

### **REQUEST FOR PROPOSALS**

### FOR

### **Battery Park City Ballfield & Community Center Resiliency Project:**

**Construction Management Services** 

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#### I. <u>SUMMARY</u>

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority ("BPCA") requests proposals (individually a "Proposal" and collectively the "Proposals") from construction management firms (individually a "Proposer" and collectively the "Proposers") to provide BPCA with construction management services for the Battery Park City Ballfield and Community Center Resiliency Project (the "Project"), which is currently at the fifty percent (50%) design stage. A detailed Scope of Work for which the selected Proposer will be responsible is attached as <u>Exhibit A</u> (the "Services" or the "Work"). The fifty percent (50%) design drawings and technical specifications are attached as <u>Exhibit B</u> (the "Preliminary Design Documents").

Specifically, the Services will consist of construction management services related to the construction of an interim flood barrier (the "Ballfield Barrier System") along the northern, eastern, and southern boundaries of the Battery Park City Ballfields (the "Ballfields" or the Project Site"), located immediately west of West Street and between Warren Street and Murray Street. The Ballfield Barrier System will have an intended useful life of up to ten (10) years and is expected to remain in place until the completion of the North Battery Park City and South Battery Park City Resiliency Projects, at which time the Ballfield Barrier System will be rendered redundant based upon current 2050 one hundred-year storm projections.

As described in more detail in <u>Exhibit A</u>, BPCA's resiliency studies over recent years have identified the Project Site as a primary point of vulnerability to flooding and associated property damage due to storm surge and projected sea-level rise. During Superstorm Sandy, the Ballfields and the adjacent Battery Park City Community Center (the "Community Center") sustained significant damage due to flooding. As a result these facilities have been designated as appropriate sites for targeted flood protection independent of the coastal flood barrier systems currently being planned for Battery Park City and Lower Manhattan. The final Ballfield Barrier System design is intended to provide flood protection for both the Ballfields and the Community Center may be implemented through a separate BPCA construction project. Any such additional Community Center-focused measures are not included in the Scope of Work for this Project.

Created in 1968, BPCA is a New York State public benefit corporation responsible for financing, developing, constructing, maintaining, and operating Battery Park City as a richly diversified, mixed-use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas, and a waterfront esplanade. A summary of BPCA's structure, mission, and history, as well as the Battery Park City project area, may be viewed at: <u>www.bpca.ny.gov</u>. Public information regarding BPCA's finances, budget, internal controls, guidelines, and policies may be viewed at: <u>www.bpca.ny.gov/public-information</u>. Information relating to the Battery Park City Parks Conservancy Corporation ("BPCPC"), BPCA's affiliate, may be viewed at: <u>www.bpcarks.org</u>.

New York State-certified Minority-Owned Business Enterprises ("MBE"), Women-Owned Business Enterprises ("WBE"), and Service-Disabled Veteran-Owned Businesses ("SDVOB") are encouraged to submit Proposals.

#### II. <u>GENERAL PROVISIONS</u>

This request for Proposals, including attachments, exhibits, and any amendments or addenda (collectively, the "RFP") is subject to the rights reserved by BPCA, including, but not limited to BPCA's right to:

- Withdraw and/or cancel this RFP at any time before final award of the contract;
- request clarification and/or additional information from any or all Proposers;
- amend any term or requirement of this RFP at any time before award of a contract (Proposers may amend their Proposals, as directed by BPCA, if BPCA materially alters or amends the RFP after submission of Proposals);

- alter any key dates or deadlines related to this RFP;
- award the Work, in whole or in part, to one or more Proposers with or without interviews;
- reject any Proposal that does not strictly conform to the requirements of this RFP;
- conduct an interview with any or all of the Proposers to aid the evaluation process; and,
- negotiate potential contract terms with any Proposer.

BPCA is not liable or responsible in any way for any expenses incurred in the preparation of a Proposal in response to this RFP. All information submitted in response to this RFP is subject to the Freedom of Information Law, Article 6 of the New York State Public Officers Law ("FOIL"), which requires public access to certain documents possessed by BPCA, unless a specific exemption applies. Proposers are responsible for identifying any information in their respective Proposals considered to be confidential and exempt from FOIL. BPCA, however, is obligated to disclose information consistent with the requirements of FOIL, New York State Public Authorities Law Section 87.

#### I. <u>TIMETABLE & DESIGNATED CONTACT</u>

#### A. Key Dates

Subject to change at BPCA's discretion, the following are key dates for this RFP:

- RFP issued: October 7, 2019
- Pre-proposal meeting and subsequent site visit (attendance is highly recommended):
  - <u>Date</u>: October 11, 2019 at 11:00 AM
  - Location: BPCA Offices 200 Liberty St., New York, NY 24<sup>th</sup> floor
- Deadline to submit questions to BPCA: October 17, 2019 (by email only)

All questions regarding this RFP should be submitted in writing via email to **Michael LaMancusa**, BPCA's Assistant Contracting Officer, at <u>michael.lamancusa@bpca.ny.gov</u> (the "Designated Contact").

- BPCA's response to substantive questions: October 23, 2019 (via posting on the BPCA website)
- PROPOSAL DUE DATE: October 30, 2019 at 3:00pm (the "Due Date")
- INTERVIEWS (IF DEEMED NECESSARY BY BPCA) WILL BE HELD ON November 6, 7 and/or 8.
- Contract start date: January 2020 (approximate)

#### **B.** Anticipated Contract Term

The anticipated term of the contract awarded pursuant to this RFP (the "Contract") will be thirteen (13) months. BPCA reserves the right to terminate the Contract at any time, with or without cause, in accordance with the terms of the Contract. BPCA's sample form of contract (the "Standard Form of Contract") is attached as <u>Exhibit D</u>.

#### IV. <u>GENERAL REQUIREMENTS</u>

#### A. Minimum Qualification Requirements

The following are the minimum qualification requirements for this RFP. Proposals that fail to meet these requirements will be rejected.

- 1) The Proposer must have an office in New York State (a New York City office is preferred).
- 2) The Proposer must be lawfully authorized to do business in the State of New York.
- 3) The Proposer must have at least five (5) years of experience providing construction management services for major urban infrastructure projects, at least two (2) of which have been performed in New York City.

#### B. MBE/WBE/SDVOB Participation, Joint Ventures, and Sub-contracting Goals

Contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs/SDVOBs and equal employment opportunity requirements relating to minority group members and women are attached as <u>Exhibit C</u>. For questions relating to MBE/WBE/SDVOB participation, joint ventures and sub-contracting goals *only*, please contact the "<u>MBE/WBE/SDVOB</u> <u>Designated Contact</u>" Justin Mclaughlin-Williams at <u>justin.mclaughlin-williams@bpca.ny.gov</u> or 212-417-2337 (the "MBE/WBE/SDVOB Designated Contact").

#### C. Restricted Period

New York State's State Finance Law sections 139-j and 139-k apply to this RFP, restricting Proposers' contacts with BPCA. Proposers are restricted from making any contact (defined as oral, written or electronic communications with BPCA under circumstances where a reasonable person would infer that a communication was intended to influence BPCA's conduct or decision with respect to a procurement) relating to this RFP with anyone other than the Designated Contact, as specified in Section III.A., or MBE/WBE/SDVOB Designated Contact, as specified in Section IV.B., from the time of Proposer's receipt of notice of this RFP through the date of the Final Award as defined in BPCA's Procurement Guidelines (the "Restricted Period"). BPCA employees must record certain contacts during the Restricted Period, including, but not limited to, any oral or written communications that could reasonably be seen as intended to influence BPCA's conduct or award of this RFP. Upon notice of an improper contact, BPCA must make a determination regarding the Proposer's eligibility to continue participating in this RFP.

#### D. Submission of Proposals

#### Proposals must be received by BPCA no later than 3:00PM on October 29, 2019.

Each Proposer must submit six (6) paper copies and a PDF version (via CD-ROM or flash drive) in a sealed package clearly marked "Proposal Enclosed – Battery Park City Ballfield & Community Center Resiliency Project: Construction Management Services" to the Designated Contact by messenger, overnight courier or certified mail to the following address:

Battery Park City Authority Attn: Michael LaMancusa 200 Liberty Street, 24<sup>th</sup> Floor New York, NY 10281

BPCA is not responsible for late Proposals, no matter the cause. Proposals *must* arrive at the time and place specified herein and be time stamped by BPCA by the Due Date. Please leave ample time for building security. Late Proposals will NOT be accepted. Proposals submitted by fax or electronic transmission will NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting an amended Proposal, clearly labeled "Amended Proposal – Battery Park City Ballfield & Community Center Resiliency Project: Construction Management Services," as long as the amended Proposal is submitted by the Due Date.

#### V. <u>PROPOSAL FORMAT AND CONTENTS</u>

#### A. Proposal Format

The Proposal must:

- Be printed on 8<sup>1</sup>/<sub>2</sub>" x 11" paper;
- Have numbered pages; and
- Be no longer than ten (10) single-sided pages, exclusive of the Cover Letter, Cost Proposal, and Required Attachments.

#### B. Proposal Content

In addition to the separately sealed Cost Proposal, described in Section VIII. Below, each Proposal must include the following in the order listed:

- 1) Cover Letter, signed by a person within the firm who is authorized to bind the Proposer, which includes representations that:
  - (a) Except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP;
  - (b) Proposer satisfies all of the minimum qualification requirements in Section IV.A; and
  - (c) Proposer has reviewed BPCA's Standard Form of Contract, attached as <u>Exhibit D</u> to this RFP, and either has no objections or has detailed their objections in an appendix to their Proposal.
- 2) Executive Summary.
- 3) Responses to the Questions as well as all of the Information Required (Sections VI.A. and B.).
- 4) Required Attachments (Section VI. C.).

BPCA reserves the right to reject any Proposals that fail to include any required item described in this Section V.B., including Cover Letters that are unsigned or fail to include each of the above representations (including an appendix if there are objections to BPCA's Standard Form of Contract).

#### VI. <u>INFORMATION REQUIRED:</u>

#### A. Questions and Information Sought Relating to the Work

- 1) Describe your team's background, services, size, and experience as these factors are relevant to the Work, with an emphasis on construction management services for major urban infrastructure projects of similar type, size, and scale.
- 2) Describe your team's construction management experience with projects involving urban and coastal flood and seepage barrier systems and drainage improvements.
- 3) Describe your team's experience providing construction management services for projects involving public parks, highway and street frontages, open spaces, and outdoor recreation facilities.
- 4) Describe your team's experience managing infrastructure construction projects in physically constrained sites involving complicated adjacencies such as active public spaces, family recreation facilities, state and city-owned streets and rights-of-way, public schools, residential high-rise buildings, and neighboring active construction projects.
- 5) Identify members of your team who have experience performing services for, and interacting with public agencies on infrastructure and resiliency projects.
- 6) Describe your team's experience with work similar to that required for the Project for other public agencies, authorities, and entities, with an emphasis on New York State and New York City public entities.
- 7) Describe your proposed approach and methodology, including scheduling, sequencing, staffing, site logistics and safety considerations for the construction management services associated with the Project. Please include consideration of all potential phasing and segmenting options, as well as innovative work approaches that would minimize on-site space requirements and disruptions to the ongoing use of the Ballfields and allow for condensing of the overall construction duration to the greatest extent possible.
- 8) List each key member of the team you intend to assign to this engagement and include for each listed individual: (a) area(s) of specialization; (b) title and/or position within your firm; (c) the services to be performed.
- 9) Identify the Project Manager who will be the primary contact and lead personnel in providing services to BPCA, and identify any other persons who will be listed as a "key person" in any contract with BPCA.
- 10) Identify any sub-consultants you intend to use for this engagement, and describe the services to be performed by each sub-consultant.
- 11) Clearly identify any information in your Proposal that you believe to be confidential and exempt from FOIL, and state the reasons. Please note that this question is for informational purposes only, and BPCA will determine whether information or materials are exempt from disclosure under FOIL in its sole discretion.

- 12) Identify any and all exceptions taken to BPCA's Standard Form of Contract, attached as <u>Exhibit D</u>, and explain the reasons for such exceptions. Such exceptions must be detailed in an appendix to your Proposal labeled, "Appendix: Objections to BPCA Form of Contract." NO EXCEPTIONS TO THE CONTRACT WILL BE CONSIDERED BY BPCA AFTER SUBMISSION OF THE PROPOSALS. BPCA maintains the right to reject Proposals based on non-conformance with the Standard Form of Contract.
- 13) Provide at least three (3) client references for whom your firm has performed similar work to that requested in this RFP. For each client, describe the project, the project's date, and services performed, and provide the name, address, and telephone number for a person at client's firm familiar with such work.

#### B. Questions and Information Sought Relating to Proposer's Firm & Eligibility

- 1) Within the past three (3) years, have there been any significant developments in your firm such as changes in ownership or restructuring? Do you anticipate any significant changes in the near future? If so, please describe.
- 2) How does your firm identify and manage conflicts of interest?
- 3) Are there any potential conflict of interest issues posed by your firm's performance of the Work on behalf of BPCA?
- 4) Has your firm or have any of the firm's partners/employees been disciplined or censured by any regulatory body within the last five (5) years? If so, please describe the relevant facts.
- 5) Within the last five (5) years, has your firm, or a partner or employee in your firm, been involved in litigation or other legal proceedings relating to the provision of professional services? If so, please provide an explanation and the current status or disposition of the matter.
- 6) List any professional or personal relationships your firm's employees may have with BPCA's Board Members and/or employees. A list of such Board members and employees is attached as Exhibit H.
- 7) If selected, will your firm assign any person to this engagement who was previously an employee of BPCA or BPCPC? If so, please: i) identify when (month and year) that person's employment at BPCA/BPCPC terminated, and ii) describe that person's involvement, if any, with matters related to this RFP during his/her employment at BPCA/BPCPC.
- 8) In the past five (5) years, have any public sector clients terminated their working relationship with your firm? If so, please provide a brief statement of the reasons. Provide the name of the client and provide a contact person, address and telephone number.
- 9) Clearly identify any information in your Proposal that you believe to be confidential and exempt from disclosure under FOIL, and state the reasons. Please note that this question is for informational purposes only, and BPCA will determine FOIL applicability in its sole discretion.

#### C. Required Attachments

1) Mandatory Forms:

Each Proposal must include a completed copy of all "Mandatory Forms" found at: www.bpca.ny.gov/wp-content/uploads/2015/03/Vendor-ResponsibilityQuestionnaire.pdf.

The Mandatory Forms include the following:

- a) NYS Standard Vendor Responsibility Questionnaire, notarized and signed by the individual(s) authorized to contractually bind the Proposer, indicating the signer's title/position within the firm.\*
- b) State Finance Law § 139 Form 1, signed by the individual(s) authorized to contractually bind the Proposer.\*
- c) W-9 form.
- d) Statement of Non-Collusion.
- e) MBE/WBE/SDVOB Utilization Plans. Please note that all such plans must be submitted even if Proposer is a MBE/WBE/SDVOB.

\*In addition to the copy required to be included in each bound Proposal, Proposers must additionally provide one (1) unbound, completed original, with ink signatures, of the NYS Standard Vendor Responsibility Questionnaire and SFL 139 Form 1.

- 2) Response to the question regarding the use of New York State businesses set forth in Section XII.
- 3) Completed MBE/WBE and EEO Policy Statement and Diversity Practices Questionnaire (attached as part of <u>Exhibit C</u>).
- 4) Financial Statements:

Provide a copy of your firm's most recent audited financial statements (within the last year). In the event you do not have audited financials you must provide a statement to that effect with your proposal, and summary financial information for the calendar year most recently ended.

5) Acknowledgement of Addenda:

Attach a completed and signed Acknowledgement of Addenda Form, attached as <u>Exhibit G</u>, acknowledging receipt of all addenda to this RFP, if any, issued by BPCA before the Due Date. Addenda are posted by BPCA as necessary and can be found on the BPCA website at <u>www.bpca.ny.gov</u>. It is the responsibility of each Proposer to check the BPCA website for addenda and to review addenda prior to submitting any proposal in response to this RFP.

- 6) Appendices:
  - a) Attach professional biographies for all employees identified in your Proposal.
  - b) Identify any and all exceptions taken to BPCA's Standard Form of Contract.

#### VII. INSURANCE REQUIREMENTS

#### A. General Requirements

The total cost of the required insurance listed in paragraphs A) and B) below, must be incorporated into the Cost Proposal. The additional insured protection afforded BPCA, BPCPC, and the State of New York must be on a primary and non-contributory basis. All policies must include a waiver of subrogation in favor of BPCA, BPCPC, and the State of New York, no policies may contain any limitations / exclusions for New York Labor Law claims, and cross liability coverage must be provided for BPCA, BPCPC, and the State of New York.

All of the carriers that provide the below required insurance must be rated "A-VII" or better by A.M. Best and must provide direct written notice of cancellation or non-renewal to BPCA, BPCPC, and the State of New York at least 30 days before such cancellation or non-renewal is effective, except for cancellations due to non-payment of premium, in which case 10 days written notice is acceptable.

#### **B.** Insurance Requirements for the Selected Proposer

The selected Proposer will be required to obtain and provide proof of the types and amounts of insurance listed below: (i) as a condition precedent to the award of the contract for the Project; and (ii) continuing throughout the entire Term. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached.

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
  - \$6,000,000 per occurrence
  - \$7,000,000 general aggregate
  - \$7,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by the selected Proposer and any of its subcontractors. Should the Proposer's work include construction activities of any kind then the Proposer must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed, and continue to include Additional Insured protection for BPCA, BPCPC & the State of New York for the prescribed timeframe. When providing evidence of insurance, the Proposer must include a completed Acord 855 NY form. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed. The General Aggregate limit must apply on a per project basis on the primary General Liability policy should a combination of primary and Umbrella/Excess liability policies be utilized to secure the required total limits of coverage.

- Automobile Liability Insurance with a combined single limit of not less than \$1,000,000. Coverage must apply to the Proposer's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed.
- Workers' Compensation, Employer's Liability, and Disability Benefits shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the Proposer.

• **Professional Liability ("Errors & Omissions") Insurance** must be maintained at a limit of not less than \$5,000,000 each claim.

#### C. Insurance Requirements for all Subconsultants

Any subcontractor(s) utilized by the selected Proposer will be required to obtain the types and amounts of insurance listed below: (i) as a condition of commencing any Work; and (ii) continuing throughout the duration of the subcontractor's Work. T

he insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached:

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
  - \$1,000,000 per occurrence
  - \$2,000,000 general aggregate which must apply on a per location / per project basis
  - \$2,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by all subcontractors. Should the subcontractor's work include construction activities of any kind then the subcontractor must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed and continue to include Additional Insured protection for BPCA, BPCPC & The State of New York for the prescribed timeframe. When providing evidence of insurance, the subcontractor must include a completed Acord 855 NY form. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed. The General Aggregate limit must apply on a per project basis on the primary General Liability policy should a combination of primary and Umbrella/Excess liability policies be utilized to secure the required total limits of coverage.

- Automobile Liability Insurance with a combined single limit of not less than \$1,000,000. Coverage must apply to the subcontractor's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured.
- Workers' Compensation, Employer's Liability, and Disability Benefits shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the subcontractor.
- Subcontractors will also be required to obtain all other insurances listed in Section (2) unless otherwise approved in writing by BPCA prior to commencement of any Subcontractor's work.

#### VIII. COST PROPOSAL: FORMAT AND REQUIRED INCLUSIONS

Each Cost Proposal must submit six (6) copies of the Cost Proposal, which must include:

- 1) A total not-to-exceed fee proposal (<u>Exhibit E</u>);
- 2) Reimbursable costs (Exhibit E); and,
- 3) Technical salary rates (<u>Exhibit F</u>) for the performance of all Work.

The Cost Proposal must be submitted in its own separate, sealed envelope within the sealed package containing all other Proposal documents. Please provide six (6) copies of the Cost Proposal.

#### IX. <u>SELECTION PROCESS</u>

#### A. Evaluation

Each timely submitted Proposal will be reviewed for compliance with the form and content requirements of this RFP. A committee of BPCA employees selected by BPCA (the "Committee") will then review and evaluate the Proposals in accordance with the evaluation criteria set forth below. While only Committee members will score the evaluation criteria, the Committee may consult an outside expert for advisement on the evaluation of matters requiring technical expertise. Before final selection, BPCA must determine that the proposed selected Proposer is responsible, in accordance with applicable law and BPCA's Procurement Guidelines, which may be viewed at: www.bpca.ny.gov/public-information.

#### **B.** Interviews

BPCA reserves the right to decide whether to interview any or all of the Proposers. The Committee may conduct interviews for many reasons, including to further assess a Proposer's ability to perform the Work or provide specific services, or to seek information related to any other evaluation criteria. The proposed Lead PM, as well all other key personnel proposed to perform the Work, must be available to participate in the interview. Failure to be invited for an interview does not indicate that a Proposer is no longer under consideration for the Project.

#### C. Evaluation Criteria for Selection

Selection will be based upon the following criteria:

- 1) Technical Evaluation:

- - d) Response to Diversity Practices Questionnaire......10%
- 2) Cost Proposal evaluation.

