KOSCIUSZKO BRIDGE PROJECT - (BIN 1075699)

PIN X731.24, Contract D900011

DB CONTRACT DOCUMENTS

ADDENDUM #3

October 2, 2013
General Instructions

Delete Form SP and Form WPS of Instructions to Proposers Appendix D and substitute with the attached revised Forms SP and WPS.

Delete Pages 8, 9, 10 and 11 of DB Contract Documents, Part 1, DB Agreement and substitute with the attached revised Pages 8, 9, 10, 11 and 11A.

Delete Page 103 of DB Contract Documents, Part 2, DB Section 100 and substitute with the attached revised Pages 103 and 103A.

Delete Page 173 of DB Contract Documents, Part 2, DB Section 100 and substitute with the attached revised Pages 173 and 173A.

Delete Pages 232, 233 and 234 of DB Contract Documents, Part 2, DB Section 100 and substitute with the attached revised Pages 232, 233 and 234.


Delete the second page of SP2 - Special Provision to Sections 200 through 699 of the NYSDOT Standard Specifications Construction and Material of DB Contract Documents, Part 5, Special Provisions and substitute with the attached revised second page of SP2 - Special Provision to Sections 200 through 699 of the NYSDOT Standard Specifications Construction and Material.
FORM SP
SCHEDULE OF PRICES FORM
(BASE PROJECT)

Proposer: ________________________________________________________________

<table>
<thead>
<tr>
<th>Item # (1)</th>
<th>Item Name</th>
<th>Price (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800.06000115</td>
<td>Design Build – Construction Work</td>
<td></td>
</tr>
<tr>
<td>800.04000015</td>
<td>Design Build – Force Account Work</td>
<td>$25,000,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Subtotal A</strong></td>
</tr>
<tr>
<td>800.05000015</td>
<td>Design Build – Site Mobilization (Maximum 4% of Subtotal A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Subtotal B (For Subcontracting or Assigning the Contract Sum of Subtotal A and Site Mobilization)</strong></td>
</tr>
<tr>
<td>800.01000015</td>
<td>Design Build – Design Services</td>
<td></td>
</tr>
<tr>
<td>800.02000015</td>
<td>Design Build – Construction Inspection Services</td>
<td></td>
</tr>
<tr>
<td>800.03000015</td>
<td>Design Build – Quality Control Services</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL PROPOSAL PRICE**

Notes:
1) Proposers shall complete Form SP (Base Project) using the excel spreadsheet located on the Department’s Project web site.

2) Subtotal B will be the value used to calculated the 51% Prime/DB self work requirement.

Instructions:
1) Enter Item Number, as shown in the Proposal Baseline Progress Schedule, for each Price Item.
2) Enter Lump Sum Price for each Price Item in the white, non-shaded cells.
3) Enter sum of all Price Item Lump Sum Prices for Contract.
### FORM SP
#### SCHEDULE OF PRICES FORM
**(BASE PROJECT PLUS THE OPTION)**

**Proposer:** ________________________________________________

<table>
<thead>
<tr>
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<th>Price (21)</th>
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#### Notes:
1) Proposers shall complete Form SP (Base Project Plus the Option) using the excel spreadsheet located on the Department’s Project web site.

2) Subtotal B will be the value used to calculated the 51% Prime/DB self work requirement.

#### Instructions:
4) Enter Item Number, as shown in the Proposal Baseline Progress Schedule, for each Price Item.
1) Enter Lump Sum Price for each Price Item in the white, non-shaded cells.
2) Enter sum of all Price Item Lump Sum Prices for Contract.
## FORM WPS

### WORK PAYMENT SCHEDULE

*(Base Project)*

<table>
<thead>
<tr>
<th>WORK ITEM</th>
<th>MAX. % OF LUMP SUM PRICE</th>
<th>PERCENT OF LUMP SUM PRICE⁽¹⁾</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear ROW in Brooklyn (Including Building Demo)</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Clear ROW in Queens (Including Building Demo)</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Reconstruct existing beds of street in Brooklyn</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Reconstruct existing beds of street in Queens</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Relocate existing utilities in Brooklyn</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Relocate existing utilities in Queens</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Main Span - Superstructure</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Main Span - Substructure</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Brooklyn Approach - Superstructure</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Brooklyn Approach - Substructure</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Queens Approach - Superstructure</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Queens Approach - Substructure</td>
<td>6%</td>
<td></td>
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<tr>
<td>Construction new Brooklyn Connector - Superstructure</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Construction new Brooklyn Connector - Substructure</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Construction new Queens Connector - Superstructure</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Construction new Queens Connector - Substructure</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Erection and demolition of temporary bridge - Brooklyn</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Erection and demolition of temporary bridge - Queens</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Construct new bridge drainage sewer - Brooklyn</td>
<td>1%</td>
<td></td>
</tr>
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<td>1%</td>
<td></td>
</tr>
<tr>
<td>Demolition Main Span</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Demolition Brooklyn Approach</td>
<td>5%</td>
<td></td>
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<td>Demolition Queens Approach</td>
<td>3%</td>
<td></td>
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<tr>
<td>Demolition Brooklyn Connector</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Demolition Queens Connector</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Streetscaping improvements - Brooklyn</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Streetscaping improvements - Queens</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Final Cleanup (Per DB § 104-12) and Restoration</td>
<td>42%</td>
<td>42% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2%</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>42%</td>
<td>42% (fixed)</td>
</tr>
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⁽¹⁾ Percent of Lump Sum Price to be completed by Proposer. Total percent for all Work Items shall equal 100%
FORM WPS
WORK PAYMENT SCHEDULE
(Base Project plus the Option)

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c. Treat such failure as a breach or default of the contract.

4. **Additional Insured.** Unless otherwise stated, all insurance policies required by these specifications, except workers’ compensation and professional liability shall be endorsed to provide coverage to the People of the State of New York, the State of New York, the Commissioner of Transportation, all employees of the Department of Transportation both officially and personally, any municipality in which the work is being performed, any public benefit corporation, railroad, public utility whose property or facilities are affected by the work, any consultant inspecting engineer or inspector working for or on the contract, and their agents or employees with respect to any claim arising from the Design-Builder’s Work under this contract or as a result of the Design-Builder’s activities. The endorsement shall be effected by endorsement of the applicable policy using ISO form CG 20 10 11 85, CG 20 37 07 04, CG 20 33 07 98 when used in combination with CG 20 37 07 04, or CG 20 33 10 01 or a form(s) that provides equivalent coverage.

5. **Primary Coverage.** All insurance policies, excepting workers’ compensation, shall provide that the required coverage shall be primary as to any other insurance that may be available to the Department for any claim arising from the Design-Builder’s Work under this contract, or as a result of the Design-Builder’s activities.

6. **Waiver of Subrogation.** As to every type and form of insurance coverage required from the Design-Builder, there shall be no right of subrogation against the State of New York, the New York State Department of Transportation, its agents or employees. To the extent that any of Design-Builder’s policies of insurance prohibit such a waiver of subrogation, Design-Builder shall secure the necessary permission to make this waiver.

7. **Policy Renewal/Expiration.** At least thirty (30) calendar days prior to the expiration of any policy required by this contract, evidence of renewal or replacement policies of insurance with terms no less favorable to the Department than the expiring policies shall be delivered to the Department in the manner required for service of notice in Paragraph A.3. Certificates of Insurance/Notices above.

8. **Self-Insured Retention/Deductibles.** Design-Builders utilizing self-insurance programs are required to provide a description of the program for Department approval. Collateralized deductible and self-insured retention programs administered by a third party may be approved. Design-Builder or third-party-administered insurance deductible shall be limited to the amount of the bid deposit or $1,000,000.00, whichever is less. Security is not required if it is otherwise provided to an administrator for an approved risk management program. The Department will not accept a self-insured retention program without security being posted to assure payment of both the self-insured retention limit and the cost of adjusting claims. The Design-Builder shall be solely responsible for all claim expense and loss payments within any permitted deductible or self-insured retention. If the Design-Builder’s deductible in a self-administered program exceeds the amount of the bid deposit, the Design-Builder shall furnish an irrevocable Letter of Credit as collateral to guarantee its obligations. Such Letter of Credit or other collateral as may be approved by Department must be issued by a guarantor or surety with an AM Best Company rating of (A-) or better. If, at any time during the term of this agreement, the Department, in its sole discretion, determines that the Design-Builder is not paying its deductible, it may require the Design-Builder to collateralize all or any part of the deductible or self-insured retention on any or all policies of insurance or, upon failure to promptly do so, the same may be withheld from payments due the Design-Builder.
9. Waiver of Indemnities. The Design-Builder waives any right of action it and/or its insurance carrier might have against the Department (including its employees, officers, commissioners, or agents) for any loss, whether or not such loss is insured.

10. Subcontractor’s Liability Insurance. In the event that any portion of the work described in this contract is performed by a subcontractor, the insurance requirements of this Article shall be incorporated into the subcontract agreement. Subcontractor insurance requirements shall include the requirements for Workers’ Compensation, Commercial General Liability, and, if applicable, Commercial Auto and/or Professional Liability. Excess or umbrella insurance is not required for subcontractors. Design-Builder shall require that Certificates of Insurance, meeting the requirements of the Department are provided to the Department documenting the insurance coverage for each and every subcontractor employed by them to do work under this contract.

B. Insurance Requirements. The types of insurance and minimum policy limits shall be as follows:

1. Workers’ Compensation and Disability Insurance. As required by State Finance Law §142, the Design-Builder shall maintain in force workers’ compensation insurance upon forms required by or acceptable to the Workers Compensation Board for all of Design-Builder’s employees. Design-Builder shall also maintain disability insurance as required by the Disability Benefits Law of the State of New York.

