NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Greenway Project
Change Order: Work Order Stormwater Infrastructure
Published: 8/14/23

Stormwater Infrastructure Mini-Bid Originally Published: 4/4/23
Stormwater Infrastructure Mini-Bid Updated: 4/28/23
Stormwater Infrastructure Proposal Received: 5/5/23
Stormwater Infrastructure Awarded: 5/19/23
Stormwater Infrastructure Consultant: Agency Landscape + Planning with NV5

NOTE: All requirements and provisions of Request for Quotes: Master Plans and Designs, dated September 16, 2022 and updated September 27, 2022 and October 26, 2022; Consultant's Proposal, dated November 14, 2022; Stormwater Infrastructure Mini-Bid issued April 4, 2023; and Consultant's Mini-Bid Proposal, dated May 5, 2023 (collectively RFQ) are incorporated herein and in effect for this Work Order.

The NJ Department of Environmental Protection (Department) determined during the execution of the Stormwater Infrastructure work order that additional data is required to successfully complete all deliverables. The Department believed, based on conversations with NJ Transit, that NJ Transit had the additional data required. The Department and Consultant learned while completing the Work Order Tasks that NJ Transit does not have the data. As such, the Department is adding the following Task 3 to the Stormwater Infrastructure work order. All other terms, conditions, and pricing remain the same.

TASK 3 – BASEMAPPING SURVEY
The Consultant shall provide a basemapping survey to aid in the drafting of the Stormwater Infrastructure Plan. Consultant shall include, but not be limited to, the following:

- Collect drone imagery, using UAV LiDAR or equal, for the length of the Greenway;
- Process the data to create an up-to-date topographic map of the Greenway; and
- Include the overhead span clearance data in the 2D plan for any electric lines that pass over the rail bridges.

Deliverable(s)
1) 2D planimetric basemap in *.DWG format;
2) Ortho-mosaic image in &.ECW format;
3) AutoCAD Civil3D surface displayed as 1-foot contours in *.DWG format; and
4) Overhead utility span clearance height provided in 2D Plan and *.CSV format.

Pricing for Task 3 will be in accordance with the all-inclusive hourly rates submitted in response to the RFQ for the activities identified herein. The budget necessary to complete this Task is approximately $150,000.00. Consultant will submit their hours to the Department as part of their invoices for this Stormwater Infrastructure Work Order. The deadline for the Stormwater Infrastructure Plan will not change in light of this additional Task.

Copy of Stormwater Infrastructure Mini-Bid provided starting on next page, for reference.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mini-Bid
Greenway Project
Work Order: Stormwater Infrastructure
Originally Published: 4/4/23
Updated: 4/28/23

NOTE: All requirements and provisions of Request for Quotes: Master Plans and Designs, dated September 16, 2022 and updated September 27, 2022 and October 26, 2022, (RFQ) are in effect for this Work Order.

OVERVIEW

The New Jersey Department of Environmental Protection (Department) issues this Mini-Bid to solicit quotes under the RFQ for activities necessary to assess and design stormwater management infrastructure for integration into the 9-mile abandoned rail corridor in Essex and Hudson Counties (Greenway) in a manner that benefits its host communities by increasing capture of existing stormwater and decreasing excessive discharge rates during major storm events.

Under this Work Order, the Department is seeking proposals for the evaluation of stormwater management infrastructure appropriate for installation prior to or in conjunction with the phased development of the Greenway, including design and feasibility analyses and implementation plans, with specific focus on reducing combined sewer overflows (CSOs) and feasible green infrastructure techniques (Stormwater Infrastructure Plan). These proposals should be designed to implement best practices and put in place necessary infrastructure prior to or in conjunction with initial development of the Greenway to increase stormwater capture and manage discharge rates during major storm events. The Department anticipates that additional stormwater management techniques will be later implemented during phased development in accordance with the Master Plan.

This Work Order is issued under Section 6.10 of the RFQ which allows the Department to conduct a Mini-Bid process to assign tasks to the retained consultant (Consultant). As a condition of receiving Coronavirus State Fiscal Recovery Funding, the Greenway must be designed in a manner that incorporates compatible stormwater infrastructure. Consultants wishing to participate in this Mini-Bid shall submit a proposal based on the all-inclusive hourly rate submitted in response to the RFQ for the activities identified herein. The Department will select the proposal most advantageous to the State, price and other factors considered, for the Work Order.

PROJECT AREA

The Greenway consists of a long-dormant 8.63-mile rail line traversing Essex and Hudson Counties—two of the most densely populated counties in New Jersey and in the nation. Averaging 100 feet in width and encompassing approximately 135 acres, the Greenway passes through numerous diverse commercial, industrial and residential neighborhoods in eight New Jersey communities (Montclair, Glen Ridge, Bloomfield, Belleville, Newark, Kearny, Secaucus, and Jersey City), crossing both the Hackensack and Passaic Rivers in the process.

The Department envisions development of the Greenway as a multimodal, walking, biking, and transit corridor providing new, safe, and equitable opportunities for outdoor recreation and open space enjoyment, improvement of regional transportation and stormwater performance, and spurring equitable economic growth and redevelopment in the surrounding heavily industrialized region. To

maximize these opportunities, the Department acquired the corridor subject to appropriate reservations to allow use for transit, utility, and other economically beneficial uses consistent with the Greenway's underlying recreational purpose.

Additionally, due to the legacy of industrial pollution in the vicinity of the Greenway and dilapidation of existing infrastructure, its development for public use requires the implementation of appropriate remedial safety measures to allow for public use.

While access to the property is currently restricted, the Department intends to open a portion of the Greenway for public use and enjoyment by the end of 2025. As the development of the comprehensive Master Plan will necessitate extensive planning and deep, robust community and stakeholder engagement, the Department expects to undertake a phased approach to development that prioritizes initial investments in stormwater infrastructure, remediation, safety and security and initial supportive public amenities. This phased approach would work in parallel to the development of the comprehensive Master Plan with further improvements and amenities subsequently incorporated into the Greenway in accordance with the finalized Master Plan.

Background documentation for the Greenway can be found on collaborative Microsoft Teams sites:

Agency Landscape + Planning with NV5 - Teams site link
Arup - Teams site link
James Corner Field Operations - Teams site link

SCOPE OF WORK

Prior to taking title to the Greenway, the Department received Stormwater Storage Siting Studies from its partners at the Open Space Institute (Stormwater Reports) and a Stormwater Feasibility Study. The Feasibility Study considered the Stormwater Reports' scouted locations for underground stormwater storage in the cities of Newark, Kearny, Belleville, and Jersey City and evaluated feasible options for storage sites, especially those in Newark and Kearny, by identifying connection points to existing local utility mains. The Feasibility Study found four feasible stormwater collection sites in the Newark area, and recommended a design that combines underground storage of both sanitary sewage and stormwater. Its primary recommended location was chosen based on cost-effectiveness and location within local topography.

Recognizing that design of appropriate stormwater infrastructure for this unique land asset requires consideration of the local topography, the existing utility network underlying the area, and the needs of the surrounding communities, the Department seeks to build on the existing Stormwater Reports and Stormwater Feasibility Study to develop the Stormwater Infrastructure Plan that identifies stormwater management techniques appropriate for installation prior to or on conjunction with the initial phased development of the Greenway.

The Stormwater Infrastructure Plan shall: (1) assess the stormwater management needs, challenges and opportunities within the Greenway's host communities, including focus on reducing combined sewer overflows; (2) evaluate infrastructure design alternatives for feasibility and effectiveness, including maximization of green infrastructure techniques; (3) propose concept design alternatives and associated costs, building on the information provided in the initial feasibility study; and (4) provide a recommended preferred alternative or ranked alternatives considering cost effectiveness.

The Consultant shall complete the scope of work as described herein.

The Consultant shall include in their response to this Mini-Bid the budget necessary to complete the scope of work. This budget is approximately $500,000.

All project deliverables shall be submitted to Department for review in a timely manner. Consultant shall provide all deliverables in a format suitable for inclusion on the Department website.

The Consultant shall be responsible for completing the following tasks as soon as feasible and no later than **September 1, 2023**:

TASK 1 – STORMWATER INFRASTRUCTURE EVALUATION

The Consultant shall review the Stormwater Reports, Stormwater Feasibility Study, and any other relevant, available information and, as necessary, engage relevant community members, local government entities and other stakeholders to gain an understanding of the areas surrounding the Greenway, as applicable, including but not limited to their existing utility infrastructure, land use and population, topography, hazard exposure, and other critical issues to develop a proposed comprehensive and effective Stormwater Infrastructure Plan for Department review.

The Consultant shall propose designs for stormwater infrastructure appropriate for installation in advance of and compatible with development of the Greenway that represent feasible options for addressing existing stormwater discharges in the host communities, including consideration of potential sharp increases in discharge rates that often accompanies major storm events. The Stormwater Infrastructure Plan shall consider and incorporate the existing utility mains in the surrounding areas. It shall also identify and incorporate catchment areas based on the topography of the area, its existing utility network, and rainfall during hypothetical major storm events for both current and future climate-influenced conditions. The Stormwater Infrastructure Plan shall consider and incorporate as necessary the zoning and land use regulations for surrounding municipalities, State land use regulations, and the Department's Stormwater Management Rules (N.J.A.C. 7:8 et seq.).

The Consultant shall use the appropriate calculation method as set forth in the Stormwater Management Rules at N.J.A.C. 7:8-5.7 to determine the runoff volume of storage necessary for each catchment area proposed, and include an explanation of the analysis and any assumptions or unknown factors in its proposal to the Department.

The Stormwater Infrastructure Plan shall recommend feasible design alternatives using the New Jersey Stormwater Best Management Practices Manual, based on the topography and existing infrastructure in the area, the relative cost, maintenance requirements, necessary permitting considerations and effectiveness of each design alternative, and provide an expected timeline for implementation prior to or in conjunction with development of the Greenway (in the Recommendation Report).

To ensure effective communication within the region, any publicly released written materials requesting input and participation from the public will be translated into Spanish by the Consultant, as well as any other languages that may be recommended by the Consultant.

The Stormwater Infrastructure Plan shall:

1. Propose stormwater infrastructure alternatives that consider the stormwater management needs, challenges and opportunities of surrounding communities, including specific consideration of issues related to combined sewer overflows;
2. Detail the analysis used to determine feasible design alternatives, including their compliance with applicable rules and guidance and relevant permitting considerations;
3. Identify a recommended preferred alternative, or ranked alternatives, considering cost effectiveness and including an explanation for their ranking/selection; and
4. Include expected timing and schedule for any construction or implementation measures.

The Consultant shall provide a draft Stormwater Infrastructure Plan to the Department for review, comment, and modification, as necessary, prior to finalization. The Department will return comments

within one week of receipt.

Deliverable(s)

1. Draft Stormwater Infrastructure Plan, including Recommendation Report, for review by Department; and
2. Final Stormwater Infrastructure Plan revised based on comments from Department.

TASK 2 – MEETINGS, CONFERENCE CALLS, AND GENERAL PROJECT TEAM COORDINATION

The Consultant shall schedule regular meetings with the Department to monitor progress, raise issues and collaborate on the tasks set forth in this scope of work including, but not limited to the following:

- Project Kick Off Meeting(s) – Within seven (7) business days of receiving the notice to proceed on execution of this scope of work, the Consultant's project manager and other key personnel shall participate in a project kick off meeting with the Department. At this meeting, contract requirements, timelines, and team member roles and responsibilities will be clarified.
- Status/Progress meetings – The Consultant shall meet with Department at least every two (2) weeks to report on the progress of all tasks for the duration of the project. The Consultant Team shall:
    1. Schedule all meetings;
    2. Prepare meeting agenda;
    3. Distribute a copy of the agenda to the meeting participants no later than two (2) business days prior to all meetings or conference calls; and
    4. Prepare meeting summaries and transmit to Department no later than two (2) business days after the meeting.
- Recommendation Presentation – Consultant shall present their final recommendations under Task 1 to the Department at least one week prior to submitting final Stormwater Infrastructure Plan.

Deliverable(s)

1) Meeting summaries for Progress/Status meetings; and
2) Recommendation Presentation.

ADMINISTRATIVE REQUIREMENTS

In addition to the tasks identified above, the Consultant will comply with administrative requirements listed below in accordance with Department requirements.

Progress Reporting

The Consultant shall be responsible for reporting all project progress at least monthly, unless a different frequency is set by the Department and Consultant, during the duration of the Work Order. This requires:

1. Ensuring that all progress reports are submitted in a mutually agreed upon format and include the following:
    a. Task Name or description per the Scope of Work;
    b. Task Status;
    c. Activities completed and anticipated for the next month; and
    d. Percent completed.

Invoicing

The Consultant's project manager shall ensure that all requests for payment:

1. Include employee timesheets;
2. Are signed by the employee's supervisor;
3. Are supported by completed activities/tasks described in the monthly progress reports; and
4. Include the Invoice Summary Table.

Uploading documents to the Greenway Microsoft Teams Site
The Department will provide a Microsoft Teams site for each prequalified Consultant to collaborate on projects and serve as a repository for work products (links below). The Consultant shall ensure that all draft and final work products developed by the Consultant are uploaded to the site regularly, but at least monthly.

Agency Landscape + Planning with NV5 - Teams site link
Arup - Teams site link
James Corner Field Operations - Teams site link

SUBMISSION OF PROPOSALS
If a Consultant is not able to respond to this Mini-Bid due to a conflict of interest or scheduling issue, it shall decline participation in writing to Department within three (3) business days of receipt of the Work Order. Scheduling issues may include if the Consultant would not have capacity to execute this scope of work within the timeline required, due to capacity constraints resulting from ongoing or anticipated projects.

Consultants may submit questions no later than 12:00 p.m. April 11, 2023 to julia.wong@dep.nj.gov. Responses to questions will be emailed to all prequalified vendors.

One electronic copy of the proposal must be submitted to julia.wong@dep.nj.gov by 12:00 p.m. on May 5, 2023.