#### D. Basis for Contract Award

The Contract will be awarded to the highest technically rated Proposer whose Proposal is determined to be responsive and in the best interests of BPCA, subject to a determination that the Cost Proposal is fair, reasonable, and provides the best value to BPCA given the requirements of the Project.

#### X. <u>NON-COLLUSION</u>

By submitting a Proposal, each Proposer warrants and represents that any ensuing Contract has not been solicited or secured directly or indirectly in a manner contrary to the laws of the State of New York, and that said laws have not been violated and shall not be violated as they relate to the procurement or the performance of the Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, or gratuity or consideration of any kind, directly or indirectly, to any member of the board of directors, employee, officer or official of BPCA.

#### XI. <u>IRAN DIVESTMENT ACT</u>

By submitting a Proposal or by assuming the responsibility of any Contract awarded hereunder, each Proposer certifies that it is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list ("Prohibited Entities List") posted on York State Office of General Services website the New at: www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize any subcontractor/consultant that is identified on the Prohibited Entities List on this Contract. The selected Proposer agrees that should it seek to renew or extend any Contract awarded hereunder, it must provide the same certification at the time the Contract is renewed or extended. The selected Proposer also agrees that any proposed assignee of the Contract will be required to certify that it is not on the Prohibited Entities List before BPCA may approve a request for assignment of the Contract.

During the term of any Contract awarded hereunder, should BPCA receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, BPCA will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the New York State Iran Divestment Act of 2012 within 90 days after the determination of such violation, then BPCA shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the selected Proposer in default of the awarded Contract.

BPCA reserves the right to reject any request for renewal, extension, or assignment for an entity that appears on the Prohibited Entities List prior to the renewal, extension, or assignment of the Contract, and

to pursue a responsibility review with the selected Proposer should it appear on the Prohibited Entities List hereafter.

#### XII. <u>ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT</u> <u>PERFORMANCE</u>

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, Proposers for this Contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Proposers are strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York's infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor's optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their contracts. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

Proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below. Each proposer must include a response to this question with their proposal. Please note that a "yes" response requires supporting information. If yes, identify New York State businesses that will be used and attach identifying information.

Will New York State businesses be used in the performance of this contract? \_\_\_\_\_Yes \_\_\_\_No

#### EXHIBIT A

#### **SCOPE OF WORK**

#### I. Background and Context

The Battery Park City Ballfields (the "Ballfields" or the "Project Site") comprise an 85,000 square foot facility located at West Street between Warren and Murray Streets and immediately west of West Street. The Ballfields are open year-round and are used by approximately 50,000 people per year. The Battery Park City Community Center (the "Community Center"), currently operated by Asphalt Green, is an approximately 60,000 square foot recreation and fitness facility located at 211 North End Avenue. The Community Center is situated within the cellar and sub-cellar levels of two neighboring residential towers located at 200 and 300 North End Avenue. The facility, which offers comprehensive fitness services, including swimming pool and gymnasium, for families and adults and has over 1,000 members.

Due to the peculiar location-specific and elevation-related vulnerabilities of the Ballfields and Community Center, they collectively represent one of the areas within Battery Park City ("BPC") at greatest risk of storm-related flooding. This risk was sharply underscored during the Manhattan landfall of Superstorm Sandy in 2012 when the recently upgraded artificial turf Ballfields were destroyed and the Community Center was heavily damaged by rushing floodwaters. BPCA's post-Sandy flood risk assessments have resulted in the formulation of an overall BPC resiliency plan comprised of four (4) distinct resiliency projects. The Ballfield and Community Center Resiliency Project (the "Project") was devised to address the discrete vulnerabilities of the Ballfields and Community Center on an interim basis, until such time as two (2) of the other, more complex, BPCA resiliency projects (the North BPC Resiliency Project and the South BPC Resiliency Project) are completed, within an expected period of three (3) to five (5) years (a useful life for the Project of up to ten (10) years is targeted). At that time, the localized protection provided by the Project will no longer be needed and will thereafter be removed.

The Project envisions the construction of an interim flood barrier (the "Ballfield Barrier System") along the northern, eastern, and southern boundaries of the Ballfields in order to provide flood risk reduction to the Ballfields and the Community Center for up to ten (10) years. As designed, the Ballfield Barrier System will provide flood protection for both the Ballfields and the Community Center. Separate additional flood protection measures for the Community Center may be implemented by BPCA through a separate construction project. Any such additional Community Center-focused measures are not included in the Scope of Work for this Project.

BPCA has contracted with STV USA, Inc. ("STV" or the "Design Team") to provide design, documentation, and engineering services for the Project. With design development currently advancing past the fifty percent (50%) mark, BPCA seeks through this RFP to identify a suitable construction management firm to lead the Project through construction to final completion, in accordance with the Scope of Work specified below. Fifty percent (50%) design documents are attached as <u>Exhibit H (the "Preliminary Design Documents"</u>).

**Note:** The Preliminary Design Documents are provided in order to provide Proposer(s) with sufficient information about the Project to develop Proposal(s) for provision of the Services. However, as indicated, these documents do not represent a complete design. The final design is subject to change, and Proposers should not rely on these documents except to inform the development of their Proposal(s).

#### II. General Responsibilities

The selected Proposer shall provide full construction management services throughout all phases of the Project, including pre-construction, construction, and post-construction/close-out. These services shall include, but are not limited to, the following tasks: Project phasing guidance, contractor coordination, schedule coordination, constructability reviews, formulation of construction-expediting or acceleration recommendations for inclusion in contractor procurements, cost estimating, contracting assistance, overall Project management, office engineering, and construction inspection services. Specifically, the selected Proposer shall, among other things:

- 1. Provide pre-construction services as specified below.
- 2. Monitor and oversee Project performance and completion by the contractors required for performance of the Project (collectively, the "Contractors" or singularly, a "Contractor") as well as the required work of any additional consultants or construction firms selected for the Project (the "Specialty Contractors"), with quality of workmanship and strict adherence to the Construction Documents, Project schedule, and budget being of critical importance. The selected Proposer shall work with the Design Team as necessary to facilitate and ensure the completion of all construction in accordance with these standards. The selected Proposer will manage the logistics of the Project, including but not limited to phasing, weather factors, workforce requirements, and staging.
- 3. Be responsible for Project coordination, preparation of overall Project schedule, and review/tracking of the Contractor's Critical Path Method ("CPM") schedule.
- 4. Be responsible for managing the overall Project schedule and all individual Contractor schedules, along with pre-construction and construction milestone dates.
- 5. Collect and review all pertinent information pertaining to the Project Site and its immediate surroundings (the "Work Area") to become familiar with any factors that could interfere with, or affect, the construction progress.
- 6. Be responsible for overseeing all financial aspects of the Project, including, but not limited to, budgets, cost estimates, change orders, pay applications, and financial reporting as specified herein.
- 7. Ensure that all work performed on the Project adheres to all relevant codes and all Local, City and State, regulations and guidelines.

#### III. <u>Pre-Construction Activities</u>

During the pre-construction phase of the Project, the selected Proposer shall:

- 1. Coordinate with BPCA as requested, in the formulation and negotiation of the following items in connection with the pre-construction activities of the general contractor(s) selected by BPCA for the Project (the "Contractor"):
  - a) Final contract provisions;
  - b) Submission formats;
  - c) Requisition forms;
  - d) Change order proposal forms; and,
  - e) Substantial and final completion confirmation forms.

- 2. At BPCA's request, assist in all aspects of the selection and management of specialty contractors, if any, and/or in the pre-construction replacement of the Contractor, if necessary, including but not limited to: preparation or refinement of work scopes and proposal requests, proposal review and comparison, attendance at related meetings, answering of questions, evaluation of qualifications and reference review, and review of and recommendations regarding proposals or quotes.
- 3. Familiarize itself with the access points and space constraints in and around the Project Site in order to facilitate Project performance and completion with the fewest possible impacts to the surrounding areas, public convenience, and the community in general.
- 4. Review and approve the contractor's logistics and coordination plans, before submitting them to BPCA for approval.
- 5. Develop, implement, and submit for approval by BPCA construction management procedures for managing the execution of the Project, including, but not be limited to: general and special conditions, project directories, submittal processing procedures, tracking of logs (for, among other things, all Project costs, submittals, plan & specification changes, change orders, potential change orders, bulletins, field orders, unforeseen conditions), daily work reports and field reports, permits and permit compliance, Project management reports, Project summary reports, meeting minutes, change order requests, requisitions, and site access procedures.
- 6. Develop a preliminary site safety and logistics plan to be coordinated with the Contractor and to inform the final general contractor's site safety and logistics plan that must be reviewed and approved by BPCA. The site safety and logistics plan must include adequate pedestrian safety measures within and adjacent to the Project Site.
- 7. Monitor on-site Work during the pre-construction phase and for coordination of site access during the pre-construction phase in accordance with BPCA's directives.

#### IV. <u>Construction Tasks</u>

During the construction phase of the Project, the selected Proposer shall:

- 1. Monitor and oversee the Project and the work of the Contractor and ensure that the Project is completed in accordance with the final construction documents, and in accordance with BPCA's objectives, budget, schedule, contract terms, and specified quality standards. The selected Proposer shall manage the performance and coordination of the Work in a manner that in order to perform the Work with **minimizes disruption** to the adjacent areas (public and private) and **minimizes the overall impact** on the community and general public. The selected Proposer will manage communications and coordination with the contractor(s) and managers associated with the adjacent active construction projects including the Community Center and Ballfield Terrace restoration and waterproofing project that commenced in September 2019 and is expected to continue through November 2020.
- 2. Manage the coordination with the Contractor on matters of scheduling, sequencing, logistics, access, site management, site safety, design compliance, regulatory and permit compliance and inspections, and labor harmony.
- 3. Manage overall matters of site safety and ensure that the Contractor maintains adequate fencing, barricades, signage, and safety precautions for the protection of the general public, including, where

and when appropriate or requested by BPCA, pedestrian crossing managers on the streets adjacent to the Project Site.

- 4. Work with BPCA and the Design Team as necessary in identifying, contacting, and arranging/participating in meetings with specialty contractors, equipment manufacturers, and industry specialists in order to determine technically viable design and construction solutions, determine the availability of materials, and develop and prepare cost estimates.
- 5. Track the disposition of all Contractor submittals including general requirements (bonds, insurance, etc.), schedule, procedures, materials, shop drawings, and subcontractor and supplier qualification submittals in accordance with the final construction documents.
- 6. Review and approve the Contractor's payment applications before they are submitted to BPCA for approval and payment, and promptly advise BPCA whether those payment applications are complete (including required lien waivers), accurately reflect work satisfactorily completed, and are consistent with the terms of their respective contracts and the final construction documents. If necessary, the selected Proposer shall coordinate with the Contractor to revise payment applications before they are submitted to BPCA.
- 7. Review and track the Contractor's CPM schedule for conformance with contractual milestones, and promptly notify BPCA and the Contractor of any actual or anticipated failure to adhere to the CPM schedule. If the Contractor proposes changes to the CPM schedule, the selected Proposer shall review the proposed changes, recommend approval or denial of the proposed changes, track the revised schedule(s) and adjust its inspection schedule and staffing accordingly. The selected Proposer shall be prepared to review the proposed schedule prepared by the contractor(s).
- 8. Review all requests for change orders, provide cost estimates where necessary or as requested by BPCA with respect to potential or requested change orders, and provide recommendations for acceptance or rejection of proposed change orders to BPCA (advising BPCA at the time of Contractor submission, but negotiating revisions, as appropriate, to the change order proposals prior to their formal submission to BPCA).
- 9. Submit the Contractor's trade payment breakdown for review and approval by BPCA.
- 10. Track and coordinate all required permits and environmental approvals with the Contractor.

#### V. <u>Meetings and Reporting</u>

With respect to meetings and reporting throughout the duration of the Project, the selected Proposer shall:

- 1. Administer one construction kickoff meeting for the Project, and promptly prepare and distribute meeting minutes for each such meeting.
- 2. On a <u>daily basis</u>, prepare reports reflecting daily activities, including, but not limited to: daily logs of the Contractor's staffing and hours on-site, weather, deliveries, disposals, special occurrences, photo documentation of work, pre-construction conditions, job progress, contractor equipment, material testing, and work performed and completed. The selected Proposer shall submit daily Project Management Reports that reflect such information via email to BPCA's designated Project Manager. Daily reports shall also be retained on site and be readily available to BPCA.

- 3. On a <u>weekly basis</u>, schedule and conduct weekly job progress meetings with BPCA and any other relevant parties (as identified by BPCA) in order to provide updates, address BPCA's concerns, describe logistics surrounding the Project and to monitor the Project schedule. The selected Proposer shall promptly prepare and distribute meeting minutes each week in advance of the next progress meeting.
- 4. On a **monthly basis**, issue a Monthly Project Summary Report, which shall include a full description of the status of all aspects of the Project, including but not limited to: a brief narrative of the work status and level of completion, an assessment of whether construction targets will be met, an update on any anticipated delays or issues, the Project's financial status and cost estimates, and tracking reports. The selected Proposer shall also conduct a monthly review of the Contractor's budget and expenditures and shall include such information in the Monthly Project Summary Report.

#### VI. <u>Post-Construction & Close-out</u>

The selected Proposer shall provide post-construction and close-out services for the Project, including, but not limited to:

- 1. Submission of all Project records, inspection reports, and a final Project summary (including final project summaries and any relevant operating and maintenance ("O&M") information for the Project to BPCA upon Project completion.
- 2. Determine, in collaboration with the Design Team, when the Contractor has reached the point of substantial completion with respect to its work required for the Project.
- 3. Conduct final inspections and approvals of the Project components, and advise BPCA regarding the issuance of certificates of final completion.
- 4. Ensure that all permits and environmental approvals for the Project are adhered to and closed out by the Contractor.

#### EXHIBIT B

PRELIMINARY DESIGN DOCUMENTS

[NO FURTHER TEXT ON THIS PAGE]

#### PRELIMINARY DRAWINGS

#### [NO FURTHER TEXT ON THIS PAGE]



NEW YORK STATE OF OPPORTUNITY. City Authority

# THE CITY OF NEW YORK BATTERY PARK CITY AUTHORITY

# BATTERY PARK CITY BALLFIELD AND COMMUNITY CENTER RESILIENCY DESIGN

# BALLFIELD AND COMMUNITY CENTER FLOOD PROTECTION CONTRACT NO. 18-2624







# 50% DESIGN SUBMITTAL SEPTEMBER 6, 2019

50 % Design Documents



1		2
GENERAL		
SHEET NO.	DWG NO.	
1 2	G-000 G-001 G-002	DRAWING LIST FLOOD COMPLIANCE MAP
SHEET NO. 3 4 5 6 7 8 9 10 11 12 13	DWG NO. C-001 C-002 C-003 C-101 C-102 C-103 C-104 C-111 C-112 C-121 C-122	TITLE CIVIL GENERAL NOTES - SHEET 1 OF 2 CIVIL GENERAL NOTES - SHEET 2 OF 2 CIVIL LEGEND AND ABBREVIATIONS EXISTING CONDITIONS - STREET LEVEL PLAN EXISTING CONDITIONS - UTILITY PLAN SITE DEMOLITION PLAN - SHEET 1 OF 2 SITE DEMOLITION PLAN - SHEET 2 OF 2 SITE PLAN - SHEET 1 OF 2 SITE PLAN - SHEET 2 OF 2 SITE GRADING, DRAINAGE, AND UTILITY PLAN - SH SITE GRADING, DRAINAGE, AND UTILITY PLAN - SH
LANDSCAPE AR	<u>CHITECTURE</u>	
SHEET NO. 14 15 16 17 18 19 20 21 22 23 24	DWG NO. LA-100 LA-101 LA-102 LA-103 LA-104 LA-105 LA-106 LA-107 LA-108 LA-501 LA-502	TITLE MATERIALS PLAN LAYOUT AND ELEVATION SHEET 1 OF 4 LAYOUT AND ELEVATION SHEET 2 OF 4 LAYOUT AND ELEVATION SHEET 3 OF 4 LAYOUT AND ELEVATION SHEET 4 OF 4 PLANTING PLAN SHEET 1 OF 4 PLANTING PLAN SHEET 2 OF 4 PLANTING PLAN SHEET 3 OF 4 PLANTING PLAN SHEET 4 OF 4 CONSTRUCTION DETAILS PLANTING DETAILS
<u>STRUCTURAL</u>		
<u>SHEET NO.</u> 25 26 27	DWG NO. S-001 S-002 S-003	<u>TITLE</u> STRUCTURAL NOTES SHEET 1 OF 3 STRUCTURAL NOTES SHEET 2 OF 3 STRUCTURAL NOTES SHEET 3 OF 3
28 29	S-101 S-102	PERIMETER PLAN SHEET 1 OF 4 PERIMETER PLAN SHEET 2 OF 4

25	S-001	STRUCTURAL NOTES SHEET 1 OF 3
26	S-002	STRUCTURAL NOTES SHEET 2 OF 3
27	S-003	STRUCTURAL NOTES SHEET 3 OF 3
28	S-101	PERIMETER PLAN SHEET 1 OF 4
29	S-102	PERIMETER PLAN SHEET 2 OF 4
30	S-103	PERIMETER PLAN SHEET 3 OF 4
31	S-104	PERIMETER PLAN SHEET 4 OF 4
32	S-501	STEEL PLATE WALL SECTIONS AND DETAILS
33	S-502	RETAINING WALL SECTIONS AND DETAILS
34	S-503	CONCRETE WALL SECTIONS AND DETAILS

HEET 1 OF 2 HEET 2 OF 2

STV 100
STV INCORPORATED
225 PARK AVENUE SOUTH 5TH FLOOR NEW YORK, NY 10003
CONSULTANTS
SITEWORKS LANDSCAPE ARCHITECTURE, LLC 150 WEST 28TH STREET SUITE 605 NEW YORK, NY 10001 www.siteworkscm.com
SEALS
50 % Design Documents
PROJECT IDENTIFICATION
STATE OF OPPORTUNITY. City Authority
BATTERY PARK CITY BALLFIELD AND COMMUNITY
A 09/06/19 50% DEISGN SUBMITTAL AC
ISSUE BLOCK
PROJECT NO.: 3019666 DESIGNED BY: NT
DRAWN BY: NT
APPROVED BY: AC
COPYRIGHT: STV, INC SHEET TITLE
DRAWING LIST



	5	
	LEGEND	STV 100
The 1% annual f chance of being area subject to fl Zones A, AE, AH,	SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD ood (100-year flood), also known as the base flood, is the flood that has a 1% equaled or exceeded in any given year. The Special Flood Hazard Area is the ooding by the 1% annual chance flood. Areas of Special Flood Hazard include AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation	STV INCORPORATED 225 PARK AVENUE SOUTH 5TH FLOOR NEW YORK, NY 10003
of the 1% annual ZONE A	chance flood. No Base Flood Elevations determined. Base Flood Elevations determined	CONSULTANTS
ZONE AL	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.	
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.	LANDSCAPE ARCHITECTURE, LLC
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.	SUITE 605 NEW YORK, NY 10001 www.siteworkscm.com
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.	
	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.	
	Elevations determined.	
The floodway is t of encroachment in flood heights.	he channel of a stream plus any adjacent floodplain areas that must be kept free so that the 1% annual chance flood can be carried without substantial increases	
,	OTHER FLOOD AREAS	
ZONE X	Areas of 0.2% annual chance flood; a reas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.	
	OTHER AREAS Areas determined to be outside the 0.2% annual chance floodplain.	
	Areas in which flood hazards are undetermined, but possible.	
	COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS OTHERWISE PROTECTED AREAS (OPAS)	
CBRS areas and OI	PAs are normally located within or adjacent to Special Flood Hazard Areas.	
	0.2% annual chance floodplain boundary	
	<ul> <li>Floodway boundary</li> <li>Zone D boundary</li> </ul>	
•••••	CBRS and OPA boundary     Boundary dividing Special Flood Hazard Area Zones and	SEALS
	boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.	
513	Limit of Moderate Wave Action     Base Flood Elevation line and value: elevation in feet*	
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*	50 %
* Referenced to the	North American Vertical Datum of 1988	Design
23	- <sup>23</sup> Transect line	Documents
	Road or Railroad Bridge	Documents
87°07'45'', 32°22	Footbridge '30'' Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere	
<sup>24</sup> 76 <sup>000m</sup> N	1000-meter Universal Transverse Mercator grid values, zone 18	
600000 FT	5000-foot grid values: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection Berch mark (see explanation in Notes to Users section of this	PROJECT IDENTIFICATION
• M1.5	FIRM panel) River Mile	NEW YORK STATE OF OPPORTUNITY City Authority
	MAP REPOSITORY	
	Refer to listing of Map Repositories on Map Index	BALLFIELD AND COMMUNITY
	June 28, 1974 FLOOD HAZARD BOUNDARY MAP REVISIONS	CENTER
	June 11, 1976 FLOOD INSURANCE RATE MAP EFFECTIVE	
	FLOOD INSURANCE RATE MAP REVISIONS	
or descriptions o port.	f revisions see Notice to Users page in the Flood Insurance Study	
To determine if	flood insurance is available in this community, contact your Insurance	MARK DATE DESCRIPTION BY
agent or call the	vauonai rioou insurance program at 1-800-638-6620.	
	MAP SCALE 1" = 500'	DESIGNED BY: JA
F	250 0 500 1000	DRAWN BY: JA
150	0 150 300	CHECKED BY: SB APPROVED BY: SB
		COPYRIGHT: STV, INC
		SHEET TITLE
		MAP
		G-002