2. Commercial General Liability Insurance. The Design-Builder shall maintain an occurrence form commercial general liability policy or policies insuring against liability arising from premises (including loss of use thereof), personal injury or death, advertising injury, liability insured under an insured contract (including the tort liability of another assumed in a business contract) occurring on or in any way related to the premises or occasioned by reason of the operations of Design-Builder. Such coverage shall be written on an ISO occurrence form (ISO Form CG 00 01 12 07 or a policy form providing equivalent coverage) in an amount of not less than $254,000,000.00 per occurrence and not less than $502,000,000.00 aggregate. Unless otherwise provided, the policy or policies of insurance providing the liability coverage shall include:
   a. Coverage for contractual liability assumed by the Design-Builder insured under an insured contract (including the tort liability of another assumed in a business contract).
   b. All insurance policies required by these specifications except workers’ compensation and professional liability shall be endorsed to provide coverage to the People of the State of New York, the State of New York, the Commissioner of Transportation, all employees of the Department of Transportation both officially and personally, any municipality in which the work is being performed, any public benefit corporation, railroad, public utility whose property or facilities are affected by the work, any consultant inspecting engineer or inspector working for or on the contract, and their agents or employees using ISO form CG 20 10 11 85, CG 20 37 07 04, CG 20 33 07 98 when used in combination with CG 20 37 07 04, or CG 20 33 10 01 or a policy form or forms providing equivalent coverage.
   c. Products-Completed Operations Coverage, as provided in the General Liability Policy, or in certain instances through ISO form CG 26 11 09 99 or suitable equivalent.
   d. Where contract work will be performed by unregistered off-road equipment, Design-Builder shall provide documentation of a blanket Pollution Liability policy, or an endorsement to cover short-term pollution events, ISO form CG 04 33 10 01 or equivalent.
   e. Coverage for claims for bodily injury asserted by an employee of an additional insured and any Employer Liability Exclusion which may otherwise operate to exclude such coverage.
shall be voided in this respect.

f. For contracts that call for the performance of excavating, underground work, and/or the use of blasting equipment, Explosion, Collapse and Underground Hazards coverage (“XCU”) (for contracts that call for the performance of excavating, underground work, and/or the use of blasting equipment).

In addition to the additional insured requirements of 17.A.4 above, the policy shall also name as additional insured Phelps Dodge Refining Corporation and Sagres LLC.

3. Commercial Automobile Insurance including liability and required coverage for New York. In the event that automobiles are used in connection with Design-Builder’s business or operations with the Department, the Design-Builder shall maintain a commercial or other automobile policy or policies insuring against liability for bodily injury, death, or damage to property and other mandatory coverages, relating to the use, operation, loading or unloading of any of Design-Builder’s automobiles (including owned, hired and non-owned vehicles) on and around the project. This should be ISO form CA 00 01 10 01, CA 00 01 03 10 18 or a policy form providing equivalent coverage along with mandatory New York endorsements. Coverage shall be in an amount of not less than $1,000,000.00 for each accident.

4. Umbrella or Excess Liability Insurance. The Design-Builder shall maintain an occurrence form umbrella liability policy or policies insuring against liability arising from premises (including loss of use thereof), operations, independent Design-Builders, products-completed operations, personal injury, advertising injury, liability insured under an insured contract (including the tort liability of another assumed in a business contract) occurring on or in any way related to the premises or occasioned by reason of the operations of Design-Builder, or arising from automobile liability as described above. Such coverage shall be written on an ISO occurrence form CU 00 01 12 07 or a policy form providing equivalent coverage. In the event that umbrella coverage is unavailable, equivalent excess coverage may be substituted. The minimum required limits for the umbrella/excess coverage shall be sufficient to provide a total of not less than $100,000,000.00 per occurrence/aggregate.

5. Special Protective and Highway Liability Policy. The Design-Builder shall maintain, separate and apart from its umbrella policy, a policy issued to and covering the liability of the People of the State of New York, The State of New York, the Commissioner of Transportation, all employees of the Department of Transportation both officially and personally, any municipality in which the work is being performed, any public benefit corporation, railroad, or public utility whose property or facilities are affected by the work, or any consultant inspecting engineer or inspector working for or on the project, and their agents or employees, against damages that the insured may be held legally liable to pay for property damage, personal injuries, or death that is caused by any occurrence that takes place within any location where work is to be or is being performed by Design-Builder, including at the location of any of the work. This should be ISO form CG 00 14 12 or a policy form providing equivalent coverage along with mandatory New York endorsements. Coverage shall be in an amount of not less than $54,000,000.00 per occurrence and at least $102,000,000.00 for each aggregate limit.

6. Design-Builder’s Risks. The Design-Builder shall be responsible for obtaining any insurance it deems necessary to cover its own risks, including without limitation: (a) business interruption, such as gross earnings, extra expense, or similar coverage, (b) personal property, and/or (c) automobile physical damage and/or theft. In no event shall the Department be liable for any damage to, or loss of, personal property, or damage to, or loss of, an automobile that is covered by a policy of insurance that is required by this agreement, even if such loss is caused by the negligence of the Department.
7. **Professional Liability/Errors and Omissions.** The Design-Builder’s designer shall maintain at its own expense such insurance as is customary to compensate Department for any claims or losses that occur because of Designer’s errors, omissions, malpractice, or breach of professional obligations. Such policy or policies may be written on a claims-made form, so long as coverage is maintained to cover claims arising from the performance of services under this contract. Said coverage may be subject to a deductible or self-insured retention level of no more than $500,000.00 subject to approval by Department. It is also agreed that Department may withhold payment for services rendered under this contract in the event and to the extent any deductible in the event that a claim is asserted. Such coverage shall be written on a claims-made basis (or a policy form providing equivalent coverage) in an amount of no less than $102,000,000.00 per claim and $102,000,000.00 in the aggregate.

8. **Builders’ Risks Policy.** The Design-Builder shall procure and maintain a Builder’s Risk policy in a form such as ISO form CP 00 20 10 90 or a policy providing equivalent coverage, covering the perils insured under and including the special causes of loss form, including collapse, water damage, and transit and theft of building materials, with deductible not to exceed the amount of the bid deposit or $100,000, whichever is less, in non-reporting form, with limits of coverage of not less than $100,000,000.00, covering the total value of work performed and equipment, supplies and materials at the location of the Work as well as at any off-site storage locations. The policy shall cover the cost of removing debris, including demolition as may be legally necessary by the operation of any law, ordinance or regulation, and for loss or damage to any owned, borrowed, leased or rented capital equipment, tools, including tools of their agents and employees, staging towers and forms, and property of Department held in their care, custody and/or control. Such policy shall name as insured, The People of the State of New York.

9. **Railroad Protective Liability Insurance.** The Contractor shall maintain at its own expense railroad protective liability policy of insurance in the name of the affected railroad and with limits of coverage of not less than $2,000,000.00 combined Bodily Injury Liability and/or Property Damage for each occurrence with a $6,000,000.00 Aggregate Limit applying separately to each annual period. Said policy shall be subject to the approval of the railroad and comply with Federal Aid Policy Guide 23 CFR 646 subpart A.

10. **Marine Protection & Indemnity.** The Design-Builder shall provide and maintain Marine Protection and Indemnity coverage under a marine policy providing coverage for all marine operations under the Contract, with a minimum limit of $5,000,000,000. When the limits of the Marine Policy procured are insufficient to meet the limits specified, the Design-Builder shall procure and maintain an excess with limits in excess of the primary; provided, however, that the total amount of insurance coverage is at least equal to the requirements set forth above. Such policies shall follow the same form as the primary policy. Any insurance maintained by the Department or any additional insured shall be considered excess of and shall not contribute with any other insurance procured and maintained by the Design-Builder including the marine policy, regardless of the “other insurance” clause contained in either parties’ policy. To the extent marine operations are to be conducted by a Subcontractor and not the Design-Builder directly, the Design-Builder may cause the Subcontractor to provide and maintain the requisite Marine Protective and Indemnity coverage.

11. **Pollution Legal Liability.** The Design-Builder shall procure, or otherwise obtain and maintain in full force and effect throughout the term of the contract, and for two years after completion hereof, pollution legal liability insurance with limits of not less than $25,000,000.
providing coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such policy shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants or in the investigation, settlement or defense of any claim, suit, or proceedings against the Department arising from the Design-Builder’s work. Such policy shall contain an extended reporting period of three years following Final Acceptance. In addition to the additional insured requirements of 17.A.4 above, the policy shall also name as additional insured [legal names of Phelps Dodge and Sagres].

ARTICLE 18. INDEMNIFICATION

The Design-Builder shall be responsible for all damage to life and property due to negligent or otherwise tortious acts, errors or omissions of the Design-Builder in connection with its services under the Contract Documents. To the fullest extent permitted by law: (a) the Design-Builder shall indemnify, hold harmless, and release the Department and/or the State of New York, any municipality in which the Work is being performed; and/or any public benefit corporation, railroad or public utility whose property or facilities are affected by the Work from suits, claims, actions, damages, and costs of every name and description resulting from the Work under this Contract and until the Final Acceptance thereof; (b) with respect to personal injury or property damage occurring after Final Acceptance and not covered by the indemnity in clause 107-27.1(a), the Design-Builder shall indemnify, hold harmless, and release the Department and/or the State of New York, any municipality in which the Work is being performed; and/or any public benefit corporation, railroad or public utility from suits, claims, actions, damages, and costs of every name and description resulting from negligent or otherwise tortious acts, errors or omissions of the Design-Builder in connection with its services under the Contract Documents; and (c) the Design-Builder shall indemnify, hold harmless, and release the Department’s Inspector from suits, claims, actions, damages, and costs involving personal injury and property damage resulting from the Design-Builder’s Work under the Contract during its prosecution and until the Final Acceptance thereof. The Department may retain such monies from the amount due the Design-Builder as may be necessary to satisfy any claim for damages recovered against the Department, any municipality in which the Work is being performed, any public benefit corporation, railroad, or public utility whose property or facilities are affected by the Work, or the Department’s Inspectors. The Design-Builder’s obligation under this paragraph shall not be deemed waived by the failure of the Department to retain the whole or any part of such monies due the Design-Builder, or where such suit, action, damages, and/or costs have not been resolved or determined prior to release of any monies to the Design-Builder under the Contract. Such obligation shall not be deemed limited or discharged by the enumeration or procurement of any insurance for liability for damages imposed by law upon the Design-Builder, Subcontractors, the Department, the State, any municipality in which the Work is being performed, any public benefit corporation, railroad, or public utility whose property or facilities are affected by the Work, or any Department consultants or contractors working relative to the Project.