The proposal must include the following:

a. A statement demonstrating why the Consultant is uniquely qualified to complete the scope of work;
b. A detailed description of how the Consultant proposes to complete each task identified in the scope of work;
c. Name, title, and qualifications of personnel that will be assigned to each task and their experience to complete it successfully;
d. A schedule or timeline for completion of the specific tasks and deliverables set forth in the scope of work; and
e. A comprehensive budget showing the person-hours proposed to complete the activities set forth in the scope of work. The budget shall be designed to reflect the tasks, sub-tasks, or other work elements required by this Work Order and shall set forth, for each task, sub-task or other work element, the total number of person-hours, by labor category, proposed to complete the assignment. The budget shall be based on the all-inclusive hourly rate submitted in the Contractor's quote in response to the RFQ.

After review of all responses to this Work Order, the Department will select the proposal(s) most advantageous to the State, price and other factors considered.

The Department expects to assign this Work Order by **May 19, 2023**.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mini-Bid
Greenway Project
Work Order: Stormwater Infrastructure
Originally Published: 4/4/23
Updated: 4/28/23

NOTE: All requirements and provisions of Request for Quotes: Master Plans and Designs, dated September 16, 2022 and updated September 27, 2022 and October 26, 2022, (RFQ) are in effect for this Work Order.

OVERVIEW

The New Jersey Department of Environmental Protection (Department) issues this Mini-Bid to solicit quotes under the RFQ for activities necessary to assess and design stormwater management infrastructure for integration into the 9-mile abandoned rail corridor in Essex and Hudson Counties (Greenway) in a manner that benefits its host communities by increasing capture of existing stormwater and decreasing excessive discharge rates during major storm events.

Under this Work Order, the Department is seeking proposals for the evaluation of stormwater management infrastructure appropriate for installation prior to or in conjunction with the phased development of the Greenway, including design and feasibility analyses and implementation plans, with specific focus on reducing combined sewer overflows (CSOs) and feasible green infrastructure techniques (Stormwater Infrastructure Plan). These proposals should be designed to implement best practices and put in place necessary infrastructure prior to or in conjunction with initial development of the Greenway to increase stormwater capture and manage discharge rates during major storm events. The Department anticipates that additional stormwater management techniques will be later implemented during phased development in accordance with the Master Plan.

This Work Order is issued under Section 6.10 of the RFQ which allows the Department to conduct a Mini-Bid process to assign tasks to the retained consultant (Consultant). As a condition of receiving Coronavirus State Fiscal Recovery Funding, the Greenway must be designed in a manner that incorporates compatible stormwater infrastructure. Consultants wishing to participate in this Mini-Bid shall submit a proposal based on the all-inclusive hourly rate submitted in response to the RFQ for the activities identified herein. The Department will select the proposal most advantageous to the State, price and other factors considered, for the Work Order.

PROJECT AREA

The Greenway consists of a long-dormant 8.63-mile rail line traversing Essex and Hudson Counties—two of the most densely populated counties in New Jersey and in the nation. Averaging 100 feet in width and encompassing approximately 135 acres, the Greenway passes through numerous diverse commercial, industrial and residential neighborhoods in eight New Jersey communities (Montclair, Glen Ridge, Bloomfield, Belleville, Newark, Kearny, Secaucus, and Jersey City), crossing both the Hackensack and Passaic Rivers in the process.

The Department envisions development of the Greenway as a multimodal, walking, biking, and transit corridor providing new, safe, and equitable opportunities for outdoor recreation and open space enjoyment, improvement of regional transportation and stormwater performance, and spurring

equitable economic growth and redevelopment in the surrounding heavily industrialized region. To maximize these opportunities, the Department acquired the corridor subject to appropriate reservations to allow use for transit, utility, and other economically beneficial uses consistent with the Greenway's underlying recreational purpose.

Additionally, due to the legacy of industrial pollution in the vicinity of the Greenway and dilapidation of existing infrastructure, its development for public use requires the implementation of appropriate remedial safety measures to allow for public use.

While access to the property is currently restricted, the Department intends to open a portion of the Greenway for public use and enjoyment by the end of 2025. As the development of the comprehensive Master Plan will necessitate extensive planning and deep, robust community and stakeholder engagement, the Department expects to undertake a phased approach to development that prioritizes initial investments in stormwater infrastructure, remediation, safety and security and initial supportive public amenities. This phased approach would work in parallel to the development of the comprehensive Master Plan with further improvements and amenities subsequently incorporated into the Greenway in accordance with the finalized Master Plan.

Background documentation for the Greenway can be found on collaborative Microsoft Teams sites:

Agency Landscape + Planning with NV5 - Teams site link
Arup - Teams site link
James Corner Field Operations - Teams site link

SCOPE OF WORK

Prior to taking title to the Greenway, the Department received Stormwater Storage Siting Studies from its partners at the Open Space Institute (Stormwater Reports) and a Stormwater Feasibility Study. The Feasibility Study considered the Stormwater Reports' scouted locations for underground stormwater storage in the cities of Newark, Kearny, Belleville, and Jersey City and evaluated feasible options for storage sites, especially those in Newark and Kearny, by identifying connection points to existing local utility mains. The Feasibility Study found four feasible stormwater collection sites in the Newark area, and recommended a design that combines underground storage of both sanitary sewage and stormwater. Its primary recommended location was chosen based on cost-effectiveness and location within local topography.

Recognizing that design of appropriate stormwater infrastructure for this unique land asset requires consideration of the local topography, the existing utility network underlying the area, and the needs of the surrounding communities, the Department seeks to build on the existing Stormwater Reports and Stormwater Feasibility Study to develop the Stormwater Infrastructure Plan that identifies stormwater management techniques appropriate for installation prior to or on conjunction with the initial phased development of the Greenway.

The Stormwater Infrastructure Plan shall: (1) assess the stormwater management needs, challenges and opportunities within the Greenway's host communities, including focus on reducing combined sewer overflows; (2) evaluate infrastructure design alternatives for feasibility and effectiveness, including maximization of green infrastructure techniques; (3) propose concept design alternatives and associated costs, building on the information provided in the initial feasibility study; and (4) provide a recommended preferred alternative or ranked alternatives considering cost effectiveness.

The Consultant shall complete the scope of work as described herein.

The Consultant shall include in their response to this Mini-Bid the budget necessary to complete the scope of work. This budget is approximately $500,000.

All project deliverables shall be submitted to Department for review in a timely manner. Consultant shall provide all deliverables in a format suitable for inclusion on the Department website.

The Consultant shall be responsible for completing the following tasks as soon as feasible and no later than **September 1, 2023**:

TASK 1 – STORMWATER INFRASTRUCTURE EVALUATION

The Consultant shall review the Stormwater Reports, Stormwater Feasibility Study, and any other relevant, available information and, as necessary, engage relevant community members, local government entities and other stakeholders to gain an understanding of the areas surrounding the Greenway, as applicable, including but not limited to their existing utility infrastructure, land use and population, topography, hazard exposure, and other critical issues to develop a proposed comprehensive and effective Stormwater Infrastructure Plan for Department review.

The Consultant shall propose designs for stormwater infrastructure appropriate for installation in advance of and compatible with development of the Greenway that represent feasible options for addressing existing stormwater discharges in the host communities, including consideration of potential sharp increases in discharge rates that often accompanies major storm events. The Stormwater Infrastructure Plan shall consider and incorporate the existing utility mains in the surrounding areas. It shall also identify and incorporate catchment areas based on the topography of the area, its existing utility network, and rainfall during hypothetical major storm events for both current and future climate-influenced conditions. The Stormwater Infrastructure Plan shall consider and incorporate as necessary the zoning and land use regulations for surrounding municipalities, State land use regulations, and the Department's Stormwater Management Rules (N.J.A.C. 7:8 et seq.).

The Consultant shall use the appropriate calculation method as set forth in the Stormwater Management Rules at N.J.A.C. 7:8-5.7 to determine the runoff volume of storage necessary for each catchment area proposed, and include an explanation of the analysis and any assumptions or unknown factors in its proposal to the Department.

The Stormwater Infrastructure Plan shall recommend feasible design alternatives using the New Jersey Stormwater Best Management Practices Manual, based on the topography and existing infrastructure in the area, the relative cost, maintenance requirements, necessary permitting considerations and effectiveness of each design alternative, and provide an expected timeline for implementation prior to or in conjunction with development of the Greenway (in the Recommendation Report).

To ensure effective communication within the region, any publicly released written materials requesting input and participation from the public will be translated into Spanish by the Consultant, as well as any other languages that may be recommended by the Consultant.

The Stormwater Infrastructure Plan shall:

1. Propose stormwater infrastructure alternatives that consider the stormwater management needs, challenges and opportunities of surrounding communities, including specific consideration of issues related to combined sewer overflows;

2. Detail the analysis used to determine feasible design alternatives, including their compliance with applicable rules and guidance and relevant permitting considerations;
3. Identify a recommended preferred alternative, or ranked alternatives, considering cost effectiveness and including an explanation for their ranking/selection; and
4. Include expected timing and schedule for any construction or implementation measures.

The Consultant shall provide a draft Stormwater Infrastructure Plan to the Department for review, comment, and modification, as necessary, prior to finalization. The Department will return comments within one week of receipt.

Deliverable(s)

1. Draft Stormwater Infrastructure Plan, including Recommendation Report, for review by Department; and
2. Final Stormwater Infrastructure Plan revised based on comments from Department.

TASK 2 – MEETINGS, CONFERENCE CALLS, AND GENERAL PROJECT TEAM COORDINATION

The Consultant shall schedule regular meetings with the Department to monitor progress, raise issues and collaborate on the tasks set forth in this scope of work including, but not limited to the following:

- Project Kick Off Meeting(s) – Within seven (7) business days of receiving the notice to proceed on execution of this scope of work, the Consultant's project manager and other key personnel shall participate in a project kick off meeting with the Department. At this meeting, contract requirements, timelines, and team member roles and responsibilities will be clarified.
- Status/Progress meetings – The Consultant shall meet with Department at least every two (2) weeks to report on the progress of all tasks for the duration of the project. The Consultant Team shall:
    1. Schedule all meetings;
    2. Prepare meeting agenda;
    3. Distribute a copy of the agenda to the meeting participants no later than two (2) business days prior to all meetings or conference calls; and
    4. Prepare meeting summaries and transmit to Department no later than two (2) business days after the meeting.
- Recommendation Presentation – Consultant shall present their final recommendations under Task 1 to the Department at least one week prior to submitting final Stormwater Infrastructure Plan.

Deliverable(s)

1) Meeting summaries for Progress/Status meetings; and
2) Recommendation Presentation.

ADMINISTRATIVE REQUIREMENTS

In addition to the tasks identified above, the Consultant will comply with administrative requirements listed below in accordance with Department requirements.

Progress Reporting
The Consultant shall be responsible for reporting all project progress at least monthly, unless a different frequency is set by the Department and Consultant, during the duration of the Work Order. This requires:

1. Ensuring that all progress reports are submitted in a mutually agreed upon format and include the following:
    a. Task Name or description per the Scope of Work;
    b. Task Status;
    c. Activities completed and anticipated for the next month; and
    d. Percent completed.

Invoicing
The Consultant's project manager shall ensure that all requests for payment:

1. Include employee timesheets;
2. Are signed by the employee's supervisor;
3. Are supported by completed activities/tasks described in the monthly progress reports; and
4. Include the Invoice Summary Table.

Uploading documents to the Greenway Microsoft Teams Site
The Department will provide a Microsoft Teams site for each prequalified Consultant to collaborate on projects and serve as a repository for work products (links below). The Consultant shall ensure that all draft and final work products developed by the Consultant are uploaded to the site regularly, but at least monthly.

Agency Landscape + Planning with NV5 - Teams site link
Arup - Teams site link
James Corner Field Operations - Teams site link

SUBMISSION OF PROPOSALS
If a Consultant is not able to respond to this Mini-Bid due to a conflict of interest or scheduling issue, it shall decline participation in writing to Department within three (3) business days of receipt of the Work Order. Scheduling issues may include if the Consultant would not have capacity to execute this scope of work within the timeline required, due to capacity constraints resulting from ongoing or anticipated projects.

Consultants may submit questions no later than 12:00 p.m. April 11, 2023 to [redacted]. Responses to questions will be emailed to all prequalified vendors.

One electronic copy of the proposal must be submitted to [redacted] by 12:00 p.m. on May 5, 2023.

The proposal must include the following:

a. A statement demonstrating why the Consultant is uniquely qualified to complete the scope of work;
b. A detailed description of how the Consultant proposes to complete each task identified in the scope of work;
c. Name, title, and qualifications of personnel that will be assigned to each task and their experience to complete it successfully;

d. A schedule or timeline for completion of the specific tasks and deliverables set forth in the scope of work; and
e. A comprehensive budget showing the person-hours proposed to complete the activities set forth in the scope of work. The budget shall be designed to reflect the tasks, sub-tasks, or other work elements required by this Work Order and shall set forth, for each task, sub-task or other work element, the total number of person-hours, by labor category, proposed to complete the assignment. The budget shall be based on the all-inclusive hourly rate submitted in the Contractor's quote in response to the RFQ.

After review of all responses to this Work Order, the Department will select the proposal(s) most advantageous to the State, price and other factors considered.

The Department expects to assign this Work Order by **May 19, 2023**.

Mini-Bids: Greenway Project Questions & Answers

April 14, 2023

General

Question: We understand we can add subconsultants as the work progresses according to the Q&A dated October 26, 2022. If we are adding them for the mini-bids, should we have them approved by DEP prior to the mini-bid deadline? Or can we simply include them as a part of the team in our proposal?
Answer: Yes. Any subconsultants that are not already approved and in NJSTART, need to be added to and approved in NJSTART before we can award the Mini-Bid.

Question: Is the Consultant Team able to add new sub-consultants to the on-call contract?
Answer: Yes. If you are adding subconsultants that are not already approved and in NJSTART, they need to be added to and approved in NJSTART before we can award the Mini-Bid.

