mitigations for large-scale development projects.

The CRA staff are interested in progressing a portion of the proposed concept design from the BMT Streetscape Plan. This includes a section of land along the southern edge of Broadway north of Galaxy Park, the point of Galaxy Park, and the intersection of Main Street and Broadway heading eastbound towards Longfellow Bridge (see Exhibit A).

We are poised to lead the implementation of this work as the CRA is the land owner of the Broadway frontage, the neighboring open space will not be part of a larger development project, and its renovation will link bicycle facilities planned for completion in the future.

SCOPE OF WORK / BUDGET

Sasaki will provide landscape architecture and civil engineering services for the design of roadway improvements and traffic control for the project, and McMahon will provide transportation engineering services. Final design will consist of development of 25%, 75%, and 100% design documents followed by a final PS&E (Plans, Special Provisions and Estimate) submission, and will be established in collaboration with City of Cambridge staff.

The scope includes design progression through construction design for a protected bicycle lane heading eastbound on Broadway from Third Street to Main Street, as well as activation of the eastern corner of Galaxy Park. The project may include the construction of a raised crosswalk where Main Street eastbound meets Broadway to improve visibility for pedestrians and bikes crossing this

intersection. The designs will be advanced based off the 10% concept plans developed by the CRA and Sasaki in the report on Broadway, Main Street, and Third Street.

As the creation of the BMT Streetscape Plans and Report is considered phases 1-3, this amendment scope begins at Phase 4. This phase of design will include the development of two alternatives and will allow comparison of the geometry, function, and cost of each. These will be based on the quantities shown in the alternative plans and the anticipated construction costs based on recent projects of similar scope. Phase 5 will include selecting one plan to develop to 25% design and will include two (2) perspective renderings for use in public presentations. Phases 6 and 7 will advance plans to 75% and 100%, respectively, and Phase 8 will consist of preparing final PS&E documents.

Given the uncertainty of increased bus routes in this area as part of the MBTA Bus Network Redesign and the various design options currently proposed for the intersection of Broadway, Third Street, and Main Street westbound, more detailed analysis may be required by the City to assess the operations of the intersection's selected alternative. In this case, the consultant would utilize VISSIM microsimulation software to model the intersection to provide more refined analytical results that account for the high volume and complexity of the pedestrian, bicycle and transit movements. This would be included as an optional additional service. Other optional additional services include further topographic survey, subsurface utility engineering, and soils investigation as needed, as well as assistance with procuring an MBTA license and reviewing bids for construction if deemed appropriate.

This project will be implemented in coordination with the redevelopment of SoMa Parcel 2 (Eastgate) by MITIMCo. The Eastgate project will also include the construction of a protected eastbound bike lane on the south side of Broadway to the east of Main Street.

Assuming a review duration of 1 month each for the design alternatives, 25%, 75%, and 100% submissions and that the subsurface soils investigation and supplemental field survey work can be done during the design alternative phase, Sasaki estimates a total project design of about 12 months.

RECOMMENDATION

CRA staff recommend authorizing the Chair and Executive Director to amend the contract scope with Sasaki to complete the streetscape design surrounding Galaxy Park of an amount not to exceed three-hundred sixty-nine thousand eight hundred dollars (\$369,800).

Attachments:

Exhibit A – Scope of Work

Exhibit B – Most recent draft of Galaxy Park Streetscape Redesign Scope



July 13, 2022

Alexandra Levering
Project Manager
Cambridge Redevelopment Authority
255 Main Street
8th Floor
Cambridge, MA 02142

Re: 2020 Kendall Square Urban Renewal Area Streetscape Redesign – Main, Broadway,
and Third – Amendment #2 (Galaxy Park Renovations)

Sasaki Project Number: 08021.01U

Dear Alex,

This Amendment (Amendment) is made by Cambridge Redevelopment Authority (Client) and Sasaki Associates, Inc. (Sasaki), parties to the Agreement dated 27 March 2020 (Agreement) and 8 September 2020 (Amendment #1). The Agreement is amended as follows:

Additional Scope of Services

Stages 1 through 3 included 10% conceptual design development for Broadway, Main and Third Streets. The proposed stages are numbered subsequent to this work.

The Agreement Services are amended as outlined below.

PROJECT DESCRIPTION

The Cambridge Redevelopment Authority (CRA) is interested in implementing a portion of the proposed concept design of for Broadway, Main, and Third Streets at the intersection of these streets near Galaxy Park. The project will include construction of a protected bicycle lane heading eastbound on the south side of Broadway from Third Street to Main Street as well as activation of the eastern corner of Galaxy Park. The project may also include the construction of a raised crosswalk at the east end of Main Street where it meets Broadway in order to improve safety for pedestrians and bikes crossing this intersection. The project will be implemented in conjunction with the proposed redevelopment of SoMa Parcel 2 (Eastgate) by MIT. The Soma Parcel 2 project will also include the construction of a protected eastbound bike lane on the south side of Broadway to the east of Main Street.