The Design-Builder has the obligation, at its own expense, for the defense of any action or proceeding which may be brought against the parties specified in this Section. This obligation shall include the cost of attorney fees, disbursements, costs, and other expenses incurred in connection with such action or proceeding. The provisions of this section shall survive the expiration or termination of the Contract.

Without limiting the generality of the foregoing, Design-Builder’s obligation to indemnify, save harmless and release the Persons identified in this DB §107-27.1 specifically includes any suits, claims, actions,
**DB 105-7.9  Subcontracts**

The Design-Builder shall insert in all Subcontracts and supply agreements a requirement that the Subcontractor or supplier shall stop Work on the date and to the extent specified in a Notice of Termination from the Department in accordance with this DB §105-7, and shall require Subcontractors to insert the same provision in each Subcontract and supply agreement at all tiers.

For the purposes of DB §105-7.4.2 and DB §105-7.5, upon termination under DB §105-7.2(D) of Work under any Subcontract or supply agreement, the Design-Builder will not be entitled to reimbursement for that portion of the termination settlement with any such Subcontractor or supplier which constitutes anticipatory or unearned profit on Work not performed, or which constitutes consequential damages on account of the termination or partial termination.

**DB 105-7.10  No Unearned Profits or Consequential Damages**

Under no circumstances shall the Design-Builder be entitled to anticipatory or unearned profits or consequential or other damages as a result of a termination or partial termination under this DB §105-7. The payment to the Design-Builder determined in accordance with this DB §105-7 constitutes the Design-Builder’s sole and exclusive remedy for a termination under this DB §105-7.

As set forth herein, the Department waives claims for consequential damages against the Design-Builder arising out of or resulting from the Work under this Contract in the following instances: consequential damages incurred by the Owner for rental expenses, for loss of use, income, profit, or reputation, for business interruption, for interest and financing charges, for depreciation, and for loss of management or employee productivity.

The waiver of consequential damages does not include any damages other than those set forth above, or any damage or assessment provisions set forth elsewhere in this Contract, including but not limited to: consequential and other damages in the event of default by the Design-Builder or termination of the Design-Builder for cause; liquidated damages; engineering charges; lane rental charges; incentive or disincentive payments; or third-party claims for consequential damages. For the purposes of clarity, the waiver of claims set forth herein shall not limit the Indemnification requirements set forth in this Contract, and thus the requirement to indemnify against “damages . . . of every name and description,” including consequential damages, remains undisturbed.”

**DB 105-7.11  No Waiver**

Termination for convenience shall not result in a forfeiture by the Department of damages it may be entitled to in connection with any default, except to the extent that settlement of such damages was included in the calculation of the compensation owing the Design-Builder upon the termination for convenience.

**DB 105-7.12  Dispute Resolution**

Any failure of the parties to agree on amounts due under this DB §105-7 shall be a Dispute to be resolved in accordance with DB §109-10.

**DB 105-7.13  Allowability of Costs**

All costs claimed by Design-Builder under this DB §105-7 shall, at a minimum, be allowable, allocable and reasonable in accordance with the cost principles and procedures of 48 CFR Part 31.
DB 105-7.14 Termination Prior To Issuance of NTP

Notwithstanding anything to the contrary contained herein, in the event that the Department terminates the Contract prior to issuance of NTP, the Design-Builder’s sole compensation hereunder shall be payment of the amount that it is entitled to receive pursuant to and in accordance with the terms and conditions of the Stipend Agreement, provided that the Design-Builder shall have executed such agreement and delivered it to the Department in accordance with the RFP. The Design-Builder acknowledges that the Department has no obligation to make any payment to the Design-Builder in excess of the amount to which the Design-Builder would be entitled pursuant to the Stipend Agreement if the Contract is terminated prior to issuance of
or other Department staff to verify the work has been completed in conformance with the contract requirements shall also have been completed and documented.

Where the Contract requires the submittal of a specified Plan or similar document prior to payments, the requirement is met when the Plan has been submitted and the Department’s Project Manager acknowledges in writing that the Plan or document meets Contract requirements.

Where the Contract requires an audit and/or update of a specified Plan prior to payments, the requirement is met when the report of the audit and/or Plan update is submitted to the Department’s Project Manager and the Department’s Project Manager acknowledges or Approves (if specified) in writing, after receipt of the report or update, that it meets the Contract requirements.

If the Design-Builder and the Department’s Project Manager cannot come to agreement on the percent complete of a Work Item or the amount due, the determination of the Department’s Project Manager shall be used as the basis of the request for periodic payment. The Department’s Project Manager shall submit a written statement to the Design-Builder outlining the rationale behind any substantial adjustment.

Payment will be based on the Price Proposal (which has been incorporated into the Contract – Design-Builder’s Proposal, upon Award of the Contract).

**DB 109-2.2 Payment for Engineering and Testing Services**

Payment for Design Engineering Services shall be per the following schedule:

- **Year 1** - 60% or 5% per month
- **Year 2** - 24% or 2% per month
- **Year 3** - 12% or 1% per month
- **Year 4** - 3% or .25% per month
- 1% upon receipt of all documentation including sealed calculations, sealed design drawings, Special Provisions, approved shop drawings, approved catalog cuts, the complete Maintenance Manual, as-built drawings and all other design documents pertaining to the project are provided.

Payment will be based on a Lump Sum basis. The schedule for the payments shall be 10% of the lump Sum the first month after the Notice to proceed, and 5% of the Lump Sum paid upon the final acceptance of the Project which includes delivery of all engineering drawings, calculations, shop drawings, as-built drawings, quality control documents and all other design documents pertaining to the project. The remaining 85% of the Lump Sum shall be paid in equal amounts per month over the established duration of the contract. However, if the design drawings, specification and calculation are completed and accepted by the Department, sooner than the established duration of the contract, the unpaid portion of the remaining 85% of the Lump Sum shall be made.

Payment for the Independent Professional Engineering Construction Inspection Services shall be on a Lump Sum Basis. The schedule for the payments shall be 10% of the lump Sum the first month after the Notice to Proceed, and 10% of the Lump Sum paid upon the final acceptance of the Project which includes delivery of all engineering drawings, calculations, shop drawings, as-built drawings, quality control documents and all other construction inspection,
MURK, and other required documents pertaining to the project. The remaining 80% of the Lump Sum shall be paid in equal amounts per month over the established duration of the contract. If the final acceptance occurs sooner than the established duration of the contract all remaining payments shall be made upon final acceptance of the Project.

Payment for the Independent Quality Control Services/Laboratory shall be on a Lump Sum basis. The payments shall be made in equal amounts over the established duration of the contract. If the final acceptance occurs sooner than the established duration of the contract all remaining payments shall be made upon final acceptance of the Project.
3) The identity of the QC Inspector or data recorder, the type of test or observation employed, the results, and the acceptability of the Work, and action taken in connection with any deficiencies noted;

4) Nature of non-conforming Work and causes for rejection;

5) Proposed corrective action;

6) Corrective actions taken; and

7) Results of corrective actions.

DB 112-7.1 SiteManager Software

SiteManager is a comprehensive web-based construction management software product used by the Department that covers the complete construction and materials management process from contract award through contract finalization. The Design-Builder and the Department shall use SiteManager for activities including the following:

A) Field Collection Daily Work Reports (DWR) – Every member of the Design-Builder’s Construction Inspection Professional Engineering Firm shall produce Daily Work Report(s) that shall be input into SiteManager. The DWRs shall include weather, staff and equipment, Work Item progress, sampling and testing, the progress of the work activity being monitored, information on any Work Zone Traffic Control that was in place during the Work activity, information on any incidents that may have occurred during the course of the day, and diaries. The DWRs and Diary entries shall conform to the NYSDOT Manual of Uniform Record Keeping Contract Administration Manual. In general, each inspector shall produce a DWR. The Construction Inspection Professional Engineering Firm shall enter the material approval information into SiteManager and generate the payment request;

B) SiteManager shall be used for Orders-on-Contract such as Time Extensions and Scope of Contract. SiteManager has an automated Approval Work Flow. The Work Flow for approval of DWRs, payments and change orders will be determined by the Department in consultation with the Construction Inspection Professional Engineering Firm;

C) SiteManager shall be used by the Construction Inspection Professional Engineering Firm to generate Progress Payment requests subject to the review and approval of the Department’s Project Manager;

D) SiteManager shall be used for materials management. Material management within Site Manager includes item master and automated contract material associations; approved lists (inspectors, testers, calibrated equipment, welders, qualified labs, producers/suppliers); sampling and testing requirement definition, and tracking of standard AASHTO tests. The Construction Inspection Professional Engineering Firm staff shall be responsible for entering material test results into SiteManager. Test results for all material testing (e.g. concrete cylinders, elastomeric bearings, etc.) shall be conducted in certified labs and shall be transmitted to the CI Firm for entry into SiteManager.

Following the Notice To Proceed the Design-Builder shall populate SiteManager, via the SiteManager function labeled “Change Order”, with the Payment Breakdown Structure pay items (Note: Not an actual Change Order). As a design is developed by the Design-Builder’s
Designer, the Designer shall produce a list of Specification Work Items that can be associated with a NYSDOT Standard Specification Item and a corresponding quantity for that Item. The development and use of special specifications will be permitted.

As designs are finalized and prior to construction activities, the Construction Inspection Professional Engineering Firm shall populate SiteManager with the Specification Items and quantities used in those designs using the “Orders-on-Contract” function. This will be a zero-value Order-on-Contract entered using the SiteManager function labeled “Change Order” (Note: Not an actual Change Order). The entries will be subject to reviewed and approval by the Department’s Project Manager for approval. These items shall be entered into SiteManager prior to the start of construction so that the full functionality of SiteManager may be utilized by the Construction Inspection Professional Engineering Firm to monitor the progress of Work.

The Construction Inspection Professional Engineering Firm shall perform sampling/testing and obtain appropriate material certifications for all permanently incorporated Work and shall enter second level work breakdown items into SiteManager, detailed to the degree necessary, to assign and quantify subcontractor work and to allow for the inspection and material testing of all work permanently incorporated into the Project. Special Specification Items will require manual entry for material testing and certification requirements.