Question: Would translation to any of the 10 languages required by the New Jersey Department of Community Affair's LAP be the Consultant Team's responsibility? Or would that be handled by DEP? Is NJDEP providing translation services for final documents, or is the expectation for the Consultant to provide these services? [If languages other] than Spanish, please specify the languages that are needed. Please confirm if translations services noted in Mini Bids shall be provided by consultant of DEP.
Answer: The Consultant Team would be responsible for translating documents, as necessary, into Spanish. No other languages are required at this time; however, Consultants should reference current ACS data to determine if other languages are appropriate for the communities surrounding the Greenway.

Question: "Budget shall be based on the all-inclusive hourly rate from the RFQ" Can NJDEP confirm that we use the all-inclusive hourly rate per title and per firm that we submitted with the RFQ?
Answer: Yes. The hourly rates per title and per firm will be what firms submitted with the RFQ.

Question: Based on pages 10-11 of the RFQ, M/W/DBEs and SDVOBs are described, but with no contract percentage requirements. Are there percentage requirements for each of the mini-bids? Please specify.
Answer: No.

Question: Are there budgets established for each of the work orders that NJDEP are able to share?
Answer: There are no established budgets. DEP will compare proposals on price and other factors.

Question: Do we assume that the NTP and the start of work will be on or shortly after the Decision Deadlines NJDEP have tabulated?
Answer: Yes.

Question: The link provided for the teams site does not appear to work for our team. Can NJDEP confirm the process for providing access to these Team sites? The Microsoft Teams link does not appear to work for our team. Could DEP send invitations to our email addresses?
Answer: Individual invitations to the Teams site were sent on 4/11 – if you are still having issues, please email [redacted]

Question: Please confirm where the kickoff meetings, status/progress meetings and recommendations presentations will take place.
Answer: Kickoff meetings, status/progress meetings, and recommendations presentations may be conducted in person or virtually (Teams, Zoom, etc.).

Safety & Security

Question: Can you confirm the Consultant Team's detailed recommendation (Task 1) is to be concept design level and the rest of the design phases including SD, DD, and CD is to be handled with a separate work order?
Answer: The Department is seeking a report and recommendations for immediate security measures that Department should take to secure the Greenway during the development process and will consider the Consultant Team's approach and depth of design as part of its review. The Department expects this would largely involve conceptual design but does not want to limit the proposal if, in the Consultant Teams' expertise, additional design would be appropriate.

Question: Will NJDEP provide a list of threats and threat scenarios to assess against the Greenway to identify the vulnerabilities or does NJDEP require the Consultant Team to prepare a list of threats and associated scenarios for evaluation at the beginning of the project?
Answer: DEP does not have a list of threats and threat scenarios. Consultant Team should prepare a list if it's beneficial to their proposal.

Question: Is the Consultant Team required to collect and analyze crime data for jurisdictions adjacent to the Greenway?
Answer: No. This work order is more about risks to users/trespassers and identification of vulnerabilities to trespass, attractive nuisance, and illegal dumping.

Question: Will escorts be required for the Consultant Team to traverse the Greenway in conducting the in-field assessment?
Answer: Yes, DEP can provide.

Question: Will NJDEP provide law enforcement escorts if requested by the Consultant Team when traveling through areas considered to be unsafe?
Answer: Yes, DEP can provide.

Question: Is the Consultant Team required to assess the communications infrastructure along the Greenway that will be required to support call boxes, cameras, etc.?
Answer: DEP is looking for recommendations as to whether/how those things should be incorporated and, if possible, what would be necessary to support. The recommendation would likely include an assessment of existing infrastructure capabilities and necessary upgrades.

Question: Has any prior safety and security assessments been completed that can be provided to the Consultant Team?
Answer: No.

Question: Are there any data residency requirements for the data (e.g. photos, observations, etc.) collected as part of the Safety and Security Needs Assessment and Recommendations scope of work?
Answer: Not required, but may be included if beneficial.

Question: Does NJDEP have the Greenway mapped (e.g. GIS) which can be provided to the Consultant Team for planning logistics of in-field assessment and use in reporting findings?
Answer: Yes. Added to Teams site – if you are unable to access, please email [redacted].

Question: Does NJDEP have geo-data (lat/long) of key assets along the Greenway?
Answer: No. DEP has Greenway shapefiles, which are in the Teams site, but does not have key assets mapped.

Stakeholder Engagement & Phased Development

Question: Can you confirm the Consultant Team's detailed recommendation (Task 4 – 2 (initial basic supportive public amenities)) is to be concept design level and the rest of the design phases including SD, DD, and CD is to be handled with a separate work order?
Answer: The Department is seeking a report and recommendations for phased development and will consider the Consultant Team's approach and depth of design as part of its review. The Department expects this would largely involve conceptual design but does not want to limit the proposal if, in the Consultant Teams' expertise, additional design would be appropriate.

Question: What is NJDEP role in the community engagement process? What is the level of involvement, and commitment to attending community engagement events?
Answer: The Department expects the Consultant Team to organize and lead the engagement efforts with the Department serving in a supportive and collaborative role, and expects to staff engagement sessions as feasible.

Question: What media channels (interactive project website, social media etc) will be used by NJDEP to post information related to this effort – at present, there's no central way of communicating this information. If the intention is for the project website to host interactive material – does the NJDEP website have the capacity to do this, or will the Consultant need to investigate an alternate project webpage?
Answer: The Greenway website has the capacity to host interactive material; Consultant Team can work with DEP staff to update the website as necessary. If Consultant Team has something specific in mind that DEP is not capable of hosting, a stakeholdering-specific site could be linked to the Greenway's page. Information can be disseminated via DEP channels (social media accounts, email blasts, etc.) and/or directly from Consultant Team. Methods/logistics of communication may be included in proposal.

Question: Would the team have regular access to the NJDEP Communications Department to coordinate throughout the community engagement process?
Answer: Yes.

Question: Is NJDEP providing translation services, or is the expectation for the Consultant to provide these services? Please provide the level of expectation. Will NJDEP require translation of materials, and interpreters at engagement events? Other than Spanish, please specify the languages that are needed.
Answer: The Consultant Team would be responsible for providing translation services, as necessary, into Spanish. No other languages are required at this time; however, Consultants should reference current ACS data to determine if other languages are appropriate for the communities surrounding the Greenway.

Question: For Task 3, our assumption is that the Consultant will be reviewing information and not conducting new analysis (particularly around structural integrity, accessibility, topography, compatibility with storm water management). Please confirm.
Answer: Correct, to the extent that information exists. If there are significant gaps identified in the assessment, the Department would work with the Consultant on whether and how those gaps would need to be addressed to provide a meaningful recommendation.

Question: Given the ~3month timeframe, what is NJDEP's expectation for the level of engagement with 'local government' mentioned in Task 4? Is the intention for local government agencies to engaged throughout the process?

Or is the intention for the Recommendation Report to resonate with a local government audience, in addition to the other audiences identified?
Answer: The Department would look to the Consultant for guidance on this issue but has existing contacts with local government stakeholders that can be leveraged as part of this process. Additionally, the Department would expect significant overlap in community and local government engagement efforts.

Question: Does NJDEP have writing guides, branding, or style guides that the report deliverables must adhere to?
Answer: NJDEP follows Associated Press guidelines and can share branded colors and logos with Consultant Team. That said, so long as deliverables are consistent from Consultant Team, DEP does not require Team to follow DEP's guidelines.

Question: Does the DEP already have a list of stakeholders and contacts, or would this need to be developed as part of the process?
Answer: DEP has a partial/preliminary list and will provide it to Consultant Team. Team should develop the list further.

Remedial Investigation & Design

Question: Can more than one LSRP be assigned to the project, ie: one for the remediation of HFM and one for other identified release not related to HFM?
Answer: Yes.

Question: Is remedial investigation based solely on conclusions of the Due Diligence Report? As such, will an inspection of the Greenway be allowed prior to the deadline of the bid submission?
Answer: The Department expects the Consultant to prepare its proposals based on existing information but is open to allowing for inspection of the Greenway as part of the bid submission process. Once selected, the Department would expect the Consultant to conduct all investigation necessary to satisfy applicable regulatory requirements and develop the necessary remedial action recommendations.

Question: Can the Due Diligence Investigation Report by J.M. Sorge and any other previous environmental/site remedial documents be provided to the teams?
Answer: Yes. Added to Teams site – if you are unable to access, please email [redacted].

Question: Under the CSRRP, the LSRP generally performs site remedial work with minimal DEP oversight. Could you please explain whether DEP's involvement in the Greenway Project differs from this understanding.
Answer: Where the Department is proceeding in its capacity as a landowner, CSRRP treats the Department as it would any third-party, including LSRP retention.

Stormwater Infrastructure

Question: Is there more detailed topography and utility information available than what was included in the Stormwater Feasibility Report for the Consultant Team to evaluate the storage area options referenced in the Work Order? If they are not available and the Consultant Team believes it is necessary to execute the work, should we include a scope to provide both topographic and utility survey specifically for this work?
Answer: Any additional survey work the Consultant believes may be required should be include in the bid response. If that information were otherwise publicly available, a Consultant would not be penalized in its evaluation, specifically on cost, for inclusion of that work.

Question: Is there a specific volume goal for the CSO reduction?
Answer: No. The Department is simply looking for feasible methods to evaluate to take advantage of the opportunity presented by the Greenway to assist in lessening localized flooding and CSOs.

Question: Is there a preference for green stormwater infrastructure vs. underground detention?
Answer: DEP anticipates the Greenway will benefit from both green stormwater infrastructure and underground detention. This Mini-Bid is geared more towards the hard infrastructure that would need to be designed/installed before remediation/capping/construction of the Greenway.

Question: Is there a design storm that should serve as the basis of design?
Answer: No.

Question: Is there a specific future climate-influenced design storm the Consultant Team needs to follow? Or can we define and determine it?
Answer: Consultant Team may define and determine the design storm in accordance with the Department's pending Inland Flood Regulations.

Question: Will NJDEP be providing additional existing information in regards to utilities and topography? Or is that to be a task as part of this scope of work?
Answer: Utilities and topography should be evaluated as part of the scope of work.

Question: The Stormwater Feasibility Study that was provided with the RFP (dated June 24, 2022) was in a draft format. Is a final version of this document available?
Answer: Yes. Added to Teams site – if you are unable to access, please email [redacted].

Question: Why did the 2022 Arup Draft Stormwater Feasibility Study exclude Belleville and Jersey City?
Answer: Unknown. DEP was not involved with the Study at that time.

Question: Since the City of Kearny was eliminated from the Arup study, is there no need for further consideration of underground stormwater storage tanks in Kearny?
Answer: Kearny should be considered for potential stormwater storage tanks.

Question: Is the intention of this mini-bid to advance the analysis/design of the CSO underground storage sightings within Newark, Kearny, Belleville and Jersey City or just Location D within Newark?
Answer: The intention is to understand which location(s) are best situated for stormwater management to identify the most beneficial opportunities to address localized flooding and CSOs. Any and all recommendations on stormwater engineering are welcome, but the Department is not pursuing full CSO abatement through this project – this is merely to leverage beneficial stormwater management opportunities.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

AMENDMENT No. 1
April 20, 2023

Greenway Project Mini-Bid Deadline Extensions

Per the review of the New Jersey Office of the State Comptroller, NJDEP is extending the deadlines for response to Greenway Mini-Bids as follows:

Mini-Bid	Mini-Bid Deadline	Decision Deadline
Safety & Security	5/5	5/19
Stakeholder Engagement & Phased Development	5/5	5/19
Remedial Investigation & Design	5/5	5/19
Stormwater Infrastructure	5/5	5/19

Note work order deliverables for Safety & Security, Remedial Investigation & Design, and Stormwater Infrastructure will be due no later than 9/1.

Stakeholder Engagement & Phased Development deliverables remain due no later than 8/18.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

AMENDMENT No. 2
April 28, 2023

Greenway Project Mini-Bid Updates

Per the review of the New Jersey Office of the State Comptroller, NJDEP non-substantially updated the Greenway Mini-Bids. Edits include:

- All Mini-Bids:
  - Referring to NJDEP as "Department" rather than "DEP";
  - Changing "will," "should," and "would" to "shall";
  - Stating Consultants shall include their budget in response, with approximate budget guidelines;
  - Adjusting dates to align with Amendment No. 1;
  - Clarifying language on translation to align with Questions & Answers document;
  - Including language to clarify DEP will return comments on draft deliverables within one week;
  - Changing "PM" to "project manager";
  - Clarifying that recommendation presentations will occur at least one week prior to submitting final deliverables;
  - Clarifying reporting on project progress; and
  - Updating "Quote Proposals" to "Proposals."
- Remedial Investigation & Design Mini-Bid
  - Defining abbreviation of Due Diligence Investigation Report as "Report" and adjusting plurality issue (i.e., "Report" versus "Reports"); and
  - Including language to clarify DEP's ability to review, comment, and modify, as necessary, draft Remediation Plan prior to finalization.
- Stormwater Infrastructure
  - Mentioning "Feasibility Study" in first sentence of Task 1;
  - Changing "Consultant Team" to "Consultant"; and
  - Including language to clarify DEP's ability to review, comment, and modify, as necessary, draft Stormwater Infrastructure Plan.
- Safety & Security Needs Assessment & Recommendations
  - Including language to clarify DEP's ability to review, comment, and modify, as necessary, draft Security Needs Assessment and Recommendations Report.
- Stakeholder Engagement & Phased Development
  - Updating "engagement plan" to "Engagement Plan";
  - Including language to clarify DEP's ability to review, comment, and modify, as necessary, draft Engagement Plan; and
  - Updating Task 3 to include "The results of this assessment will be reflected in the recommendation report required under Task 4 below."

Liberty State Park and Greenway

Response to Mini-Bid - Greenway Project

Work Order: Stormwater Infrastructure

May 5, 2023

State of New Jersey, Department of Environmental Protection

Agency Landscape + Planning and NV5
with:
AmerCom

Agency Landscape + Planning with NV5

www.agencylp.com
91 Harvey Street, Suite 2
Cambridge, MA 02140

Table of Contents

Note: Click the page numbers to jump to that section!