### GENERAL CIVIL NOTES 1. THIS PLAN IS BASED ON A FIELD SURVEY BY NAIK SURVEYING PERFORMED IN NOVEMBER 2019 AND UPDATED ON APRIL 12, 2019. 2. THE SITE IS LOCATED WITHIN FLOOD ZONE AE BASED ON THE 2013 FEMA FIRM MAP NO. 3604970184G. THE BASE FLOOD ELEVATION IS 11.0' (NAVD88). SEE G-002 FOR FLOOD MAP. 3. THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES WITH SERVICE IN THE AREA PRIOR TO EXCAVATING PIPES OR RELATED STRUCTURES UNDER THE PUBLIC SIDEWALK. 4. TEMPORARY FENCING OR BARRICADES SHALL BE INSTALLED TO ISOLATE WORK AREAS FROM THE PUBLIC AND ADJACENT BUILDING OCCUPANTS DURING THE WORK OF THIS CONTRACT. 5. THE CONTRACTOR SHALL EXAMINE AND VERIFY IN THE FIELD ALL EXISTING AND GIVEN DIMENSIONS WITH THOSE SHOWN ON THE PLANS. IN THE CASE OF DISCREPANCIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER. 6. WHERE CONSTRUCTION IS ADJACENT TO EXISTING LINES (FUEL, WATER, TELEPHONE, GAS, ELECTRIC, COMMUNICATION, STORM SEWER, SANITARY SEWER, AND THERMALS) THE CONTRACTOR SHALL HAND EXCAVATE TEST PITS AND LOCATE, MARK AND PROTECT UTILITY LINES AGAINST DISTURBANCE OR DAMAGE. 7. ALL ITEMS NOTED FOR DEMOLITION SHALL BE COMPLETELY REMOVED AND LEGALLY DISPOSED 8. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED SIDEWALK PERMITS INCLUDING SIDEWALK CLOSURE PERMIT FOR COMPLETING WORK ON MURRAY STREET, WARREN STREET, AND WEST STREET 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE OF TRAFFIC. MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION AND THE D.O.T. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NEW YORK STATE D.O.T. STANDARDS. 10. ALL SHEETING PLACED UNDER THIS CONTRACT SHALL BE REMOVED UPON COMPLETION OF THE CONTRACT WORK, AND THE COST SHALL BE DEEMED INCLUDED IN THE PRICES BID FOR ALL SCHEDULED ITEMS. THE SHEETING SHALL CONFORM TO THE REQUIREMENTS OF TITLE 29 CODE OF FEDERAL REGULATIONS, PART 1926, SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION (OSHA). 11. THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE VEHICULAR AND PEDESTRIAN ACCESS TO ADJACENT PROPERTIES. ACCESSIBILITY TO FIRE HYDRANTS AND PROVISION FOR THE INGRESS AND EGRESS OF EMERGENCY VEHICLES INCLUDING POLICE, FIRE AND AMBULANCE VEHICLES SHALL BE REQUIRED AT ALL TIMES. 12. AREAS DISTURBED BY THE INSTALLATION OF THE NEW WORK SHALL BE RESTORED TO ORIGINAL CONDITION UPON COMPLETION OF WORK. 13. ALL WORK SHALL BE INSTALLED WITHIN THE SPACE PROVIDED AS SHOWN ON THE DRAWINGS. ANY ITEMS WHICH CANNOT BE INSTALLED WITHIN THE SPACE PROVIDED SHALL BE BROUGHT TO THE ATTENTION OF THE BPCA'S REPRESENTATIVE PRIOR TO INSTALLATION OF ANY WORK IN THAT AREA. 14. ALL GRADING AND FILL MUST COMPLY WITH NYC BUILDING CODE APPENDIX G303.7. 15. ALL UTILITIES SHALL BE ADEQUATELY PROTECTED AGAINST FLOOD DAMAGE. UNDERGROUND TANKS SHALL COMPLY WITH NYC BUILDING CODE APPENDIX G307.1 AND STORMWATER INLETS AND PIPING SHALL COMPLY WITH NYC BUILDING CODE APPENDIX G307.2. 16. AN EMERGENCY FLOOD MANUAL WILL BE PROVIDED WITH INSTRUCTIONS FOR BEFORE, DURING, AND AFTER A FLOOD EVENT AT THE SITE IN ACCORDANCE WITH APPENDIX G 6.2.3 AND ASCE 24. FIRE PREVENTION NOTES 1. THERE SHALL BE NO OPEN FLAME OR SPARK PRODUCING DEVICE, EXCEPT AS PERMITTED BY 27-4079 OF THE ADMINISTRATIVE CODE. THE APPLICABLE PROVISIONS OF CHAPTER 27 OF THE ADMINISTRATIVE CODE WILL BE COMPLIED WITHIN ALL RESPECTS. MAINTAIN FIRE FIGHTING EQUIPMENT AS DIRECTED BY THE FIRE COMMISSIONER. THE PROVISIONS OF 27-438 THROUGH 27-442 OF THE ADMINISTRATIVE CODE TO BE COMPLIED WITHIN ALL RESPECTS. INSTALLATION OF TANKS TO BE MADE BY A LICENSED INSTALLER OF PETROLEUM PRODUCT STORAGE TANKS.

2. THE CONTRACTOR SHALL SUPPLY AND INSTALL A 20-POUND ABC RATED FIRE EXTINGUISHER AT THE PROJECT SITE. THE FIRE EXTINGUISHERS SHALL BE MODEL TGP20G AS MANUFACTURED BY GENERAL FIRE EXTINGUISHERS CO. OR AN APPROVED EQUAL.

- SAND.

# DRAINAGE NOTES

# PAVING NOTES (NYCDOT RIGHT-OF-WAY)

- HIGHWAY OPERATIONS.

- THE REQUIRED ELEVATION.

# UTILITY SERVICE NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING ANY UTILITY DISCONNECT ORDERS OR NEW CONNECTION REQUESTS FOR WATER, TELECOMMUNICATIONS, ELECTRIC, SEWER AND GAS LINES FOR AFFECTED FACILITIES WITHIN THE PROJECT WORK AREA.

2. ALL ABANDONED UNDERGROUND UTILITIES. SEWER AND/OR WATER STRUCTURES ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED TO A POINT 2 FEET BEYOND THE LIMIT OF THE NEW WORK. ENDS OF ABANDONED PIPES SHALL BE CAPPED OR PLUGGED WITH CONCRETE TO 6 INCHES MINIMUM THICKNESS. TOPS OF ABANDONED UNDERGROUND STRUCTURES SHALL BE REMOVED TO A POINT 2 FEET BELOW THE LIMIT OF NEW WORK AND THEIR BASE FILLED WITH COMPACTED CLEAN

3. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REGRADING AND/OR REPAVING OVER EXISTING/NEW UTILITIES INCLUDING, BUT NOT LIMITED TO STORM AND SANITARY SEWERS, WATER MAINS, GAS AND ELECTRIC LINES.

1. ALL PROPOSED DRAINAGE WORK SHALL BE DONE IN CONFORMANCE WITH THE LATEST STANDARDS OF THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION UNLESS OTHERWISE NOTED.

ALL EXISTING SEWER MANHOLES WITHIN THE CONTRACT LIMITS SHALL BE ADJUSTED TO MATCH FINAL GRADE ELEVATIONS. ANY MANHOLES THAT HAVE BEEN DAMAGED, WORN OR HAVE NONSTANDARD FRAMES AND COVERS SHALL BE PROVIDED WITH NEW 27-INCH CASTINGS IN ACCORDANCE WITH THE LATEST STANDARDS OF NYCDEP INCLUDING ANY NECESSARY MODIFICATIONS OF THE MANHOLE MASONRY.

3. ANY DAMAGE TO MANHOLES OR SEWERS CAUSED BY THE CONTRACTOR'S WORK SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE AUTHORITY.

ALL STORM DRAINAGE STRUCTURES AND PIPING SHALL BE CLEANED AND FLUSHED UPON COMPLETION OF CONSTRUCTION, STARTING FROM ROOF DRAINS ON TO THE FINAL CONNECTION(S) AT THE MUNICIPAL SEWER

POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM THE BUILDING, AT ALL TIMES.

 ALL MATERIALS, CONSTRUCTION METHODS AND WORKMANSHIP SHALL CONFORM WITH STANDARD DETAILS AND SPECIFICATIONS OF THE NYCDOT BUREAU OF

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE CONSTRUCTION AREA, AND PROVIDING FOR PEDESTRIAN AND VEHICULAR TRAFFIC FLOW AROUND THE CONSTRUCTION SITE IN ACCORDANCE WITH NYCDOT, OFFICE OF CONSTRUCTION MITIGATION AND CONTROL (OCMC).

WHERE A NEW PAVEMENT OR SIDEWALK IS INSTALLED THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL EXISTING HANDHOLES, MANHOLE COVERS, CATCH BASINS, AND VALVE BOXES AS REQUIRED TO MEET THE NEW GRADES. ALL UTILITY STRUCTURES WITHIN THE CONSTRUCTION AREA SHALL REMAIN AND BE MAINTAINED THROUGHOUT CONSTRUCTION.

4. ALL EXISTING AND/OR PROPOSED GUTTER FLOW WITHIN THE PROJECT AREA SHALL BE MAINTAINED SO AS NOT TO CAUSE ANY PONDING CONDITIONS.

5. ALL EXISTING NYCDEP DRAINAGE STRUCTURES ARE TO BE CLEANED AND MADE OPERABLE AROUND THE SITE AT THE COMPLETION OF CONSTRUCTION.

6. ALL PAVEMENT MARKINGS, INCLUDING THERMOPLASTIC LANE DIVIDERS, REMOVED DURING CONSTRUCTION, SHALL BE REPLACED IN-KIND, AND IN ACCORDANCE WITH THE BUREAU OF TRAFFIC OPERATIONS STANDARDS.

THE CONTRACTOR WILL REPLACE ANY MISSING, BROKEN, OR EXISTING CURB. SIDEWALK OR ROADWAY DAMAGED PRIOR TO OR DURING CONSTRUCTION AND REPAIR AS DIRECTED BY THE BOROUGH NYCDOT MAINTENANCE ENGINEER.

8. NEW SIDEWALKS AND CURB INSTALLATIONS ARE TO MATCH EXISTING GRADES AND CONDITIONS AT ABUTTING PROPERTY BOUNDARIES WITH NO TRIP HAZARDS.

9. WHERE EXISTING CONCRETE PAVEMENT OR ASPHALT CONCRETE PAVEMENT ARE REMOVED, THE CONTRACTOR SHALL SAWCUT AND CLEANLY TRIM EDGE OF REMAINING PAVEMENT BEFORE INSTALLING NEW CONSTRUCTION.

10. EXISTING PAVEMENT IN THE AREAS OF NEW PAVEMENT SHALL BE ENTIRELY REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE SUBGRADE SHALL BE PREPARED AS PER THE CONTRACT SPECIFICATIONS AND DETAILS AND BROUGHT TO 11. THE CONTRACTOR SHALL ENSURE THAT PAVEMENT SLOPES FROM ACTIVITIES WILL PROVIDE POSITIVE DRAINAGE TOWARD EXISTING BASINS.

# EROSION AND SEDIMENT CONTROL

- 1. ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES SHALL C STANDARDS SET FORTH IN THE LATEST EDITION OF THE "NEW YOR STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT O
- 2. ALL ESC MEASURES SHALL BE INSTALLED PRIOR TO ANY MAJOR PA REMOVAL OR EARTHWORK, OR IN THEIR PROPER SEQUENCE, AND PERMANENT PROTECTION IS ESTABLISHED.
- ALL STORM DRAIN INLETS SHALL BE PROTECTED WITH FILTER FAB UNTIL PAVING HAS BEEN ESTABLISHED
- 4. ANY DAMAGE INCURRED BY EROSION SHALL BE INSPECTED AND M PERIODICALLY AFTER ALL STORM EVENTS.

# **EXCAVATION NOTES**

- 1. THE FOLLOWING INFORMATION IS TO BE USED AS A GUIDE ONLY. CONFLICT BETWEEN THIS INFORMATION AND OSHA OR OTHER LOC THE MOST RESTRICTIVE REGULATIONS AND REQUIREMENTS SHAL EXCAVATION WORK.
- 2. TRENCHING, SHORING SECTIONS 1962.50 THROUGH 1926.653 AND SECTION 27-1032 THE CONTRACTOR SHALL COMPLY WITH ALL REC OSHA SUBSECTION P. EXCAVATIONS, OF THE NEW YORK CITY BUIL
- 3. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN ADJACENT TO PROPERTY LINES, ROADS, AND SIDEWALKS. PARTIC BUILDINGS ON ABUTTING PROPERTY ARE NEAR THE PROPERTY LI
- THE CONTRACTOR SHALL CUT BACK AND SHEET AS NECESSARY F SAFETY, AND PROTECTION OF UTILITIES, STRUCTURES, STOCKPILI EQUIPMENT. IN THE EVENT THAT SHEETING AND/OR SHORING ARE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECES DESIGN COMPUTATIONS AND DETAILS SIGNED BY AN ENGINEER LI PRACTICE IN NEW YORK STATE, TO THE BPCA'S REPRESENTATIVE
- 5. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO EXISTING UTILITIES AND APPURTENANCES TO REMAIN IN PLACE PF OF EXCAVATION. ANY BURIED UTILITIES ENCOUNTERED WHICH WE IDENTIFIED BEFORE THE START OF EXCAVATION SHALL BE REPORT REPRESENTATIVE.
- 6. ALL EXCAVATED SOIL MUST BE REPLACED WITH APPROVED BACK MATERIALS SHALL NOT BE PLACED WITHOUT WRITTEN APPROVAL REPRESENTATIVE.
- ALL EXCAVATIONS GREATER THAN 5'-0" IN DEPTH MUST BE SHORE PER OSHA, UNLESS IN ROCK, SHALE OR CEMENTED SANDS AND GF

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D OR SLOPED AS RAVELS.	STATE OF Battery Park
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	SHEET 1 OF 2
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	TI	REE PROTECTION NOTES	16.	IF ROOTS ARE TO BE E
D	1.	IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL SITE CONDITIONS, BOTH ABOVE AND BELOW THE SURFACE, PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK	17	EXPOSED AREA SHALL MAINTAINED DURING T PROPERLY BACKFILLE SECTION C, ARTICLE 1
	2.	CONSTRUCTION ACCESS ROUTE IS DIAGRAMMATIC. FINAL ROUTE SHALL BE ESTABLISHED ON SITE AND APPROVED BY THE RESIDENT ENGINEER. THE CONSTRUCTION ROUTE PROPOSED BY THE CONTRACTOR SHALL BE REVIEWED BY THE ENGINEER AT LEAST SEVEN DAYS PRIOR TO SITE WORK. ROUTE SHALL BE CONFIRMED ONSITE AND FINAL APPROVED BY THE ENGINEER.	17.	ANY DAMAGE TO EXIS
	3.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE BY ALL WORKERS AND SUBCONTRACTORS WITH THESE NOTES AND GENERAL CONDITIONS, SPECIAL PROVISIONS, SECTION C, ARTICLE 14 "TREE WORK."	19.	AS DIRECTED BY THE I CONTRACTORS EXPEN
	4.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL EXISTING TREES NOT LISTED FOR REMOVAL THAT ARE LOCATED COMPLETELY OR PARTIALLY WITHIN THE CONTRACT LIMIT LINE.		OPINION OF THE ENGI REMOVED WITHOUT A
С	5.	THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE OF ANY WORK ON OR IMPACTING EXISTING TREES, INCLUDING BUT NOT LIMITED TO TREE PROTECTION, PRUNING, TREE REMOVAL, EXCAVATION WITHIN TREE PROTECTION ZONES, DECOMPACTION, TOPSOIL, AND PLANTING WORK. THE ENGINEER SHALL NOTIFY THE APPROPRIATE BOROUGH FORESTER.		
	6.	THE TREE PROTECTION ZONE (TPZ) ALSO CALLED THE CRITICAL ROOT ZONE (CRZ) SHALL BE DEFINED AS THE AREA WITHIN THE DRIP LINE OF EXISTING TREES, UNLESS OTHERWISE SHOWN ON THE TREE PROTECTION PLAN.		
	7.	THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT THE ROOT SYSTEMS OF EXISTING TREES. MATERIAL, EQUIPMENT, OR VEHICLES SHALL NOT BE STOCKPILED OR PARKED WITHIN THE TPZ OF ANY TREE COMPLETELY OR PARTIALLY WITHIN THE CONTRACT LIMIT LINE TO MINIMIZE SURFACE AND SUBSURFACE ROOT AND SOIL COMPACTION.		
_	8.	IF STOCKPILING OCCURS WITHIN THE TPZ, A STOP WORK ORDER SHALL BE ISSUED IMMEDIATELY, AND WORK SHALL NOT RE-COMMENCE UNTIL ALL STOCKPILED MATERIAL IS REMOVED FROM THE TPZ AND MITIGATION MEASURES ARE PERFORMED TO THE SATISFACTION OF THE RESIDENT ENGINEER.		
	9.	TEMPORARY WOODEN TREE GUARDS WITH WRAP FOR INDIVIDUAL TREES, TEMPORARY WOODEN TREE GUARD FOR GROVES, AND TEMPORARY SNOW FENCE BOUNDARY SHALL BE MAINTAINED FOR THE DURATION OF THE CONTRACT AND ARE NOT TO BE REMOVED UNTIL DIRECTED BY THE ENGINEER.		
В	10.	ALL TREES WITHIN THE CONTRACT LIMIT LINE ARE TO RECEIVE AT LEAST ONE (1) INCH (THE EQUIVALENT OF 750 GALLONS OF WATER PER 1,000 SQUARE FEET OF TREE PROTECTION ZONE) OF WATER PER WEEK BETWEEN THE MONTHS OF MARCH AND OCTOBER. IF RAINWATER IN ANY GIVEN WEEK IS BELOW THIS QUANTITY, THE CONTRACTOR MUST SUPPLEMENT THE AMOUNT RECEIVED BY UTILIZING SOAKER HOSES OR AS DIRECTED BY THE ENGINEER. IF A WATER SOURCE IS UNAVAILABLE AT THE SITE THE CONTRACTOR IS TO PROVIDE IRRIGATION BAGS AND WATER TO APPLY THE REQUISITE WATER AMOUNT.		
	11.	ALL TREE PRUNING AND TREE REMOVAL IS TO BE PERFORMED IN ACCORDANCE WITH ANSI A300 STANDARDS BY AN ARBORIST HOLDING CERTIFICATION FROM THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR EQUIVALENT EDUCATION AND EXPERIENCE. ANSI PRUNING TYPES SPECIFIED ON TREE PROTECTION SCHEDULE AND TREE DIAMETERS AT BREAST HEIGHT ARE TO BE CONFIRMED BY THE ENGINEERING REPRESENTATIVE BEFORE PRUNING WORK IS PERFORMED.		
_	12.	THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN REMOVING CONCRETE OR ASPHALT WITHIN THE DRIPLINE OF EXISTING TREES - LIFTING RATHER THAN DRAGGING PIECES OF PAVING. TOOLS FOR THIS ACTIVITY SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO THE START OF EXCAVATION.		
	13.	ALL EXCAVATION AND PLANT INSTALLATION WITHIN THE TPZ SHALL BE PERFORMED BY HAND OR PNEUMATICALLY, WITH MINIMAL SOIL DISTURBANCE, AND UNDER THE SUPERVISION OF THE ENGINEER. PLANTS SHALL NOT BE PLACED WITHIN THREE (3) FEET OF THE TREE TRUNK UNLESS APPROVED.		
	14.	ROOTS OVER 1" DIAMETER SHALL NOT SHALL BE CUT WITHOUT THE WRITTEN AUTHORIZATION OF THE NYC PARKS DIRECTOR OF LANDSCAPE CONSTRUCTION OR THE ENGINEER.		
A	15.	EXCAVATED AREAS WITHIN THE TPZ SHALL BE BACKFILLED IMMEDIATELY OR ROOTS SHALL BE KEPT CONSTANTLY MOIST WITH BURLAP COVERED WITH WHITE PLASTIC AND CHECKED A MINIMUM OF TWO (2) TIMES A DAY, ONCE IN THE MORNING AND ONCE IN THE AFTERNOON, FOR A MAXIMUM OF FORTY-EIGHT (48) HOURS, UNTIL BACKFILL IS COMPLETE. IF DIRECTED, SOAKER HOSES SHALL BE INSTALLED TO FACILITATE PROPERLY MOIST CONDITIONS. NO POOLING OF OR CONTINUOUS RUNNING WATER SHALL OCCUR WITHIN THE TPZ OTHER THAN THAT DURING THE IRRIGATION PROCESS.		
		IRRIGATION PROCESS.		

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E EXPOSED FOR A PERIOD GREATER THAN 48-HOURS, THE LL BE COVERED WITH AT LEAST 6-INCHES MULCH AND THE COURSE OF CONSTRUCTION UNTIL THE AREA CAN BE LED (AS PER GENERAL CONDITIONS, SPECIAL PROVISIONS, 14 "TREE WORK").