Sasaki will provide landscape architecture and civil engineering services for the design of roadway improvements and traffic control for the project. The design will generally follow the concept plans developed for this location by the CRA and Sasaki. Final design is

assumed to consist of development of 25%, 75%, and 100% design documents followed by a final PS&E (Plans, Special Provisions and Estimate) submission.

Work Area

The anticipated project limits are shown on the attached sketch. It is understood that the limits above may be adjusted slightly to best match existing conditions and proposed improvements by others while providing acceptable transitions.

The project will include separated bike lanes (cycle tracks), sidewalk improvements, crosswalk modifications, landscape planting and furnishings, irrigation, and lighting. It is anticipated that the project will be implemented independent of the proposed bus service improvement project being considered by the CRA and Kendall Square Transit Enhancement Program (KSTEP). It is anticipated that any necessary modifications to the traffic signals and timing to improve bus service will be completed as part of this separate project.

Drainage/Stormwater

It may be necessary to relocate or install new catch basins, drain manholes, and laterals. Stormwater improvements may also include infiltration catch basins to improve stormwater quality. Some existing utility structures may need to be raised, lowered, or relocated to accommodate the proposed improvements. It is anticipated that the existing street lighting and park irrigation systems will remain as is, but the park design may include additional lighting and modifications to the irrigation systems.

Utility Coordination

Sasaki will coordinate with City and private utility companies to establish relocation and/or modification procedures for existing utilities compatible with proposed improvements. This task does not include the design of new private utilities.

Special Provisions

Sasaki will prepare special provisions to the Standard Specifications in accordance with CRA standards, supplemented by MassDOT Standard Specifications for Highways and Bridges and standard details where an applicable City standard does not apply.

Traffic Management

The design team will develop traffic management plans that will permit access to adjacent properties, and manage traffic through the construction zones.

STAGE 4: GALAXY PARK AREA DESIGN ALTERNATIVES

The design team will attend a meeting with the Client and City to review the 10% conceptual design and discuss any relevant concerns with the proposed project. It is assumed that extensive revisions to the 10% conceptual design will not be necessary.

This first stage of the design will include the development of two alternatives. These alternatives will be documented to a level to allow for comparison of the geometry, function, and cost of each alternative.

The team will also prepare opinions of probable construction cost for the design alternatives. These will be based on the quantities shown in the alternative plans and the anticipated construction costs based on recent projects of similar scope.

A meeting will be held to present the alternatives and costs to the CRA and the City staff for review.

Deliverables

- Illustrative landscape and streetscape plans for each alternative
- Perspective views for each alternative
- Preliminary opinions of probable construction cost for each alternative
- Technical memorandum documenting initial transportation analysis

STAGE 5: GALAXY PARK AREA 25% DESIGN PLANS

The design team will attend a meeting with the City and Client to review the alternatives analysis. Based on comments received from the City and Client on the selected alternative, Sasaki will advance the plans to a 25% design submission. Improvements will include separated bicycle facilities/cycle tracks, pedestrian improvements, and reconfigured areas of Galaxy Park, drainage system modifications, intersection realignment, coordination for public utilities (water, sewer, and drainage), and coordination for private utilities (gas, electric, and telephone).

The design team will also develop two (2) perspective renderings of the 25% design for use in public presentations. These renderings may be eye level or birds eye level views that will show a three-dimensional representation of the proposed street modifications and park improvements, including a representation of the proposed materials.

Deliverables

- 25% Plans
 - Typical Sections
 - Construction Details
 - Existing Conditions Plan
 - General Plan
 - Marking and Signing Plan
 - Traffic Sign Summary
 - Landscape Plan
 - Materials and Furnishing Plan
- Two (2) Perspective Renderings
- Estimate of Probable Cost

STAGE 6: GALAXY PARK AREA 75% DESIGN PLANS

Sasaki will attend a meeting with the City and Client to review the 25% design plans. Based on comments received from the City and Client from the 25% design plans, Sasaki will advance the plans to a 75% design submission.

Deliverables

- Responses to 25% design plan comments
- 75% Design Plans
 - Typical Sections
 - Construction Details
 - Existing Conditions Plan
 - General Plan
 - Profile

- Alignment and Curb Tie Plan
- Grading Plan
- Drainage & Utility Plans
- Marking and Signing Plan
- Traffic Sign Summary
- Temporary Traffic Control Plans
- Landscape Plan and Details
- Irrigation Plans
- Site Lighting Plans
- Materials and Furnishing Plan
- Specification Book
 - Construction Items List
 - Special Provisions supplementing the MassDOT Standard Specifications
 - Geometric Design & Traffic Technical Memorandum
 - Preliminary Stormwater Management Technical Memorandum (if required)
- Estimate of Probable Cost

STAGE 7: GALAXY PARK AREA 100% DESIGN PLANS

Sasaki attend one meeting to review the 75% design plans with the City and Client. Based on comments received from the City and Client on the 75% design plans, Sasaki will advance the plans to a 100% design submission.