State of New Jersey
Department of Environmental Protection
401 E. State Street, Mail Code 401-07
Trenton, NJ 08625-0420
May 5, 2023

Re: Work Order: Stormwater Infrastructure

We are thrilled to submit a detailed scope proposal for the initial stormwater planning and design for the entire nine-mile Greenway corridor. We understand that stormwater design – from systems-thinking through detailed implementation – will be integral to both the success of the Greenway and the health of the region. Grounded in technical expertise and passionate about the interconnections between ecology, community, and infrastructure inherent in stormwater design, our team stands ready to partner with NJDEP to deliver a stormwater plan that lays the groundwork for first phases of implementation.

An expert, multidisciplinary team grounded in New Jersey regulations

The Agency team brings an integrated design process that will advance Greenway segments smoothly and effectively from planning concepts through to post design. Our multi-disciplinary approach blends planning, landscape architecture, and engineering disciplines along with a collaborative project philosophy that leverages open space and community engagement expertise in service of innovative stormwater system design. Together we bring a national perspective on stormwater innovation and boots on the ground solving the intricacies of stormwater in the region. Our dedicated water resources professionals have led local and regional large-scale infrastructure projects involving CSOs, urban centers, green stormwater infrastructure and linear park and trail systems. Critical to a streamlined implementation, our team brings a deep understanding of the regulatory processes and jurisdictions that will impact the stormwater design over the 9-mile stretch of Greenway as it passes through the eight municipalities.

We are passionate about innovating stormwater solutions, especially along greenways

We believe that striking the balance between a community's needs, including economic and physical development, and the health of our ecosystem is critical for a sustainable future. Moreover, we believe that solutions to this balance can be beautiful, educational and rich in experiences for humans, wildlife and plants. Our shared passion for this topic has led our team to be nationally recognized innovators in stormwater management and design. We go beyond standard measures, addressing runoff quantity, runoff quality and groundwater recharge via use of Best Management Practices (BMPs) and

Agency
Landscape + Planning
www.agencylp.com
91 Harvey Street, Suite 2
Cambridge, MA 02140

integration with landscape experience. Our work on trail projects across the country - from Denver Colorado's High Line Canal to Camden County's LINK Trail project - has set a new standard for integrating stormwater capture with a sense of place. Greenways are powerful in their potential to capture and treat runoff from a larger watershed efficiently and experientially.

Communication and education of stakeholders is key

It is vital to communicate with stakeholders and the public early and often as part of the stormwater design and broader greenway design process. Regulatory and municipal stakeholders will provide key insight to the process, and the community needs to understand the stormwater plans in order to support them. In close collaboration with the Stakeholder Engagement and Phased Development mini-bid our team will adeptly craft materials to communicate the history, current conditions, and contextual story of the hydrology and ecology of the region and the important role of stormwater management throughout the greenway corridor. We see huge value in this "stormwater 101" as a key communications tool in conversations with stakeholders including local leaders, property owners, residents, and the broader public. We will also communicate the various stormwater tactics, best management practices, and tradeoffs with each to connect stakeholders to decision making about the future greenway's stormwater practices. These materials will be light on narrative and heavy on graphics - to ensure clear communication with people of many backgrounds, cultures and ages can understand and have a dialogue about the topic, its costs, and its impacts on the timeline for the greenway's completion.

Building off of our original proposal, we believe our qualifications set us apart as a team that will provide the technical know-how, collaborative spirit, and holistic vision to effectively prepare for the implementation of this important place. We look forward to continuing the conversation about how our team can support NJDEP in the development of stormwater plans for the Greenway!

Kate Tooke, ASLA
Principal Landscape Architect
Agency Landscape + Planning
[redacted]

Nigel Newton, PE
Managing Director
New Jersey Operations
NV5
[redacted]

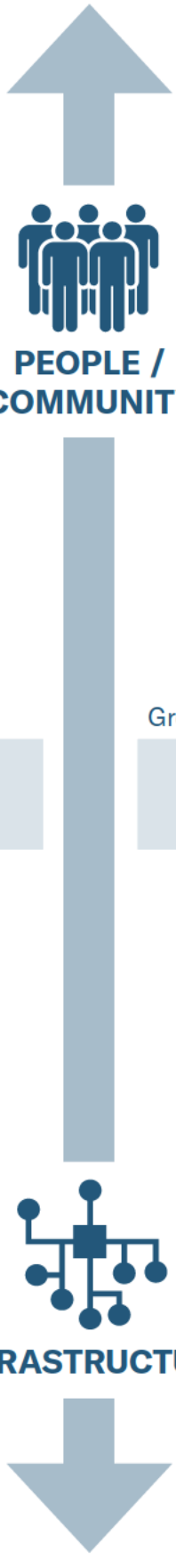
James Brazel
Director of Environmental Services
NV5
[redacted]

Scale - the Full 9 Miles

The first push of work focuses on the entire 9 miles of greenway. We understand that these complementary work orders explore opportunities and constraints in several disciplines, and will identify priority actions that will be codified in the phased development plan and later grounded in first phases of implementation.

Phased Development Plan

This deliverable pulls together recommendations from each of the preliminary technical minibids along with priorities from the over-arching engagement process.



Engagement + Phased Development Minibid

ENGAGEMENT MILESTONES

Safety / Security Minibid

ENGAGEMENT

Safety / Security Recommendations

Greenway Framework Plan

Ideas about landscape character and experience explored in the framework plan may be further developed in initial engagement and form the foundation for landscape design.

Stormwater Design

ENGAGEMENT

Stormwater Recommendations

Remediation Minibid

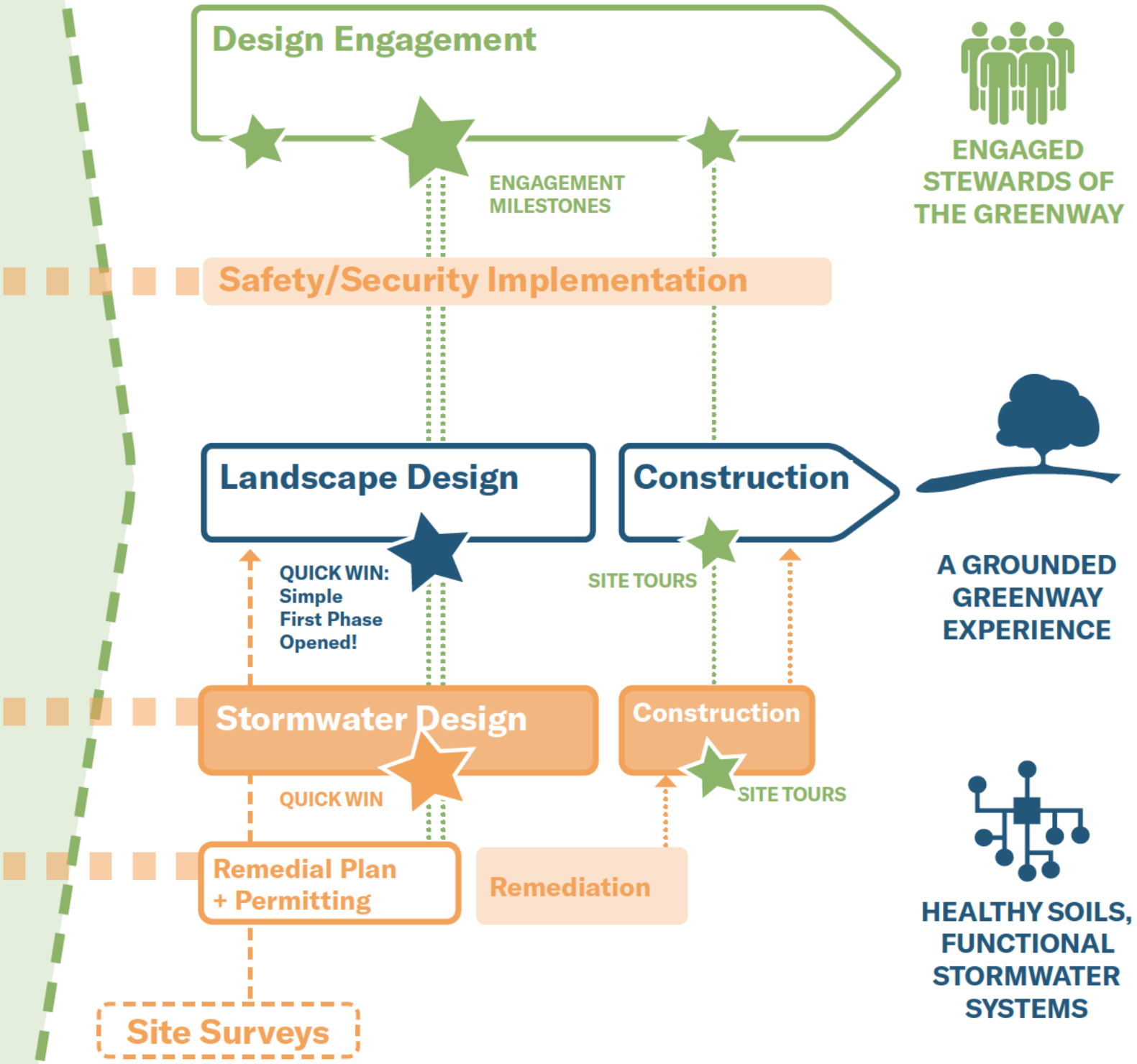
ENGAGEMENT

Site Investigation Letter Report

Base Mapping + Drone Survey

Scale - Subset(s) of the Greenway

Building on the priorities identified in the phased development plan, the first phases of implementation include quick wins (simple opportunities to open small sections for the public) and ultimately a fully built out section (or sections) of the greenway including remediated soils, stormwater systems, landscape character and an invested community ready to steward the Greenway long term!



Stormwater Infrastructure
Our Team's Unique Qualifications

NV5 will serve as the lead for this task order, supported closely by Agency throughout the process. Our team is uniquely qualified to serve NJDEP on this project in that we have successfully completed various studies and designs involving stormwater management along major trails and greenways throughout the region. The collective experience of our multi-disciplinary teams coupled with our emphasis on open space design and community engagement, allow us to cater stormwater management solutions to truly serve the public.

The Agency team has the skills and experience needed to address challenging drainage and stormwater management (SWM) compliance issues associated with development and aging infrastructure. Since 2000, NV5 has been the on-call hydrologic and hydraulic engineering firm for the New Jersey Department of Transportation, providing services ranging from simple to complex drainage system designs to large scale flood mitigation studies. NV5 has provided similar services for a plethora of government agencies and facilities, as well as numerous private clients. NV5 is well-versed in regulatory requirements and has the foresight and experience to see a project through success on-time and on-budget. NV5's staff has extensive experience in the design of SWM facilities addressing runoff quantity, runoff quality and groundwater recharge via use of Best Management Practices (BMPs); design of conveyance systems including both gravity and pressurized flow; performance of in-field soil investigations and permeability testing for stormwater management facilities design; development of stormwater pollution prevention plans (SWPPPs); green stormwater infrastructure planning and design; and groundwater mounding analysis.

Personnel at NV5 are well-respected by NJDOT, provide drainage/SWM design training for NJDOT staff, and have been involved with recent NJDEP regulatory changes with respect to climate threats (NJ Protecting Against Climate Threats guidance document), pending changes to stormwater management rules (Stormwater Management Rules Amendment) and green stormwater infrastructure requirements, and planned changes to Coastal Rules. NV5 has also been performing planning and design of green stormwater infrastructure for various clients throughout the region, most notably the City of Philadelphia Water Department (PWD), New York City Department of Environmental Protection (NYCDEP), New York City, Economic Development Corporation (NYCEDC), and the New York City Department of

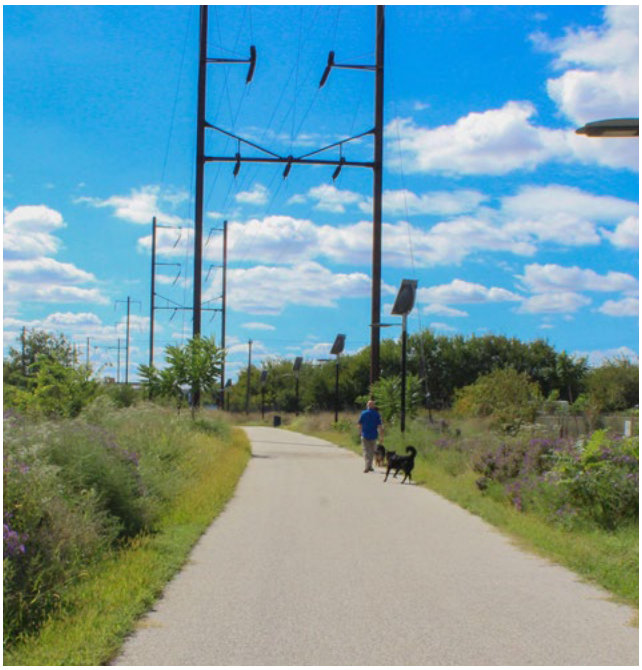
Design and Construction (NYCDDC). These planning and design contracts involve the planning and design of Green Stormwater Infrastructure (GSI) through retrofits of public street rights-of-way and other public land across these cities.

COMBINED SEWER OVERFLOW (CSO) EXPERIENCE

The Agency team has extensive experience working within communities with combined sewer infrastructure, including cities like Philadelphia, Camden, and New York City where our Green Stormwater Infrastructure team plans and designs green stormwater infrastructure retrofits within urban street rights-of-way, public parks, and other public lands daily. More and more cities across the country are looking to green stormwater infrastructure to reduce combined sewer overflows and to serve as a public amenity by beautifying and greening urban neighborhoods with surface expressions of lush and vibrant landscapes. Green stormwater infrastructure provides additional community benefits such as improved air quality and even local economic benefits. Our Green Stormwater Infrastructure (GSI) team is accustomed to working within highly constrained urban environments to find opportunities to manage stormwater amidst existing underground utilities, soil contamination due to historic land use, flood plains, traffic conditions, and other constraints common within the built environment.