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ECTION DEFICIENCY, AS DETERMINED BY THE ENGINEER IS BE REMEDIED WITHIN 24-HOURS OF NOTIFICATION BY THE FO CORRECT THE DEFICIENCY WITHIN THIS TIMEFRAME WILL ORK ORDER.

STING TREES DURING CONSTRUCTION SHALL BE THE PONSIBILITY. THE CONTRACTOR SHALL MITIGATE SUCH DAMAGE ENGINEER, TO THE SATISFACTION OF THE ENGINEER AT THE NSE.

HALL BE ASSESSED RESTITUTION FOR TREES THAT IN THE INEER ARE INJURED, IRREPARABLY DAMAGED, DESTROYED, OR AUTHORIZATION.

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CIVIL GENERAL NOTES 2 OF 2

LEGEND				LEGEND				ABBREVIATIONS
EXISTING	EXISTING TO BE REMOVED	NEW	DESCRIPTION	EXISTING	EXISTING TO BE REMOVED	NEW	DESCRIPTION	ASPH - ASPHALT
								BC - BOTTOM OF CURB
			BUILDING				FIRE LINE	BFE - BASE FLOOD ELEVATION
			PROPERTY LINE	——————————————————————————————————————			ELECTRIC LINE	BUR - BURIED
			BITUMINOUS PAVING	E			ELECTRIC MANHOLE	BW - BOTTOM OF WALL
			CONCRETE PAVEMENT	□ <sup>E</sup> BXE			ELECTRIC BOX	BXE - ELECTRIC BOX
, ,								CB - CATCH BASIN
			GRASS/LANDSCAPED AREA					CC - CONCRETE CURB
			PAVERS	000			UNKNOWN VALVE	COMM - COMMUNICATION
			SAW CUT PAVEMENT	$\bigcirc$			TREE	CONC - CONCRETE
			CONCRETE CURB	-O- BOL			BOLLARD	
			CONCRETE WALL	VER			VERIZON LINE	CSW - CONCRETE SIDEWALK SSW - STONE SIDEWALK
			CONTOUR ELEVATION (MAJOR)	C			COMMUNICATIONS LINE	ECS - EMPIRE CITY SUBWAY (VERIZON)
1				F				ESVP - EXTRA STRENGTH VITRIFIED PIPE
11 96				$\bigcirc$				DC - DEPRESSED CURB
× 11.00		<u>+11.50</u> OR <u>\11.50</u>	SPOTELEVATION				FLOW ARROW	DE - DEAD END
×BC8.50 TC9.00			BOTTOM/TOP OF WALL/CURB ELEVATION				TREE PROTECTION	D.I DUCTILE IRON
							INLET PROTECTION	DIP - DUCTILE IRON PIPE
		U	24 WELDED WIRE MESH FENCE					DN - DOWN
0 0			GUIDE RAIL					D.P DUCTILE PRECAST
0 0			HAND RAIL					EL - ELEVATION
—⊶ SN			SIGN					ELEC - ELECTRIC
LT			LIGHT POLE					EOP - END OF PAVEMENT
6 MLP			METAL LIGHT POLE					GR - GRATE
~U~			METAL MULTI-LIGHT TOWER					HDPE - HIGH DENSITY POLYETHYLENE PIPE
MPFD								HYD - HYDRANT
[] ···· ==			METAL PEDESTRIAN SIGNAL					
-⊙- MIL			METAL TRAFFIC LIGHT					
$\downarrow$			GUY WIRE					
-6- WLP			WOODEN LIGHT POLE					
			WOODEN POLE WITH 2 LIGHTS					
			AREA DRAIN					
D		s	STORM PIPE					
			STORM MANHOLE					
S			SANITARY SEWER					
S			SANITARY MANHOLE					
oG			GAS VALVE					
G			GAS LINE					
			WATER MANHOLE					
$\circ$ VVV			WATER VALVE					
W			WATER FOUNTAIN					

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<ul> <li>LIGHT POLE</li> <li># - MANHOLE NUMBER</li> <li>GR - METAL GUIDE RAIL</li> <li>H - MANHOLE</li> <li>C - METAL COVER</li> <li>HE - ELECTRIC MANHOLE</li> <li>HS - SEWER MANHOLE</li> <li>HU - UNKNOWN MANHOLE</li> <li>LP - METAL LIGHT POLE</li> <li>PED - METAL PEDESTRIAN SIGNAL</li> <li>TL - METAL UTILITY POLE</li> <li>E - POLYETHYLENE</li> <li> PLASTIC</li> <li>- RECORD</li> <li>CP - REINFORCED CONCRETE PIPE</li> <li>ET - RETIRED</li> <li>SS - RIGID GALVANIZED STEEL</li> <li>C - STEEL FACE CURB</li> <li>N - SIGN</li> </ul>	<image/> <image/> <image/> <image/> <image/> <image/> <image/> <image/> <section-header><section-header><text></text></section-header></section-header>
- RELORD CP - REINFORCED CONCRETE PIPE T - RETIRED SS - RIGID GALVANIZED STEEL C - STEEL FACE CURB N - SIGN - STEEL PIPE P - STANDPIPE C - TOP OF CURB V - TOP OF WALL (P - TYPICAL / - UNKNOWN VALVE ER - VERIZON P - VENT PIPE S- # - VAULT NUMBER V - WATER VALVE LP - WOODEN LIGHT POLE	SEALS 50 % Design Documents PROJECT IDENTIFICATION PROJECT IDENTIFICATION Marki Date Description By ISSUE BLOCK PROJECT NO: 3019666 DESIGNED BY: 3A DRAWN BY: JA CHECKED BY: SB APPROVED BY: SB COPYRIGHT: STV, INC SHEET TITLE CIVIL LEGEND AND ABBREVIATIONS
5	C-003



## GENERAL SHEET NOTES:

- 1. PROJECT UNITS ARE US SURVEY FEET.
- 2. THE COORDINATE SYSTEM USED FOR THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE. NAD 83 WAS ESTABLISHED FROM NAIK GPS OBSERVATION.
- 3. ELEVATIONS SHOWN HEREON ARE IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- 4. TOPOGRAPHIC SURVEY PERFORMED BY NAIK USING A LEICA C10 LASER SCANNER, GS12 RTK ROVER, AND LEICA TS15i TOTAL STATION.
- 5. CONDITIONS AND INFORMATION SHOWN HEREIN ARE FROM A SURVEY DATED NOVEMBER, 2018.
- 6. EXISTING IRRIGATION SYSTEM HEADS INCLUDING SPRINKLERS, GATE VALVES, AIR RELIEF VALVES, FLUSHING VALVES, EXHAUST HEADER AND DRIP ZONE SUPPLY ETC, ARE NOT SHOWN IN THESE DRAWINGS. THEY ARE LOCATED THROUGHOUT THE SITE.
- 7. EXISTING BIOSWALE DRIP LINES AND LATERAL LINES ARE NOT SHOWN.
- 8. EXISTING UNDERGROUND UTILITIES COVERED BY TURF OR BURIED HAVE NOT BE SURVEYED OR FIELD VERIFIED. EXISTING UTILITY INFORMATION SHOWN ON THESE DRAWINGS HAS BEEN EXTRACTED FROM RECORD DRAWINGS.

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# **GENERAL SHEET NOTES**

1. REFER TO C-001 TO C-003 FOR CIVIL GENERAL NOTES, LEGEND, AND ABBREVIATIONS.

## $\bigcirc$ SHEET KEYNOTES

- D1. REMOVE EXISTING CONCRETE PAVING OR SIDEWALK AND SUBBASE. IF SIDEWALK REMOVAL CUTS INTO ADJACENT SLAB EXTEND SIDEWALK REMOVAL AND REPLACEMENT TO NEXT JOINT.
- D2. SAWCUT EXISTING CONCRETE PAVING OR SIDEWALK.
- D3. REMOVE EXISTING CONCRETE CURB IN ITS ENTIRETY. D4. REMOVE AND SALVAGE EXISTING
- CONCRETE BARRIER.
- D5. REMOVE EXISTING PAVERS AND SUBBASE. D6. PROTECT EXISTING TREES. SEE NOTES ON C-002.
- D7. PROTECT EXISTING CATCH BASINS DURING CONSTRUCTION.
- D8. EXISTING FENCE TO REMAIN IN PLACE.
- D9. REMOVE AND SALVAGE 8' HIGH WELDED WIRE MESH FENCE AND GATE, FOR REUSE. D10. CLEAR AND GRUB AS REQUIRED FOR INSTALLATION OF NEW FLOOD WALL.

**KEY PLAN** 

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CONSULTANTS

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# Design Documents

PROJECT IDENTIFICATION



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GENERAL SHEET NOTES         1. REFER TO C-001 TO C-003 FOR CIVIL GENERAL NOTES, LEGEND, AND ABBREVIATIONS.         2. REFER TO LANDSCAPING DRAWINGS FOR DECORATIVE METAL PANEL DETAILS.         3. REFER TO STRUCTURAL DRAWINGS FOR INTERIM FLOOD WALL PLANS, ELEVATIONS, AND DETAILS. <b>SHEET KEYNOTES</b> 1. FURNISH AND INSTALL NYCDOT STANDARD CONCRETE SIDEWALK.         2. FURNISH AND INSTALL PAVERS AND BASE COURSE TO MATCH ADJACENT PAVERS IN NYS DOT RIGHT OF WAY.         3. MATCH EXISTING CONCRETE PAVING AT THE NEAREST JOINT.         4. DECORATIVE METAL PANEL ATTACHED TO EXISTING WELDED WIRE MESH FENCE. REFER TO LANDSCAPING DRAWINGS FOR DETAILS.         5. REINSTALL SALVAGED CONCRETE BARRIERS.         6. 24" WIDE CONCRETE GRADE BEAM. SEE STRUCTURAL DRAWINGS FOR DETAILS.         7. REINSTALL SALVAGED WELDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.         8. FURNISH AND INSTALL FLOOD GATE. REINSTALL SALVAGED WILDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.         8. FURNISH AND INSTALL FLOOD GATE. REINSTALL SALVAGED WELDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.         8. FURNISH AND INSTALL FLOOD GATE. REINSTALL SALVAGED WELDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.         8. FURNISH AND INSTALL FLOOD GATE. REINSTALL SALVAGED WELDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.	<image/> <image/> <text><text><text><text><text></text></text></text></text></text>
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<ol> <li>BRAWINGS FOR DETAILS.</li> <li>FURNISH AND INSTALL FLOOD GATE. REINSTALL SALVAGED SECURITY GATES AT THE ORIGINAL LOCATION AFTER INSTALLATION OF FLOOD GATE.</li> <li>CONCRETE WALL EXTENSION TO DFE OVER EXISTING GRANITE RETAINING WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS.</li> </ol>	SEALS
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<ol> <li>REFER TO C-001 TO C-003 FOR CIVIL GENERAL NOTES, LEGEND, AND ABBREVIATIONS.</li> <li>REFER TO LANDSCAPING DRAWINGS FOR DECORATIVE METAL PANEL DETAILS.</li> <li>REFER TO STRUCTURAL DRAWINGS FOR INTERIM FLOOD WALL PLANS, ELEVATIONS, AND DETAILS.</li> </ol>	SITEWORKS LANDSCAPE ARCHITECTURE, LLC 150 WEST 28TH STREET 6TH FLOOR NEW YORK, NY 10001 www.siteworkscm.com
1. FURNISH AND INSTALL NYCDOT STANDARD CONCRETE	
SIDEWALK. 2. FURNISH AND INSTALL PAVERS AND BASE COURSE TO MATCH ADJACENT PAVERS IN NYS DOT RIGHT OF WAY. 3. MATCH EXISTING CONCRETE PAVING AT THE NEAREST	
<ol> <li>DECORATIVE METAL PANEL ATTACHED TO EXISTING</li> <li>WELDED WIRE MESH FENCE. REFER TO LANDSCAPING DRAWINGS FOR DETAILS.</li> <li>REINSTALL SALVAGED CONCRETE BARRIERS.</li> </ol>	
<ol> <li>24" WIDE CONCRETE GRADE BEAM. SEE STRUCTURAL DRAWINGS FOR DETAILS.</li> <li>REINSTALL SALVAGED WELDED WIRE MESH FENCE TO NEW 10" CONCRETE FLOOD WALL. SEE STRUCTURAL</li> </ol>	
DRAWINGS FOR DETAILS. 8. FURNISH AND INSTALL FLOOD GATE. REINSTALL	
9. CONCRETE WALL EXTENSION TO DE OVER EXISTING GRANITE RETAINING WALL. SEE STRUCTURAL DRAWINGS FOR DETAILS	
	SEALS
	50 %
	Design
	Design
	Documents
	PROJECT IDENTIFICATION
	STATE OF OPPORTUNITY. Battery Park City Authority
	BATTERY PARK CITY BALLFIELD AND COMMUNITY CENTER
	A 09/06/19 50% DESIGN SUBMITTAL SB MARK DATE DESCRIPTION BY
	ISSUE BLOCK PROJECT NO.: 3019666
	DESIGNED BY: JA
$\sim$ ,	CHECKED BY: JA CHECKED BY: SB
	APPROVED BY: SB
	SHEET TITLE
	SITE PLAN SHEET 2 OF 2
KEY PLAN NOT TO SCALE	C-112
5	<u> </u>





## GENERAL SHEET NOTES

1. REFER TO C-001 TO C-003 FOR CIVIL GENERAL NOTES, LEGEND, AND ABBREVIATIONS. 2. REFER TO GENERAL NOTES FOR HORIZONTAL COORDINATES AND ELEVATION DATUM. 3. REFER TO LANDSCAPING DRAWINGS FOR DECORATIVE METAL PANEL DETAILS. 4. REFER TO STRUCTURAL DRAWINGS FOR INTERIM FLOOD WALL PLANS, ELEVATIONS, AND DETAILS.

# $\bigcirc$ SHEET KEYNOTES

1. MATCH EXISTING GRADE. 2. RESET EXISTING STRUCTURE TO FINISH GRADE

ELEVATION. 3. INSTALL INLINE CHECK VALVE ON OUTGOING PIPE. SIZE AND INVERT OF PIPE SHALL BE VERIFIED IN FIELD.

4. NYS DOT STANDARD PRECAST CATCH BASIN. 5. STORM PIPE.

6. CONNECTION TO EXISTING CATCH BASIN. SIZE, LOCATION, AND INVERT OF OUTGOING PIPE TO NYS SEWER SHALL BE VERIFIED BY THE CONTRACTOR.

SEALS					
50 % Design Documents					
PROJECT IDENTIFICATION					
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DRAINAGE, AND UTILITY PLAN SHEET 1 OF 2					
C-121					







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NEW YORK STATE OF OPPORTUNITY. City Authority	
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MATERIALS PLAN	
LA-100	












Qty.	Abbrev.	Botanical Name	Common Name	Size
TREES	6			
1		TBD		
2				
3				
4				
5				
6				
7				
8				
9				
10				

Qty.	Abbrev.	Botanical Name	Common Name	Size
VINES				
1		TBD		
2				
3				













1 PLANTING PLAN LA-108 SCALE: 1" = 10'-0"

# <u>NOTES</u>

1. PLANTING DESIGN TO BE ALLOWANCE

Τ







MANUFACTURED BY: COMPANY NAME, WEBSITE, PHONE NUMBER. TO BE DETERMINED

2. PANEL ANODIZATION TO BE A41 PER AAMA 611-98.



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SEALS			
50 % Design Documents			
PROJECT IDENTIFICATION			
BATTERY PARK CITY BALLFIELD AND COMMUNITY CENTER			
A09/06/1950% DESIGN SUBMITTALAWMARKDATEDESCRIPTIONBYISSUE BLOCKPROJECT NO.:3019666DESIGNED BY:KMDRAWN BY:KMCHECKED BY:AWAPPROVED BY:STV, INCSHEET TITLE			
CONSTRUCTION DETAILS			
LA-501			



SET ELEVATION OF ROOT FLARE -SO THAT IT IS 1"-2" ABOVE EXISTING GRADE AFTER SETTLEMENT.



TREE PLANTING LA-502 SCALE: 1/2" = 1'-0"





	<u>GENERAL NOTES:</u>	FOUNDATIONS
D	1. THE FLOODWALL STRUCTURES ARE DESIGNED IN ACCORDANCE WITH THE 2014 BUILDING CODE OF THE CITY OF NEW YORK (NYCBC 2014).	1. THE FOU EXCAVATI
	2. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE LANDSCAPE ARCHITECTURAL AND CIVIL DRAWINGS.	
	3. THE METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.	AS DIRE PROFESSI
	4. THE PRESENCE OF THE ENGINEER OR OWNER REPRESENTATIVES AT THE JOBSITE SHALL NOT CHANGE ANY RESPONSIBILITY FOR THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION AND FOR ALL SAFETY PRECAUTIONS ON THE JOB SITE.	3. FOUNDATI OF 2 TONS A LATERA
	5. THE DESIGN AND ENGINEERING FOR THE REINFORCING OF THE BUILDING STRUCTURES TO SUPPORT CONSTRUCTION EQUIPMENT AND THE DESIGN AND ENGINEERING OF THE FORMWORK, SHORES AND RE-SHORES, AS WELL AS ITS CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL SUCH ENGINEERING SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.	4. THE SOIL ARE ENCO CONTRAC FOUNDATI
С	6. ANY SUBSTITUTIONS OR ALTERNATES PROPOSED BY THE CONTRACTOR MAY BE USED IF SUCH SUBSTITUTIONS OR ALTERNATES ARE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND COVER ANY ADDITIONAL EXPENSES FOR THE DESIGN OF SUCH ALTERNATES AND SUBSTITUTIONS.	5. IF ADEQU/ FOOTING S UNSUITAB GRAVEL F SUBJECT CONCRET
	7. THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE EXISTING STRUCTURE AT ALL STAGES OF CONSTRUCTION.	6. CONTRAC
	8. DETAILS HAVE BEEN PREPARED BASED UPON RECORD DRAWINGS AND VISUAL OBSERVATIONS. DEVIATIONS FROM THESE DRAWINGS MIGHT OCCUR. NOTIFY ENGINEER PRIOR TO PERFORMING WORK IN ALL SUCH CASES.	OR VERTIO 8. DEWATER OF THE CO
	<ol> <li>IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY IN THE FIELD ALL DIMENSIONS, ELEVATIONS AND CONDITIONS TO PROVIDE AN ACCURATE INSTALLATION OF ALL INVOLVED TRADES.</li> </ol>	9. BACKFILL THE MAXII
	10. DEFICIENT WORK SHALL BE REPLACED OR REPAIRED BY CONTRACTOR, AS	CONCRETE:
	11. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL	1. ALL CONCR "BUILDING ( "SPECIFICA"
	DESIGN CRITERIA:	2. CONCRETE REQUIREME
В	<ol> <li>REFERENCE CODES: 1968 NEW YORK CITY BUILDING CODE (NYCBC 1968) 2014 NEW YORK CITY BUILDING CODE (NYCBC 2014) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7)</li> </ol>	3. UNLESS OT MINIMUM 28 WATER/CEM
	2. WIND LOADING ON STRUCTURE (ASCE 7-05): BASIC WIND SPEED 105 MPH	4. ALL CONCR C231.
	EXPOSURE CLASSIFICATIOND RISK CATEGORYCATEGORY II	5. ALL REINFC SPECIFICAT
	<ol> <li>FLOOD AND WAVE LOADS (AS PER ASCE 7-10 CHAPTER 5):</li> <li>100 YEAR BASE FLOOD ELEVATIONEL. +11.0'</li> <li>DESIGN FLOOD ELEVATIONEL. + 12.0'</li> </ol>	REINFORCE ASTM A706. GALVANIZE
	RISK CATEGORYCATEGORY II WATER DENSITY64 PCF	6. ALL EXTERI
	SEE S-003 FOR ADDITIONAL FLOOD LOAD INFORMATION.	7. ALL WELDE SHALL BE L UNLESS OT
		8. ALL STEEL S REQUIRED, BE PROVIDE
		9. LOCATION ( ENGINEER F ENGINEER I
A		

1

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INDATION CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS BEFORE ION HAS BEGUN. CONTRACTOR SHALL SUBMIT FIELD SKETCHES TO RS FOR REVIEW AND APPROVAL WHERE CONDITION DEVIATES FROM CT DOCUMENTS.

3" OF EXCAVATION FOR FOOTINGS SHALL BE FINISHED BY HAND SHOVEL OR ECTED BY TESTING AGENCIES AND INSPECTED AND CERTIFIED BY SIONAL AND /OR GEOTECHNICAL ENGINEERS.

TIONS SHALL BEAR ON SOIL WITH A MINIMUM ALLOWABLE BEARING PRESSURE S PER SQUARE FOOT AND PILES SHALL HAVE AN AXIAL CAPACITY OF 25T AND AL CAPACITY OF 3T. REFER TO YU & ASSOCIATES GEOTECHNICAL REPORTS INFORMATION.

BEARING CAPACITY MUST BE VERIFIED BY THE CONTRACTOR. IF PROBLEMS COUNTERED, A GEOTECHNICAL ENGINEER SHOULD BE RETAINED BY THE CTOR TO EVALUATE THE CONDITION AND RECOMMEND THE APPROPRIATE ION SYSTEM.

