

**TOWN OF PLYMOUTH
PROCUREMENT DIVISION
26 COURT STREET
PLYMOUTH, MA 02360**

BID 22142, JENNEY POND PEDESTRIAN BRIDGE REPLACEMENT

Issued: Tuesday, November 10, 2021
Mandatory Pre-Bid Meeting: Tuesday, November 23, 2021, at 10:00 a.m.
Due: Tuesday, December 7, 2021, at 10:00 a.m.

SPECIAL PROVISIONS AND SPECIFICATIONS PREPARED BY:

**SLR INTERNATIONAL CORPORATION
99 REALTY DRIVE
CHESHIRE, CT 06410**

TABLE OF CONTENTS

	<u>PAGE</u>
A. Invitation	4
Contract Period	4
Rule for Award	4
Bid Surety	4
Pre-Bid Conference	5
MassDOT Prequalification	5
DCAMM Certification	5
Prevailing Wage Rates	5
Labor and Materials Bond	5
Performance Bond	5
B. General Conditions	5
C. Contract Award	7
D. Insurance Requirements	7
E. Safety and Health Regulations	9
F. Withdrawal of Bids	9
G. Bid Status Information	10
H. Bid Questions	10
 Special Conditions	 11
 Sample Agreement and Associated Documents	 15
 ATTACHMENT 1: SPECIAL PROVISIONS & SPECIFICATIONS	 29
Introduction to the Special Provisions	30
Notice(s) to Contractor	30
Scope of Work	31
Work Schedule	31
Survey	31
Control of Water and Dewatering	32
Provisions for Travel and Prosecution of Work	32
Haul Routes and Posted Limits	32
Traffic Control	32
Engineering Directives	33
Personal Protective Safety Equipment for Contractor Personnel	33

Approved Equivalent		33
Section 4.00	Scope of Work	33
Section 5.00	Control of Work	33
Section 6.00	Control of Materials	36
Section 7.00	Changed Conditions	37
Section 8.00	Prosecution and Progress	39
Section 9.00	Measurement and Payment	40
Protection of Underground Utilities		40
Disposal of Excess Material		40
Item 1	Site Preparation	41
Item 2	Traffic Management	45
Item 3	Demolition and Removals	48
Item 4	Site Improvements	51
Item 5	Site Restoration	55
Subsection 120	Excavation	64
Subsection 150	Embankment	65
Subsection 748	Mobilization	66
Subsection 801	Conduit, Manholes, Pull Boxes and Foundations	67
Subsection 813	Wiring, Grounding and Service Connections	68
Subsection 820	Highway Lighting	69
Subsection 901	Cement Concrete	75
Subsection 970	Damp-Proofing	77
Subsection 990	Water Control	78
Subsection 995	Bridge Structure	80
ATTACHMENT 2: DRAWINGS		105
ATTACHMENT 3: PERMITS		124
ATTACHMENT 4: PREVAILING WAGE RATES		160
BID FORMS		195

TOWN OF PLYMOUTH
26 Court Street
Plymouth, MA 02360

November 10, 2021

INVITATION FOR BIDS 22142

A. INVITATION

Sealed Bids are sought by the Town of Plymouth for the removal and replacement of the pedestrian bridge at Jenney Pond Park.

Specifications and bid forms are available to download by registering at www.plymouth-ma.gov/bids-current.

Bids are to be submitted by **10:00 a.m. on Tuesday, December 7, 2021**, at which time they will be publicly opened and read. Postmarks will not be considered. All bids must be sealed and made upon forms furnished by the Procurement Division. Bids submitted on any other form will not be accepted as valid bids. Envelopes should be clearly marked **BID 22142, JENNY POND PEDESTRIAN BRIDGE REPLACEMENT**.

A mandatory Pre-Bid Conference will be held on **Tuesday, November 23, 2021, at 10:00 a.m.** at the Jenney Pond pedestrian bridge. **Any person interested in submitting a bid is required to attend.**

All bids are subject to the provisions of M.G.L. c.30 §39M, and these Bid and Contract Documents.