RELEVANT PROJECT EXPERIENCE – STORMWATER ALONG GREENWAYS

The Agency team has extensive experience performing planning and design of stormwater management measures for some of the largest greenway trail projects in the region. NV5 is currently working on the Camden County LINK Trail project, which began initially with a feasibility study and now involves the final design and permitting of approximately 20 miles of shared use trail across Camden County and runs through many environmentally sensitive areas. In addition, NV5 has recently completed design and permitting for the NYS&W Bicycle/Pedestrian Trail for Morris County, a Rails-to-Trails project located along a 6-mile abandoned rail corridor in Passaic and Morris counties. This trail project incorporated green stormwater infrastructure measures (porous pavement) into the design to address stormwater



management controls. Our team has also designed large-scale stormwater management systems along sections of the East Coast Greenway (ECG), including a large green stormwater infrastructure design along a section of the ECG within the City of Philadelphia involving rain gardens, stormwater curb bumpouts, and infiltration tree trenches. This effort along the ECG also includes an ongoing design by NV5 of green stormwater infrastructure within a park and non-motorized boat launch along the trail and a former railroad right of way.

KNOWLEDGE OF PENDING FLOOD HAZARD AREA REGULATION CHANGES WHICH AFFECT STORMWATER MANAGEMENT DESIGN

The Agency team is aware that NJDEP will be enacting changes to the FHA Rules (Inland Flood Protection Rules) as early as May 2023, which is aimed at addressing issues related to increased precipitation due to climate change. According to the Department, the current rules do not accurately account for existing precipitation or future increases in precipitation, and designs based on current flood mapping are not protective for future conditions. These rules, among other things, will:

- Update the current precipitation data used in design through 2020 (Note: the precipitation data that is currently used in hydrologic/hydraulic design is based on data computed through 1999);
- Require the use of future projected precipitation data (2100 projection) when calculating design flood elevations and **designing stormwater best management practices**;
- Raise fluvial (non-tidal) design flood elevations
    - FEMA: + 3 feet
    - DEP State Study: + 2 feet
    - Self-calculated: 125% of the flow for the 1002100 year storm
- Remove use of Rational and Modified Rational methods for stormwater calculations

In addition, NJDEP is proposing further regulatory changes to the FHA Rules and Coastal Zone Management (CZM) Rules that incorporate climate change and sea level rise. Of specific relevance to this project will be the implementation of the Climate Adjusted Flood Elevation (CAFE), which will adjust regulatory floods by 5'. Currently, the NJDEP sets the coastal design flood elevation to the FEMA 100 year tidal flood elevation + 1'; whereas the new rules (expected to be implemented in 2024) will require roads, building first-floors and utility equipment to be raised to the FEMA 100 year tidal flood elevation + 6' (5' adjusted flood +1' of freeboard).

GREEN STORMWATER INFRASTRUCTURE/BMP FOCUS OF SWM FACILITIES DESIGN

The Agency team has performed a detailed review of the RFP/addenda and questions/answers, performed site visits, and have reviewed the Stormwater Storage Siting Studies Report dated August 19, 2020 (prepared by MNLA) as well as the Stormwater Feasibility Study Report dated November 11, 2022 (prepared by ARUP Americas, Inc.) and have a clear understanding of the project needs with respect to a stormwater infrastructure plan.

The stormwater infrastructure goals of the project are:

- Primary Goal: Provide stormwater management measures for proposed trail improvements that are necessary to satisfy regulatory agency requirements/permitting
- Secondary Goals: Provide CSO reductions where possible within Newark, Kearny and Jersey City (note: contrary to the MNLA report, Belleville is not a NJDEP listed municipality with CSO's). In addition, provide flood mitigation (within known flood prone areas) to the extent possible within the eight communities along the trail corridor.

It is important to note that the two stormwater reports noted above do not address the stormwater management needs of the proposed trail and are solely related to providing CSO reductions within the noted CSO municipalities. As stated within the RFP, the Department seeks to build on the previously prepared stormwater reports, which look to construct underground storage pipes for the purpose of retaining and reducing peak runoff to CSO's. The Agency team has performed a detailed review of the Stormwater Feasibility Report prepared by ARUP and has identified several issues with the provided analysis associated with the design of subsurface storage facilities. First, the computations performed to support the sizing of the storage facilities utilize the Rational Method. The Rational Method is a basic, empirical methodology used to calculate peak flow stormwater runoff rates, but this methodology is not recommended for the determination of storm runoff for volumetric analyses. The Modified Rational Method may be used for small watersheds for volumetric analyses; however, this

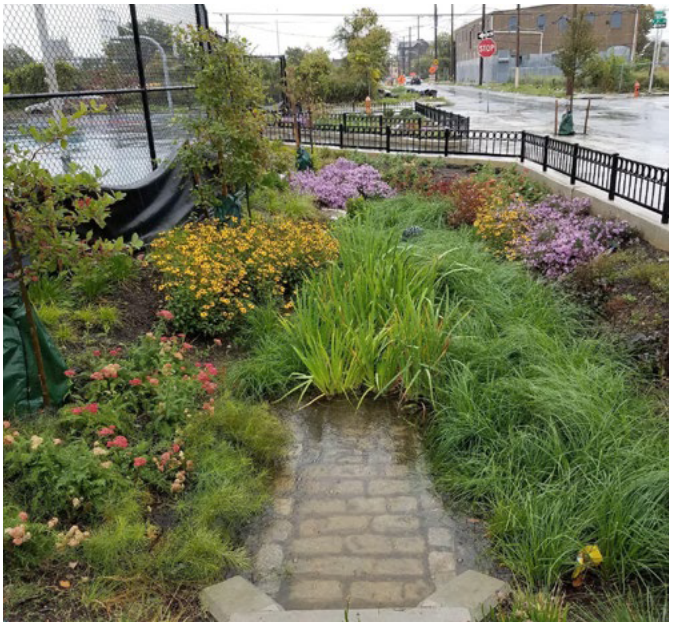
methodology requires additional critical duration analysis, which were not performed as part of the study and the Modified Rational Method is being eliminated as an acceptable method of analysis within the pending NJDEP regulation changes.

Second, the calculations provided in the report incorrectly utilize a rainfall intensity, I = 0.837 inches/hour. The table referenced in the report actually indicates a 10-minute, 10-year storm depth of 0.837 inches. The actual 10-year storm intensity is 5.02 inches/hour, and therefore, the design is incorrect by a factor of 6. In reality, the design is based on a storm event much less than 1 year, and likely akin to 1 month storm frequency.

From our extensive experience in designing green and grey infrastructure improvements, the NRCS methodology is much more appropriate in developing synthetic hydrographs and determining the effectiveness of stormwater BMPs. This methodology is also preferred by engineers and technical reviewers at NJDEP and other regulatory agencies.

Some disadvantages of solely utilizing underground storage for stormwater control/CSO's reductions include:

- The communities along the trail would not benefit from the landscape improvements and beautifying elements associated with green stormwater infrastructure.
- Underground storage is not a Best Management (BMP) measure because this approach does not allow for either infiltration or evapotranspiration of stormwater runoff.
- Required pump station(s) would translate to additional maintenance and responsibility burdens. These ownership and maintenance responsibilities would need to be coordinated with the affected municipalities.
- Combined Sewerage volume is not taken 'offline' from the combined sewer system and still requires treatment at the wastewater treatment plant
- Within the three-month timeline provided for preparation of the stormwater infrastructure plan, there is not sufficient time to coordinate and obtain input from the CSO municipalities, obtain/investigate utilities at potential CSO mitigation sites and then preliminarily design the CSO mitigation sites to confirm feasibility/permitability and associated construction costs
- The need for additional permits (NJPDES/Treatment Works Approval) to modify existing combined sewer systems
- The need to construct improvements/sewer mains outside of the Greenway ROW in order to convey combined sewer flow to the storage tanks located within the Greenway ROW
- Potential need to relocate other utilities to accommodate conveyance piping and/or large scale storage system



Alternatively, NV5 proposes an approach in which runoff contributory to/from the Greenway corridor (and to CSO systems) will be retained/recharged with green stormwater infrastructure/BMP facilities that can be constructed adjacent to the Greenway and completely within the Greenway ROW. Such measures include: porous pavement; bioretention swales/basins; rain gardens, etc. Benefits of this approach include:

- A more cost effective solution (no need for large underground storage pipes/chambers, diversion and reconnection piping, potential utility relocations, potential treatment devices and pump stations with associated electric service) with reduced long-term engineering and maintenance costs
- No ROW impacts beyond the Greenway
- Specified three-month schedule for completion of

Stormwater management at Sarasota Bay Park

proposed stormwater infrastructure plan can be accomplished

- Green stormwater infrastructure (GSI) techniques are visible to the public and aesthetically pleasing in comparison to underground tanks which the public would be unaware of their existence
- Potential educational component with signage to explain benefits
- Superior approach for long-term resiliency
- Can more easily design around locations of shallow groundwater and bedrock
- Reduces volume of flow to the wastewater treatment plant by removing stormwater runoff (via recharge) and therefore saving on treatment costs
- Provides for small scale facilities throughout the project length which can be constructed with the trail improvements

COMMITMENT TO PROJECT AND TIMELINE

The Agency team has the personnel to perform the scope of work within the specified timeframe of three (3) months. We are aware of the need to expedite preparation of a stormwater infrastructure plan with the intention of opening up a segment of the Greenway by the end of 2025. Based on the RFP, the stormwater infrastructure plan is to be completed by September 1, 2023.

As explained in detail in the Agency team proposal for the Stakeholder Engagement and Phased Development Mini-Bid, our goal is to develop a meaningful and realistic phased plan before September, so that the design of the first segment can start in the fall of 2023 and construction can begin in the winter of 2025. The outline of our work below is designed to cohesively work with the engagement team to collaboratively determine the location of the first segment which will have an accelerated design and construction timeline. This means a location will need to be selected that has the least amount of barriers but a high amount of impact, and that the work in these initial Mini-Bids will allow for the design team(s) to hit the ground running in September, subject to subsequent work orders.

Scope of Work

Stormwater Infrastructure

Based on the anticipated improvements, this project will be considered a "Major Development" per the Statewide Stormwater Management Rules (NJAC 7:8) since it will result in greater than one acre of disturbance and will propose more than one quarter acre of impervious coverage.

We recommend taking an interactive, hands-on approach to learning from the communities within which the improvements will permanently live, and to look at the stormwater management for the project in a holistic and sensible way by evaluating approaches that would meet permitting and regularly requirements for the trail as a whole, and also evaluating specific CSO areas or areas of opportunity along the corridor involving facilities that would serve the trail's needs such as rest areas or adjacent public spaces that could help amplify the positive impacts of the trail on the communities the trail traverse through. Our approach would include the following:

1. **Engaging with Local Governments and Key Stakeholders Early in the Process.** It will be critically important to learn what has been studied, learn about known flooding or existing infrastructure problems, known opportunities, etc. This input will inform the rest of the process to avoid known problem areas and to capitalize on already identified opportunities. Additionally, the team will need to quickly gather all relevant mapping records to utilize for the team's design analysis, as well as compile any specific zoning and land use regulations to compile a matrix of all requirements for each local jurisdiction through which the trail passes to serve as a guide to the team during the design process.

   We propose at least 2 touch points over the course of this assignment with key project stakeholders to not only gather initial input but to share the progress of the project. Additionally, we would anticipate coordinating with the team awarded the engagement mini-bid to provide updates and materials to inform the public engagement process so that the engagement includes all key elements of the project, including the approach and proposed stormwater management improvements along the trail corridor. This will ensure that the team's communications with the public will be through one centralized source and will be streamlined, consistent in format and style, and will include communications for all aspects of the trail greenway project.

2. **Developing a Menu of Options to Manage Stormwater Along the Entire Trail Corridor.** This would involve creating a kit of parts in a way so that the design team can use the best approach to managing stormwater given the constraints and opportunities for each particular section of trail. For example, where portions of the trail are in areas where infiltration or subsurface storage is infeasible given a high ground water table or other subsurface constraints, an approach such as porous asphalt or pavement may be the most suitable. However, in sections where the trail corridor possesses opportunities for surface expressions such as linear bioinfiltration swales running parallel to the trail, or within facilities such as parking areas or passive or active recreational zones or rest areas along the trail, larger rain gardens may be most suitable.

   It is important to acknowledge that a trail that passes through the full transect of urban and natural landscapes requires flexibility within the design so as not to force a one size fits all approach to a large project of this nature. There are various factors to consider when determining the best approach to stormwater management for each segment, including but not limited to the ability of the party responsible for maintaining the trail (or sections of trail) to maintain certain stormwater management infrastructure, as well as physical constraints such as the depth to the groundwater table, infiltration capacity of soils, locations depths of underground utilities, and existing land use and operational needs within

Stormwater Infrastructure

Based on the anticipated improvements, this project will be considered a "Major Development" per the Statewide Stormwater Management Rules (NJAC 7:8) since it will result in greater than one acre of disturbance and will propose more than one quarter acre of impervious coverage.

We recommend taking an interactive, hands-on approach to learning from the communities within which the improvements will permanently live, and to look at the stormwater management for the project in a holistic and sensible way by evaluating approaches that would meet permitting and regularly requirements for the trail as a whole, and also evaluating specific CSO areas or areas of opportunity along the corridor involving facilities that would serve the trail's needs such as rest areas or adjacent public spaces that could help amplify the positive impacts of the trail on the communities the trail traverse through. Our approach would include the following:

1. **Engaging with Local Governments and Key Stakeholders Early in the Process.** It will be critically important to learn what has been studied, learn about known flooding or existing infrastructure problems, known opportunities, etc. This input will inform the rest of the process to avoid known problem areas and to capitalize on already identified opportunities. Additionally, the team will need to quickly gather all relevant mapping records to utilize for the team's design analysis, as well as compile any specific zoning and land use regulations to compile a matrix of all requirements for each local jurisdiction through which the trail passes to serve as a guide to the team during the design process.

   We propose at least 2 touch points over the course of this assignment with key project stakeholders to not only gather initial input but to share the progress of the project. Additionally, we would anticipate coordinating with the team awarded the engagement mini-bid to provide updates and materials to inform the public engagement process so that the engagement includes all key elements of the project, including the approach and proposed stormwater management improvements along the trail corridor. This will ensure that the team's communications with the public will be through one centralized source and will be streamlined, consistent in format and style, and will include communications for all aspects of the trail greenway project.