Deliverables

- Responses to 75% design plan comments
- 100% Design Plans
 - Typical Sections
 - Construction Details
 - Existing Conditions Plan

- Existing Utility Survey
- General Plan
- Profile
- Alignment and Curb Tie Plan
- Grading Plan
- Drainage & Utility Plans
- Marking and Signing Plan
- Traffic Sign Summary
- Temporary Traffic Control Plans
- Landscape Plan and Details
- Irrigation Plans
- Site Lighting Plans
- Materials and Furnishing Plan
- Cross Sections
- Specification Book
 - Construction Items List
 - Special Provisions supplementing the MassDOT Standard Specifications
 - Stormwater Management Technical Memorandum (if required)
- Estimate of Probable Cost

STAGE 8: PS&E DOCUMENTS

Sasaki will attend one meeting to review the 100% design plans with the City and Client. Based on comments received from the City and Client on the 100% design plans, Sasaki will prepare final stamped plans and specifications.

Deliverables

- Responses to 100% design plan comments
- Stamped 100% Construction Drawings

- Typical Sections
- Construction Details
- Existing Conditions Plan
- Existing Utility Survey
- General Plan
- Profile
- Alignment and Curb Tie Plan
- Grading Plan
- Drainage & Utility Plans
- Marking and Signing Plan
- Traffic Sign Summary
- Temporary Traffic Control Plans
- Landscape Plan and Details
- Irrigation Plans
- Site Lighting Plans
- Materials and Furnishing Plan
- Cross Sections
- Stamped Specification Book
 - Construction Items List
 - Special Provisions supplementing the MassDOT Standard Specifications

Optional Additional Services

The following services will be provided for an additional fee as needed.

VISSIM MODELING

Should the City deem additional, more detailed analysis is necessary to assess the operations of the selected alternative, the team would utilize VISSIM microsimulation software to model

the subject intersection to provide more refined analytical results that account for the high volume and complexity of the pedestrian, bicycle and transit movements.

Should City staff deem the results of the Synchro model to be acceptable for the purposes of design, no VISSIM modeling would be completed as part of this effort.

THIRD STREET INTERSECTION OPTIONS

If necessary, the design team will study the multiple options planned for Third Street southbound at its intersection with Broadway. It is assumed that these alternatives would already be identified (by traffic studies for other nearby projects or the previous conceptual design efforts). The design team would include these as additional options in line with the scope that's already been identified above. The additional fee includes studying two additional options for Third Street, including two Synchro models representing preferred phasing options for each and then selected one for VISSIM analysis.

THIRD STREET OPTIONS VISSIM MODELING

VISSIM modeling could be provided for both of the additional options received under the Third Street Intersection Options task above for an additional fee to the task above.

TOPOGRAPHIC SURVEY

While some existing survey information is available for the site, an updated and accurate topographic survey will be necessary to ensure that the existing conditions information is accurate. Sasaki will engage a subcontractor to collect updated topographic survey information for the project site and immediate surrounding areas.

SUBSURFACE UTILITY ENGINEERING

Subsurface utility engineering services to more accurately locate existing subsurface utilities at key locations is recommended. Sasaki will engage a subcontractor to perform ground-penetrating radar (GPR) survey, or other similar services to identify the location of existing underground utilities. This information will help inform the final layout of the proposed utilities and surface improvements.

Sasaki assumes that test pit excavations will be necessary to verify the exact dimensions, horizontal, and vertical location of underground utilities. During the 75% design phase, Sasaki will review the location of potential underground structures to determine the extent of necessary excavations. An allowance has been included to cover these investigations.

SOILS INVESTIGATION

If it is determined that stormwater infiltration systems are necessary, a soil investigation will be required. This investigation will include test pits to characterize the soils within the proposed drainage infiltration limits. At a minimum, Sasaki assumes that the geotechnical

subcontractor will analyze infiltration rates, soil characteristics, and depth to groundwater, as well as characterize the soil for potential contamination within the project limits. Subsurface investigations shall be completed in accordance with Massachusetts stormwater regulations. Sasaki assumes that no more than two test pits will be required.

MBTA LICENSE

If it is determined that a license is required for work within the MBTA Zone of Influence (ZOI), the team can assist with obtaining this license as required prior to the beginning of construction. The team will prepare and submit the license application for review by the MBTA. The team will make revisions to the application and plans as requested. It is not anticipated that any meetings with the MBTA will be required.