Contract Period:

This agreement shall be for the period as specified in the Notice to Proceed, and is to be completed by June 30, 2022.

Rule for Award:

The Contract will be awarded to the responsive, responsible, and eligible bidder offering the lowest bid price.

Bid Surety:

A Bid Deposit is required in the amount of five percent (5%) of the approximate total value of the bid based upon the bid price, and if applicable, the estimated quantities as shown on the Bid Form price schedule. Such Bid Deposit shall be in the form of a Cashier's, Certified or Bank Treasurer's check payable to the Town of Plymouth, or a bid bond from a licensed surety company authorized to do business in the Commonwealth of Massachusetts. The Bid Deposit of the successful bidder will be returned upon execution of the Contract. All others will be returned upon Contract award.

Pre-Bid Conference:

Any person interested in submitting a bid is required to attend a Pre-Bid Conference on **Tuesday, November 23, 2021, at 10:00 a.m.** The conference will be held at the Jenney Pond pedestrian bridge.

MassDOT Prequalification: N/A

DCAMM Certification: N/A

Prevailing Wage Rates:

This bid is subject to §39 of c.30, and §26 to 27G and §29 of c.149 of the Massachusetts General Laws as amended, including Prevailing Wage Rates as determined by the Commissioner of Labor and Industries that must be paid on this Contract. A copy of said rates is contained herein. Each Contractor and/or Subcontractor shall preserve its payroll records for a period of three (3) years from the date of completion of this Contract. In addition, each Contractor/Subcontractor must submit a copy of their weekly payroll records to the Procurement Division on a weekly basis.

Labor and Materials Bond:

This bid is subject to §39 of c.30, and §26 to 27G and §29 of c.149 of the Massachusetts General Laws as amended, including the requirement for a Payment Bond. The successful bidder must furnish a bond in an amount fifty percent (50%) of the total Contract Price for payment by the Contractor and/or Subcontractors for labor performed or furnished and material used or employed therein, payable to the Town of Plymouth, issued by a responsible surety company authorized to do business in the Commonwealth of Massachusetts, the premiums of which are to be paid by the Contractor and included in the bid price.

Performance Bond: N/A

B. GENERAL CONDITIONS

1. All bids shall be based on the quantities set forth in the Invitation for Bids. These quantities shall be used as a basis for comparison of bid proposals. The quantities are based on the Town's estimates of the work to be performed during the term of this Contract; the Town does not expressly or by implication agree that the actual amount of work will correspond herewith and the Town reserves the right to increase or decrease the amount of any class or portion of the work as it may deem necessary, without change of price per unit.
2. The Town of Plymouth reserves the right to reject all bids, to waive technicalities, to advertise for new bids and to split awards as may be deemed to be in the best interest of the Town. The contract(s) will be awarded by the Town within thirty (30) business days after opening bids. The Town reserves the right to require samples of materials for inspection and testing.
3. All words, signatures and figures submitted on the bid shall be in ink. Bids which are conditional, obscure or which contain additions not called for, erasures, alterations or irregularities, or any prices which contain abnormally high or low prices for any item, may be rejected as informal. More than one (1) proposal from the same bidder will not be considered.

4. The successful bidder shall comply with all applicable Federal, State and local laws and regulations.
5. The Town's policy on awarding Contract(s) to bidders with identical prices states: "When bids for goods and services are requested and received by the Town, the award is made to the lowest responsive and responsible bidder. If two (2) or more bid prices are identical and all tied bidders are responsive and responsible, and award will be made according to the first of these three (3) conditions to apply:
 - a. Past service to the Town; if one of the tied bidders has provided this or similar services in a satisfactory manner in the past, it will be awarded to that bidder;
 - b. A bidder based in Plymouth
 - c. Random selection – flip of a coin, or drawing if more than two (2) are tied"
6. Purchases made by the Town are exempt from taxes and bid prices must exclude any taxes. Tax exemption certificates will be furnished upon request.
7. Verbal orders are not binding on the Town and deliveries made or work done without formal Purchase Order or Contract are at the risk of the Contractor and may result in an unenforceable claim.
8. An item equal to that named or described in the Specification of the Contract may be furnished by the Contractor and the naming of any commercial name, trademark, item or manufacturer not mentioned by name or as limiting competition, but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the Specifications. The name and identification of all materials other than the one specifically named shall be submitted to the Town for approval, prior to purchase, use or fabrication of such items. Subject to the provisions of §39J of c.30 of the Massachusetts General Laws, approval shall be at the sole discretion of the Town, shall be in writing to be effective, and the decision of the Town shall be final. The Town may require tests of all materials so submitted to establish quality standards at the Contractor's expense. All directions, specifications and recommendations by manufacturers for the installation, handling, storing, adjustment and operation of their equipment shall be complied with; responsibility for proper performance shall continue to rest with the Contractor.