2. **Developing a Menu of Options to Manage Stormwater Along the Entire Trail Corridor.** This would involve creating a kit of parts in a way so that the design team can use the best approach to managing stormwater given the constraints and opportunities for each particular section of trail. For example, where portions of the trail are in areas where infiltration or subsurface storage is infeasible given a high ground water table or other subsurface constraints, an approach such as porous asphalt or pavement may be the most suitable. However, in sections where the trail corridor possesses opportunities for surface expressions such as linear bioinfiltration swales running parallel to the trail, or within facilities such as parking areas or passive or active recreational zones or rest areas along the trail, larger rain gardens may be most suitable.

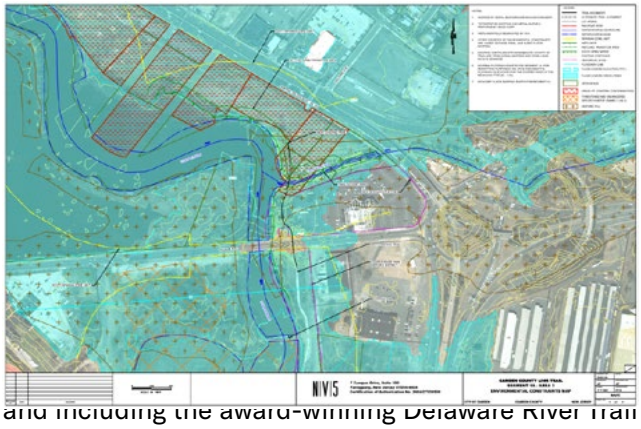
   It is important to acknowledge that a trail that passes through the full transect of urban and natural landscapes requires flexibility within the design so as not to force a one size fits all approach to a large project of this nature. There are various factors to consider when determining the best approach to stormwater management for

each segment, including but not limited to the ability of the party responsible for maintaining the trail (or sections of trail) to maintain certain stormwater management infrastructure, as well as physical constraints such as the depth to the groundwater table, infiltration capacity of soils, locations depths of underground utilities, and existing land use and operational needs within public rights-of-way along or crossing over the Greenway's right-of-way.

3. **Developing a Green-first Approach to Stormwater Management with CSOs.** The team would utilize OSI's Stormwater Storage Siting study and Stormwater Feasibility Study Report as a reference. In lieu of following through with the concept design within the OSI study that included subsurface storage tanks, detaining combined sewage (sanitary and stormwater flows), and including pump stations in certain locations, our approach would instead seek to lessen the impacts of CSOs in certain areas along the trail, but in addition would provide the inherent benefits of green stormwater infrastructure.

It has been our experience that the most cost effective and impactful approach to lessening CSOs is to first focus on reducing the contribution of stormwater runoff into the CSO sewer network. This approach, which involves taking stormwater runoff 'offline' to allow for the infiltration or slow-release detention, provides an opportunity for an intervention prior to stormwater runoff combining with sanitary effluent in the combined sewer system. This diversion of stormwater runoff allows for green stormwater infrastructure opportunities. This approach has been studied in numerous cities and has been proven to provide return on investment by improving the urban landscape and serving as a public amenity. There have also been economic benefits correlated with green stormwater infrastructure.

As part of our stormwater management approach, we will identify segments of the Greenway within combined sewer overflows (CSO) areas (Newark, Kearny and Jersey City), and evaluate incorporation



and including the award-winning Delaware River Trail in Philadelphia.

Green Stormwater infrastructure (GSI) measures (i.e. bioretention swales/basins; permeable pavement; underground storage for water reuse) will be incorporated into the project design to meet NJDEP stormwater management control requirements. In order to properly design and site GI measures, geotechnical studies are typically performed upfront to supply critical information (depth to rock/seasonal high water table; soil type/permeability). However, the three-month stormwater infrastructure plan completion timeline will not allow for associated geotechnical investigations. This will need to be a follow-up activity. As stormwater system locations are being considered along the trail, record documents provided by local governments or publicly available information such as the state's Geotechnical Data Management System (GDMS) Viewer will be utilized as a reference by the team for geotechnical information.

NV5 is aware of the urgency of advancing this project. Given the 3-month timeline for this work order, NV5's approach to perform the scope is as follows:

Task 1 -Stormwater Infrastructure Evaluation

TASK 1.1 COORDINATION WITH MUNICIPALITIES AND KEY STAKEHOLDERS

The Agency team will communicate with all eight municipalities to obtain combined sewer system mapping (where applicable), utility infrastructure mapping, and known areas of flooding at/adjacent to the greenway corridor. Tax maps showing the Greenway

will be sent to the municipalities to use in marking up known flooding areas.

TASK 1.2 PREPARE BASEMAP

The Agency team will prepare a basemap (100 scale plans) using publicly available LiDAR data, aerial imagery and property lines (from county GIS sources). This publicly available data has a concept-level degree of accuracy, and will be suitable for the initial analysis on the Greenway.

Recommended Additional Scope (Not in Base Bid):

The Agency team recommends, simultaneous to the stormwater evaluation, that it gathers more detailed, survey-grade, base mapping data. NV5 has the ability to perform unmanned aerial vehicle (UAV) data capture to develop detailed project base mapping for use by all in advancement of the Greenway study/design/permitting/construction. This high-quality survey mapping will be critical to the advancement of the Greenway project design in future work orders (by all consultant teams), and will be able to be used toward the end of this initial stormwater evaluation work order for confirmation. NV5 has provided a separate fee for this effort should NJDEP wish to authorize under this mini-bid contract. By performing this work in the May and June 2023 timeframes, NJDEP will be able to more aggressively schedule the design work for the first segment of the Greenway, and design can begin very soon after the final deliverables are sent to NJDEP by September 1st. The detailed specifications for the scope of this survey work are included as an optional Task 3 to this proposal.

TASK 1.3 PREPARE HIGH-LEVEL ENVIRONMENTAL CONSTRAINTS MAP

The Agency team will prepare high-level environmental constraints map using online sources such as NJDEP GeoWeb and FEMA flood mapping. Constraints will include: watercourses and associated floodplains and riparian zones; wetlands and associated transition areas; threatened and endangered species of concern (Ranks 3, 4 and 5); Green Acres properties; cultural resources (historic archaeological site grids, historic districts, historic properties); and hazardous concerns (groundwater contamination areas, historic fill, deed notice areas, known contaminated sites, underground storage tanks, gas stations, dry cleaners). See sample constraints map below from NV5's Camden County LINK Trail project.

This mapping will help determine optimal placement for GI measures and ensure that NJDEP is not investing time into installing GI where it may not work from a regulatory or constraint perspective.

TASK 1.4 STORMWATER ALTERNATIVES ANALYSIS

This task will include a high-level analysis of stormwater management options for the Greenway to provide NJDEP with enough information to make an informed decision on the preferred approach to managing stormwater runoff from the Greenway. Additionally, this task will include an assessment to determine opportunities adjacent to the trail to mitigate flooding and CSO impacts, where applicable.

The Agency team anticipates up to two feasible alternatives to managing stormwater runoff along the Greenway. This may include porous pavement with subsurface storage or potentially a shallow, linear bioswale with subsurface storage for a non-porous/imperious trail material (i.e. asphalt). The team will estimate the proposed average trail width so that we can determine the approximate stormwater management needs for the Greenway trail improvements. Typical cross sections showing the approximate sizing of each approach will be developed along with an estimated cost ($) per lineal foot (or mile), as well as estimated annual maintenance costs, required maintenance equipment, and other considerations. This assessment would be presented to NJDEP to determine the preferred approach.

The team would also assess stormwater opportunities adjacent to the Greenway within the various communities the greenway passes through. The first step in performing the Hydrologic & Hydraulic (H&H) Analysis for determining stormwater management needs will be to conduct field investigations to take

note of crucial stormwater infrastructure (cross culverts, stormwater trunk lines) within the study area. Field survey will be performed as necessary (one week of a 2-person crew has been accounted for).

The team will calculate watershed runoff to identified combined sewer systems and known flooding areas within or immediately adjacent to the Greenway so that GSI measures can be conceptually designed while considering the pending rainfall data. Since it is unknown at this time how many flooding areas there are, and given the short timeframe to prepare the Stormwater Infrastructure Plan, we have assumed a maximum of ten (10) locations to evaluate flooding and potential solutions, with at least one location within each municipality that identifies a flooding concern. A preliminary report will be prepared summarizing H&H efforts performed and stormwater management infrastructure improvements proposed, drainage area maps, SWM plans, tables, etc.

TASK 1.5 INVESTIGATE POTENTIAL LOCATIONS FOR GREEN STORMWATER INFRASTRUCTURE MEASURES

Once a preferred alternative is chosen for addressing stormwater management along the Greenway and flood and CSO mitigation locations have been evaluated adjacent to the trail, the Agency team will investigate the entire 9-mile Greenway corridor for potential locations to incorporate stormwater green stormwater infrastructure measures (i.e. bioretention swales/ basins; permeable pavement) while accounting for site and environmental constraints. This is the task where the team will begin to layout stormwater interventions in plan view along the trail. We will develop stormwater infrastructure concept plans (1"=100' scale) to show size, shape and location of proposed stormwater BMP's.

TASK 1.6 NJDEP PRE-APPLICATION MEETING

Separate from the ongoing discussions and coordination with NJDEP (the client and owner), the Agency team will request and attend a virtual pre-application meeting with NJDEP (Office of Permits and Coordination) to discuss our approach to implement stormwater management measures to satisfy NJDEP SWM regulations (NJAC 7:8) while at the same time looking to reduce known flooding and frequency of CSO discharges to waterways. By doing so, the team will seek to avoid a potential fatal flaw when the project is advanced to the final design and permitting phase.

TASK 1.7 PREPARE DRAFT STORMWATER INFRASTRUCTURE PLAN

This is the task that will bring together the high-level analysis performed in Task 1.4, the plan documents which will depict the stormwater management measures along and adjacent to the trail, and summarize and synthesize all the key input from local governments, key stakeholders, and NJDEP. The Agency team will prepare a Draft Stormwater Infrastructure Plan, including Recommendation Report. 1" = 100' scale (max.) plans of the entire project length will be included showing: contours/ features; property boundaries; known utilities; environmental constraints and recommended stormwater management facilities. The plan set will also include typical details and sections. The report will contain: back-up for all work performed; opinion of probable SWM construction costs; and proposed phasing of proposed stormwater infrastructure. The report will also identify efforts required to advance the proposed stormwater infrastructure plan (i.e. geotechnical efforts; community engagement; advancement of design/details/specifications; and permitting).

TASK 1.8 PREPARE FINAL STORMWATER INFRASTRUCTURE PLAN

The Agency team will address/incorporate Department comments on the draft plan and prepare the **Final Stormwater Infrastructure Plan**. Within one week of receipt of comments from NJDEP on the draft submittal, the final plan/report will be provided.

Deliverables:

- Draft Stormwater Infrastructure Plan, including Recommendation Report, for review by NJDEP; and
- Final Stormwater Infrastructure Plan revised based on comments from NJDEP

Please note, this Stormwater Infrastructure Plan will not include detailed construction drawings or procurement of permits.

TASK 1.9 GREENWAY COMMUNICATIONS AND ENGAGEMENT

It is vital to communicate with the public early and often as part of this process. We will work with the Stakeholder Engagement and Phased Development mini-bid to understand the key engagement milestones and will craft materials that communicate the history, current conditions, and contextual story of the hydrology and ecology of the region and the important role of stormwater management throughout the greenway corridor as a "stormwater 101", that can be included in communications with stakeholders including local leaders, property owners, residents, and the broader public. We will also communicate the various stormwater tactics, best management practices, and tradeoffs with each to connect stakeholders to decision making about the future greenway's stormwater practices. These materials will be light on narrative and heavy on graphics - to ensure clear communication with people of many backgrounds, cultures and ages can understand and have a dialogue about the topic, its costs, and its impacts on the timeline for the greenway's completion.

Task 2 - Meetings, Conference Calls, and General Project Team Coordination

This task includes the project management for the current scope of work, wherein the Agency team project manager will coordinate: the efforts, roles and progress of the design team; all design team and client meetings; and submission of regular progress reports and invoices with all supporting documentation.

At the time of notice to proceed, the Agency team will coordinate with the Department to schedule regular meetings to monitor progress, raise issues and collaborate on the tasks set forth in this scope of work. Meetings will include the following:

- Project Kick Off Meeting(s) – Within 7 business days of receiving the notice to proceed with execution of this scope of work, the Agency team's project manager and other key personnel will participate in a project kick off meeting with the Department. At this meeting, contract requirements, timelines, and team member roles and responsibilities will be clarified. We'll also discuss communications protocol with the other two consultant teams, who may be working on other mini-bids. We believe that the work on the other three current mini-bids will be integral to the work that is being performed as a part of this scope of work.
- Status/Progress meetings – The Agency team's project manager and other key personnel will meet with the Department at least every two (2) weeks to report on the progress of all tasks for the duration of the project.
- Recommendation Presentation – The Agency team will present our final recommendations under Task 1 to the Department.

The Agency team project manager will complete the following tasks related to each of the above meetings:

1. Schedule all meetings;
2. Prepare meeting agenda;
3. Distribute a copy of the agenda to the meeting participants no later than two (2) business days prior to each meeting; and
4. repare meeting summaries and transmit to the Department no later than two (2) business days after each meeting.

Deliverables:

1. Meeting summaries for Progress/Status meetings; and

2. Recommendations Presentation
3. Monthly Progress Reports, including:
    - Task Name or description per the Scope of Work;
    - Task Status;
    - Activities completed and anticipated for the next month; and
    - Percent completed.

Draft and final work products developed by the Agency team will be uploaded to the Department's Microsoft Teams site regularly, and no less than monthly.