JATE SOIL IS NOT FOUND AT THE DEPTH SHOWN ON THESE DRAWINGS, THE SHALL REMAIN AT ITS SPECIFIED BEARING ELEVATION AND THE UNDERLYING BLE MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED FILL OR CONCRETE (f'c = 3,500 PSI). SUBGRADE FOR ALL FOOTINGS SHALL BE TO CONTROLLED INSPECTION IMMEDIATELY PRIOR TO PLACEMENT OF

CTOR NOT TO UNDERMINE EXISTING FOOTINGS OR SLABS.

TEMPORARY SUPPORTS AS REQUIRED, SO THAT NO HORIZONTAL MOVEMENT ICAL SETTLEMENT OCCURS TO EXISTING STRUCTURES AT THE PROJECT SITE.

RING OF THE SITE DURING CONSTRUCTION IS SOLELY THE RESPONSIBILITY ONTRACTOR.

UNDER ANY PORTION OF THE STRUCTURE SHALL BE COMPACTED TO 98% OF MUM DRY DENSITY PER ASTM D-698 IN 6" LIFTS.

RETE WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE ("ACI") CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318-11 AND ATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" ACI 301-05.

MIXES SHALL BE PREPARED IN ACCORDANCE WITH THE NYC BUILDING CODE ENTS AND SUBMITTED FOR REVIEW AT LEAST 14 DAYS PRIOR TO THE T OF CONCRETE.

HERWISE NOTED., ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A B-DAY COMPRESSIVE STRENGTH OF 5,000 PSI AND A MAXIMUM MENT RATIO OF 0.40 BY WEIGHT.

RETE EXPOSED TO EARTH OR WEATHER SHALL BE AIR ENTRAINED PER ASTM

RCING STEEL SHALL BE GRADE 60 AND SHALL CONFORM TO ASTM TION OF DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE EMENT, ASTM A615. ALL WELDABLE REINFORCEMENT SHALL CONFORM TO ALL EPOXY COATED REINFORCING BARS SHALL CONFORM TO ASTM A775. ALL ED REINFORCING BARS SHALL CONFORM TO ASTM A767.

RIOR CONCRETE SHALL HAVE GALVANIZED REINFORCEMENT.

ED WIRE FABRIC SHALL CONFORM TO ASTM A1064. ALL WELDED WIRE FABRIC LAPPED TWO (2) FULL MESH PANELS AT ENDS AND SIDES AND TIED SECURELY, HERWISE NOTED.

. SHALL BE SECURELY HELD IN PLACE DURING POURING OF CONCRETE. IF , CHAIRS, REBARS, TIES, SPACERS OR ADDITIONAL BARS AND STIRRUPS SHALL DED BY THE GENERAL CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.

OF ALL CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE STRUCTURAL FOR APPROVAL PRIOR TO DETAILING OF REINFORCEMENT. THE STRUCTURAL MAY REQUIRE ADDITIONAL REINFORCING AT SUCH JOINTS.

# CONCRETE CONTINUED:

CONCRETE COVER			
ELEMENT	BOTTOM	ТОР	SIDE
FOUNDATION	3"	2"	2"*
BEAMS	1-1/2"	1-1/2"	1-1/2"
COLUMNS/WALLS	-	-	1-1/2"
SLAB ON GRADE	2"	1"	-
INT. STR. SLAB	1"	1"	1-1/2"
EXT. STR. SLAB	1-1/2"	1-1/2"	1-1/2"

\*COVER IS 2" WHERE CONCRETE IS FORMED AND 3" WHERE POURED AGAINST EARTH

ALL STEEL REINFORCING BAR DEVELOPMENT LENGTHS, UNLESS INDICATED OTHERWISE, SHALL SATISFY THE FOLLOWING:

WALLS				
BAR	VERTICAL BARS		HORIZONTAL BARS	
SIZE	CASE 1	CASE 2	CASE 1	CASE 2
#3	13	20	17	25
#4	17	26	23	34
#5	22	32	28	42
#6	26	39	34	50
#7	38	56	49	73
#8	43	64	56	83
#9	48	72	63	94
#10	54	81	71	106
#11	60	90	78	117

	BEAMS / PIERS / BRACES		
BAR	THICK GREATER	NESS THAN 12"	
SIZE	BOTTOM BARS	OTHER BARS	
#3	13	17	
#4	17	23	
#5	22	28	
#6	26	34	
#7	56	73	
#8	64	83	
#9	72	94	
#10	81	106	
#11	90	117	

TABLE NOTES:

1. TABLE ABOVE LISTS VALUES OF "Ld" IN INCHES.

- 2. ALL LAP SPLICES SHALL BE 1.3 Ld UNLESS NOTED
- OTHERWISE ON THE DRAWINGS. 3. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED
- VALUE BY 1.5.

TABLE ASSUMPTIONS:

- 1. A MINIMUM CLEAR COVER AS LISTED IN THE NOTES.
- 2. A MINIMUM CLEAR SPACING OF 3" BETWEEN ANY BARS.
- 3. fy = 60 KSI
- 4. NORMAL WEIGHT CONCRETE

5. FOR WALLS:

- CASE 1 = CLEAR SPACING  $\geq$  2 db AND CLEAR COVER ≥ db CASE 2 = OTHER THAN CASE 1
- 6. FOR BRACES, USE THE "BOTTOM BARS" Ld IN THE TABLE.

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BATTERY PARK CITY
BALLFIELD AND COMMUNITY CENTER
A09/06/1950% DESIGN SUBMITTALACMARKDATEDESCRIPTIONBY
DESIGNED BY: N. TOLLI
DRAWN BY: N. TOLLI CHECKED BY: A. CERINO P.E.
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1 OF 3
S-001

# STRUCTURAL STEEL:

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- 1. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS-ALLOWABLE STRESS DESIGN AND LOAD RESISTANCE FACTOR DESIGN", AISC 360-05, AS MODIFIED BY CHAPTER 22 OF THE NYC BUILDING CODE 2014.
- 2. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "CODE OF STANDARD PRACTICE" AISC 303-05.
- 3. ALL WIDE FLANGE STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50. ALL PLATES, CHANNELS, ANGLES AND MISCELLANEOUS PIECES SHALL BE ASTM A572 GRADE 50. STRUCTURAL STEEL TUBING SHALL BE ASTM A500, GRADE C.
- 4. STEEL CONNECTIONS SHALL BE PROPORTIONED FOR MINIMUM VALUES AS INDICATED ON THE ALLOWABLE LOAD TABLES ON THE ASD MANUAL EXCEPT AS MODIFIED BY THE SCHEDULES AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS. SHEAR CONNECTIONS SHALL BE DESIGNED TO DEVELOP A MINIMUM END REACTION OF 10.0 KIPS. MOMENT CONNECTIONS SHALL BE DESIGNED TO DEVELOP FULL MOMENT CAPACITY, UNLESS OTHERWISE NOTED.
- 5. THE FRAME SHALL BE CARRIED UP TRUE AND PLUMB AND TEMPORARY BRACING SHALL BE INTRODUCED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED DURING CONSTRUCTION, INCLUDING EQUIPMENT AND OPERATION OF SAME. SUCH BRACING SHALL BE THE RESPONSIBILITY OF THE STEEL CONTRACTOR AND SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR STABILITY, SAFETY AND COMPLETION OF WORK.
- 6. SHOP DRAWINGS, PREPARED IN ACCORDANCE WITH AISC "DETAILING FOR STEEL CONSTRUCTION", SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO PERFORMING WORK. PRIOR TO DETAILING CONNECTIONS FOR STRUCTURAL STEEL, THE FABRICATOR SHALL SUBMIT FOR REVIEW REPRESENTATIVE DETAILS AND CALCULATIONS FOR EACH TYPE OF STRUCTURAL STEEL CONNECTION TO BE UTILIZED.
- 7. OBTAIN ALL FIELD MEASUREMENTS REQUIRED FOR PROPER FABRICATION AND INSTALLATION PRIOR TO THE START OF DETAILING AND FABRICATION. PRECISE MEASUREMENTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. DETAILER SHALL VISIT JOBSITE AS MANY TIMES AS NECESSARY TO MEASURE EXISTING CONDITIONS AS TO OBTAIN REQUIRED DIMENSIONS.
- 8. BOLTS SHALL BE 3/4 INCHES IN DIAMETER MINIMUM, UNLESS OTHERWISE NOTED. BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 OR A490. PROVIDE A MINIMUM OF 2 BOLTS PER CONNECTION.
- 9. ALL WELDING ELECTRODES SHALL BE E70XX. MINIMUM FILLET WELD SIZES SHALL COMPLY WITH THE AISC SPECIFICATION, BUT SHALL NOT BE LESS THAN 1/4 INCH, UNLESS OTHERWISE NOTED. IN THESE DRAWINGS.
- 10. ALL WELDING SHALL BE DONE BY NEW YORK CITY CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY AWS D1.1.
- 11. ALL PIPES AND TUBES SHALL BE COMPLETELY SEALED WITH CAP PLATES.
- 12.LOCATION AND TYPE OF SPLICE SHALL BE SPECIFICALLY DETAILED ON SHOP DRAWINGS. SPLICING OF STRUCTURAL STEEL MEMBER IS PROHIBITED WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD.
- 13. FIELD CUTTING OF STEEL IS NOT PERMITTED.

1

- 14. ALL BEAMS SHALL BE FABRICATED AND INSTALLED WITH NATURAL CAMBER UP.
- 15.PROVIDE FIELD WELDING AT ALL CANTILEVERS. KEEP ENDS OF ALL CANTILEVER BEAMS UP 1/2" UNLESS OTHERWISE NOTED ON DRAWINGS.
- 16.COPED OR CUT ENDS OF MEMBERS SHALL BE REINFORCED AS REQUIRED TO SUSTAIN THE REACTION AS PER ALLOWABLE LOAD TABLES ON THE ASD MANUAL.
- 17. STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE DECK SUPPORT ANGLES AS REQUIRED.

# POST-INSTALLED ANCHORS:

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE ICC-ES REPORT AND MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS:

APPLICATION	ANCHORING SYSTEM	ICC-ES REPORT
ANCHORAGE TO CONCRETE	HILTI HIT-HY 200 ADHESIVE	ESR-3187
	HILTI KWIK BOLT TZ	ESR-1917
	HILTI KWIK HUS EZ	ESR-3027
REBAR DOWELING	HILTI RE 500 V3 ADHESIVE	ESR-3814
	HILTI HIT-HY 200 ADHESIVE	ESR-3187
ANCHORAGE TO SOLID	HILTI HIT-HY 270 ADHESIVE	ESR-4143
GROUTED MASONRY	HILTI KWIK BOLT 3	ESR-1385
ANCHORAGE TO HOLLOW/ MULTI-WYTHE MASONRY	HILTI HIT-HY 270 ADHESIVE WITH SCREEN TUBE	ESR-4143, ESR-4144
		1

- 2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON ACI 318 APPENDIX D AND ON THE TECHNICAL DATA PUBLISHED BY THE MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT INCLUDING AN ICC-ES REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE, SEISMIC USE, LOAD RESISTANCE, INSTALLATION CATEGORY, IN-SERVICE TEMPERATURE, INSTALLATION TEMPERATURE, ETC.
- 3. ADHESIVE ANCHORS INSTALLED IN A HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION INTO CONCRETE AND SUPPORTING A SUSTAINED TENSION LOAD SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER. INSTALLER SHALL BE CERTIFIED THROUGH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUAL.
- 4. CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE ANCHOR INSTALLATION TRAINING FOR ALL OF THEIR ANCHOR PRODUCTS SPECIFIED. CONTRACTOR SHALL SUBMIT DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL INSTALLING ANCHORS HAVE RECEIVED THE REQUIRED TRAINING PRIOR TO THE COMMENCEMENT OF WORK.
- 5. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF BASE MATERIAL. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS OR PER THE MANUFACTURER'S GUIDELINES.
- 6. CONTINUOUS OR PERIODIC SPECIAL INSPECTION FOR POST-INSTALLED ANCHORS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 4.3/4.4 OF THE ICC-ES REPORT FOR THE INDIVIDUAL ANCHOR. SPECIAL INSPECTOR SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK TO COORDINATE INSPECTION EFFORTS.
- 7. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED IN THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS BY GPR, X-RAY OR OTHER NON-DESTRUCTIVE TESTING MEANS. MODIFICATION OF FINAL ANCHOR LOCATIONS AND ATTACHING ELEMENTS MAY BE REQUIRED BASED ON FIELD-VERIFIED CONDITIONS.
- 8. CONTRACTOR SHALL SUBMIT TECHNICAL PRODUCT DATA WITH RECOMMENDED DESIGN VALUES, SAMPLES, QUALITY ASSURANCE TESTING REPORTS, CERTIFICATES AND INSTALLATION PROCEDURES FOR REVIEW BY THE ENGINEER OF RECORD.
- 9 ALL INSTALLERS SHALL BE QUALIFIED AND THE QUALIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD.
- 10. PROVIDE GALVANIC SEPARATION WHEN ANCHORS ARE IN CONTACT WITH DISSIMILAR METALS.

# CONTROLLED INSPECTIONS BY CONTRACTOR

- CONTRACTOR SHALL PAY FOR THE SER INSPECTION AGENCY LICENSED TO PR INSPECTION SERVICES IN ACCORDAN BUILDING CODE FOR STABILITY AND INT AND NEW STRUCTURES PER NYC DEPAR RULES AND REGULATIONS AS PER SECT BUILDING CODE.
- 2. INSPECT ALL EXCAVATION SHORING AN SECTION 1704.20.2 OF NYC BUILDING COD

## ABBREVIATIONS

&,+	AND
ADMIN	ADMINISTRATION
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
B.E.	BASE ELEVATION
BLDG	BUILDING
B.O.	BOTTOM OF
CFRP	CARBON-FIBER REINFORCEI POLYMER
CHEM	CHEMICAL
CHLOR	CHLORINE, CHLORINATION
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
DFE	DESIGN FLOOD ELEVATION
DIA	DIAMETER
DI, DIP	DUCTILE IRON PIPE
DN, DWN	DOWN
EL, ELEV.	ELEVATION
ELEC	ELECTRICAL
ETC.	ET CETERA
E.W.	EACH WAY
EXIST	EXISTING
EXT	EXTERIOR
FL	FLOOD LOG
F.O.	FOOTPRINT OF
FT.	FOOT/FEET
GA	GAUGE
GALV	GALVANIZED
HEX.	HEXAGONAL
HOR., HORIZ.	HORIZONTAL
IN.	INCH(ES)
INT	INTERIOR
INV	INVERT
INV. EL., IE.	INVERT ELEVATION
KSI	KILOPOUND PER SQUARE
	INCH

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ROVIDE CONTR	ROLLED E NYC	5TH FLOOR NEW YORK, NY 10003 www.stvinc.com
TEGRITY OF EX		CONSULTANTS
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ND BRACING A	S PER	SITEWORKS LANDSCAPE ARCHITECTURE, LLC
DE.		SUITE 605 NEW YORK, NY 10001
		www.siteworkscm.com
KW	KNEE WALL	
LF	LINEAR FOOT/FEET	
MAX	MAXIMUM	
MCC	MOTOR CONTROL CENTER	
MECH	MECHANICAL	
MIN	MINIMUM	
MPH	MILES PER HOUR	
NIC	NOT IN CONTRACT	
NO., #	NUMBER	
NTS	NOT TO SCALE	
OC	ON CENTER	
O.C.E.W.	ON CENTER EACH WAY	
PCF	POUNDS PER CUBIC FOOT	SEALS
PSF	POUNDS PER SQUARE FOOT	
PSI	POUNDS PER SQUARE INCH	50 %
PVC	POLYVINYL CHLORIDE	Design
REF	REFERENCE	Documents
REINF	REINFORCING	Documents
SCH.	SCHEDULE	
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T.E.	THRESHOLD ELEVATION	
T.O., T/	TOP OF	
T.O.S.		
T.O.W.	TOP OF SLAB	A 09/06/19 50% DESIGN SUBMITTAL AC
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		STRUCTURAL
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		S-002



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WE	TOP OF WALL ELEVATION
FE	DESIGN FLOOD ELEVATION
Ε	GROUND ELEVATION
h	EQUIVALENT SURCHARGE DEPTH OF WATER $d_h = av^2/2g$ WHERE: $a = 1.25$ v = 8.8 FT/SEC (SEE NOTE 8) g = 32.2 FT/SEC <sup>2</sup>
w	UNIT WEIGHT OF SEA WATER
i	DEBRIS IMPACT LOAD

H<sub>FLA</sub> HEIGHT OF FLOODWATER ABOVE GRADE (DFE-GE)

3

# NOTES:

1. THE DESIGN FLOOD LOAD IS CALCULATED IN ACCORDANCE WITH ASCE 7-10, CHAPTER 5 WITH A DESIGN FLOOD ELEVATION REFERENCING NAVD88 DATUM.

4

2. PER ASCE 7 GUIDELINES, HYDRODYNAMIC PRESSURE IS CONVERTED TO AN EQUIVALENT HYDROSTATIC LOAD FOR ANALYSIS AND DESIGN PURPOSES.

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KEY PLAN NOT TO SCALE	S-101

NOTES: FLOODWALL STRIP FOOTING

BETWEEN F-180 AND F-390 IS CURRENTLY SHOWN OUTSIDE OF THE PROPERTY LINE AND UNDER THE CITY SIDEWALK. ALIGNMENT AT THIS CORNER NEEDS TO BE DISCUSSED/STUDIED FURTHER. THE OPTIONS ARE:

- 1. KEEP THE CONFIGURATION AS SHOWN AND GET APPROVAL/EASEMENT FROM DOT
- TO CONSTRUCT IN THIS AREA. 2. TURN THE HEEL INSIDE THE PROPERTY AND NEEDLE NEW PILES AROUND THE EXISTING EQUIPMENT PADS AND SPAN AN ODD SHAPED PILE CAP WHERE POSSIBLE.
- 3. MOVE THE FLOODWALL ALIGNMENT TO THE INNER FENCE LOCATION AND KEEP THE SPREAD FOOTING WITH A FLOODGATE AT THE INNER ENTRANCE TO THE MECHANICAL EQUIPMENT AREA.







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NOT	ES:

1. THERE IS NO CONNECTION OF THE NEW STEEL PLATE TO THE EXISTING HSS 4x4 INTERMEDIATE VERTICAL STEEL POSTS.

E BEAM SCHEDULE		
TION	DEPTH (IN)	
O F-520	54	
O F-650	48	



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## PRELIMINARY SPECIFICATIONS

# [NO FURTHER TEXT ON THIS PAGE]

# Resiliency Design Ballfield and Community Center Flood Protection Contract No. 18-2624

# **Specifications Table of Content**

# <u>Civil</u>

311000 - OT Site Clearing
312000 - Earth Moving
321313 - Concrete Paving
334200 - Stormwater Conveyance

# Landscape Architecture

- 015639 Temporary Tree and Planting
- 312000 Decorative Metal Panels
- 321313 Soil Preparation
- 334200 Plants

# **Structural**

- 030130 Maintenance of Cast-In-Place Concrete
- 031000 Concrete Forming and Accessories
- 032000 Concrete Reinforcing
- 033000 Cast-In-Place Concrete
- 055000 Metal Fabrications
- 315000 Excavation Support and Protection

### SECTION 311000 - SITE CLEARING

#### 1.1 SUMMARY

- A. Protecting existing vegetation to remain.
- B. Removing existing vegetation.
- C. Clearing and grubbing obstructions, trees, shrubs, and other vegetation, including grinding stumps and removing roots and debris.
- D. Stripping and stockpiling topsoil and disposing of surplus topsoil.
- E. Removing existing above- and below-grade site improvements.
- F. Providing temporary erosion- and sedimentation-control measures.

### SECTION 312000 - EARTH MOVING

#### 1.1 SUMMARY

- A. Rough grading the Site.
- B. Preparing subgrades for walks, pavements, and foundations
- C. Excavating and backfilling for buildings and structures.
- D. Subbase course for concrete walks.
- E. Excavating and backfilling for utilities.
- F. Excavation: Unclassified.

### 1.2 MATERIALS

- A. Soil Materials: Satisfactory and unsatisfactory soil classifications, subbase material, base course, and bedding course.
- B. Warning Tape: Detectable, polyethylene film.

#### 1.3 EXCAVATION

- A. Explosives: Not allowed.
- B. Hand-excavate in tree- and plant-protection zones and utility zones.
- C. Disposal of Surplus and Waste Materials: Off Owner's property.

### 1.4 FIELD QUALITY CONTROL

A. Special Inspector and Testing Agency: Owner engaged.

#### SECTION 321313 - CONCRETE PAVING

#### 1.1 QUALITY ASSURANCE

- A. Mockups to demonstrate surface finish, texture, and color; curing; and standard of workmanship.
- B. Concrete paving within the public right of way shall conform to NYC DOT latest standards and specifications.