For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes in the work as shown. If no manufacturer is named, the Contractor shall submit the product for intended use for approval of the Town.

Except as otherwise provided for by the provisions of §39J of c.30 of the Massachusetts General Laws, the Contractor shall not have any right of appeal from the decision of the Town condemning any materials furnished if the Contractor fails to obtain the approval for substitution under this clause. If any substitution is more costly, the Contractor shall pay for such costs.

9. The Contractor shall replace, repair or make good, without costs to the Town, defects or faults arising within one (1) year after date of acceptance or articles furnished hereunder (acceptance

not to be unreasonably delayed) resulting from imperfect or defective work done or materials furnished by the Contractor.

10. The Contractor shall not discriminate against any person on the grounds of race, color, marital status, physical disability, age, sex, sexual orientation, religion, ancestry, or national origin in any manner prohibited by the laws of the United States, the Commonwealth, or the Town of Plymouth.

C. CONTRACT AWARD

Award of this bid will be made to the bidder who offers the lowest price(s) and who is deemed responsive, responsible and eligible. Determination of responsiveness, responsibility and eligibility shall be based solely on the following criteria:

1. Bidders will be deemed responsive if they complete all required forms as included in the attached Bid Forms package to the satisfaction of the Town.
2. Bidders will be deemed responsible and eligible if:
 - a. Its bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work;
 - b. It shall certify that they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;
 - c. It shall also certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten (10) hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee;
 - d. Where the provisions of §8B of c.81 apply, the bidder shall have been determined to be qualified thereunder;
 - e. If the bidder provides at least six (6) references as evidence that it has a minimum of ten (10) years' experience performing work of a similar scope and scale in the Commonwealth of Massachusetts. Evidence shall include: Owner's name, Owner's contact information, name of project, description of project, year project completed, and the project engineers contact information.

D. INSURANCE REQUIREMENTS

1. The Contractor shall carry and continuously maintain until completion of the Contract, insurance as specified below and in such form as shall protect them performing work covered by this Contract, or the Town of Plymouth and its employees, agents and officials, from all claims and liability for damages of bodily injury, including accidental death, and for property damage which may arise from operations under this Contract. The Contractor covenants and agrees to hold the Town and its employees, agents and officials harmless from loss or damage due to claims for

personal injury and/or property damage arising from, or in connection with, operations under this Contract.