The percent complete value of all Payment Breakdown Structure Items shall be determined from the progress of completed Work as shown on the Design-Builder’s approved P6 CPM Schedule.

The Department will provide the necessary software and training for the use of SiteManager. The training requires approximately one week to be completed. Following Notice To Proceed, the Design-Builder shall contact the Department’s Project Manager to arrange for the training of the Design-Builder’s and Construction Inspection Professional Engineering Firm’s staff. The cost of time for the training for the Design-Builder’s and Construction Inspection Professional Engineering Firm’s staff will be the Design-Builder’s responsibility. The Construction Inspection Professional Engineering Firm shall access SiteManager over the Internet through Citrix. Details on how to access SiteManager will be provided at the time of the training.

Items and quantities that are input into SiteManager will be transferred into EBO, which is the Department’s software package for monitoring Sub-Contractors and the Design-Builder’s DBE compliance. The Design-Builder’s DBE/Civil Rights Compliance Manager shall assign all items of Work which are being performed by a DBE Sub-Contractor to that Sub-Contractor in EBO to facilitate monitoring of the Design-Builder’s compliance with DBE goals.

**DB 112-7.2 Computer and Networking Requirements**

Computer and Networking equipment described in Contract Document, Part 3, Project Requirements, shall be provided by the Design-Builder for the duration of the Project.

**DB 112-8 MATERIAL CERTIFICATES OF COMPLIANCE**

When the Design-Builder purchases materials from providers/suppliers on the Department’s approved Materials or source list, the Design-Builder shall obtain and retain a certificate of compliance from the provider/supplier covering the Material and/or the source.
Documentary evidence that Material and Equipment conform to the procurement requirements shall be available at the job Site no less than 24 hours prior to installation or use of such Material and Equipment. This documentary evidence shall be retained at the job Site and shall be sufficient to identify the specific requirements, such as Contract Documents, codes, standards, or specifications, met by the purchased Material and Equipment. The effectiveness of the QC by the Design-Builder’s own forces and Subcontractors shall be assessed by the Design-Builder and the QC engineering firm at intervals consistent with the importance, complexity, and quantity of the product or services.

The Department reserves the right to inspect and review these documents at any time.

At the completion of the Project, the Design-Builder shall submit with the final invoice a certificate of compliance signed by the Design-Builder’s Project Manager and the Construction QC Engineer indicating that all materials incorporated in the Project conform to the Contract requirements.

**DB 112-9 FINAL ACCEPTANCE**

The Department has the responsibility and authority for Final Acceptance of all Work.

The Design-Builder shall complete all Work and provide all documents, certifications, and other information in accordance with the Contract Documents. Final Acceptance shall be based on QC testing verified by verification testing and the final Inspection. Any deviations from the sampling and testing methods and frequencies indicated in the individual Specifications shall require Department Approval prior to the start of construction on any affected Work.

Final Acceptance shall be based on certificates of compliance and/or Manufacturer’s test results where specified in the individual specification.

Deficient Materials and products shall be brought into compliance with Specifications or replaced. The method of reconciliation shall be noted in the log of failed tests.

Upon final acceptance copies of all project records shall be transferred to the Department.
New York State Department of Transportation

Construct new bridge drainage sewer - Brooklyn 1%
Construct new bridge drainage sewer - Queens 1%
Demolition Main Span 2%
Demolition Brooklyn Approach 5%
Demolition Queens Approach 3%
Demolition Brooklyn Connector 3%
Demolition Queens Connector 1%
Streetscaping improvements - Brooklyn 0.5%
Streetscaping improvements - Queens 0.5%
Punch list work, Site Cleanup and Restoration, 42% (fixed) 42% (fixed)
Final Acceptance (Per DB §109-12.1) 2% (fixed) 2% (fixed)
Final Agreement (Per DB §109-12.2) 42% (fixed) 42% (fixed)

Note: (1) See Work Payment Schedule included in ITP, Appendix D.

**WORK PAYMENT SCHEDULE**

*(Base Project Plus Option)*

<table>
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<tr>
<th>WORK ITEM</th>
<th>MAX. % OF LUMP SUM PRICE</th>
<th>PERCENT OF LUMP SUM PRICE&lt;sup&gt;(1)&lt;/sup&gt;</th>
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</tr>
<tr>
<td>Clear ROW in Queens (Including Building Demo)</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Reconstruct existing beds of street in Brooklyn</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Reconstruct existing beds of street in Queens</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Relocate existing utilities in Brooklyn</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Relocate existing utilities in Queens</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Main Span - Superstructure</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Construct new EB Main Span - Substructure</td>
<td>6%</td>
<td></td>
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<tr>
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<td>Demolition Brooklyn Connector</td>
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<td>Demolition Queens Connector</td>
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<tr>
<td>Streetscaping improvements - Brooklyn</td>
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</tr>
<tr>
<td>Streetscaping improvements - Queens</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Final Cleanup (Per DB § 104-12) and Restoration</td>
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<td>42% (fixed)</td>
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<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
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<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>42% (fixed)</td>
<td>42% (fixed)</td>
</tr>
</tbody>
</table>

Note: (1) See Work Payment Schedule included in ITP, Appendix D.
I) Spot-checking for compliance with Design Plans and Project Specifications, conducting verification (QA) sampling and testing and comparing Department’s CQAE records with the Design-Builder’s construction QC Inspection results;

J) Reviewing and spot-checking Design-Builder’s Work Zone Traffic Control activities and installations;

K) Participating in release for construction Design Reviews and reviews of Work Plans;

L) Participating in the reviews of As-built Plans;

M) Ensuring the Design-Builder is complying with the QC plan processes and procedures;

N) Assisting the Design-Builder in coordinating with appropriate State or federal agencies should unknown, unidentified Hazardous Materials be encountered;

O) Spot-checking the Design-Builder’s QC Inspectors’ records for the remediation of Hazardous Materials;

P) Performing Construction QA and testing of materials to verify the Design-Builder’s QC materials test data;

Q) Monitoring Design-Builder’s Utility Relocations and installations;

R) Verifying qualifications of Design-Builder’s environmental staff, spot-checking of Design-Builder’s compliance with environmental requirements; and, auditing of Design-Builder’s environmental monitoring records.

2.11 PROJECTWISE

ProjectWise shall be used to organize, manage and archive electronic Project design documents for the Department. These documents typically include but are not limited to:

- All design reports including drafts and final;
- All studies and supporting reports;
- Permits;
- Survey and ROW mapping;
- Photos taken prior to and during design;
- CADD and xD models files including current NYSDOT supported Microstation and InRoads file formats;
- Engineering calculations to support designs;
- All electronic plan sheets;
- Engineers estimate based on Payment Breakdown Structure; and
- Public Information.

All files posted to ProjectWise shall be in accordance with the file naming convention and submission procedures as defined in Appendix 14 of the NYSDOT Project Development Manual. In addition the Payment Breakdown Structure (PBS) shall be used in the file naming convention, specifically the work item number in the PBS.

The Design-Builder may obtain a ProjectWise account by contacting the Department’s Project Manager and providing the required account information per Appendix 14 of the Project Development Manual.

The Design-Builder shall ensure that all electronic design documents are stored in ProjectWise and updated on a monthly basis.
E) For the Design-Builder-located areas, the Design-Builder shall notify the Department of scheduled meetings with regulatory agencies and provide to the Department copies of any documentation regarding environmental compliance;

F) The Design-Builder shall be solely responsible for compliance with and violations of any Environmental Requirements;

G) The Design-Builder shall indemnify the Department and the State of New York for any fines, violations or damages incurred by reason of failure of the Design-Builder to comply with Environmental Approvals.

H) The Design Builder shall construct a cap including fencing and drainage on a portion of the former Phelps Dodge Refining Site in Queens per the Directive Drawings included in Part 6 – RFP Plans. The cap shall be installed by the Design-Builder before construction on and adjacent to the area to be capped can begin. The construction activities on the cap are subject to the loading restrictions included in the Directive Plans. If the Design-Builder constructs a temporary structure on Parcel 1A or 9A for access to the Creek, pile foundations shall not be used. If a spread footing is utilized it shall not penetrate the ground and loads may not exceed the allowable loads indicated in the capping plans. The Design Builder shall provide a Final Engineering Report (FER) and certification of As-Built plans to assure the caps are built in accordance with the approved plans. The Design-Builder shall relocate the unused stockpiled soil from Parcel 1A to Parcels 2 and 1C as directed by the Phelps Dodge representative. The Design-Builder shall provide a minimum of 10 days notice to Phelps Dodge Refining Corporation (PDRC) before the movement of the stockpiled soil on Parcel 1A to allow for a PDRC representative to be onsite during any such movement.

I) The Design-Builder shall provide access to the PDRC inspector and NYSDEC personnel on Parcels 1A and 2 for monitoring and maintenance of the existing Ground Water Treatment System as required.

J) The Design-Builder shall be responsible for complying with the Monitoring Program on the Laurel Hill Site. See Part 6 – RFP Plans. The Department will install the monitoring program prior to award of the Design-Build Contract. The intent of the program is to monitor soil movements and groundwater movements associated with the sheet pile wall that is intended to prevent movement of groundwater from the site into Newtown Creek. Based on readings taken during the RFP phase, the Department intends to establish allowable tolerances for the monitoring program. A layout of the plan is indicated on the capping plans. Two months after award of the contract the Design-Builder shall take over responsibility for maintaining the monitoring and for continuing the readings. If the readings indicate that due to the Design Builder’s activities, the wall has been compromised and that groundwater from the site is moving through the wall into the creek, it may be necessary to halt construction in the vicinity of the wall and remediate the wall until the work can be restarted at the site. The Design Builder shall be responsible for any such delays if they are attributed to the activities of the Design-Builder.

K) The Design-Builder shall take the appropriate actions to limit the potential for propeller scour in Newtown Creek. Provisions shall include limiting the drafts, horsepower and operating speeds of tugboats in the Creek as required. The requirements for monitoring turbidity are described in 3.2.5N below.
greater, petroleum-staining, unusual odors, or visible contamination will be staged separately for disposal from apparent lesser impacted soils. The soil shall be staged on polyethylene plastic (minimum 10-mil thick) at an agreed upon location for disposal characterization. While staged, the Design-Builder shall maintain a minimum 6-mil polyethylene cover over the soil pile(s) to prevent water from entering the soil pile. Berms constructed of hay bales, jersey barriers, and/or silt fence shall be constructed around soil piles to prohibit soil runoff from the pile(s).