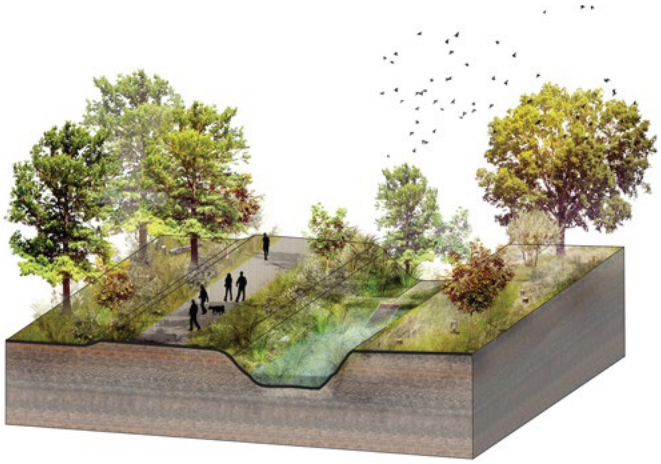
OPTIONAL/ADDITIONAL TASK 3 – BASEMAPPING SURVEY

As noted under Task 1.2, the Agency team is providing an optional survey basemapping task to give NJDEP the opportunity to pursue this work during the summer of 2023 not only to aid in the stormwater infrastructure mini-bid, but to also gain a head start to the design phase which we anticipate beginning this fall. NV5 will fly UAV LiDAR and Imagery for rough 9.5 miles along the Greenway corridor. NV5 will then process the data to create an up-to-date topographic map of the entire right of way. NV5 will also include the overhead span clearance data in the 2D plan for any electric lines that pass over the rail bridges. The detailed specifications of the basemap include:

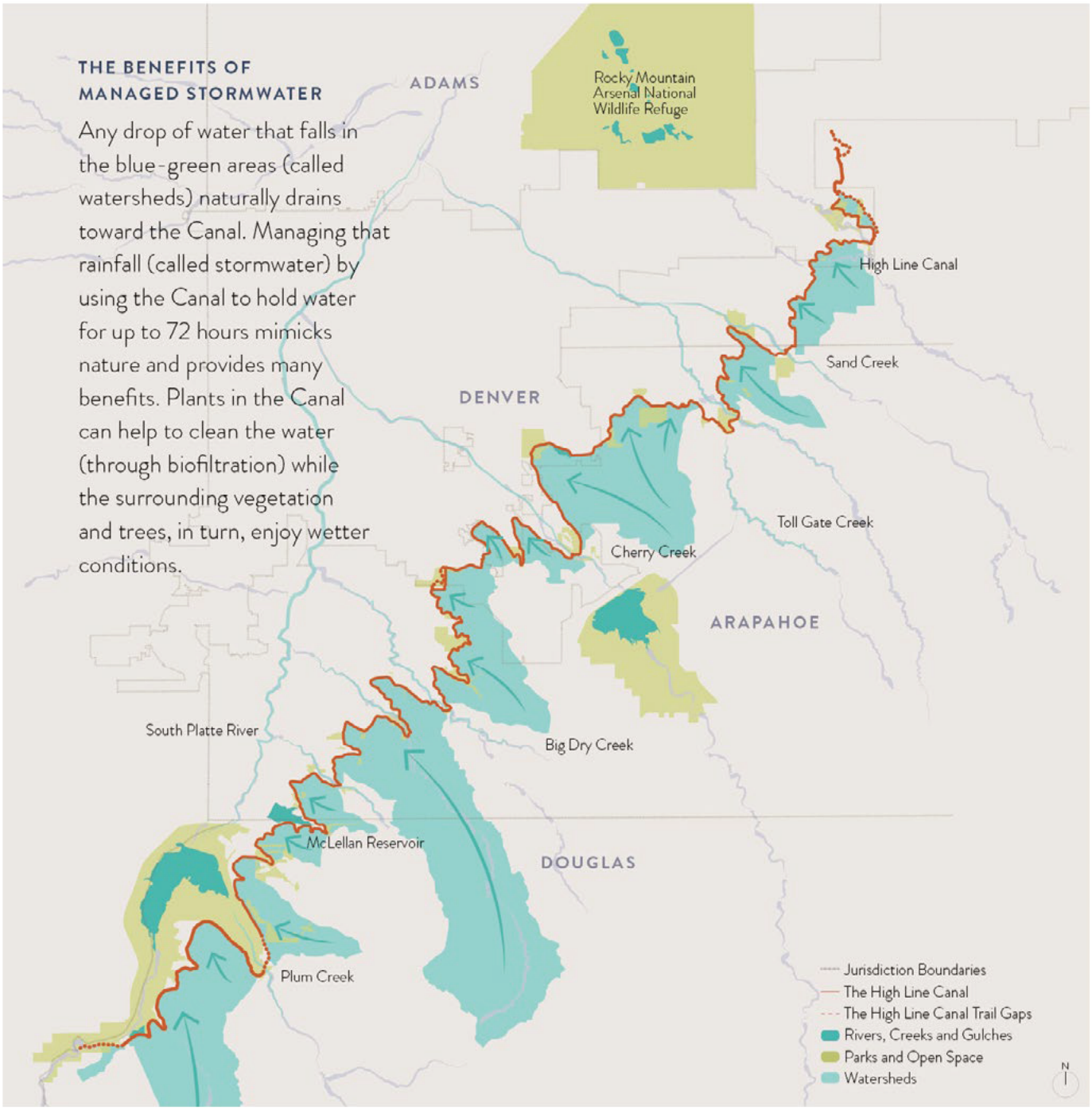
1. UAV Flight and Field Services
    - AmerCom will provide survey control, up to 38 aerial targets, and three transect lines prior to the UAV flight.
    - AmerCom will also survey under nine (9) roadway overpass structures to gather areas that the UAV cannot access.
    - AmerCom will survey manhole/grate elevations, flowlines, inverts, and pipe sizes for storm and sanitary lines within the project corridor.
    - NV5 will provide local base station operations during the UAV collection.
    - NV5 will conduct UAV Photogrammetry and LiDAR flights.
    - NV5 will collect LiDAR data at 75-125 points per square meter.
    - NV5 will collect UAV digital Jpeg imagery at a 1-inch ground sampling distance or tighter.
2. Processing
    - NV5 will process LiDAR data to create a calibrated *.LAS file to meet USGS QL 1 standards.

    - NV5 will require 3 RTK transect, consisting of 20 survey shots at a spacing of 20 to 40ft to check the LiDAR vertical accuracy, by others.
    - NV5 will process GPS base station data in conjunction with UAV GPS data to create photo position centers for each image.
    - NV5 will require 40 aerial targets and 9 check shots, by others.
    - NV5 will process digital Jpeg imagery to create an Ortho-mosaic image tied to survey ground control.
3. Deliverables
    - NV5 will compile a basemap that will include all visible 2D planimetric features.
    - NV5 will use the *.LAS file to classify and create an AutoCAD surface file with 1-foot contours using the 3D break lines.
    - NV5 will deliver:
        i. 2D planimetric basemap in *.DWG format
        ii. Ortho-mosaic image in *.ECW format
        iii. AutoCAD Civil3D surface displayed as 1-foot contours in *.DWG format
        iv. Overhead utility span clearance height provided in 2D Plan and *.CSV format

Existing Condition



Immediately after storm event



Managed Stormwater at the High Line Canal

Phase Development Team - Agency

REGISTRATIONS

RLA: MA, ME

Kate Tooke, ASLA / Principal, Landscape Architect / Agency

Landscape architect Kate Tooke has focused her career on the intersection of community and public space. She leverages a diverse background as an educator, engineer and landscape architect into a practice unabashedly passionate about connecting people to the urban environment. Kate's listening-oriented leadership approach and her strategic thinking, design eye, and technical acumen have contributed to the success of diverse projects ranging from master planning to site-scale work. While a Principal at Sasaki, Kate led the design of Boston City Hall Plaza and Copley Square, Gulf State Park and Wilmington Waterfront Promenade. Her work with Agency includes Town Branch Park, the Mill River Park, and the Charlestown Navy Yard.

AFFILIATIONS

American Planning Association

Rhiannon Sinclair / Principal, Planner / Agency

An urban planner with a background in architecture, Rhiannon Sinclair's work focuses on complex urban systems across multiple scales. Rhiannon has over a decade of experience engaging diverse perspectives in the projects that will shape their communities. She has led multi-jurisdictional planning and engagement efforts for a strategic plan for 58 miles of the White River in Central Indiana, led equitable engagement and project prioritization for the 71-mile High Line Canal in Denver, Colorado, and recently completed a plan for investments in parks, open spaces and greenways with the Jersey City community.

REGISTRATIONS

RLA: CT, MA, TX

Susannah Ross, ASLA / Director, Landscape Architect / Agency

Susannah Ross is a landscape architect with two decades of experience, much of that spent playing the role of project manager for complex urban projects. In the last 15 years she has managed over 20 projects with combined design fees totaling over $12M and site construction costs of $100M. She settled into the role of project manager in recognition that her greatest strengths—communication, problem-solving, organization, and directing others—were best employed in the capacity of point person and conductor for multidisciplinary design teams. She has orchestrated the execution of designs, from master planning through construction administration, on time, on budget, and to the level of excellence to which Agency commits to achieve each client's mission.

AFFILIATIONS

Boston Society of Landscape Architects

Estello Raganit / Landscape Designer / Agency

A landscape designer at Agency Landscape + Planning, Estello has worked on and managed the design, planning, and construction of public projects of varying scales and types across the United States. Prior to receiving his Masters in Landscape Architecture at Harvard's Graduate School of Design in 2019, he studied biology and English at Vassar College. Estello's interest in landscape architecture's ability to forge links between our natural/built environments and individual/collective memory of place can be felt in his work with Agency, including Robbins Farm Park playground in Arlington, MA and the Bay Park in Sarasota, FL.

James Brazel / Director of Environmental Services / NV5

Jim, with 38 years of experience in environmental planning and permitting, is responsible for the coordination and management of all environmental related projects. In addition to his project management responsibilities his areas of expertise include: freshwater wetland delineation and permitting; flood hazard area (submittals include all technical and environmental planning associated with permitting process); sewer extension and NJPDES applications; stormwater management studies; endangered species reconnaissance; soil erosion and sediment control planning; environmental assessment studies (NEPA, E.O. 215); environmental impact studies; hazardous materials screenings; environmental constraints planning; permitting for local, state, and federal agencies; and expert testimony.

Frederick Scherrer, PE / Supervising Environmental Engineer, Stormwater & H&H / NV5

Fred has over 30 years of experience in environmental and civil engineering. He has had extensive experience in water resources engineering, including the design of stormwater and drainage systems, hydrologic and hydraulic (H&H) engineering, environmental engineering, evaluation/ design of sanitary sewer facilities, dam inspection/ construction/ improvements, flood hazard area regulations, site development, underground storage tanks, and the planning and design of flood abatement projects. Mr. Scherrer has prepared applications for various environmental permits including: Flood Hazard Area (FHA), Dam Safety, Highlands, water lowering, wetlands, Pinelands, CAFRA, D&R Canal, waterfront development, tidelands license, HMDC, NJPDES, water main extension and TWA.

REGISTRATIONS

Professional Engineer: NJ

Bryan Vandergheynst, PE / Supervising Environmental Engineer, Stormwater & H&H / NV5

Mr. VanderGheynst has over 27 years of experience in civil and environmental engineering, specializing in site development, permitting, and water resources engineering. He has been responsible for the design, permitting, cost estimating, and construction administration for many commercial, industrial, residential, government, roadway, airport, and recreation projects in New York, New Jersey, and Pennsylvania, and is experienced in the design and implementation of water quality facilities and best management practices required to comply with local, state, and federal requirements. Engineering designs performed by Mr. VanderGheynst include: site plans, subdivisions, recreation facilities, trails, golf courses, grading plans, roadway geometry, water quality facilities, stormwater management, dams, sanitary sewer, septic system design, utilities, soil erosion control, and retaining walls. He is experienced in the computer design of plans and is responsible for training fellow employees on the implementation of the latest rules/regulations and the use of the most current engineering software. He has provided drainage/SWM design training for NJDOT staff and has been involved with recent NJDEP regulatory changes with respect to climate threats (NJ Protecting Against Climate Threats guidance document), pending changes to stormwater management rules (Stormwater Management Rules Amendment) and green infrastructure requirements, and planned changes to Coastal Rules.

REGISTRATIONS

Professional Engineer: NY, NJ, CT

REGISTRATIONS

Professional Engineer: PA

Leadership In Energy and Environmental Design Accredited Professional

Michael Connor, PE, LEED AP / Supervising Green Stormwater Infrastructure Engineer / NV5

Michael brings more than 20 years of regional professional experience as a civil engineer. He possesses a well-rounded blend of experience in civil engineering design, project management, and technical oversight experience for community development projects. He is highly proficient in urban hydrology and green stormwater infrastructure, multi-modal transportation design, and local and state permitting. Michael currently serves as the project manager for NV5's Planning & Design Contract of GSI for the Philadelphia Water Department.

REGISTRATIONS

Professional Engineer: NJ, PA

AICP

Waterfront Edge Design Guidelines (WEDG) Certified Associate

Matt Ludwig, PE, AICP, WEDG / Active Transportation Planner + Senior Engineer / NV5

Matt is a licensed civil engineer and certified planner with over 15 years' experience on a wide variety of transportation projects, including specialized expertise in the planning, design, and management of active transportation facilities. His experience includes trails and greenways, complete streets, urban bicycling and pedestrian networks, and first/last mile solutions. Matt's hands-on experience in the engineering phase of projects has helped him lead ambitious, yet practical master plans, feasibility studies, and concept plans, including the 34-mile LINK Trail in Camden County, NJ, the Riverfront North Greenway along the Delaware River in Philadelphia, and the Little Sugar Creek Greenway in Charlotte, NC.