2. Except as otherwise stated, the amounts of such insurance shall be for each policy, not less than:
 - a. **General Liability** of at least one million dollars (\$1,000,000.00) Bodily Injury and Property Damage Liability, Combined Single Limit with a two million dollars (\$2,000,000.00) Annual Aggregate Limit. **The Town of Plymouth shall be named as “Additional Insured”.**
 - b. **Automobile Liability** of at least one million dollars (\$1,000,000.00) Bodily Injury and Property Damage per accident. **The Town of Plymouth shall be named as “Additional Insured”.**
 - c. **Worker’s Compensation Insurance** as required by law.
 - d. **Property Coverage** for materials and supplies being transported by the Contractor as the Town’s Property Contract provides coverage for personal property within 1,000 feet of the premises.
 - e. **Umbrella Liability** of at least three million dollars (\$3,000,000.00) per occurrence, three million dollars (\$3,000,000.00) aggregate. **The Town of Plymouth shall be named as “Additional Insured”.**
3. All policies shall be so written that the Town will be notified of cancellation or restrictive amendment at least thirty (30) days prior to the effective date of such cancellation or amendment. A certificate from the Contractor’s insurance carrier showing at least the coverage and limits of liability specified above and expiration date shall be filed with the Town before operations are begun.
4. Such certificates shall not merely name the type of policy provided, but shall specifically refer to this Contract and shall state that such insurance is required by the Contract. The Contractor shall make no claims against the Town of Plymouth or its officers for any injury to any of their officers or employees or for damage to their trucks or equipment arising out of work contemplated by this Contract.
5. The Contractor shall, to the maximum extent permitted by law, indemnify and save harmless the Town of Plymouth, its officers, agents and employees from and against any and all damages, liabilities, actions, suits, proceedings, claims demands, losses, costs and expenses (including reasonable attorney’s fees) that may arise out of or in connection with the work being performed or to be performed by the Contractor, its employees, agents, subcontractors or materialmen. The existence of insurance shall in no way limit the scope of this indemnification. The Contractor further agrees to reimburse the Town of Plymouth for damage to its property caused by the Contractor, its employees, agents, subcontractors or materialmen, including damages caused by use of faulty, defective or unsuitable material or equipment, unless the damage is caused by the Town of Plymouth’s gross negligence or willful misconduct.

E. SAFETY AND HEALTH REGULATIONS

The successful bidder shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PS-91-596) and under §107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

The successful bidder shall have a competent person or persons, as required under the Occupational Safety and Health Act, on the site to inspect the work and to supervise the conformance of the work within the regulations of the Act.

This project is subject to the Safety and Health Regulations of the United States Department of Labor and Industries, Division of Industrial Safety “Rules and Regulations for the Prevention of Accidents in Construction Operations (Industrial Bulletin No. 12).” Contractors shall know the requirements of these regulations.

The Contractor shall provide the following safety documents upon Contract award:

1. The Safety Acknowledgement Agreement Form (which will be issued with the Contract), and
2. The Company’s Health and Safety Manual.

For projects over one million dollars (\$1,000,000.00) the awarded Contractor shall submit a job specific Health and Safety Plan (HASP) to the Town’s Safety Compliance Officer for review, before commencing any portion of the work on site. The plan shall include the analysis of the significant hazards to life, limb, and property inherent in the performance of work, and plan for controlling these hazards.

The Contractor shall inform the permitting authority within **twenty-four (24) hours** if any accidents/incidents resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies or equipment that arises in connection with the work.

In any emergency affecting the safety of persons or property, the Contractor shall immediately act in the exercise of reasonable judgement to prevent threatened damage, injury or loss. The Contractor shall immediately notify the Town of such emergency.

Without limiting the Contractor’s responsibilities described in the Bid Documents, the Contractor shall take all reasonable precautions for the safety of, and the prevention of, injury or damage to all agents, employees and contractors on the project, and all other persons who may be affected thereby including the general public.

F. WITHDRAWAL OF BIDS

Except as hereinafter expressed provided, once a bid is submitted and received by the Town, the bidder agrees that they may not and will not withdraw it within thirty (30) calendar days after the actual date of the opening of bids.

Upon proper written request and identification, bids may be withdrawn as follows:

1. At any time prior to the designated time for opening bids;

2. Provided the bid has not been accepted by the Town, at any time subsequent to thirty (30) days following the actual date of bid opening.

Unless a bid is withdrawn as provided above, the bidder agrees that it shall be deemed open for acceptance until a Contract has been executed by both sides or until the Town notifies the bidder in writing that their bid was rejected or that the Town does not intend to accept it, or returns its Bid Surety. Notice of acceptance of a bid shall not constitute rejection of any other bid.

G. BID STATUS INFORMATION

If you received Bid Documents directly from the Town, and provided the Town with an email address for delivery of **addenda**, the Town intends to deliver a copy of each addendum to you at such email address, but the Town shall not be responsible for any failure of a bidder to receive any addenda. Notwithstanding the foregoing, bidders are solely responsible to check for and confirm their receipt of any addenda in advance of the bid deadline.