#### 1.2 SUSTAINABILITY REQUIREMENTS

A. As Required by NYC DOT.

#### 1.3 PRODUCTS

- A. Concrete, General: ACI 301, NYS DOT.
- B. Reinforcement:
  - 1. Welded-Wire Reinforcement: Plain steel.
- C. Concrete:
  - 1. Portland Cement Replacement: Use fly ash, slag cement, and silica fume to reduce portland cement by 40 percent.
  - 2. Fly ash.
  - 3. Slag cement.
  - 4. Blended cement.
  - 5. Normal-weight aggregate.
  - 6. Air-entraining admixture.
  - 7. Color pigment.
  - 8. Compressive Strength: 3500 psi at 28 days.

#### 1.4 FINISHING AND CURING

- A. Finishes: Medium-to-fine-textured broom.
- B. Cure concrete according to NYC DOT standard specifications.

#### 1.5 FIELD QUALITY CONTROL

A. Testing: By Contractor-engaged agency.

### END OF SECTION 321313

#### CONCRETE PAVING

### SECTION 334200 - STORMWATER CONVEYANCE

- 1.1 PIPING
  - A. Ductile-iron, push-on-joint pressure pipe and push-on-joint standard fittings.
  - B. Expansion Joints and Deflection Fittings: Ductile-iron flexible expansion joints.

#### 1.2 COMPONENTS

- A. Backwater Valves: Cast iron.
- B. Cleanouts: Cast iron.
- C. Drains: Cast-iron area.
- D. Catch Basins: Standard precast concrete.
  - 1. Cast-iron frames and grates.

### SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.
- B. Related Requirements:
  - 1. Section 015000 "Temporary Facilities and Controls" for temporary site fencing.
  - 2. Section 311000 "Site Clearing" for removing existing trees and shrubs.

#### 1.3 DEFINITIONS

- A. Caliper: Diameter of a trunk measured by a diameter tape or the average of the smallest and largest diameters at a height 6 inches above the ground for trees up to and including 4-inch size at this height and as measured at a height of 12 inches above the ground for trees larger than 4-inch size.
- B. Caliper (DBH): Diameter breast height; diameter of a trunk as measured by a diameter tape or the average of the smallest and largest diameters at a height 54 inches above the ground line for trees with caliper of 8 inches or greater as measured at a height of 12 inches above the ground.
- C. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.
- D. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and defined by a circle concentric with each tree with a radius 12 times the tree's caliper size and with a minimum radius of 96 inches unless otherwise indicated .
- E. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

#### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .
  - 1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:

- a. Tree-service firm's personnel, and equipment needed to make progress and avoid delays.
- b. Arborist's responsibilities.
- c. Quality-control program.
- d. Coordination of Work and equipment movement with the locations of protection zones.
- e. Trenching by hand or with air spade within protection zones.
- f. Field quality control.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
  - 1. Include plans, elevations, sections, and locations of protection-zone fencing and signage, showing relation of equipment-movement routes and material storage locations with protection zones.
  - 2. Detail fabrication and assembly of protection-zone fencing and signage.
  - 3. Indicate extent of trenching by hand or with air spade within protection zones.
- C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
  - 1. Species and size of tree.
  - 2. Location on site plan. Include unique identifier for each.
  - 3. Reason for pruning.
  - 4. Description of pruning to be performed.
  - 5. Description of maintenance following pruning.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For arborist and tree service firm.
- B. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- C. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.
- D. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
  - 1. Use sufficiently detailed photographs or video recordings.
  - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

E. Quality-control program.

### 1.7 QUALITY ASSURANCE

- A. Arborist Qualifications: Certified Arborist as certified by ISA .
- B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
- C. Quality-Control Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work without damaging trees and plantings. Include dimensioned diagrams for placement of protection zone fencing and signage, the arborist's and tree-service firm's responsibilities, instructions given to workers on the use and care of protection zones, and enforcement of requirements for protection zones.

#### 1.8 FIELD CONDITIONS

- A. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Moving or parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or other digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

#### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Backfill Soil: Stockpiled soil mixed with planting soilor Planting soil of suitable moisture content and granular texture for placing around tree; free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.
  - 1. Planting Soil: Planting soil as specified in Section 329115 "Soil Preparation (Performance Specification)."

- B. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
  - 1. Type: [Shredded hardwood]or Wood and bark chips .
  - 2. Size Range: 3 inches maximum, 1/2 inch minimum.
  - 3. Color: Natural.
- C. Protection-Zone Fencing: Fencing fixed in position and meeting one of the following requirements:
  - Chain-Link Protection-Zone Fencing: Galvanized-steel fencing fabricated from minimum 2-inch opening, 0.148-inch- diameter wire chain-link fabric; with pipe posts, minimum 2-3/8-inch- OD line posts, and 2-7/8-inch- OD corner and pull posts ; with 1-5/8-inch- OD top rails and 0.177-inch- diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
    - a. Height: 72 inches .
  - 2. Wood Protection-Zone Fencing: Constructed of two 2-by-4-inch horizontal rails, with 4by-4-inch preservative-treated wood posts spaced not more than 96 inches apart, and lower rail set halfway between top rail and ground.
    - a. Height: 48 inches .
    - b. Lumber: Comply with requirements in [Section 061000 "Rough Carpentry."] [Section 061053 "Miscellaneous Rough Carpentry."]
  - 3. Gates: Single- swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones; leaf width 36 inches .
- D. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes prepunched and reinforced; legibly printed with nonfading lettering and as follows:
  - 1. Size and Text: 18 inches by 18 inches .
  - 2. Lettering: 3-inch high minimum, black characters on red background.

### SECTION 323120 - DECORATIVE METAL PANELS

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Decorative aluminum panels.
- B. Related Requirements:
  - 1. Section 051200 "Structural Steel Framing" for Structural Steel Floodwall.

#### 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For decorative panels.
  - 1. Include plans, elevations, sections, gate locations, post spacing, mounting and attachment details.
- C. Samples: For each fence material and for each color specified.
  - 1. Provide Samples 12 inches in length for linear materials.
  - 2. Provide Samples 36 inches square for decorative panel including decorative pattern for verification of pattern, finish and workmanship.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

- 1. Include full-size single panel, including attachment hardware mounted to structural steel wall and complying with requirements.
- 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Wind Loading:
  - 1. Panel Height: 0 to 15 feet.
  - 2. Wind Exposure Category: C.
  - 3. Design Wind Speed: 98 mph.

### 2.2 DECORATIVE ALUMINUM PANELS

- A. Decorative Aluminum Panels: Panels made from aluminum plate.
- B. Decorative Panels: Aluminum plate, type 6061, 1/2 inch thick.
  - 1. Decorative pattern: Laser-cut pattern as shown in Drawings.
- C. Fasteners: Stainless steel, tamperproof, with neoprene washers and sleeves to prevent galvanic action.
- D. Brackets:
  - 1. ASTM A572 Grade 50 steel sheet.
- E. Fabrication: Assemble panels into sections by fastening pickets to rails.
- F. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 completely sanded joint, some undercutting and pinholes okay.
- G. Finish: Baked enamel or powder coating.

#### 2.3 ALUMINUM

- A. Aluminum, General: Provide alloys and tempers with not less than the strength and durability properties of alloy and temper designated in paragraphs below for each aluminum form required.
- B. Plate and Sheet: ASTM B 209, Alloy 6061-T6.

#### 2.4 STEEL AND IRON

A. Plates, Shapes, and Bars: ASTM A 36/A 36M.

#### 2.5 COATING MATERIALS

A. Epoxy Zinc-Rich Primer for Uncoated Steel: Complying with MPI #20 and compatible with coating specified to be applied over it.

#### 2.6 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
  - 1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.
- B. Neoprene-backed washers and sleeves.
  - 1. For separating dissimilar metals to prevent galvanic actions. See Drawings.
    - a. Stainless steel neoprene-backed washers.
    - b. Neoprene sleeves.

#### 2.7 ALUMINUM FINISHES

A. Bright clear anodized.

#### 2.8 STEEL FINISHES

- A. Surface Preparation: Clean surfaces according to SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning." After cleaning, apply a conversion coating compatible with the organic coating to be applied over it.
- B. Shop-Painted Finish: Comply with [Section 099113 "Exterior Painting."] [Section 099600 "High-Performance Coatings."]

#### SECTION 329113 - SOIL PREPARATION

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes planting soils including layered soil assemblies specified by composition of the mixes AND the reinstallation of the existing soils to be salvaged and amended prior to reinstallation.
- B. Related Requirements:
  - 1. Section 311000 "Site Clearing"
  - 2. Section 329300 "Plants"

#### 1.3 UNIT PRICES

A. Work of this Section is affected by unit prices specified in Section 012300 "Alternates & Unit Prices".

#### 1.4 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Compaction: Compaction of the soil fabric is any force applied to the soil that reduces porosity and where 90 percent of all compaction can be accomplished with only three application of force under optimum soil moisture conditions.
- C. Dry Soil: The condition of the soil at or below the wilting point of plant available water in which the soil is subject to blowing.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Frozen Soil: The point at which the soil water has frozen and the soil has become very hard and cloddy. Ice crystals can be seen in the pore spaces of the soil.
- F. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- G. Moist Soil: the condition of the soil in where it can be formed into a ball and maintain its shape. Deformation of the soil is difficult with hand pressure. Free water is not visible and is usually considered the point between the wilting point and filed capacity of the soil.

- H. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- I. Planting Area: Areas to be planted.
- J. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- K. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- L. Saturated: All the pore space within a soil is filled with water and the remaining water is under gravitational forces to drain through the profile.
- M. Scarification: The loosening of the surface of a soil lifts by mechanical or manual means to alleviate compaction of the soil surface. Depth of scarification is dependent on material and extent of compaction.
- N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- O. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- P. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- Q. Wet Soils: Soil that is considered wet will easily be deformed by hand pressure, maintain their shape and free water will be visible within the pore spaces. The water content at this soil condition is considered field capacity or wetter.

#### 1.5 CRITICAL PATH BLENDING

- A. The Contractor shall submit required soil submittal and their associated specified test results six months prior to the scheduled soil and plant installation.
- B. The Soil Blending contractor shall be engaged at least six months prior to schedule soil installation to allow for sufficient time for material searches and initial planting blend approvals.

#### 1.6 PREINSTALLATION MEETINGS

A. Preinstallation Conference: The contractor shall examine previous work, related work and conditions under which this work is to be performed and shall notify the Landscape Architects in writing of all deficiencies and conditions detrimental to the proper completion of this work. Beginning work means the contractor accepts substrates, pervious work and conditions. The
Contractor shall not place any planting soil until all work in adjacent areas is complete and approved by the Landscape Architect.

### 1.7 ACTION SUBMITTALS

- A. Product Data: Submit technical descriptive data for each manufactured or packaged product of this Section. Include manufacturer's product testing and analysis and installation instructions for manufactured or processed items and materials.
- B. Locations: Submit locations of material sources. Submit location of mixing sites.
  - 1. Soil Mix supplier shall have a minimum of five years experience in supplying custom planting soil mixes.
  - 2. Submit supplier name, address, telephone and fax numbers and contract name.
  - 3. Submit certification that accepted supplier is able to provide sufficient quantities of materials and mixes for the entire project.
  - 4. Landscape Architect shall have the right to reject any soil supplier.
- C. Test Reports Soil Analysis: The Contractor shall submit representative samples of all soil materials and organic material components which are intended to be used for planting soil mixes and final mixes, to a Soil and Plant Testing Laboratory acceptable to the Battery Park City Parks Conservancy. All reports shall be sent to the Landscape Architect for approval. Samples of all soil materials to be brought to the site must be approved before delivery. Deficiencies in the soils shall be corrected organically (peatmoss is not acceptable) by the Contractor, as directed by the Landscape Architect after review of the testing agency report. Testing reports shall include the following:
  - 1. Date issued.
  - 2. Project Title and names of Contractor and material supplier.
  - 3. Testing laboratory name, address and telephone number, and name(s), as applicable, of each field and laboratory inspector.
  - 4. Date, place, and time of sampling or test, with record of temperature and weather conditions.
  - 5. Location of material source.
  - 6. Type(s) of test.
  - 7. Results of tests including identification of deviations from acceptable ranges.
  - 8. Particle size analysis to include sand sieve analysis shall be performed and compared to the USDA Soil Classification System per ASTM D422 (hydrometer test) or ASTM F1632 (pipette test). The silt and clay content shall be determined on soil passing the #270 sieve and shall be reported separately.
  - 9. Percent of organic shall be determined by an Ash Burn Test or Walkley/Black Test, ASTM F1647.
  - 10. Saturated hydraulic conductivity per any of the test methods stated in ASTM F1815.

- 11. Chemical analysis shall be undertaken for Nitrate, Ammonium, Nitrite, Phosphorous, Potassium, Calcium, Magnesium, Iron, Manganese, Zinc, Copper, Soluble Salts, Cation Exchange Capacity, and acidity (pH).
- 12. Soil analysis tests shall show recommendations for soil additives, including organic and inorganic soil amendments, necessary to accomplish particular planting objectives noted.
- 13. All tests shall be performed in accordance with the current standards of the Association of Official Agriculture Chemists.
- 14. Certified reports on analysis from producers of composted organic materials are required, particularly when sources are changed. The analysis performed shall include pH, density, salinity, total organic nitrogen, C:N Ratio, Solvita Maturity Index, moisture, sodium, potassium, calcium, magnesium, and phosphorous.
- 15. Soil Components and Soil Mix Sampling requirements: At middle height of wind row/pile, remove sample two feet into the pile. Place sample in clean container. Repeat gathering methods for five to ten times at equidistant spacing on both sides of the pile. Mix gathered samples with clean utensils. Remove approximately 500g of composite samples and place that final sample by overnight courier to the testing laboratory. Submit sample with completed testing laboratory submission form.
- 16. Biological Tests for organisms in compost and mixes:
  - a. Contact the testing laboratory to review testing and sampling requirements before sending samples.
  - b. Sampling requirements: At middle height of wind row, remove sample two feet into the pile. Place sample in clean container. Repeat gathering methods for five to ten times at equidistant spacing on both sides of the compost pile. Mix gathered samples with clean utensils. Remove approximately 500g of composite samples and place that final sample by overnight courier to the testing laboratory. Submit sample with completed testing laboratory submission form.
  - c. Maintain clear and concise records for testing and sampling procedures.
- 17. Testing Agencies: The following firms are acceptable testing agencies for the various components.
  - a. Compost testing:
    - a. Woods End Research Laboratory, PO Box 297, Mt. Vernon, ME 04352, phone 800-451-0337, fax 207-293-2488.
  - b. Physical soil analysis including particle size analysis and hydraulic conductivity
    - a. Hummel & Company Inc., 35 King Street Trumansburg, NY 14886 Phone 607-387-5694
  - c. Soil chemical analysis:
    - a. University of Massachusetts West Experiment Station, Amherst, MA 01003, phone 413-545-2311, fax 413-545-1931.
  - d. Compost/Biological Testing:
    - a. Soil Foodweb New York, 17 Clinton Street, Center Moriches, NY 11934, tel. 631-750-1553, fax 631-750-1554.
- D. All approved samples to be submitted to Landscape Architect:
  - 1. Leaf mold, each source, 5 lb. packaged.
  - 2. Sand, each source, 5 lb. packaged.
  - 3. Loam, each source, 5 lb. packaged.

- 4. Base component material, each source, 5 lb. packaged.
- 5. Yard Waste Compost, each source, 5 lb. packaged.
- 6. Each mix type specified 5 lb. packaged.
- E. Statement(s) of Qualifications: Submit within 45 days of notice to proceed to confirm qualifications as specified herein.
- F. Equipment Data: Submit descriptive information with wheel load data for each proposed item of equipment to be used for execution of earthwork of this Contract. Equipment Data will be evaluated for conformance to site restriction of use.
- G. Schedule and Protection Plan: Submit a detailed plan for scheduling and sequencing of all contract work and for protection of soil mixes and other completed work including coordination with contractors requiring access through the site. Indicate with schedules and plans the utilization of finished work protection measures (wooden protection boards or other approved methods) over the work area of construction operations concurrent with all construction operations until substantial completion.
- H. Schedule for performing percolation tests.

#### 1.8 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.

#### 1.9 TESTING REQUIREMENTS

A. General: Perform all tests on components and soil blends according to requirements in this article.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.
- B. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  - 3. Do not blend soil mixes, move or handle materials when they are wet or frozen.
  - 4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

## PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Jute Netting: Erosion Control fabric blanket, made from 100% natural jute fibers. Blanket weave has spaces of approximately 1/4" x 1/4".
  - 1. "U" shaped steel staples for anchors. 6"
- B. General- Salvaged Planting Soils
  - 1. Existing Planting Soils shall be removed, labeled and maintained off site during construction. Prior to reinstallation, and as early as weather permits, soils shall be tested for organic content and quantitative biological testing for 5-7% organic content. If these soils do not meet that criterion they shall be amended with the specified organic matter resulting in a 5-7% organic content. In addition, they shall be tested for quantitative biological as specified herein.
- C. General Newly Blended Soils
  - 1. Newly blended soil quantities to be determined by quantities calculated during removal with appropriate "fluff" factor.
  - 2. All soil mix material shall fulfill the requirements for new soil mixes as specified.
  - 3. Samples of individual components of soil mixes and also blended soil mixes shall be submitted by the Contractor for testing and analysis to the approved testing laboratory. Include verification testing of on-site sub soils. Comply with specific materials requirements specified.

a. No base component or soil components for soil mixes shall be used until certified test reports by an approved agricultural chemist have been received and approved by the Landscape Architect.

b. As necessary, make any and all soil mix amendments and resubmit tests reports indicating amendments until approved.

- 4. The Landscape Architect, Construction Manager or BPCA/BPCPC may request additional testing by Contractor for confirmation of mix quality and/or soil mix amendments at any time until completion.
- 5. Base Component Material shall be sand that meets the requirements outlined below mixed by volume with loam material that meets the requirements outlined below. Base component materials shall not be site salvaged and must be off-site borrow material.
- 6. Test sand and loam components individually as components and together to form the Base Component mixed materials, for compliance with material specifications. These test criteria and results, when approved, shall establish the standard to which all sub-sequent Base Component Material tests must conform.
- 7. Organic matter (leaf mold or yard waste compost) shall be tested prior to mixing Base Component Material with organic matter. Have one (1) composite organic mat-

ter sample tested from each 50 c.y. of material intended for use in soil mixes of planting work.

- 8. Testing requirements for components and mixes:
  - a. Organic matter as a component
  - b. Sand as a component
  - c. Loam as a component
  - d. Sand + Loam for Base Component
  - e. Base Component + Organic for various Soil Mixes
- D. Organic Matter: Organic matter for amending planting media shall be a stable, material produced from the aerobic decomposition and curing of leaf/yard wastes. The compost shall meet the following criteria
  - 1. Organic matter content of no less than 40% as determined by ASTM 2974
  - 2. Moisture content of 35 to 70% as determined by ASTM D2974.
  - 3. Carbon to nitrogen ratio of 15:1 to 30:1
  - 4. Soluble salts not exceeding  $4 \text{ dSm}^{-1}$
  - 5. Solvita Maturity Index 6 to 8
  - 6. 95 100% passing a 3/8" screen
  - 7. pH 6 to 7.5
  - 8. Biological Organisms: The compost shall have the following levels of organisms (direct microscopy).
    - $\cdot$  15 to 25 or more  $\mu$ g active bacteria /g dry weight (dw) compost
    - $\cdot$  100  $\mu g$  (fungal compost) to 300 or more  $\mu g$  (bacterial compost) total bacteria /g dw compost
    - $\cdot$  15 to 25 µg or more active fungi /g dw compost
    - $\cdot$  100 to 300 µg total fungal biomass /g dw compost
    - · 10,000 or more flagellates
    - · 10,000 or more amoebae
    - · 50 100 ciliates.
    - $\cdot$  20 30 Total nematodes (No root feeding nematodes)
  - 9. Nutrient cycling capacity will be a minimum of 200 lbs/available nitrogen per acre due to microbial presence and activity.
- E. Sand for Base Component Material shall meet the following requirements:

1.	Texture:

Sand Fraction	Size (mm)	Sieve Size	<u>% Passing</u>
Gravel	> 2.0	#10	95 - 100%
Very coarse sand	1.0 - 2.0	#18	90 - 100%
Coarse sand	0.5 - 1.0	#35	65 – 75%
Medium sand	0.25 - 0.5	#60	15 - 20%
Fine sand	0.1 - 0.25	#140	0 - 4%
Very fine sand	0.05 - 0.1	#270	0 - 2%

- 2. Chemical Analysis:
  - 1) Soil reaction (pH)  $5.0 6.5 \pm 0.5$
  - 2) Soluble salt content (Conductivity)  $< 1.5 \text{ dSm}^{-1}$

- 3. Material shall have a saturated hydraulic conductivity rate of no less than 30 inches per hour, per ASTM 1815.
- F. Loam for Base Component Material shall meet the following requirements:
  - a. Soil Texture per ASTM D422 or ASTM F1632, as determined on material passing a 2 mm screen:

Main Fractions	Size (mm) Percent	
Sand	0.05-2.0	83 - 87
Silt	0.002-0.05	7 - 10
Clay	< 0.002	4 - 8

In addition, maximum size shall be  $\frac{1}{2}$ ", the total gravel (> 2 mm) shall be less than 10% of the total material, and the sand passing the 2 mm screen shall have the following particle size distribution:

Sand Fraction	Size (mm)	Sieve Size	<u>% Passing</u>
Very coarse	1.0 - 2.0	#18	87-90
Coarse	0.5 - 1.0	#35	65-71
Medium	0.25 - 0.5	#60	34-42
Fine	0.10 - 0.25	#140	17-23
Very fine	0.05 - 0.10	#270	14-18

- b. Chemical Analysis:
  - 1) Organic matter content (%) oven dry weight of soil shall be within the range of 4 to 10%.
  - 2) Soil reaction (pH)  $6.0 \pm 0.5$
  - 3) Soluble salt content (Conductivity)  $< 1.5 \text{ dSm}^{-1}$
- 1. Before base sand-loam mix (base component) is used for mixing with organic amendments, handle and pile the mix in the following manner:
- a. Mix the base sand with base loam in a ratio of 3 parts sand to 1 part loam. Adjustments to the ratio may have to be made to meet the specifications for the base component. Homogenize to make a uniform mix, free of subsoil lenses and other irregularities.
- b. Aerate the base component to make a friable planting medium.
- c. Screen out all clay lumps, stones, roots, and other debris.
- 2. Material Requirements, Base Component Mix: The final mix of sand and loam materials shall substantially conform to the following:
- a. Soil Texture per ASTM D422 or ASTM F1632, as determined on material passing a 2 mm screen:

Main Fractions	Size (mm)	Percent
Sand	0.05-2.0	95.0
Silt	0.002-0.05	3.0
Clay	< 0.002	<u>2.0</u>

In addition, maximum size shall be  $\frac{1}{2}$ ", the total gravel (> 2 mm) shall be less than 5% of the total material, and the sand passing the 2 mm screen shall have the following particle size distribution:

Sand Fraction	Size (mm)	Sieve Size	<u>% Passing</u>
Very coarse sand	1.00	#18	92-95
Coarse sand	0.50	#35	67-73
Medium sand	0.25	#60	20-26
Fine sand	0.10	#140	5-9
Very fine sand	0.05	#270	5

- b. Nutrient Analysis:
  - 1. Ammonium (NH4) and Nitrate (NO3): below 100 ppm
  - 2. Phosphorous
  - 3. Potassium
  - 4. Calcium (CA), Magnesium (Mg): ratio of 7 part Ca to 1 part Mg
  - 5. Iron (Fe) 1 to 4 ppm
  - 6. Manganese (Mn) 3 to 20 ppm
  - 7. Zinc (Zn) 0.1 to 70 ppm
  - 8. Copper (Cu) 0.3 to 8 ppm

Chemical Analysis:

- 1. Organic matter content (%) oven dry weight of soil: 1-4%
- 2. Soil reaction (pH): 6 7
- 3. Soluble salt content (Conductivity)  $< 1.5 \text{ dSm}^{-1}$
- c. Saturated hydraulic conductivity of no less than 15 inches per hour per ASTM 1815.