G) The Design-Builder shall conduct vapor monitoring during all excavation in accordance with Item 205.03 – Field Organic Vapor Monitoring, for the purpose of segregating potentially greater contaminated soil from lesser contaminated soil per Item 205.02.

H) Stockpiled soils shall be characterized for disposal as determined by the results of analytical testing performed by the Design-Builder per Item 205.04 – Laboratory Analysis, and in accordance with all applicable State and Federal Regulations, and meeting disposal facility requirements. After characterization, the Design-Builder shall load the soils into lined trucks and the material shall be transported and disposed of at a NYSDEC (or other state environmental agency) approved facility. Dependant on the waste characterization results, the Design-Builder shall dispose of these soils in accordance with Item 205.0501 – Disposal of Contaminated Hazardous Waste Soil and/or Item 205.0502 – Disposal of Contaminated Non-Hazardous Waste Soil.

I) At no time may excavated soil be reused as backfill at the project site or at other locations without explicit written permission from NYSDEC. Should the Design-Builder obtain NYSDEC approval to reuse excavated soil, this work shall be performed in accordance with Item 205.06 – Reuse of Contaminated Soil.

J) The Design-Builder shall be responsible for handling, treating, discharging and/or disposing of any contaminated water removed from excavations per the Part 5 – Special Provisions – Handling and Treatment of Contaminated Construction Dewatering Fluids. The Design-Builder is responsible for designing, providing and operating a treatment system in compliance with the permit requirements. The Department will provide the Design-Builder with a NYSDEC SPDES Permit for dewatering of excavations in Queens. If the Design-Builder’s work necessitates dewatering in Brooklyn or requires changes to the expected dewatering scope in Queens, the Design-Builder is responsible for obtaining additional or modified dewatering discharge permits from NYSDEC.

K) Current plans are to locally dewater the excavations in Queens by sump (trash) pumps. If the Design-Builder elects to install dewatering wells to lower the water table in either Queens or Brooklyn, the Design-Builder is responsible for obtaining a NYSDEC Long Island Well Permit.

L) Driven piles are preferred—required by NYSDEC to eliminate the generation of contaminated spoils brought to the surface, particularly in Brooklyn in the vicinity of within the limits of the Greenpoint Oil Spill and Meeker Avenue Solvent Plume. Should the Design-Builder choose an alternative pile method, the Design-Builder must develop methods to contain and dispose of the contaminated spoils, and provide written proof to
Regardless of the type of piles that are selected, the depths of the piles may not extend more than 10 feet above the Raritan Clay confining layer in order to avoid cross contamination of the deeper aquifer.

Dredging of Newtown Creek sediment is not expected based on the preliminary design. If the Design-Builder determines that dredging is necessary, the Design-Builder is responsible for obtaining a NYSDEC Dredging Permit. The dredged material would require dredging, handling and offsite disposal as contaminated material. Any dredging or work in general within Newtown Creek will require coordination with USEPA based on the creek’s listing on the Federal NPL.

The Design-Builder will be responsible for performing Water Quality Monitoring of Newtown Creek per Part 5 Special Provisions – Turbidity Monitoring, and in accordance with all applicable permit requirements.

The Design-Builder will be required to take precautions to avoid damage to the underground components of the groundwater remediation system that currently operates on the Phelps Dodge Laurel Hill Inactive Hazardous Waste Site. In addition, the Design-Builder shall take over the maintenance and operation of the Laurel Hill Site Geotechnical and Environmental Instrumentation and Monitoring as described in Section 10.3.9.

The Design-Builder will be responsible for providing worker exposure air monitoring for hazardous atmospheres during all ground intrusive activities, including for VOCs, particulates, and methane. The Design-Builder will be responsible for abating any unsafe conditions related to harmful vapors detected during the worker exposure monitoring.

The Design-Builder shall maintain odor control materials onsite at all times and shall institute odor control as necessary and as directed by the Engineer.

The Design-Builder shall institute a Community Air Monitoring Plan (CAMP) as described in the provided CHASP and CMP and in accordance with the NYSDOH guidance for developing a CAMP contained in NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation. Prior to any ground intrusive work or structure demolition, the Design-Builder shall submit to the Engineer and NYSDEC for approval a detailed site specific CAMP. No ground intrusive or demolition work may commence until written proof of NYSDEC acceptance of the CAMP is provided to the Engineer. Based on the results of the CAMP monitoring, the Design-Builder shall be responsible to modify work actions as needed to maintain acceptable air quality throughout operations. Work activities shall at all times be performed to minimize the generation of dust.

The Design-Builder will provide the Engineer with copies of all analytical test data and disposal documentation as soon as feasible but not to exceed the timeframes stipulated under the specifications.
• (*) external hard disk drives as needed

Paper Supplies

• (*) 5000 sheets of 8 ½”x11”, 20# weight, paper suitable for printers and copiers
  (minimum)
• (*) 5000 sheets of 11”x17”, 20# weight, paper suitable for printers and copiers
  (minimum)
• (*) 200 sheets of 8 ½” x 11”, photo quality, printer paper

If a specification is followed by "(minimum)" then the stated requirement or better is acceptable. Otherwise, only the stated requirement is acceptable. For accessories proceeded by "(*)", the Contractor shall replenish these items, as required by the Engineer and be of a type, size, quality, and capacity acceptable to the Engineer. These items shall remain the property of the Department.

The cost of providing and maintaining the Engineer’s Field Office, Laboratory and Equipment as described in Section 637 shall be included in the Lump Sum price in the Design-Builder’s Proposal. No separate payment will be made for the provision of the Engineer’s Field Office and Equipment. However the Department will reimburse the Design-Builder for fifty percent (50%) of the cost for the Partnering Workshop as described in Section 637-5.13 of the Standard Specifications.

4.4 GROUNDING OF THE EXISTING BRIDGE

The Design-Builder shall take the necessary precautions when working on the existing bridge to prevent occurrences of electric shock. See the Kosciuszko Bridge RF Illuminations/Safety, Shock Hazards Investigation Report on the Project website as a reference.
<table>
<thead>
<tr>
<th>Geotechnical Feature</th>
<th>Minimum Number of Borings</th>
<th>Minimum Investigation Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>All other pier pile caps or footings</td>
<td>1</td>
<td>In accordance with AASHTO LRFD Bridge Design Specifications, and as required by the Foundations Lead Designer</td>
</tr>
<tr>
<td>Non-redundant drilled shaft foundations</td>
<td>1 for each drilled shaft within footprint of the drilled shaft</td>
<td>In accordance with AASHTO LRFD Bridge Design Specifications, and as required by the Foundations Lead Designer</td>
</tr>
<tr>
<td>Bridge abutment</td>
<td>A minimum of two within a 50 feet radius of the centroid of the substructure. At least one of the two borings shall be within the footprint of the foundation substructure.</td>
<td>In accordance with AASHTO LRFD Bridge Design Specifications, and as required by the Foundations Lead Designer</td>
</tr>
<tr>
<td>Retaining walls</td>
<td>Two borings at each retaining wall. For retaining walls more than 100 feet in length, spacing between borings shall be no greater than 100 feet. Spacing of borings shall be at least adequate for design for bearing, settlement, and stability.</td>
<td>In accordance with AASHTO LRFD Bridge Design Specifications, and as required by the Foundations Lead Designer</td>
</tr>
<tr>
<td>Ancillary structures</td>
<td>As required by Foundations Lead Designer</td>
<td>As required by Foundations Lead Designer</td>
</tr>
</tbody>
</table>

Borings shall not extend into the Raritan clay layer within the limits of the Meeker Avenue Solvent Plume and the Greenpoint Oil Spill. If the clay layer is encountered within this area, the boring must not be advanced at this location.

Information from existing borings provided on the Department’s Project website may be combined by the Design-Builder with the Design-Builder’s subsurface investigation to comply with the requirements presented in Table 10.4-1. It is the sole responsibility of the Design-Builder’s Foundations Lead Designer to determine if the existing borings are suitable for use in the Project.

### 10.3.4 Subsurface Investigation Records

The Design-Builder shall be responsible for keeping a continuous and accurate log of the materials encountered and a complete record of the operation of progressing the casing. Where driving is used, a record of the number of blows required to advance the sampling barrel, each 6 inches in the soil where each sample is taken, shall be kept. Records shall be kept using the NYSDOT Subsurface Exploration Log Form (US Units).
4) Time-related settlement and lateral deformation and determination of the resulting effects on adjacent structures

5) Protection of existing structures and utilities

10.3.10.2 Bridge Foundation Design

The Design-Builder shall design and construct permanent foundations based on the requirements of NYSDOT LRFD Bridge Design Specifications, AASHTO LRFD Bridge Design Specifications and AASHTO LRFD Bridge Construction Specifications.

The Design-Builder shall not use auger cast piles, screw piles, timber piles, buoyant foundations or re-use any existing foundations.

The Design-Builder shall evaluate the effects of ground movement around, or movement of, existing foundations due to proposed structures and consider downdrag loads on deep foundations, where applicable.

Seismic design of foundations shall be in accordance with Section 3.10 of the AASHTO LRFD Specifications, considering the effects of inertial loading from the superstructure and kinematic effects due to loading from the soil (soil-structure interaction).

A) Drilled Shafts. If drilled shafts are designed to be socketed into rock, the rock socket length shall not be less than two times the rock socket diameter.

Subcontractor shall submit documentation before the start of construction that he has successfully completed at least three drilled shafts projects and at least installed 100 drilled shafts within the last three years with drilled shafts diameters and lengths similar to those anticipated for this project. Documentation shall include the general contractor and owner’s name and current contact information with descriptions of each project. A design geotechnical engineer is required to design drilled shafts. The design engineer shall be a licensed Professional Engineer in the State of New York and shall have at least 10 years of experience in designing drilled shafts and deep foundations with capacities and in subsurface conditions similar to those of this project.