Bid Results will be available on the Town's website at www.plymouth-ma.gov/current-bids/pages/bid-results. Bid results will not be provided over the phone.

Notification of award of Contract will be mailed to all bidders.

H. BID QUESTIONS

Please contact Sandra Strassel, Procurement Officer, at (508) 747-1620, ext. 10107, if you have any questions on the bid process. Questions regarding the project or specifications must be submitted in writing and emailed to sstrassel@plymouth-ma.gov at least five (5) days prior to the bid opening date. At the discretion of the Town, questions will be answered by written addenda. Bidders may not rely upon oral responses to questions, and may rely solely upon written addenda, if any.

SPECIAL CONDITIONS

EQUIPMENT: The Contractor shall furnish equipment which will be effective, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the work within the time stipulated in the Bid Documents. If at any time such equipment appears to the Town to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, the Town may order the Contractor to increase the efficiency, change the character or increase the equipment, and the Contractor shall conform to such order. Failure of the Town to give such order shall in no way relieve the Contractor of their obligations to secure the quality of the work and rate of progress required.

WORK HOURS: Normal work hours will mean up to five (5) 8-hour days, Monday through Friday. In order to work hours not within this span for the Contractor's benefit, they shall request a written authorization to be approved by the Town. For work outside the normal day, work on Saturdays, Sundays or legal holidays, if any be performed, the Contractor will receive no extra payment, but compensation shall be considered as having been included in the prices as stipulated for the appropriate items of work as listed in the bid.

APPROVAL OF MATERIALS: Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Town. No materials shall be delivered to the worksite without prior approval of the Town.

The Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of a claim against the Town.

SUBSTITUTES OF APPROVED "OR EQUAL" ITEMS: Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other suppliers may be accepted by the Town if sufficient information is submitted by the Contractor to allow the Town to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of substitute items of material and equipment will not be accepted by the Town from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or requirement, the Contractor shall make a written application to the Town for acceptance thereof certifying that the proposed substitute will perform adequately similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice the Contractor's achievement of substantial completion on time, whether or not acceptance of the substitute for use in the work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the Town for work on the project) to adapt the design to the proposed substitute and whether or not incorporation of use of the substitute in connection with the work is subject to payment of any license fee or royalty.

All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Town in evaluating

the proposed substitute. The Town may require the Contractor to furnish, at the Contractor's expense, additional data about the proposed substitute.

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Town if the Contractor submits sufficient information to allow the Town to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by the Town will be similar to that stated previously.

The town will be allowed a reasonable time within which to evaluate each proposed substitute. The Town will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Town's prior written acceptance which will be evidenced by either a change order or an approved Shop Drawing. The Town may require the Contractor to furnish, at the Contractor's expense, a special performance guarantee or other surety with respect to any substitute. The Town will record time required by the Town and Town's consultants in evaluating substitutions proposed by the Contractor, and in making changes in the Contract Documents occasioned thereby. Whether or not the Town accepts a proposed substitute, the Contractor shall reimburse the Town for the charges of Town's consultants for evaluating each proposed substitute.

TEMPORARY UTILITIES: The Contractor shall make all arrangements for and furnish at their expense all water, electric, telephone or other utility required by them for construction purposes.

LOCATION OF ALL UTILITIES: The location of the existing utilities must be established and verified by the Contractor. The Contractor shall make arrangements with the appropriate utility companies to have all existing utilities marked along the course of this work by such means as necessary. The Contractor shall preserve such marked locations until the work has progressed to the point where the encountered utility is fully exposed or protected as required. It shall be the Contractor's responsibility to notify the proper authorities or utility before interfering therewith.

SAFETY CONTROL: The Contractor shall provide and maintain all required safety equipment such as barricades, detour barriers and signs, lights, walkways, fences, and fire prevention equipment. If at any time before the commencement or during the progress of work, or any part of it, such methods and procedures as used appear to the Town as unsafe, insufficient or improper, the Town may order the Contractor to increase their safety of efficiency or to improve their character,, and the Contractor shall conform to such orders. Failure of the Town to give such an order to increase such safety, efficiency, adequacy or any improvements shall not release the Contractor from their obligation to secure the safe conduct and quality of work specified. Notwithstanding the foregoing, nothing herein obligates the Town to perform any review or inspection of any of the Contractor's methods or procedures.