This fee does not include the fees payable to the MBTA, such as the administrative review fee, license fee, or design & construction and structural review fees if required. This fee also does not include the cost of any construction phase services, such as on-site inspections required by the MBTA.

BID AND CONSTRUCTION PHASE SERVICES

If necessary, Sasaki can assist with the review of bids, including responding to requests for information from the bidders. Sasaki can also provide construction administration services, including attendance at meetings, field visits, review of submittals and substitution requests, responses to requests for information, payment requisition review, punch list and project closeout documentation review.

Assumptions

1. The project area is under the jurisdiction of the CRA and the City of Cambridge. The design plans will be reviewed by the CRA and the City (including all relevant departments) and its agents at the design alternatives, 25%, 75%, 100%, and PS&E stages. No other entities will have review or jurisdictional authority.
2. MBTA will need to review the design plans for approval of work in the vicinity of the existing red line tunnel. Review of intersection modifications will be reviewed by the MBTA as part of the KSTEP bus improvement project and is not included in this scope.
3. Structural evaluation of MBTA tunnel will not be required.
4. Private utility relocations will be by the respective utility company. Sasaki will assist the Client and the City with coordination efforts with gas, electric, and telecommunications providers. The utility company's internal design and construction costs associated with relocations will be the responsibility of others.

5. No environmental permitting or notifications are required under this agreement. Sasaki shall provide no environmental or permitting services.
6. Hazardous and/or contaminated materials investigation, identification, testing, or analysis is not included except to the extent required to analyze stormwater improvements.
7. Bid documentation preparation, negotiating with contractors or preparation of contract documents is not included in this agreement. Sasaki assumes that the Client will retain a contractor for construction. Assistance with the review of submitted bids will be an additional service.
8. Securing the necessary rights-of-way, easements, and rights-of-entry will be the responsibility of others. Sasaki shall not have any role in ROW or property acquisition related work.
9. Construction inspection or resident engineering services is not included in this scope.

Schedule

Sasaki anticipates performance of services, exclusive of Client and City review to be completed within the following time frame after receipt of written authorization to proceed:

Design Alternatives	1 month
Subsurface Soils Investigation	2 months
Supplemental Field Survey	2 months
25% Design	1.5 months
75% Design	2 months
100% Design	2 months
PS&E Documents	1 month

Assuming a review duration of 1 month each for the design alternatives, 25%, 75%, and 100% submissions and that the subsurface soils investigation and supplemental field survey work can be done during the design alternative phase, Sasaki estimates a total project design of about 12 months.

Compensation

LABOR FEE

Sasaki will be compensated for the Additional Services as outlined in this Amendment on a fixed fee basis of three hundred sixty nine thousand eight hundred dollars (\$369,800). Reimbursable Expenses and Optional Additional Services are in addition to the fee. Below is a list of fee by task. The reimbursable services below are not included in the total contract amendment amount.

Stage 4: Design Alternatives	\$25,900
Stage 5: 25% Design Plans	\$59,000
Stage 6: 75% Design Plans	\$129,500
Stage 7: 100% Design Plans	\$129,500
<u>Stage 8: PS&E Documents</u>	<u>\$25,900</u>
Total Fee	\$369,800
Optional Additional Services	
VISSIM Modeling	\$15,140
Third Street Intersection Options	\$20,360
Third Street Options VISSIM	\$8,890
Topographic Survey	\$6,325
Subsurface Utility Engineering	\$33,350
Allowance for Test Pits	\$11,500
Allowance for Soils Investigation	\$8,000
MBTA License Application	\$30,000

Additional meetings will be billed on a time and expense basis based on the hourly rates in the attached table.

Staff Level	Hourly Billing Rate
Principal in Charge	\$275-350

Project Manager	\$175-195
Landscape Architect	\$150
Civil/Landscape Designer	\$100-125
Multimodal / Traffic Technical Lead	\$260.10
Project Lead	\$167.67
Traffic Analysis / Multimodal Designer	\$155.76
Lead Design Engineer	\$105.00

REIMBURSABLE EXPENSES

In addition to the Labor Fee, Sasaki Reimbursable Expenses shall not exceed eight thousand five hundred dollars (\$8,500). Reimbursable expenses shall not exceed this value unless authorized in writing by the Client.

Except as set forth in this Amendment, the Agreement is unaffected and shall continue in full force and effect in accordance with its terms. If there is conflict between this Amendment and the Agreement, the terms of the Agreement will prevail.

Agreed and Accepted

Intending to be legally bound hereby, the parties have executed this Amendment as of the Effective Date written above.

Authorized signature for:

Cambridge Redevelopment Authority

Date

Authorized signature for:

Sasaki Associates, Inc.

Date

Exhibits

- a. Original agreement dated 27 March 2020
- b. Amendment #1 dated 8 September 2020

cc: contracts@sasaki.com

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