Permanent casings may be considered to contribute to the capacity of the drilled shafts by designing them as composite columns, the casing thickness shall be assumed to be reduced to account for corrosion loss by not less than 1/8 inch. A site is considered highly corrosive, if the following condition exists in the soil and/or water:

<table>
<thead>
<tr>
<th>Table 10.3-2 – Corrosive Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorides</td>
</tr>
<tr>
<td>Sulfates</td>
</tr>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Resistivity</td>
</tr>
</tbody>
</table>
Additional corrosion protection (beyond the 1/8 inch) shall be provided at foundation locations that exceeds the values in Table 10.3.2. Additional corrosion protection measures may include:

1) Allowance for additional sacrificial metal loss
2) Barrier coating such as coal tar epoxy and/or cathodic protection

The bottom of drilled shafts shall be inspected using a shaft inspection device (SID) in accordance with NYSDOT Specification. Uplift resistance of the drilled shaft shall be taken as the minimum of either the side shear resistance of the drilled shaft rock socket or the shear wedge capacity of the surrounding rock.

The lateral resistance of a single drilled shaft and a group of shafts shall be analyzed for all limit states. Group efficiency and lateral load reduction factors shall be considered based on the shaft spacing as specified in the AASHTO LRFD Specifications. Center-to-center spacing between adjacent drilled shafts shall not be less than 2.5 times the diameter of the drilled shafts.

In Brooklyn, in the vicinity of the Meeker Avenue Solvent Plume, the method of installation of the drilled shaft shall be such as not to cause cross contamination below that Clay layer. The Design-Builder shall be responsible for obtaining the approval of NYSDEC for the method of installation.

For drilled shaft foundations, include the following information in the Foundation Design Report:

1) Nominal Axial Compressive Resistance and resistance factors
2) Factored Axial Compressive Resistance
3) Nominal Uplift Resistance and resistance factors
4) Factored Uplift Resistance
5) Top of Drilled Shaft elevation
6) Top of Rock Socket Elevation
7) Tip of Drilled Shaft Elevation
8) Drilled Shaft Diameter
9) Rock Socket Diameter and depth
10) Reinforcement Cage cross sections
11) Concrete and reinforcement steel properties
B) Driven Piles. Calculate the axial resistance of production piles in accordance with AASHTO LRFD specifications. Drive all piles to competent bearing material in accordance with the production pile driving criteria developed based on the Pile Load Test Results. Analyze the lateral resistance of a single pile and a group of piles for all limit state load conditions.

Consider group efficiency and lateral load reduction factors based on the pile spacing in accordance with AASHTO LRFD Specifications. Verify overstress conditions on piles by determining the stresses on the piles under combined loads and moments. Center-to-center pile spacing shall not be less than 2.5 times the diameter or side dimension of the pile.

In Brooklyn, in the vicinity within the limits of the Meeker Avenue Solvent Plume and the Greenpoint Oil Spill, all piles shall be driven to a depth so that they are a minimum of 10 feet above the Raritan Clay Layer (Silty Clay) to avoid cross contamination below that Clay layer. Piles penetrating the Raritan Clay Layer shall not be allowed unless the Design-Builder obtains approval from NYSDEC.

For steel piles, casing thickness shall be assumed to be reduced by not less than 1/8 inch to account for corrosion loss by not less than 1/8 inch. Additional protection measures for highly corrosive locations (Table 10.3-2) shall be provided.

Do not locate splices between the top of the pile and a minimum of five times the pile diameter below the point of fixity. Pile splices must be full penetration weld with a structural capacity equal to or greater than the pile section.

For driven pile foundations, include the following information in the Foundation Design Report:

1) Nominal Axial Compressive Resistance and resistance factors
2) Factored Axial Compressive Resistance
3) Nominal Driving Axial Compressive Resistance: Obtain the Nominal Driving Axial Compression Resistance by including the nominal side resistance from soils susceptible for downdrag, and other unsuitable materials not utilized as part of the nominal axial compression resistance determination.
4) Nominal Uplift Resistance and resistance factors
5) Factored Uplift Resistance
6) Nominal Lateral Resistance and resistance factors
7) Factored Lateral Resistance
8) Maximum Driving Resistance: Perform a pile drivability analysis to verify adequacy of proposed pile driving equipment, assess axial compression
resistance and driving stresses for full length of driving. Report analysis results along with the Maximum Driving Resistance.

9) Minimum Pile Tip Elevation: Define the Minimum Pile Tip Elevation as the elevation corresponding to the minimum required depth of penetration.

10) Estimated Pile Tip Elevation: Report the elevation corresponding to the depth where nominal axial compression resistance was derived as the Estimated Pile Tip Elevation.

11) Pile type, size, cut-off elevation and tip elevation

12) Reinforcement details, pile point details, splicing details

C) Micropiles. Small diameter drilled and grouted non-displacement pile with a reinforcing casing and a center reinforcing bar. Permanent casings and load testing are required. Design micropiles in accordance with AASHTO LRFD specifications. A Micropile specialty Subcontractor is required.

Subcontractor shall submit documentation before the start of construction that he has successfully completed at least three micropile projects and at least installed 150 micropiles within the last three years with Micropile diameters and lengths similar to those anticipated for this project. Documentation shall include the general contractor and owner’s name and current contact information with descriptions of each project. A design geotechnical engineer is required to design micropiles. The design engineer shall be a licensed Professional Engineer in the State of New York and shall have at least 10 years of experience in designing micropiles and drilled foundations with capacities and in subsurface conditions similar to those of this project.

In Brooklyn, in the vicinity of the Meeker Avenue Solvent Plume, the method of installation of the micropiles shall be such as not to cause cross contamination below that Clay layer. The Design-Builder shall be responsible for obtaining the approval of NYSDEC for the method of installation.

For Micropile foundations, include the following information in the Foundation Design Report:

1) Micropile layout, diameter, inclination, minimum reinforcing casing and center rebar, and pile to cap connection

2) Micropile tip elevations, and bond lengths. If socketed in to rock, use a minimum bond length of ten feet. Neglect tip resistance in tension and compression
also be provided in Brooklyn wherever the edge of the new structure passes over an existing building to remain.

3) Protection shall be provided to all superstructure elements above the deck. Rigid traffic barriers shall be used to separate roadway shoulders from the towers and the stay cables. The level of protection shall be in accordance with Security Requirements provided by the Department.

4) Barriers, railings and/or fencing that will be designed and constructed to contain users and materials, shall be detailed to prevent people from climbing, provide for maximum safety and security, minimize weather (wind, rain, snow) impacts and maximize viewing opportunities.

B) Decks. Precast panel and/or cast in place decks are allowed except at steel girder Approach and Connector spans where cast-in-place decks will be required. Filled, overfilled or unfilled steel grating decks and orthotropic steel decks are not permitted. **Steel stay in place forms are not permitted.** All decks must be protectively sealed. A 2” concrete overlay is required at the Main Span and at concrete box girders if utilized.

C) Deck Joints. The number of deck joints shall be minimized to the extent practical to minimize future maintenance. Where the range of movement is 2-½ inches or less Armorless Bridge Joint Systems per the NYSDOT BD Sheets shall be used unless the nature of the movement (i.e. significant transverse movement) precludes their use. For larger movements, modular type joints shall be used in the roadway sections. For the joint between the cable-stayed main span and approach structure, movement and rotations shall be accounted for in the joint design. Deck joints in the bikeway/walkway shall be bicycle-safe.

D) Superstructures

1) The interior of any superstructure element such as box girders shall be accessible for inspection and maintenance. Means to facilitate safe access to interior spaces shall be provided.

2) Structural steelwork shall be fully metalized or galvanized. This includes the interior of steel box girders, if utilized. **All metalizing shall be 90% zinc metalizing with 9 mil dry thickness sealer. Hot dip galvanizing shall be 4 mil thick.** Structural steelwork at the Meeker Avenue Viaduct only shall be painted.

3) The interior of any box girders shall be illuminated and provided with 120V outlets as required in Project Requirement 14 - Lighting.

4) Drain holes shall be provided at all low points in box girder cells to ensure no ponding occurs in the event of water leakage into the box. All drain holes shall be protected with type 316 stainless steel bird screens.

E) Bearings. Design and location of bearings shall provide for maintenance, accessibility and future replacement. Jacking points with sufficient capacity (full dead load and live load) to allow the superstructure to be lifted for bearing replacement under live load shall be provided. The plans shall include the location of the jacking points and the jacking loads.
F) Piers and Cap Beams

1) Access shall be provided to the interior of all hollow pier sections. All access provisions shall meet the requirements of OSHA. Any access hatches shall be Type 316 stainless steel and shall meet the requirements of Section 17 – Security Requirements.

2) The tops of all piers below expansion joints shall be coated with penetrating type protective sealers. Stainless Steel reinforcement shall be utilized in all pier caps and bridge seats below expansion joints. Reinforcing bars that extend into the pier cap below expansion joints shall be epoxy coated. Refer to the Bridge Manual for primary reinforcement requirements.

3) The pier shape shall be such as to have aesthetic appeal in a similar manner to those shown in the Indicative Plans in accordance with the Visual Quality and Lighting Plan. See Part 5 – Special Provisions – Architectural Requirements.

4) The tops of all piers and cap beams shall be pigeon proofed using type 316 stainless steel bird spikes or type 316 stainless steel screens.

G) Abutments. Abutments shall be designed and constructed in accordance with the Visual Quality and Lighting Plan.

H) Foundations and Piles

1) The Design-Builder shall calculate settlements for the different founding conditions along the bridge. Settlements likely to occur during construction shall be calculated separately from long term settlements. Particular attention shall be given to the differential settlements likely to occur between piers with piled/drilled shaft foundations to rock and piers supported by soil. The effects of settlements, differential settlements, and down-drag shall be fully accounted for in the design and construction.

2) In Brooklyn, in the vicinity of the Chlorinated within the limits of the Meeker Avenue Solvent Plume and the Greenpoint Oil Spill between all piles shall be installed to a depth so that they are a minimum of 10 feet above the Raritan Clay Layer to avoid cross contamination below that clay layer.

I) Lightning Protection. Lightning Protection shall be provided in accordance with Project Requirement 14 - Lighting.