OCCUPATIONAL SAFETY AND HEALTH ACT: The Contractor's particular attention is called to the rules and regulations included in Public Law 91-596, known as the "Occupational Safety and Health Act of 1970" (OSHA).

MAINTENANCE OF TRAFFIC: The Contractor shall be responsible for the maintenance of traffic with the maximum of safety and practicable convenience to such traffic during the life of the contract whether or not work thereon has been suspended temporarily. The work shall be carried on in such a manner as to provide safe passage at all times for public travel and with least obstruction to traffic.

The convenience of the general public and of the residents along and adjacent to the work shall be provided for in an adequate and satisfactory manner.

Portable barrier fences with appropriate signs shall be used for safety control in establishing traffic patterns (detours, etc.). These portable barrier fences shall meet the approval of the Director of Marine and Environmental Affairs or their designee, provided that any such approval or lack thereof shall not relieve the Contractor of their obligation to use appropriate barrier fences.

Roadways, driveways and foot paths closed to the traffic shall be protected by suitable barricades and warning signs, and the Contractor shall provide and maintain adequate lights and illumination. Therefore, they shall be held responsible for all damage to the work due to any failure of signs and barricades to protect the work properly from traffic, pedestrians, animal or other causes.

POLICE DETAIL: The Contractor shall coordinate with the Plymouth Police Department the number of traffic police required in either the appropriate traffic management plan (TMP) template (see MassDOT's website at www.mass.gov/lists/construction-details) or deemed necessary for the direction and control of traffic within the site.

The Contractor shall submit the requested and signed police detail schedule as called in and arranged directly with the Police Department on a weekly basis. Police details will be paid directly by the Contractor. The Contractor shall be responsible for scheduling and canceling police details if not needed. It is the Contractor's responsibility to cancel a detail(s) at a minimum of four (4) hours in advance of the start of the shift if conditions so warrant. Police details not cancelled in time shall be paid for by the Contractor.

RESTORATION (WORK IN IMPROVED PROPERTY AREAS): The Contractor, at their own expense, shall care for, replace and restore to good condition, satisfactory to the Town, and public or private property (i.e. shrubs, hedges, trees, public or private ways, sewer drains, water or other pipes, catch basins, wires, buildings, fences, posts, poles, mailboxes, stone walls or other structures) negligently damaged by their work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations.

The Contractor shall also restore to original condition, or better, any lawn or other planted area interfered with, including fertilizing, loaming, and seeding as required, once again at the Contractor's expense.

Suitable materials, equipment and methods shall be used for such restoration.

BOUNDS AND PROPERTY MARKERS: All bounds and property markers disturbed in the course of the work shall be replaced by the Contractor at their expense.

The Contractor shall employ a registered land surveyor to reset all bounds and property markers.

TELEPHONE NUMBERS: The telephone numbers of the following Town of Plymouth Departments are:

POLICE	(508) 830-4220 (business)
FIRE	(508) 830-4213 (business)
HIGHWAY	(508) 830-4162, ext. 12101
WATER	(508) 830-4162, ext. 12136

ENGINEERING (508) 747-1620, ext. 10120

SEWER (508) 830-4159

PUBLIC WORKS (508) 830-4162, ext. 12105

Town Office Building Hours:	Monday, Wednesday, Thursday	7:30 a.m. to 4:00 p.m.
	Tuesday	7:30 a.m. to 6:30 p.m.
	Friday	7:30 a.m. to 12:00 p.m.

LEGAL REQUIREMENTS: The Contractor shall keep themselves fully informed of, and comply with, all laws, ordinances and regulations of the Federal, State and municipal governments which may be in force during the life of the contract, and in any manner affecting their employees or the conduct of work of materials used on said work.

PERSONAL SUPERVISION BY CONTRACTOR: The Contractor or their duly authorized and approved representative shall give personal attention to the fulfillment of the contract. The Contractor shall have on the worksite, at all times, a competent representative authorized to receive and execute any order of direction of the Town.