#### 2.2 PLANTING SOILS MIXES

- A. Adequate quantities of mixed planting soil materials shall be provided to attain, after compaction and natural settlement, all design finish grades.
- B. Uniformly mix ingredients using a mechanical soil blender designed for such purpose as specified for each Mix Type (Base Component Material, compost, and other ingredients deemed to be necessary as a result of testing). Wind rowing/tilling on an approved hard surface area may also be used as an alternative. Organic matter shall be maintained moist, not wet during mixing.
  - 1. Mixing of Amendments: Add organic amendment in proportions as specified and as confirmed by testing. Other amendments shall not be added unless approved to extent and quantity by Battery Park City Parks Conservancy and additional tests have been conducted to verify type and quantity of amendment is acceptable.
- C. Testing of Plant Mixes:
  - 1. Perform initial tests to confirm compliance with base material and mix specifications. These test results, when approved, will establish the standard to which all other test results must conform.

- 2. Follow-up Testing: Have one (1) composite sample delivery and upon arrival to the site from each 500 c.y. or as required by the Landscape Architect for use in each type plant mix to include the following:
  - a. Particle size analysis: Use sieve sizes as specified for Base Component Material.
  - b. Organic matter content as per mix specified.
  - c. Nutrient Analysis:
    - 1) Have nutrient levels (pH, ammonium nitrogen, nitrate nitrogen, nitrite nitrogen, phosphorus, potassium, magnesium, calcium, magnesium, zinc, iron, copper, and manganese) tested, and request testing laboratory recommendations for additional fertilizer requirements at all plant areas if nutrient levels are below average. Soluble salts shall also be tested.
    - 2) Contractor shall not use amendments to correct nutrient deficiencies.
  - d. Biological Organisms: The mixes shall have a minimum of the following levels of organisms (direct microscopy). Refer to Article 1.08 C for testing and sampling requirements. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity. Mix shall have microbiological populations as listed below. Acceptance or rejection of mixes based on these test values will be determined by the Landscape Architect.

Plant	Active	Total	Active	Total	Hyphal	Protozoa	Numbers/g		Total
Material	Bacterial	Bacterial	Fungal	Fungal	Diameter				Beneficial
	Biomass	Biomass	Biomass	Biomass	(ug/g)	Flagellate	s	Amoebae	Nematode
	(ug/g)	(ug/g)	(ug/g)	(ug/g)		Ciliates			Numbers
									(#/g)
Deciduous	40-60	400-800	30-45	400-900	3.0	10,000	10,000	50-100	20-30
Trees and									
Shrubs									

- D. Soil Mix Types: Provide the following planting soil mix types at the locations indicated on plan. Percentages of components, unless otherwise noted, will be established upon completion of individual test results for components of the various mixes. The controlling factor will be the percent (%) organic matter as specified for each mix. Note that percent (%) by volume of components will be, in large part, determined by the compost. Specifically the bulk density of the compost will directly impact the organic matter readings that have been specified for each mix.
  - 1. Raised Beds-Upper Root Zone:
    - a. Organic Component shall be mixed with the Base Component (sand-loam) mix at a rate necessary to provide an organic matter content of 4.8-6% by weight, as determined by ASTM F1647. pH shall be 6.5 to 7.0. Cation Exchange Capacity shall be between 10 and 15. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity.

a.

- 2. Raised Beds-Lower Root Zone:
  - a. Organic Component shall be mixed with the Base Component (sand-loam) mix at a rate necessary to provide an organic matter content of 5.0-6% by weight, as determined by ASTM F1647. pH shall be 6.5 to 7.0. Cation Exchange Capacity shall be between 10 and 15. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity.
- 3. Furrow- Root Zone:
  - a. Organic Component shall be mixed with the Base Component (sand-loam) mix at a rate necessary to provide an organic matter content of 6.0-6.5% by weight, as determined by ASTM F1647. pH shall be 6.5 to 7.0. Cation Exchange Capacity shall be between 10 and 15. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity.
- 4. Raised Beds & Furrow-Drainage Zones:

Texture:			
Sand Fraction	Size (mm)	Sieve Size	<u>% Passing</u>
Gravel	> 2.0	#10	93 - 100%
Very coarse sand	1.0 - 2.0	#18	85 - 90%
Coarse sand	0.5 - 1.0	#35	45 - 60%
Medium sand	0.25 - 0.5	#60	12 - 15%
Fine sand	0.1 - 0.25	#140	0 - 6%
Very fine sand	0.05 - 0.1	#270	0 - 5%

- b. Chemical Analysis:
  - 1. Soil reaction (pH)  $6.0 6.5 \pm 0.5$
  - 2. Soluble salt content (Conductivity)  $< 1.5 \text{ dSm}^{-1}$
- c. Material shall have a saturated hydraulic conductivity rate of no less than 30 inches per hour, per ASTM 1815.

### 2.3 SOIL AMENDMENTS

- A. Ground Limestone: Ground Limestone as a soil amendment material will only be used pending results of analysis.
  - 1. Provide a Ground Agricultural Limestone with a minimum of 88% of calcium and magnesium carbonates
  - 2. Ground Limestone material shall have a total 100% passing the 10 mesh sieve, minimum of 90% passing the 20 mesh sieve and a minimum of 60% passing the 100 mesh sieve.

SECTION 329300 - PLANTS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section Includes:
  - 1. Trees
  - 2. Shrubs
  - 3. Goundcovers, Perennial, Herbaceous Plants and Vines
  - 4. Mulch, fertilizer and other soil amendment applications to suit plant type during and after planting.
  - 5. Protecting completed work.
  - 6. Warranty
  - 7. Coordination with other trades
  - 8. Clean up
- B. Related Requirements:
  - 1. Section 311000 Site Clearing for salvaged planting soil to be reused
  - 2. Section 329113 Soil Preparation

## 1.3 UNIT PRICES

- A. Work of this Section is affected by unit prices specified in Section 012300 "Alternates & Unit Prices."
- B. Unit prices apply to authorized work covered by quantity allowances.
- C. Unit prices apply to additions to and deletions from the Work as authorized by Change Orders.

### 1.4 REFERENCES

- A. ANLA: American Nursery and Landscape Association (Formerly: AAN-American Association of Nurserymen)
- B. ANSI: American National Standards Institute
- C. AOAC: Association of Official Agricultural Chemists
- D. ASTM: American Society for Testing Materials.

### 1.5 APPLICABLE STANDARDS

- A. The references listed herein shall be in the standards used for performance of the Work: All standards shall include the latest additions and amendments as of the date of advertisement for bids.
  - 1. American National Standards for Tree Care Operations, ANSI A300. American National Standards Institute, 11 West 42<sup>nd</sup> Street New York, NY 10036.
  - 2. American Standard for Nursery Stock, ANSI Z60.1 American Nursery and Landscape Associating, 1250 Eye Street NW Suite 500 Washington DC 20005
  - 3. Horticultural Standards, American Nursery & Landscape Association.
  - 4. Hortus Third, The Staff of the L.H.Bailey Hortorium. 1976. MacMillan Publishing Co, New York
  - 5. Standardized Plant Names, American Joint Committee on Horticultural Nomenclature, 1942 edition
  - 6. American Society for Testing Material (ASTM)
  - 7. International Society of Arboriculture.

### 1.6 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a wellestablished root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- F. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- G. Planting Area: Areas to be planted.
- H. Planting Soil for Soil Profiles: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- I. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

J. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

## 1.7 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 1.

## 1.8 ACTION SUBMITTALS

- A. Submittals shall conform to Section 013300-Shop Drawings, Product Data and Samples
- B. Product Data: For each type of product.
  - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
  - 2. Plant Photographs: Include color photographs in **digital** format of each required species and size of plant material as it will be furnished to Project. These photos shall be submitted a minimum of 10 workings days prior to the tagging trip they are to be tagged. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 15 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
- C. Samples for Verification: For each of the following:
  - 1. Shrubs: Landscape Architect and BPCPC will accompany landscape contractor for tagging all plant material.
  - 2. Milled Leaf Mulch: 1-quart (1-L) volume in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.

## 1.9 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following. Submit inspection certificates required by authorities having jurisdiction. Supply Certificates of Compliance for all materials required for fabrication and installation, certifying that each material item complies with, or exceed, specified requirements
  - 1. Manufacturer's certified analysis of standard products including but not limited to:
    - a. Soil amendments
    - b. Mulch, maturity certification

- 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.
- D. Sample Warranty: For special warranty.

## 1.10 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

## 1.11 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants. Submit resumes for Landscape Project Manager, Foreman/Site Supervisor showing the following:
  - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
  - 2. Experience: Five years' experience in landscape installation.
  - 3. Installer's Field Supervision: Require Installer to maintain an experienced English speaking, fulltime supervisor on Project site when work is in progress.
  - 4. Pesticide Applicator: State licensed, commercial.
- B. Provide quality, size, genus, species, and variety of plants indicated. Provide only healthy, vigorous stock, grown in a recognized nursery acceptable to the Landscape Architect and BPCPC and free from disease, insects, eggs, larvae and other defects. Provide plants in strict compliance with the recommendations of the following:
  - 1. ANSI Z 60.1 American Standard for Nursery Stock, latest edition.
  - 2. American Association of Nurserymen, Horticultural standards.
  - 3. American Joint Committee on Horticultural Nomenclature, Standardized Plant Names, 1942 edition.
  - 4. International Society of Arboriculture.
  - 5. Selection of plants purchased under allowances is made by Landscape Architect, who tags plants at their place of growth before they are prepared for transplanting.
  - 6. Landscape Architect, Battery Park City Parks Conservancy staff member or Resident Engineer retains right to reject any plant at any time due to transportation damage, disease, loose rootball or lack of correct maintenance practices while plants are being maintained on site.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
  - 1. Shrubs: Measure with branches or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip..

- D. Pruning: Unless otherwise noted, pruning of plants before, during or after installation shall be prohibited except to remove dead or broken branches and limbs. Confer with Landscape Architect before any pruning. Plants pruned without permission from the Landscape Architect are subject to rejection and replacement.
- E. Inspection: The Landscape Architect will inspect plant materials at place of growth before planting for compliance with requirement for genus, species, variety, size and quality. Landscape Architect retains right to inspect plant materials further for size and condition of balls and root systems, insects, injuries, and latent defect and to reject unsatisfactory or defective material at any time during progress of work even if previously inspected and approved. Remove and replace rejected pants immediately from Project site at no change to the Owner.
  - 1. Selection: All plants shall be tagged in the nursery by the Landscape Architect prior to digging of plants. The Landscape Architect shall place seals on selected plant at the nursery. Seals shall remain on plants until acceptance of work.

## 1.12 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  - 3. Accompany each delivery of bulk materials with appropriate certificates.
- C. Do not prune shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- D. Handle planting stock by supporting the rootball or container
- E. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.
- F. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
  - 1. If deciduous shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- G. Deliver plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered

sun, or shade), protect from weather and mechanical damage, and keep roots moist. Plants shall not be stored on asphalt or any other pavement without a minimum of 3" mulch layer over pavement.

- 1. Set balled stock on ground and cover ball with soil, mulch, sawdust, or other acceptable material.
- 2. Do not remove container-grown stock from containers before time of planting.
- 3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

## 1.13 FIELD CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Digging Season: Plants shall be delivered freshly dug. Plants dug the previous season shall not be accepted. When it is anticipated that planting will occur outside of the digging seasons, storage shall conform to the requirements of this Specification.
  - 1. Spring Dig: Plants shall be dug as early as determined by nursery owner and no later than bud break.
- C. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion. Trees and Shrubs

	Spring Season	Fall Season
Perennials and Grasses	April 30 to June 15	Sept. 15 to Nov 1
Deciduous (container)	March 15 to June 15	Sept. 15 to Nov1
Deciduous (Balled and burlapped)	March 15 to June 15	Sept. 15 to Nov1

D. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

## 1.14 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period. Provide written warranty agreeing to remove and replace work that exhibits defect in materials or workmanship for the specified periods. "Defects" is defined to include, but is not limited to death, unsatisfactory growth, disease, insect infestation, abnormal foliage density, abnormal size abnormal color failure to thrive and other unsatisfactory characteristics.
  - 1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
    - b. Structural failures including plantings falling or blowing over.
    - c. Faulty performance of tree stabilization and tree grates

- 2. Warranty Periods: From date of Substantial Completion.
  - a. Trees: 12 months.
  - b. Shrubs: 12 months.
  - c. Ground Covers, Perennials, Ornamental Grasses and Other Plants: 12 months.
- 3. Include the following remedial actions as a minimum:
  - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
  - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
  - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.

# PART 2 - PRODUCTS

## 2.1 PLANT MATERIAL-GENERAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Planting Schedule indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
  - 1. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Hardiness: Provide plant stock certified to have been grown within hardiness Zones 2 through 6 as established by the Arnold Arboretum, Jamaica Plan Massachusetts. Plants without this certification will be rejected.
- D. Root-Ball Depth: Furnish shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- E. Root-Ball Handling: All plants balled and burlapped shall be moved with the root systems as solid units with balls of earth firmly wrapped with untreated biodegradable eight ounce burlap. Firmly held in place by stout cord and drum lacing. The diameter and depth of the rootballs of earth must be sufficient to encompass the fibrous ad root feeding system necessary for the healthy development of the plant. NO plant shall be accepted with the ball of earth surrounding its roots has been badly cracked or broken preparatory to or during the process of planting or after the burlap, stave, ropes or platform required connection with its transplanting have been removed. The plants and balls shall remain intact during all operations. Burlap for containing rootballs shall be untreated, made from biodegradable natural fibers. Inspect root crown for girdling roots. Plants with girdling roots will be rejected.

- 1. Root flare of all plants shall be clearly visible prior to planting. Carefully avoid damage to roots while removing soil overburden from the rootball. Adventitious roots shall be removed with sharp pruners.
  - a. Root flares more than 2" below grade at source shall be cause for rejection. The Landscape Architect may request a larger diameter rootball to compensate for a buried root flare, as the soil overburden shall be removed prior to planting which effectively reduces the size of the root ball. This will be at no additional cost to the Owner.
- F. Container Stock: Container stock shall have a full container of well-developed root system. Plants loose in the container are not acceptable. The surface of the root zone shall be free of circling or kinked roots. When removed from the container, the rootball shall be free from numerous circling roots. Large matted roots at the side or bottom of the container will not be accepted. Container grown plants may be accepted for balled and burlapped material if approved by Landscape Architect.
- G. Labeling: Label each plant of each variety, and size, with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- H. Select stock for uniform height and spread, and number the labels to assure symmetry in planting.
- I. Handling of Plants: Plants delivered by truck and plants requiring overnight storage on site shall be properly wrapped and covered to prevent wind-drying and desiccation of branches, leaves and buds; plant balls shall be firmly bound, unbroken, reasonably moist to indicate watering prior to delivery and during storage, and tree trunks shall be free from fresh scare and damage in handling.

## 2.2 MULCH

A. Milled Leaf Mulch: Provide partially decomposed, minimum six-month-aged, finely shredded leaf mulch that is free of weeds, excessive fine particles and stringy material. Provide leaf mulch approved by Landscape Architect.

## 2.3 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Burlap: Untreated biodegradable eight ounce burlap.
- C. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb of vesiculararbuscular mycorrhizal fungi and 95 million spores per lb of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

END OF SECTION 329300-PLANTS

#### SECTION 030130 - MAINTENANCE OF CAST-IN-PLACE CONCRETE

#### 1.1 SUMMARY

- A. Removal of deteriorated concrete and subsequent replacement and patching.
- B. Concrete repair with job-mixed, packaged, cementitious and patching mortar(s) formulated to match existing, adjacent, exposed concrete.
- C. Concrete repair with cast-in-place concrete formulated to match existing, adjacent, exposed concrete.
- D. Floor joint repair with patching mortar and epoxy joint filler.
- E. Epoxy crack injection of in-place concrete.
- F. Corrosion-inhibiting treatment applied to in-place concrete.
- G. Polymer-overlay epoxy adhesive with surface-applied aggregate applied to in-place concrete.
- H. Polymer Sealer: Low-viscosity epoxyorhigh-molecular-weight methacrylate penetrating sealer and crack filler free of VOCs applied to in-place concrete.

#### 1.2 UNIT PRICES

- A. Unit prices for concrete removal and replacement or patching, epoxy crack injection, and polymer overlays.
- 1.3 QUALITY ASSURANCE
  - A. Mockups for each type of concrete maintenance.

#### 1.4 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor engaged.
- B. Manufacturers' service representatives engaged for consultation, site inspection, and on-site assistance when requested.

## SECTION 031000 - CONCRETE FORMING AND ACCESSORIES

## 1.1 SUSTAINABILITY REQUIREMENTS

## 1.2 QUALITY ASSURANCE

A. Mockups of formed-surface panels to demonstrate typical joints, surface finish, texture, tolerances, floor treatments, and standard of workmanship.

## 1.3 PRODUCTS

- A. Form-facing materials.
- B. Insulating concrete forms.
- C. Waterstops.

### 1.4 INSTALLATION

A. Formed Finishes: Surface Finish 1.0, Surface Finish 2.0, and Surface Finish 3.0.

### 1.5 FIELD QUALITY CONTROL

- A. Testing and Inspections: By Contractor-engaged agency.
- B. Special Inspections: By Owner-engaged special inspector.

# SECTION 032000 - CONCRETE REINFORCING

- 1.1 SUSTAINABILITY REQUIREMENTS
- 1.2 QUALITY ASSURANCE
- 1.3 PRODUCTS
  - A. Steel Reinforcement:
    - 1. Reinforcing Bars: Deformed, Galvanized, Epoxy coated.

## 1.4 INSTALLATION

- A. Comply with CRSI's "Manual of Standard Practice" for placing and supporting reinforcement.
- 1.5 FIELD QUALITY CONTROL
  - A. Testing and Inspections: By Contractor-engaged agency.
  - B. Special Inspections: By Owner-engaged special inspector.

## SECTION 033000 - CAST-IN-PLACE CONCRETE

- 1.1 SUSTAINABILITY REQUIREMENTS
- 1.2 QUALITY ASSURANCE
- 1.3 PRODUCTS
  - A. Concrete General: ACI 301 (ACI 301M) and ACI 117 (ACI 117M).
  - B. Cementitious Materials:
    - 1. Portland Cement: ASTM C150, Type I/II, gray.
    - 2. Fly Ash: ASTM C618, Class C or F.
    - 3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.
    - 4. Silica fume.
    - 5. Aggregate: Normal weight.
    - 6. Water.
  - C. Mixing: Ready mixed.