J) Lighting. Lighting shall be in accordance will Project Requirements 14 – Lighting and Section 18-Visual Quality.

K) Drainage

1) Deck drainage system shall be designed and constructed to minimize maintenance needs, and cleanouts shall be provided at appropriate locations. Scuppers in the roadway shall meet Department requirements for truck loading.
under this Project, the Design-Builder shall design and construct the Eastbound structure to allow for future installation of these crosswalks.

M) Dampers. Dampers shall only be used for the stay cables and shall not be used for structure damping.

N) Stay Cable System

1) The Stay Cable system shall be in accordance with Part 5 – Special Provisions – Stay Cables. Security measures shall be incorporated into the design per the security requirements provided by the Department and the Department’s review and approval. In addition, an icing prevention system shall be incorporated in the design and construction of the towers and the cable stays over the roadway.

2) A 1’-6” clear horizontal distance shall be provided from the outside face of barrier to the nearest obstruction. This distance shall be maintained from the top of barrier to 18 feet above the roadway deck. A 1’-6” foot minimum offset shall be provided from the back face of the roadway barrier to any stay cable at a height of 18 feet above the bridge deck for stay cables adjacent to traffic lanes. For stay cables adjacent to the sidewalk/bikeway/walkway, a one foot minimum offset – clear distance shall be provided from the outside face of the bikeway/walkway railing to the stay cable nearest obstruction. This distance shall be maintained from the top of railing to a height of 10 feet above the bikeway/walkway deck.

3) The bridge shall be designed so that each stay cable can be replaced one at a time without temporary supports. The bridge shall be designed so that cable(s) loss will not result in failure of the bridge. The loss of cables shall be determined from analysis as specified in the Security Requirements provided by the Department.

4) The non-linear effects due to large deformations shall be considered for cable replacement and cable loss cases. Non-linear analysis considering the P-Δ effect of the tower pylon shall be performed.

11.3.1.5 Bikeway/Walkway

1) The geometrical design criteria for the Bikeway/Walkway are specified in Project Requirement 24 – Highway Design. The Bikeway/Walkway shall have a minimum clear width of 20 feet along its full length on the bridge and approaches. Design of the Bikeway/Walkway shall accommodate all users including high-speed bicyclists, low-speed bicyclists, runners, in-line skaters, pedestrians, and persons with disabilities; and separation of bicyclists and pedestrians shall be provided by pavement markings or other clearly defined attributes.

2) Fences or railings shall be anti-climbing. Pedestrian railings along the walkway/bikeway shall be designed to withstand the horizontal pressure of 50 psf.

11.3.1.6 Materials

A) Concrete
1) The compressive strength of concrete shall be 10,000 psi maximum in prestressed or precast applications.

2) Use of concrete classes and corresponding mixtures defined under NYSDOT Standard Specification Section 501 are pre-approved, but are not required. If the Design-Builder proposes the use of alternative concrete mixtures, then the mixture design shall require trial batching and testing in accordance with NYS Standard Specifications. All materials used in alternative mixes shall be in accordance with NYS Standard Specifications, Section 555 – Structural Concrete.

3) Hot weather concreting shall be performed as per the recommendations of ACI 305 Guide to Hot Weather Concreting.

4) Cold weather concreting shall be performed as per the recommendations of ACI 306 Guide to Cold Weather Concreting.

5) Whenever a concrete placement is four feet or thicker, the recommendations of ACI 207 Guide to Mass Concrete shall be followed.

6) All concrete construction shall be in accordance the tolerances stated in ACI 117 unless otherwise specified in the NYS Standard Specifications.

B) Reinforcement. Reinforced concrete decks shall utilize solid Stainless Steel Bar Reinforcement. Reinforcing bars that extend into the deck shall be epoxy coated. For all other reinforced concrete elements the reinforcement may be epoxy coated, or uncoated steel provided that they will meet the 100 year design life. The use of different types of bars in a structure shall only be allowed where provisions for preventing corrosion due to mixing dissimilar metals has been incorporated into the project.

C) Structural Steel. Structural steel shall be any appropriate combination of ASTM A709 Grade 50, Grade 50W, Grade HPS 50W, Grade HPS 70W and/or Grade HPS 100W. If utilized, weathering steel will require a protective coating at deck joints and along fascias as indicated above.

11.3.1.7 Design Parameters (For All Eastbound and Westbound Structures)

A) Service Life. Service Life shall be in accordance with ACI 365 Service-Life Prediction - State-of-the-Art Report and Service Life shall be defined as the time in service until spalling of concrete occurs.

B) Vehicular and Pedestrian Loading. Vehicular and pedestrian live loads for the bridge shall be as per the NYSDOT LRFD Blue Pages.

C) Seismic Loading

1) The Design-Builder shall perform seismic analyses of all bridge components in order to establish the seismic design and bridge performance criteria, definition of the relevant bridge site characteristics, determination of the site response, as
Table 11.3-2 – Minimum Service Life for Replaceable Components

<table>
<thead>
<tr>
<th>Replaceable Components</th>
<th>Minimum Service Life (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay cables and tie-down cables</td>
<td>60</td>
</tr>
<tr>
<td>External post-tensioning cables</td>
<td>50</td>
</tr>
<tr>
<td>Bridge bearings</td>
<td>40</td>
</tr>
<tr>
<td>Expansion joints</td>
<td>30</td>
</tr>
<tr>
<td>Concrete barriers</td>
<td>50</td>
</tr>
<tr>
<td>Bridge rail / approach guide rail</td>
<td>30</td>
</tr>
<tr>
<td>Separate bridge deck wearing surface</td>
<td>30</td>
</tr>
<tr>
<td>Overhead sign structures</td>
<td>40</td>
</tr>
<tr>
<td>Drainage system</td>
<td>75</td>
</tr>
<tr>
<td>Internal access ladders, platforms etc.</td>
<td>40</td>
</tr>
<tr>
<td>Access elevators in towers</td>
<td>40</td>
</tr>
<tr>
<td>Inspection travelers</td>
<td>40</td>
</tr>
<tr>
<td>Stay cable dampers</td>
<td>40</td>
</tr>
<tr>
<td>Electrical and mechanical parts</td>
<td>30</td>
</tr>
<tr>
<td>Galvanizing of Structural Steel</td>
<td>33</td>
</tr>
<tr>
<td>Metalizing of Structural Steel</td>
<td>24</td>
</tr>
</tbody>
</table>

11.3.1.9 Critical Maintenance and Inspection Components

The following items are representative items that have been identified which require special design and/or detailing in the interest of inspections and maintenance. This is not an all inclusive listing and it is the responsibility of the Design-Build to identify all such components in the Inspection and Maintenance Manual.

A) Tower/Stay Cable Anchorage Connection: The anchorage connection/assembly must be fully accessible for inspection. The connection assembly shall be detailed to shed water and sealed to prevent water and moisture intrusion.

B) Composite Steel Member Stay Cable Attachment: Composite steel member to stay cable attachments shall be detailed to shed water and sealed to prevent water and moisture intrusion to the steel/concrete interface.

11.3.1.10 Moisture Control and Interior Drainage System

A) Ventilation: The design and detailing of voided towers shall promote natural ventilation to aid in preventing in the accumulation of moisture within the towers and stagnant air. Openings to promote ventilation shall be provided with appropriate screening to prevent entry of birds and pests. Openings shall be arranged such that to prevent water entry.

B) Access Doors: All horizontal access doors shall be provided with appropriate seals to prevent moisture from entering the piers, towers and superstructure.
SECTION 12 LANDSCAPE ARCHITECTURE

12.1 SCOPE
The Design-Builder shall complete all landscaping required for the Project. The Work includes preparation and implementation of a landscape development plan (LDP), which the Design-Builder shall develop in collaboration with the Design-Builder’s visual quality management plan (see Project Requirement 13 – Visual Quality). The LDP shall include aesthetic guidelines for landscape elements within the Project Limits that integrates with the surrounding environment.

The Design-Builder shall be responsible for care of planting in accordance with NYSDOT Standard Specification §611-3.05 Care of Planting. The Design-Builder shall remain responsible for the maintenance and monitoring of all areas landscaped and planted by the Design-Builder until Final Acceptance. This obligation shall include replacement of any trees and other plantings that fail to establish or thrive prior to Final Acceptance.

The Design-Builder shall be responsible for the design and construction of streetscaping improvements for the areas of new or disturbed sidewalks per the New York City Street Design Manual.

12.2 STANDARDS AND REFERENCES
The Design-Builder shall perform the landscape architectural activities in accordance with the NYCDOT Street Design Manual and the New York City Department of Parks and Recreation requirements regarding the removal and planting of street trees.

12.3 REQUIREMENTS

12.3.1 Vegetation Inventory
The Design-Builder shall develop and provide a comprehensive vegetation inventory including survey of trees within the Project Limits and any projected areas of impact on neighboring properties. Trees proposed for removal and potentially subject to impact shall be documented. Plans shall be submitted to the Department’s landscape architect for review and comment.

The Design-Builder’s Arborist shall be responsible for identifying which trees are proposed for removal and which trees are potentially subject to impact within the Project Limits and on neighboring properties, and shall assess whether preservation is feasible for trees potentially subject to impact.

12.3.2 On-site Protection Zones and Monitoring
The Design-Builder shall be responsible for limiting the removal of existing vegetation including trees within the Project Limits and for minimizing removal in adjacent areas, such as may be needed for the operation of construction vehicles or similar.

The Design-Builder shall be responsible for ensuring that all tree and vegetation protection zones shall be clearly marked in the field for ease of identification by the Design-Builder’s construction personnel.
SECTION 14 LIGHTING

14.1 SCOPE

The Design-Builder shall conduct all Work necessary to provide all lighting located inside the Project Limits. This includes the transportation related permanent and temporary roadway lighting of the bridge, under-deck lighting at street crossings, maintenance lighting, navigation and aviation lights, aesthetic lighting and lighting of local streets.

The Design-Builder shall be responsible for the replacement of existing street lighting and traffic signals on existing at-grade streets to be reconstructed with full depth pavement in order to realign or reestablish that street.