REGISTRATIONS

Licensed Planner, NJ

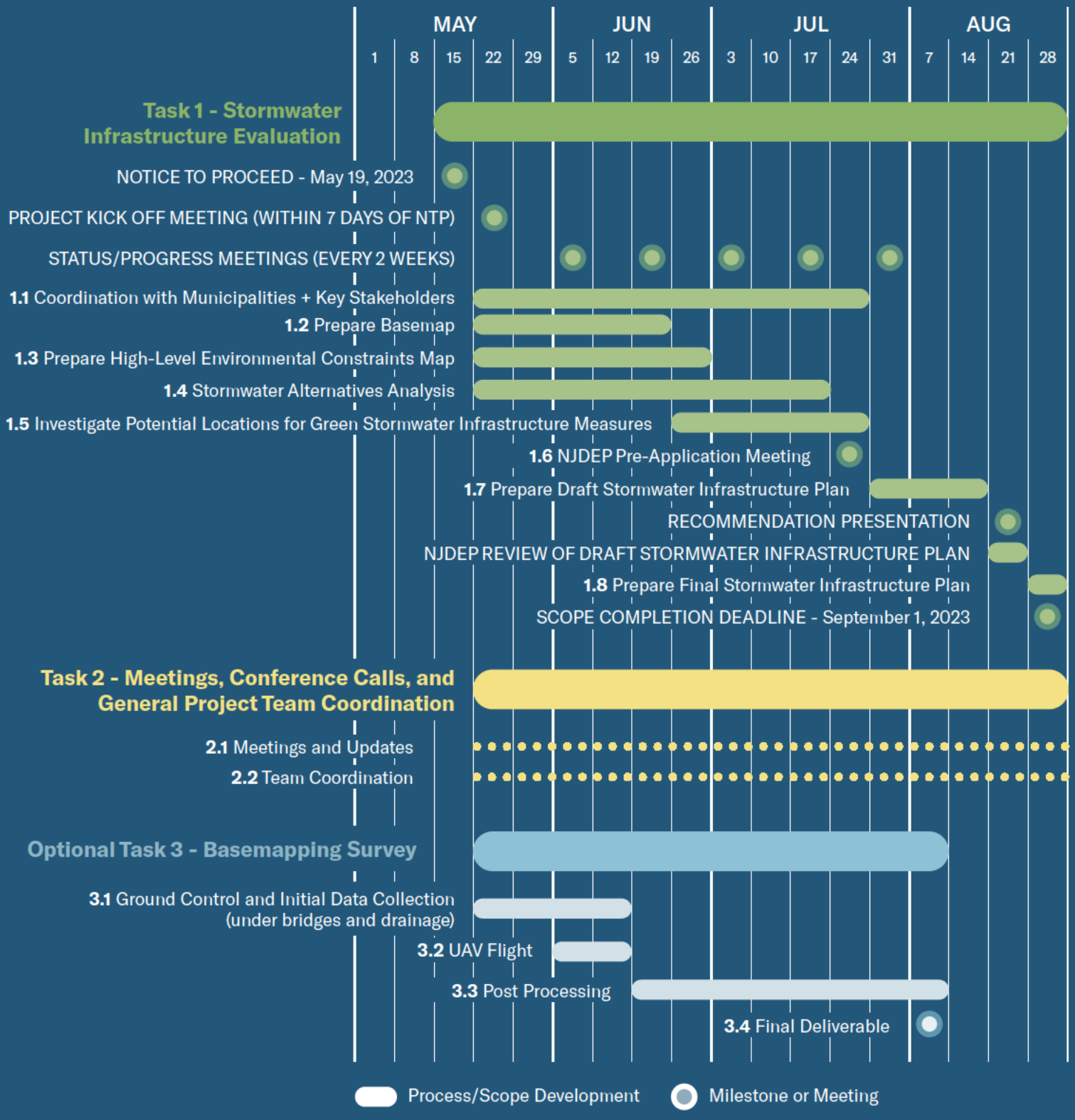
AICP

Bettina Zimny, AICP/PP / Director of Planning / NV5

Bettina Zimny has over 30 years of experience in multimodal transportation planning and facilities design, public outreach, and environmental assessments. She has prepared greenway master plans, transit access studies, downtown revitalization plans, pedestrian/bicycle studies and corridor-wide "complete streets" plans. She served as primary author of the award-winning NJ Statewide Bicycle/ Pedestrian Master Plan, and led the concept and design phases for the NYS&W Bicycle & Pedestrian Path, a five mile multi-purpose trail currently under construction in Morris & Passaic Counties. She has managed local planning assistance contracts for NJ TRANSIT and the NJDOT for over two decades, providing communities with multimodal and transit-friendly planning and design services, and has conducted a wide range of training courses related to walkable communities, safety and access issues for seniors.

PROPOSED SCHEDULE

The following schedule summarizes our scope of work and key milestones to complete the work identified within the mini bid and by September 1, 2023. We look forward to a conversation with the other mini-bids to ensure that our project timeline aligns with those milestones.



PROPOSED FEE

Our team has assessed staff hours for each task in this minibid, and calculated the fee as follows. We view this as a starting point for a conversation about how our team's effort can meet the expectations of NJDEP. Fee calculations assume that the schedule and deliverables timeframe remains as currently stated. We understand the overall larger budget that NJDEP has set aside for this work, and assume that the mini-bid will set a foundation for further stormwater activities, issued as work orders which could be funded partially out of the original budget.

			Hours per Task				
Firm	Title	Hourly Rate	Task 1 Stormwater Infrastructure Evaluation	Task 2 Meetings, Conference Calls, and General Project Team Coordination	Fee per person	Optional/ Additional Task 3 – Basemapping Survey	Optional/ Additional Scope Fee per person
Agency	Principal	$ 200.00	16	16	$6,400.00		$0.00
Agency	Director	$ 175.00	24	108	$23,100.00		$0.00
Agency	Associate	$ 125.00	40	16	$7,000.00		$0.00
Agency	Designer/Planner	$ 100.00	124	64	$18,800.00		$0.00
AmerCom	Project Engineer	$ 225.00			$0.00		$0.00
AmerCom	Surveyor	$ 215.00			$0.00	40	$8,600.00
AmerCom	Principal Engineer	$ 205.00			$0.00	24	$4,920.00
AmerCom	Senior Engineer	$ 170.00			$0.00		$0.00
AmerCom	Engineer	$ 150.00	40		$6,000.00	92	$13,800.00
AmerCom	Principal Technician	$ 148.00			$0.00		$0.00
AmerCom	Junior Engineer	$ 115.00	60		$6,900.00	72	$8,280.00
AmerCom	Technician	$ 85.00			$0.00	28	$2,380.00
BlueShore	Principal (Engineering)	$ 271.00			$0.00		$0.00
BlueShore	Associate Engineer	$ 183.00			$0.00		$0.00
BlueShore	Ecologist	$ 170.00			$0.00		$0.00
BlueShore	Junior Engineer II	$ 170.00			$0.00		$0.00
BlueShore	Junior Engineer I	$ 153.00			$0.00		$0.00
Churchill	Project Manager	$ 190.00			$0.00		$0.00
Churchill	Senior Engineer	$ 140.00			$0.00		$0.00
Churchill	Principal Engineer	$ 130.00			$0.00		$0.00
Churchill	Engineer	$ 115.00			$0.00		$0.00
Churchill	Engineer Technician 3	$ 115.00			$0.00		$0.00
Churchill	Engineer Technician 2	$ 100.00			$0.00		$0.00
CUA	Principal	$ 250.00			$0.00		$0.00
CUA	Design Support	$ 80.00			$0.00		$0.00
CUA	Admin	$ 50.00			$0.00		$0.00
Green Shield	Principal Ecologist	$ 205.00			$0.00		$0.00
Green Shield	Ecologist / Arborist	$ 145.00			$0.00		$0.00
Green Shield	Field Technician	$ 55.00			$0.00		$0.00
HGA	Principals	$ 175.00			$0.00		$0.00
HGA	Principal Planners	$ 165.00			$0.00		$0.00
HGA	Senior Planners	$ 150.00			$0.00		$0.00
HGA	Associate Planners	$ 120.00			$0.00		$0.00
Hive	Principal	$ 250.00			$0.00		$0.00
Hive	Lead Consultant	$ 200.00			$0.00		$0.00
Hive	Design Support	$ 80.00			$0.00		$0.00
Hive	Administrative Support	$ 50.00			$0.00		$0.00
HLB	Associate Principal	$ 300.00			$0.00		$0.00
HLB	Senior Associate	$ 230.00			$0.00		$0.00
HLB	Designer	$ 165.00			$0.00		$0.00
InfraMap	Principal (Engineering)	$ 221.00			$0.00		$0.00
InfraMap	Survey / Engineer Project Manager	$ 163.00			$0.00		$0.00
InfraMap	Senior Utility Location Manager	$ 127.00			$0.00		$0.00
InfraMap	Computer Draftperson	$ 114 00			$0 00		$0 00
InfraMap	Locating Supervisor / Project Surveyor	$ 109.00			$0.00		$0.00
InfraMap	Admin. Assistant	$ 83.00			$0.00		$0.00
InfraMap	Technical Locator I	$ 71.60			$0.00		$0.00
Moffatt & Nichol	Principal	$ 350.00			$0.00		$0.00
Moffatt & Nichol	Project Manager	$ 320.00			$0.00		$0.00
Moffatt & Nichol	Senior Marine	$ 295.00			$0.00		$0.00
Moffatt & Nichol	Senior Coastal	$ 295.00			$0.00		$0.00
Moffatt & Nichol	Marine Structural	$ 233.00			$0.00		$0.00
Moffatt & Nichol	Coastal Engineer	$ 233.00			$0.00		$0.00
Moffatt & Nichol	Junior Marine	$ 186.00			$0.00		$0.00
Moffatt & Nichol	Junior Coastal	$ 186.00			$0.00		$0.00
Moffatt & Nichol	CADD	$ 155.00			$0.00		$0.00
NV5	Director (avg. for Engr/LA/PL/Archit/Env/MEP/Geo)	$ 304.00	125	50	$53,200.00		$0.00
NV5	Senior Project Engineer	$ 299.00			$0.00		$0.00
NV5	Supervising Engineer Transportation	$ 272.00			$0.00		$0.00
NV5	Supervising Environmental Engineer	$ 271.00	400	50	$121,950.00		$0.00
NV5	Supervising/Environmental Hazardous Specialist	$ 258.00	20		$5,160.00		$0.00
NV5	Supervising Technical Advisor	$ 233.00			$0.00		$0.00
NV5	Principal Archaeologist	$ 233.00	20		$4,660.00		$0.00
NV5	Supervising/Director of Cultural Resources	$ 221.00	20		$4,420.00		$0.00
NV5	Senior Architectural Designer	$ 217.00			$0.00		$0.00
NV5	Supervising Engineer Utilities	$ 213.00			$0.00		$0.00

			Hours per Task				
Firm	**Title**	**Hourly Rate**	**Task 1 Stormwater Infrastructure Evaluation**	**Task 2 Meetings, Conference Calls, and General Project Team Coordination**	**Fee per person**	**Optional/ Additional Task 3 – Basemapping Survey**	**Optional/ Additional Scope Fee per person**
NV5	Supervising Engineer Traffic	$ 211.00			$0.00		$0.00
NV5	Survey Crew (2-person)	$ 208.00			$0.00		$0.00
NV5	Senior Engineer Traffic	$ 197.00			$0.00		$0.00
NV5	Supervising Planner	$ 194.00			$0.00	81	$16,848.00
NV5	Principal Engineer	$ 193.00	200	50	$48,250.00		$0.00
NV5	Supervising/Cultural Resource Specialist	$ 192.00			$0.00		$0.00
NV5	Senior Engineer Water Resources	$ 187.00	450		$84,150.00	48	$9,264.00
NV5	Senior Graphic Designer	$ 180.00			$0.00		$0.00
NV5	Senior Environmental Engineer	$ 174.00			$0.00		$0.00
NV5	Senior Engineer/Planner	$ 170.00			$0.00		$0.00
NV5	Supervising/Environmental Specialist	$ 170.00	20		$3,400.00		$0.00
NV5	Senior Engineer	$ 169.00			$0.00		$0.00
NV5	Principal Landscape Architect	$ 162.00	250		$40,500.00		$0.00
NV5	Principal Technician	$ 162.00			$0.00		$0.00
NV5	Architectural Designer	$ 155.00			$0.00		$0.00
NV5	Senior Landscape Architect	$ 143.00			$0.00		$0.00
NV5	Chief of Survey	$ 140.00			$0.00		$0.00
NV5	Senior Environmental Specialist	$ 136.00	20		$2,720.00		$0.00
NV5	Senior Planner	$ 133.00			$0.00	20	$2,800.00
NV5	Senior Environmental Specialist	$ 133.00			$0.00		$0.00
NV5	Senior Architectural Historian/Photographer	$ 132.00			$0.00		$0.00
NV5	Senior Archaeologist	$ 129.00			$0.00		$0.00
NV5	Assistant Engineer	$ 121.00	600		$72,600.00		$0.00
NV5	Planner	$ 96.00			$0.00		$0.00
NV5	Senior Technician	$ 87.00			$0.00	9	$1,089.00
NV5	Environmental Specialist	$ 87.00			$0.00		$0.00
NV5	Archaeological Technician	$ 87.00			$0.00	865	$75,255.00
TCT	Principal (Cost Estimating)	$ 314.90			$0.00		$0.00
TCT	Senior Cost Estimator	$ 294.24			$0.00		$0.00
TCT	Senior MEP Estimator	$ 269.24			$0.00		$0.00
TCT	Cost Estimator	$ 193.37			$0.00		$0.00
TCT	Associate Cost Estimator	$ 144.27			$0.00		$0.00
Town Square	Principal	$ 250.00			$0.00		$0.00
Town Square	Senior Specialist	$ 175.00			$0.00		$0.00
Ummo	Partner, Project Manager	$ 175.00			$0.00		$0.00
Ummo	Partner, Design Director	$ 175.00			$0.00		$0.00
Ummo	Brand Strategy Advisor	$ 125.00			$0.00		$0.00
Ummo	Junior Designer	$ 85.00			$0.00		$0.00
WJC	Principal (Engineering)	$ 210.00			$0.00		$0.00
WJC	Underwater Inspection Team Leader	$ 195.00			$0.00		$0.00
WJC	Supervising Structural Engineer	$ 170.00			$0.00		$0.00
WJC	Underwater Inspector/Tender	$ 130.00			$0.00		$0.00
WJC	CADD/Technician	$ 120.00			$0.00		$0.00
	TOTAL FEE				**$509,210.00**		**$143,236.00**

Contact Information
Kate Tooke
Principal Landscape Architect