The representative should also accept any notices given to the Contractor under the provisions of the contract.

CLEANUP: During the course of the work, the Contractor shall keep the site of their operations in as clean and neat a condition as possible. They shall dispose of all residue resulting from the construction work on a daily basis and, at the conclusion of work, they shall remove and haul away structures and other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

SAMPLE AGREEMENT & ASSOCIATED DOCUMENTS

THIS AGREEMENT, made this ____ day of _____, 2021, by and between the TOWN OF PLYMOUTH, with an office at 26 Court Street, Plymouth, Plymouth County, Massachusetts, 02360, hereinafter called the “Owner”, and _____, with an office at _____, hereinafter called the “Contractor”.

WITNESSETH, that the Owner and the Contractor, for the consideration hereafter named, agree as follows:

Article 1. SCOPE OF WORK: The Contractor shall perform all the work required by the Contract Documents for the removal and replacement of the Jenney Pond Park Pedestrian Bridge, as described in attached Bid Documents 22142.

Article 2. TIME OF COMPLETION: The Contractor shall commence work under this Contract on the date specified in the written “Notice to Proceed” from the Owner and shall bring the work to full completion on or before June 30, 2022.

Article 3. CONTRACT SUM: The Owner shall pay the Contractor in current funds for the performance of the work, subject to additions and deductions by Change Order, the Contract Sum of _____ (\$_____).

Article 4. CONTRACT DOCUMENTS: The following, together with this Agreement, form the Contract and all are as fully a part of the Contract as if attached to this Agreement or repeated herein; the advertisements, Bid Documents, Contract Forms, Specifications, Drawings, Addenda and Change Orders issued after execution of the Contract.

Notwithstanding anything to the contrary in the Contract Documents, in the event of any conflict or inconsistency in and among the provisions of the Contract Documents, the provisions resulting in the greater quantity and better quality of goods and services and greater liability protection for the Town, as reasonably determined by the Town, shall control.

“NOTICE TO PROCEED” AND PRE-CONSTRUCTION CONFERENCE:

A written “Notice to Proceed” shall be issued to the Contractor after receipt of all required documents. No work shall be performed by the Contractor until they have received the “Notice to Proceed” from the Town.

Prior to start of the work, the Contractor, all subcontractors, the project manager, and the Owner shall attend a Pre-Construction Conference. The Conference will serve to acquaint the participants with the general plan of Contract administration; and requirements under which the construction operation is to proceed. The date, time and place of the Conference will be furnished to the Contractor by the project manager.

GENERAL CONDITIONS

1. Funding Source: This project is funded through a Town of Plymouth appropriation.
2. Contract Plans and Specifications: All plans, Specification and Addenda, hereinafter enumerated or referenced in this Contract, shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein set fully forth. The Table of Contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions of which they refer.
3. Additional Instructions and Detail Drawings: The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor and the Director of Marine and Environmental Affairs will prepare jointly: (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Director of Marine and Environmental Affairs in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of Shop Drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.
4. Shop or Setting Drawings: The Contractor shall submit promptly to the Director of Marine and Environmental Affairs two (2) copies of each Shop or Setting Drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Director of Marine and Environmental Affairs or their designee and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Director of Marine and Environmental Affairs or their designee with two (2) corrected copies. If requested by the Director of Marine and Environmental Affairs or their designee, the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Director of Marine and Environmental Affairs, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the plans and specifications, unless he notifies the Director of Marine and Environmental Affairs in writing of any deviations at the time he furnishes such drawings.
5. Materials, Services and Facilities:
 - a. It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.
 - b. Any work necessary to be performed after regular working hours, on Sunday or legal holidays, shall be performed without additional expense to the Owner.
6. Contractor's Title to Materials: No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that they have good title to all materials and supplies used by them in the work, free from all liens, claims or encumbrances.