14.2 STANDARDS AND REFERENCES

The Design-Builder shall perform the lighting activities in accordance with the Contract Requirements and the applicable New York City and New York State Standards, Codes and Manuals listed in Section 1.5.Requirements. The lighting design and construction will require review and approval from the New York City Department of Transportation Bureau of Street Lighting.

Additional reference is made to:

- ANSI/IESNA-RP-8-00, American National Standard Practice for Roadway Lighting
- AASHTO GL-6 Roadway Lighting Design Code
- FHWA Lighting Handbook

In addition to the documents referenced above, the IESNA has published two technical memorandums that solely address light trespass and sky glow.

- TM-11-00, Light Trespass: Research, Results and Recommendations/Illuminating Engineering Society of North America, 2000 (TM-11-00)
- TM-10-00, Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in conjunction with Roadway Lighting, Illuminating Engineering Society of North America, 2000 (TM-11-00)
- MLO, Model Lighting Ordinance, Illuminating Engineering Society of North America and the International Dark Sky Association

These additional criteria documents provide recommendations for measuring, determining, and identifying light trespass, sky glow and light trespass from roadway lighting. These documents shall be used to determine whether light control apparatus, such as shields, will be required.

The criteria referenced for the design of the aesthetic lighting can be found in:


The particular tables to be used are:
SECTION 15 INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

15.1 SCOPE
The Design-Builder shall perform all work necessary to design, furnish, build, and install, a new ITS system including any additional software along the Kosciuszko Bridge corridor from the Long Island Expressway to Metropolitan Avenue. This new system shall replace in its entirety the existing ITS system and shall be installed on the new Eastbound structure. The existing ITS system shall be maintained until the new ITS system is in use and has been accepted by the Department at which time the existing system shall be removed by the Design-Builder. The system shall be designed so that it can be expanded in a future contract to a new Westbound structure.

The Design-Builder shall design, furnish, install and test an operational ITS system including all required electronic devices for the system related to systems communication, traveler information, traffic monitoring and detection systems, all associated mounting hardware, and all associated cabling and integrate those devices into the NYSDOT system that connects to the Region 11 Joint Transportation Management Center (JTMC). The Design-Builder shall integrate the ITS devices from the field to the JTMC rack room at the basement and the equipment/system shall work continuously for a 30 day testing period. The Design-Builder shall work with JTMC consultant support staff for the rack room integration. The State JTMC Consultant Staff will integrate the tested system into the Operation floor.

The Design-Builder shall prepare As-Built plans that detail all ITS work completed as part of this ITS system including but not limited to the fiber optic backbone, fiber assignments, test results pull boxes, splicing, ITS cabinets, CCTV installation, and radar detection. Variable Message Signs (VMS), Highway Advisory Radio (HAR), and TRANSMIT related equipment. The design, construction and installation of all the devices and facilities and appurtenances shall address functionality, redundancy, reliability, durability, ease of maintenance, maintenance access, safety and protection against vandalism and shall meet the latest NYSDOT Region 11 specifications and NTCIP standards.

The Design-Builder shall be responsible for continuity of operations of the existing ITS system until the new system has been installed, tested and accepted. None of the current functionality of the existing system may be lost or negatively affected by this ITS system replacement. Any disruptions to the existing system caused by the Design-Builder’s operation shall be repaired within 48 hours at the Design-Builder’s expense at no additional cost to the Department.

The Design-Builder shall be responsible for obtaining from the Department all available existing as-built plans of existing ITS elements and systems that will be affected by the Project that are in the possession of the Department. The Design-Builder shall investigate and survey all relevant areas, including areas one quarter mile beyond the Long Island Expressway interchange and beyond the project to Metropolitan Avenue, to ensure that all existing ITS-related features are identified and accounted for in the design. The Design-Builder is also responsible to verify the existing ITS system operational requirements.

The Design-Builder shall be responsible for ensuring that the following requirements are met:

A) The existing ITS system shall remain operational during the Project.
The proposed CCTV deployment shall include all equipment, camera assembly, Ethernet switch, hardware, mounting arm, pole and foundation, mountings, cabling, power, software modifications and labor necessary to install, and integrate a fully operational system. Connections between the equipment shall be through weather proof connectors to provide easy replacement. CCTV video, fiber optic video and data transceivers shall be supplied. The camera assembly shall include but not be limited to the camera assembly, the mounting arm, cabling, mounting hardware and miscellaneous fittings. The Design-Builder shall furnish and install all equipment mounts for all aspects of the CCTV system including the CCTV assemblies, enclosure, cabinets, stand alone equipment modules and rack mounted components. Shop drawings and cut sheets of all portions of the camera system shall be submitted for review by the Department.

All proposed CCTV control cabinets shall be installed at such locations that accessibility for future maintenance can be performed without any lane closures. The CCTV installed at 54 Ave shall have a lowering device for the future maintenance.

The Design-Builder shall provide the Department with one day class training by the CCTV manufacturer that shall consist of a half day training held in the field and a half day training held in a classroom format.

15.2.4 Variable Message Signs

The Design-Builder shall be responsible for the design and implementation of a new variable message signs (VMS) for the project. The installation of VMS shall be such as to provide one sign on the eastbound approach to the Bridge. The Design-Builder shall design the VMS and the associated assemblies on an overhead structure as per Department specifications and requirements for a VMS on a structure.

A two day class training shall be provided for the ITS maintenance group by the VMS manufacturer. One day shall be held in the field and a second day shall be held in a classroom format.

15.2.5 Travel Time TRANSMIT System

TRANSMIT is the system developed by the Transportation Operations Coordinating Committee (TRANSCOM; which comprises various transportation and public safety agencies in the New York, New Jersey and Connecticut) for managing incidents and traffic using electronic toll tags, including the E-Z Pass system, and traffic management toll tags as anonymous probes for traffic surveillance and incident detection purposes. The Design-Builder shall submit to the Department the design plans and supporting documents for the installation of one traffic monitoring TRANSMIT site per the Department’s standards, in order to provide for travel times and speeds across the Bridge in both directions. The Design-Builder shall be responsible for integrating the project TRANSMIT site into the existing TRANSMIT system and shall comply with Department specifications.

The Department will coordinate the system integration with TRANSCOM under the existing NYSDOT and TRANSCOM agreement. The Design-Builder shall fully install the TRANSMIT site and test it locally and NYSDOT and TRANSCOM will integrate the TRANSMIT site based on successful local test results provided.
26.3.2 Model Management Plan

The Design-Builder shall prepare and maintain a model management plan that contains:

- Strategy for model creation and maintenance;
- Software, including CADD, 3D modeling, 4D modeling, and CPM scheduling;
- Change management plan for keeping models current with design document milestone submittals and subsequent revisions;
- Quality control and Quality Assurance process for auditing change management of 3D models; and
- Roles and responsibilities of modeling team.

The model management plan shall be submitted to the Department for review and approval prior to the start of any CADD production or 3D modeling.

26.3.3 Department-supplied Data

The Department will make available the data listed in Table 26.3-1. The Design-Builder shall be responsible for verifying any data used for the Project.

Table 26.3-1 – Source Data Supplied by the Department

<table>
<thead>
<tr>
<th>Information Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photogrammetric mapping</td>
</tr>
<tr>
<td>Records Plans</td>
</tr>
<tr>
<td>Preliminary Design CADD Files</td>
</tr>
<tr>
<td>USACE Bathymetric Survey (2009)</td>
</tr>
</tbody>
</table>

26.4 4D/5D MODELING DELIVERABLES

At a minimum, the Design-Builder shall submit the items listed in Table 26.4-1 4D/5D Modeling Deliverables. Where applicable, electronic copies of deliverables listed in Table 26.4-1 – 4D/5D Modeling Deliverables shall be supplied as per the specifications given in Chapter 2 of the Department’s CADD Standards and Procedure Manual. All relevant Bentley MicroStation® files (including .DGN files) and Bentley InRoads® files (including DTM, ALG files) shall be compatible with the MicroStation 8i and InRoads 8i software versions.
Plans.

G. References to “Proposal” or “proposal” shall be interpreted to mean the “Contract Documents”;

H. Unless specifically stated otherwise in the Contract Documents, sampling and testing specified to be done by the Engineer or other Department staff, shall be performed by the Design-Builder’s Construction Quality Control (QC) staff;

I. Working Plans or working drawings, as defined in Part 2 – DB § 101-3, shall be reviewed per DB § 111-12;

J. “Submission” or “submittal” used in the design shall be subject to review and Department acceptance per DB § 111-12;

K. All references to “the Engineer” or “the Engineer-in-Charge” shall mean the Department’s Project Manager or designated representative;

L. All references to “Contractor” shall mean “Design-Builder”;

M. References to: “Deputy Chief Engineer Design, Construction, Technical Services”; any Division in Main Office NYSDOT; “Regional Director”; “Regional Design Engineer”; “Materials Engineer”; “Construction Engineer”; or any other similar title and role shall mean the Department’s Project Manager or a designated representative;

N. References to “Departmental Engineering Geologist” shall have the meaning defined in Part 2 DB § 101-3;

O. References to “Departmental Geotechnical Engineer” shall have the meaning defined in Part 2 DB § 101-3;

P. References to “Contract Award” shall mean Notice to Proceed;

Q. References to “preconstruction meeting” shall mean “pre-work meeting”;

R. There shall be no quality payment adjustments under this Contract;

S. In each Specification delete the sections titled “Method of Measurement” and “Basis of Payment”;

T. Delete Section 637 – Engineer’s Field Office, Laboratory and Equipment;

U. Add the following to Section 648 – Subsurface Explorations:

“The Design-Builder shall be responsible to determine the nature, extent, and locations of subsurface explorations needed to obtain data and support subsequent analysis, design, and construction. The Design-Builder shall also be responsible for determining the adequacy of any subsurface exploration data provided by the Department to support its analyses, design, and construction and to supplement such data provided by the Department as the Design-Builder deems necessary.

“In planning and conducting its subsurface explorations, the Design-Builder shall comply with the technical requirements of Section 648, unless the Department agrees otherwise. The Design-Builder is not required to comply with the administrative requirements specified in Section 648”.

V. Delete Section 697 – Field Change Payment;

W. Delete Section 698 – Price Adjustments; and

X. Delete Section 699 – Mobilization.