### 1.4 CONCRETE MIXTURES

- A. Compressive Strength (28 Days):
  - 1. Footings and Grade Beams: 5000 psi (34.5 MPa).
  - 2. Foundation Walls: 5000 psi (34.5 MPa).

### 1.5 INSTALLATION

A. Formed Finishes: Surface Finish 1.0 Surface Finish 2.0 Surface Finish 2.0 with rubbed finish Surface Finish 3.0 Surface Finish 3.0 with rubbed finish.

### 1.6 FIELD QUALITY CONTROL

- A. Testing: By Contractor-engaged agency.
- B. Special Inspections: By Owner-engaged special inspector.

## SECTION 055000 - METAL FABRICATIONS

## 1.1 SUSTAINABILITY REQUIREMENTS

## 1.2 PRODUCTS

- A. Materials: Steel plates, shapes, and bars Steel tubing.
- B. Miscellaneous Framing and Supports: Galvanized or primed using zinc-rich primer where indicated.
- C. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts cast into concrete or built into unit masonry.
- D. Steel weld plates and angles not specified in other Sections, for casting into concrete.

# SECTION 315000 - EXCAVATION SUPPORT AND PROTECTION

#### 1.1 PERFORMANCE REQUIREMENTS

- A. Contractor to design excavation support and protection.
- 1.2 FIELD CONDITIONS
  - A. Geotechnical report is available.
  - B. Contractor to survey adjacent construction before and during installation of excavation support and protection.
- 1.3 MATERIALS
  - A. Structural steel.
  - B. Steel sheet piling.
  - C. Wood Lagging: Nominal rough thickness of 3 inches.
  - D. Cast-in-place concrete.
  - E. Tiebacks.

#### 1.4 REMOVAL

A. Remove excavation support and protection to a minimum depth of 48 inches below overlying construction.

## EXHIBIT C

## CONTRACTOR REQUIREMENTS AND PROCEDURES FOR PARTICIPATION BY NEW YORK STATE-CERTIFIED MBEs/WBEs/SDVOBs AND EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITY GROUP MEMBERS AND WOMEN

#### NEW YORK STATE LAW

Pursuant to New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations BPCA is required to promote opportunities for the maximum feasible participation of New York State-certified MBEs/WBEs (collectively, "MWBE(s)") and the employment of minority group members and women in the performance of BPCA contracts. Pursuant to New York State Executive Law Article 17-B and 9 NYCRR §252, BPCA recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified SDVOBs.

#### **Business Participation Opportunities for MWBEs**

For purposes of this solicitation, BPCA hereby establishes the following MWBE participation goals, based on the current availability of MWBEs:

Overall goal for total MWBE participation:	<u>30%</u>
NYS-Certified Minority-Owned Business ("MBE") Participation:	<u>15%</u>

## NYS-Certified Women-Owned Business ("WBE") Participation: <u>15%</u>

A contractor ("Contractor") on any contract resulting from this procurement ("Contract") must document its good faith efforts to provide meaningful participation by MWBEs as subcontractors and suppliers in the performance of the Contract. To that end, by submitting a response to this RFP, the Proposer agrees that BPCA may withhold payment pursuant to any Contract awarded as a result of this RFP pending receipt of the required MWBE documentation. The directory of MWBEs can be viewed at: <u>www.ny.newnycontracts.com</u>. For guidance on how BPCA will evaluate a Contractor's "good faith efforts," refer to 5 NYCRR § 142.8.

The Proposer understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be 25 percent of the total value of the contract.

In accordance with 5 NYCRR § 142.13, the Proposer further acknowledges that if it is found to have willfully and intentionally failed to comply with the MWBE participation goals set forth in a Contract resulting from this RFP, such finding constitutes a breach of contract and BPCA may withhold payment as liquidated damages.

Such liquidated damages shall be calculated as an amount equaling the difference between: (1) all sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and (2) all sums actually paid to MWBEs for work performed or materials supplied under the Contract.

By submitting a bid or proposal, a Proposer agrees to demonstrate its good faith efforts to achieve the applicable MWBE participation goals by submitting evidence thereof through the New York State Contract System ("NYSCS"), which can be viewed at www.ny.newnycontracts.com, provided, however, that a Proposer may arrange to provide such evidence via a non-electronic method by contacting Justin Mclaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or 212-417-2337. Please note that the NYSCS is a one-stop solution for all of your MBE/WBE and Article 15-A contract requirements. For additional information on the use of the NYSCS to meet the Proposer's MBE/WBE requirements, please see the attached MBE/WBE guidance from the New York State Division

of Minority and Women's Business Development, "Your MWBE Utilization and Reporting Responsibilities Under Article 15-A.".

Additionally, a Proposer will be required to submit the following documents and information as evidence of compliance with the foregoing:

- A. An MWBE Utilization Plan with their bid or proposal. Any modifications or changes to an accepted MWBE Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised MWBE Utilization Plan and submitted to BPCA for review and approval.
- B. BPCA will review the submitted MWBE Utilization Plan and advise the Proposer of BPCA acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, the Proposer will be required to respond to the notice of deficiency within seven (7) business days of receipt by submitting to Michael LaMancusa at BPCA, by email at <u>michael.lamancusa@bpca.ny.gov</u>, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MWBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
  - 1) If a Proposer fails to submit an MWBE Utilization Plan;
  - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
  - 3) If a Proposer fails to submit a request for waiver; or
  - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer will be required to attempt to utilize, in good faith, any MBE or WBE identified within its MWBE Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract Award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer will be required to submit a quarterly M/WBE Contractor Compliance & Payment Report to BPCA, by the 10<sup>th</sup> day following each end of quarter over the term of the Contract documenting the progress made toward achievement of the MWBE goals of the Contract.

### **Business Participation Opportunities for SDVOBs**

**For purposes of this solicitation, BPCA hereby establishes an overall goal of 6%** for SDVOB participation. A Proposer must document good faith efforts to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract and Proposer agrees that BPCA may withhold payment pending receipt of the required SDVOB documentation. The directory of New York State Certified SDVOBs can be viewed at: http://www.ogs.ny.gov/Core/docs/CertifiedNYS\_SDVOB.pdf. For guidance on how BPCA will determine a Contractor's "good faith efforts," refer to 9 NYCRR §252.2(f)(2).

In accordance with 9 NYCRR §252.2(s), the Proposer acknowledges that if it is found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, such finding constitutes a breach of Contract and Contractor shall be liable for damages as specified in the Contract.

Such damages shall be calculated based on the actual cost incurred by BPCA related to BPCA's expenses for personnel, supplies and overhead related to establishing, monitoring and reviewing certified SDVOB programmatic goals.

- A. Additionally, a Proposer agrees to submit a Utilization Plan with their bid or Proposal as evidence of compliance with the foregoing. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.
- B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, Proposer agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to Michael LaMancusa at BPCA, by email at <u>michael.lamancusa@bpca.ny.gov</u>, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of SDVOB participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
  - 1) If a Proposer fails to submit a Utilization Plan;
  - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
  - 3) If a Proposer fails to submit a request for waiver; or
  - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer shall attempt to utilize, in good faith, any SDVOB identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer is required to submit a Contractor's SDVOB Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the SDVOB goals of the Contract.

### **Equal Employment Opportunity Requirements**

By submission of a bid or proposal in response to this solicitation, the Proposer agrees with all of the terms and conditions of the attached MWBE Equal Employment Opportunity Policy Statement. The Proposer is required to ensure that it and any subcontractors awarded a subcontract for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work"), except where the Work is for the beneficial use of the Proposer, undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

The Proposer will be required to submit a Minority and Women-owned Business Enterprise and Equal Employment Opportunity Policy Statement, Form # 4, to BPCA with its bid or proposal.

If awarded a Contract, Proposer shall submit a Workforce Utilization Report and shall require each of its Subcontractors to submit a Workforce Utilization Report, in such format as shall be required by BPCA on a monthly basis during the term of the Contract.

Pursuant to Executive Order #162, contractors and subcontractors will also be required to report the gross wages paid to each of their employees for the work performed by such employees on the contract utilizing the Workforce Utilization Report on a quarterly basis.

Further, pursuant to Article 15 of the Executive Law (the "Human Rights Law"), all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.



## Your MBE/WBE Utilization and Reporting Responsibilities Under Article 15-A

The New York State Contract System ("NYSCS") is your one stop tool compliance with New York State's MBE/WBE Program. It is also the platform New York State uses to monitor state contracts and MBE/WBE participation.

## **GETTING STARTED**

То access the system, please login and password or create a user name at www.ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562. If you are uncertain whether you already have an account set up or still need to register, please send an email to the customer service contact listed on the Contact Us & Support page, or reach out to Justin Mclaughlin-Williams at justin.mclaughlinwilliams@bpca.ny.gov or 212-417-2337. For verification, in the email, include your business name and contact information.

## VENDOR RESPONSIBILITIES

As a vendor conducting business with New York State, you have a responsibility to utilize minority- and/or womenowned businesses in the execution of your contracts, per the MBE/WBE percentage goals stated in your solicitation, incentive proposal or contract documents. NYSCS is the tool that New York State uses to monitor MBE/WBE participation in state contracting. Through the NYSCS you will submit utilization plans, request subcontractors, record payments to subcontractors, and communicate with your project manager throughout the life of your awarded contracts.

There are several reference materials available to assist you in this process, but to access them, you need to first be registered within the NYSCS. Once you log onto the website, click on the Help & Support >> link on the lower left hand corner of the Menu Bar to find recorded trainings and manuals on all features of the NYSCS. You may also click on the **Help & Tools** icon at the top right of your screen to find videos tailored to primes and subcontractors. There are also opportunities available to join live trainings, read up on the "Knowledge Base" through the Forum link, and submit feedback to help improve future enhancements to the system. Technical assistance is always Us available through the Contact & Support link on the NYSCS website (www.ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562).

For more information, contact Justin Mclaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or 212-417-2337.

## MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES

## EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

## **MBE/WBE AND EEO POLICY STATEMENT**

I.

(the "Contractor"), agree to adopt the following policies with respect to the project

being developed at, or services rendered to, the Battery Park City Authority ("BPCA").

This organization will and will cause its MBE/WBE contractors and subcontractors to take good faith actions to achieve the MBE/WBE contract participations goals set by the State for that area in which

the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively soliciting bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to MBE/WBE contractor associations.
- (2) Requesting a list of State-certified MBEs/WBEs from BPCA and soliciting bids from these MBEs/WBEs directly.
- (3) Ensuring that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective MBEs/WBEs.
- (4) Where feasible, dividing the work into smaller portions to enhance participations by MBEs/WBEs and encourage the formation of joint venture and other partnerships among MBE/WBE contractors to enhance their participation.
- (5) Documenting and maintaining records of bid solicitation, including those to MBEs/WBEs and the results thereof. The Contractor will also maintain records of actions that its subcontractors have taken toward meeting MBE/WBE contract participation goals.
- (6) Ensuring that progress payments to MBEs/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives are developed to encourage MBE/WBE participation.

**EEO** 

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing diversity programs to ensure that minority group members are afforded equal employment opportunities without discrimination, and will make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

- (b) This organization will state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.
- (c) At the request of BPCA, this organization will request that each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.
- The Contractor will comply with the provisions of the (d) Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and subcontractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and will also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.
- (e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

#### Battery Park City Authority Request For Proposals

Agreed to this \_\_\_\_\_\_, 20\_\_\_\_\_,

By \_\_\_\_\_

Print: \_\_\_\_\_ Title: \_\_\_\_\_

is designated as the Consultant's Minority Business Enterprise Liaison responsible for administering the Minority and Women-Owned Business Enterprises - Equal Employment Opportunity (MBE/WBE - EEO) program.

### **MBE/WBE Contract Goals**

30% Minority and Women's Business Enterprise Participation

\_\_\_\_% Minority Business Enterprise Participation

\_\_\_\_% Women's Business Enterprise Participation

**EEO Contract Goals** (if applicable)

- \_\_\_\_% Minority Labor Force Participation
- \_\_\_\_% Female Labor Force Participation

(Authorized Representative)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **Diversity Practices Questionnaire**

I, \_\_\_\_\_, as \_\_\_\_\_ (title) of \_\_\_\_\_ company (the "Company"), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your Company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes or No

If Yes, provide the name, title, description of duties, and evidence of initiatives performed by this individual or individuals.

- 2. What percentage of your Company's gross revenues (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as subcontractors, suppliers, joint-ventures, partners or other similar arrangement for the provision of goods or services to your Company's clients or customers?
- 3. What percentage of your Company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your Company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as suppliers/contractors?<sup>1</sup>
- 4. Does your Company provide technical training<sup>2</sup> to MBEs/WBEs? Yes or No

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of MBEs/WBEs participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your Company participating in a government approved M/WBE mentor-protégé program?

If Yes, identify the governmental mentoring program in which your Company participates and provide evidence demonstrating the extent of your Company's commitment to the governmental mentoring program.

6. Does your Company include specific quantitative goals for the utilization of MBEs/WBEs in its nongovernment procurements? Yes or No

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

7. Does your Company have a formal M/WBE supplier diversity program? Yes or No

If Yes, provide documentation of program activities and a copy of policy or program materials.

8. Does your Company plan to enter into partnering or subcontracting agreements with New York State certified MBEs/WBEs if selected as the successful Proposer? Yes or No

If Yes, complete the attached Utilization Plan

<sup>&</sup>lt;sup>1</sup> Do not include onsite project overhead.

 $<sup>^2</sup>$  Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

All information provided in connection with the Diversity Practices Questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official			
Printed Name of Signatory			
Title			
Name of Business			
Address			
City, State, Zip			
STATE OF			
COUNTY OF	) ss:		
On the day of , personally ap me on the basis of satisfactor	, 20, before me peared ory evidence to be the indiv	e, the undersigned, a	a Notary Public in and for the State of , personally known to me or proved to subscribed to this certification and said

person executed this instrument.

Notary Public

# EXHIBIT D

# (BPCA Standard Form of Contract)

(attached)

# EXHIBIT E

### Form of Cost Proposal

## COST PROPOSAL

(Proposer to submit executed Cost Proposal on its letterhead)

Date:

Battery Park City Authority One World Financial Center - 24th Floor New York, New York 10281

Attention: Mr. Michael LaMancusa Contract Administrator

Dear Mr. LaMancusa:

The undersigned (the "Proposer") hereby proposes to provide all specified work necessary to perform the work for the **Battery Park City Ballfields & Community Center Resiliency:** Construction Management Services **Project**. The Proposer agrees to commence the Work immediately upon receipt of an Initial Letter of Intent or executed contract, in accordance with the terms stipulated in the following pages, for the sum written below.

## A. Base Proposal

A total not-to-exceed amount of \$\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents) to perform all work as described in, and associated with, Exhibit A ("Scope of Work").

### B. <u>Reimbursable</u>

A total not-to-exceed amount of \$\_\_\_\_\_ (\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents) for any reimbursable costs to be incurred in performing the work as described in Exhibit A of the RFP.

### C. Itemized Proposal and Labor Rates

Enclosed with its Cost Proposal, Proposer has submitted a completed Form of Technical Salaries (<u>Exhibit F</u>), showing labor rates for all titles.

Name of Proposer:

By: \_\_\_\_\_

Title: \_\_\_\_\_

## **EXHIBIT F**

#### Form of Technical Salary Rates

Proposers shall provide all appropriate persons necessary to ensure the highest quality work performed in accordance with applicable professional standards. Proposers must furnish the names and resumes of all Project personnel. The rates listed below represent contract unit rates for the personnel as listed within the assigned categories. Invoicing will be based on actual hours worked multiplied by the unit rate. The unit rate is the actual salary times an auditable multiplier indicated below. The auditable multiplier shall be limited to the direct payroll burden itemized below, overhead (allowances as defined in list below) and a reasonable profit percentage (not to exceed 15%).

#### Itemization of Direct Payroll Burden

- F.I.C.A 1
- 2. Federal Unemployment Insurance
- State Unemployment Insurance 3.
- 4. Worker's Compensation
- 5. Life Insurance
- Accidental death and Disbursement 6.
- 7. NYS Disability Insurance
- 8. PL and PD Insurance
- 9 Group Hospitalization
- 10. Vacation time attributable to the Project

- 11. Major Medical Insurance
- 12. Pension and Profit Sharing Plan
- 13. 401K Program (company
- contribution)
- 14. Medicare
- 15. Long Term Disability Insurance
- 16. Company Automobile Expenses
- 17. Tuition and Seminar
- Reimbursement
- 18. Company Training Program

(Attach table(s) to the Proposal Form)

- 19. Employee Bonuses- non-principals and non- shareholders
- 20. Travel and Meal Allowances overtime work only
- 21. Premium for Staff Overtimesupport or clerical work
- 22. Sick Time and Personal Days for employees

Title/Function	Hourly Rate (without Profit & Multiplier)	Estimated # Of Hours	Total

SUBTOTAL TECHNICAL SALARIES (w/o Multiplier) \$

REIMBURSABLE = \$\_\_\_\_\_ TOTAL FEE = \$ \_\_\_\_\_

PROJECT MULTIPLIER = \_\_\_\_\_

Proposer: \_\_\_\_\_<Name of Company>

\_\_\_\_\_ <Printed Name of Executing Officer> By: Title:

Signature: Date

# EXHIBIT G

#### (Acknowledgement of Addenda)

## RFP TITLE: \_\_\_\_\_

#### Complete Part I or Part II, whichever is applicable, and sign your name in Part III.

### <u>Part I</u>

Listed below are the dates of issue for each Addendum received in connection with this RFP:

Addendum # 1, Dated,	
Addendum # 2, Dated	,
Addendum # 3, Dated	,
Addendum # 4, Dated,	
Addendum # 5, Dated	,
Addendum # 6, Dated	,

# Part II Acknowledgement of No Receipt

\_\_\_\_\_ No Addendum was received in connection with this RFP

## <u>Part III</u>

Proposer's Name: \_\_\_\_\_

Proposer's Authorized Representative:

Name:	
Title:	

Signature: \_\_\_\_\_ Date: \_\_\_\_\_
## EXHIBIT H

## List of BPCA & BPCPC Board Members and Employees

(Attached)

## LIST OF BOARD MEMBERS

George J. Tsunis Donald Capoccia Lester Petracca Louis J. Bevilacqua Catherine McVay Hughes Martha J. Gallo Anthony Kendall

## **Employees:**

Betzayda Abreu Deborah Addison Curtis Afzal Elsa Alvarez Dana Anders Anthony Andriano Stephen Arciold Sharmila Baichu Marie Baptiste Brett Beecham Freddy Belliard Marieke Bender Marcus Billups **Emily Birdseye** Nidia Blake-Reeder LaToya Brooks-Jones Nancy Buivid Anthony Buquicchio Peter Campbell Frances Caperchi Monica Centeno Julissa Cooke Sarah Fisher-Curtin Gwen Dawson Nicole Dawson Gilbert DePadua Paul Diaz-Larui **Tonasia** Dopson Jennifer Dudgeon Abigail Ehrlich Maria Ellison Richard Faraino Anitra Fauntleroy Claudia Filomena Tamara Flores Pamela Frederick James Gallagher Abigail Goldenberg Anastasia Gonzalez Lenron Goode Neresa Gordon Sakina Graves Ned Greenberg Evelyn Gregg Jonathan Gross Robert Hansen Nicole Heater

Sankar Heerah Robert Hinkelman Craig Hudon Jake Jacevicius Amy Jogie William John Jasmine Johnson **Benjamin Jones** Roland Kemp Ann Ketring Susie Kim Karl Koenig Leandro Lafuente Michael LaMancusa Della Lee Rene Lopcy Janira Lopez Robert Maggi **Evelin Maisonet** Jonathan McCain Princess McNeill Justin Mclaughlin-Williams **Brian Meikle** Vanessa Mesine Ronnie Mohammed Dana Morgera Irene Moulketis Eric Munson Lauren Murtha Bertha Narcisse Jahmeliah Nathan **Robert Nesmith** Siu May Ng Yoshihiro Nishida Anne O'Neill Maril Ortiz Bienvenido Osorio Kevin O'Toole Hector Oyola Willem Paillant Jonathan Parker Nimisha Haribaran Patel **Gladys** Pearlman Dahlia Pena Bruno Pomponio Katherine Powell Sandra Power

Robert Ouon Jason Rachnowitz Madelin Ramirez Aline Reynolds Chad Rimer Manual Rivera Anthony Robinson Kim Robledo Nelson Rogers Jose Rosado Holly Ross **Carlos Santiago** Nicholas Sbordone Jean Schwartz Iphigenia Seong Rekha Sewraj Sean Simon Kemnarine Singh Sarah Smedley **Bruce Spierer** Shinay Stewart Jerome Sturiano Lance Super John Tam Alexis Torres **Rvan** Torres Douglas Van Horn Noe Velasquez **Evangelio Villalobos** Jeffrey Vixamar Sharon Wade David Wallace Annalise Warren Eric White **Dwight Williams** Kenneth Windman Al Wright Erin Yokoi Nishida Yoshihiro Alaura Zayas