7. Title to Work: The title to all work completed and in the course of construction and of all material on account of which any payment has been made shall be in the Owner's name.
8. Inspection and Testing of Materials:
 - a. All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The Owner will pay for all laboratory or inspection service direct, and not as part of the Contract.
 - b. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with Specifications and suitability for uses intended.
9. Express Warranty: The Contractor guarantees to the Owner that all materials incorporated into the work will be new unless otherwise specified or agreed. The Contractor also guarantees that all work will be done in a workmanlike manner, free of defects, and in conformance with any Specifications mentioned in this Contract.
10. Maintenance and Guarantee: The Contractor hereby guarantees that the entire work constructed by them under the Contract will meet fully all requirements thereof as to quality of workmanship and of materials furnished by them. The Contractor hereby agrees to make, at their own expense, any repairs or replacements made necessary by defects in materials or workmanship supplied to them that become evident within one (1) year after the date of the final payment, and to restore to full compliance with the requirements set forth herein for any part of the work constructed hereunder, which during said one (1) year period is found to be deficient with the respect to any provisions of the Specifications. The Contractor also agrees to hold the Owner harmless from claims of any kin arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written orders for the same from the Owner. If the Contractor fails to make the repairs and replacements promptly, the Owner may do the work and the Contractor shall be liable to the Owner for the cost thereof.
11. "Or Equal" Clause: Whenever a material, article or piece of equipment is identified on the Plans or in the Specifications by reference to manufacturer's or vendor's trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any materials, articles or equipment of other manufacturers and vendors will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed is, in the opinion of the Director of Marine and Environmental Affairs, of equal substance and function. It shall not be purchased or installed by the Contractor without the Director's written approval.
12. Surveys, Permits and Regulations: The Town will provide a baseline survey. The Contractor shall be responsible for all additional surveys/layouts necessary for the execution of the work.

The Contractor shall procure and pay for all permits, licenses and approvals necessary for the execution of the Contract.

The Contractor shall comply will all laws, ordinances, rules, orders and regulations relating to performance of the work, the protection of adjacent property and the maintenance of passageways, guard fences or other protective facilities.
13. Contractor's Obligations: The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this Contract, within the time herein specified, in accordance with the provisions of

this Contract and said Specifications, and in accordance with the Plans and Drawings covered by this Contract, and any and all supplemental Plans and Drawings, and in accordance with the direction of the Director of Marine and Environmental Affairs as given from time to time during the progress of the work. The Contractor shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of the Contract and Specifications, and shall do, carry on and complete the entire work to the satisfaction of the Director of Marine and Environmental Affairs and the Owner.

14. Weather Conditions: In the event of temporary suspension of work, or during inclement weather, or whenever the Director of Marine and Environmental Affairs shall direct, the Contractor will, and will cause their subcontractors to, carefully protect their work and materials against damage or injury from the weather. If, in the opinion of the Director of Marine and Environmental Affairs or their designee, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of their subcontractors to protect their work, such materials shall be removed and replaced at the expense of the Contractor.
15. Protection of Work and Property – Emergency: The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with the Contract. They shall at all times safely guard and protect their own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the Contract or by the Owner, or their duly authorized representatives.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Director of Marine and Environmental Affairs, in a diligent manner. The Contractor shall notify the Director of Marine and Environmental Affairs immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Director of Marine and Environmental Affairs.
16. Inspection: The authorized representatives and agents of the Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records.
17. Reports, Records and Data: The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payroll reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under the Contract.
18. Superintendence by the Contractor: At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Director of Marine and Environmental Affairs, or designee, and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.
19. Changes in Work: No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one (1) or a combination of the following methods:
 - a. Unit bid prices previously approved
 - b. An agreed lumps um
 - c. The actual cost of:
 - i. Labor, including foremen

- ii. Materials entering permanently into the work
- iii. The ownership of rental cost of construction plant and equipment during the time of use on extra work
- iv. Power and consumable supplies for the operation of power equipment
- v. Insurance
- vi. Wages to be paid.

To the cost under (c.) there shall be added a fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of the actual cost of work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

20. Time for Completion and Liquidated Damages: It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion of the work to be done hereunder are ESSENTIAL CONDITIONS of the Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed".

The Contractor agrees that said work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any extension thereof granted by the Owner, then the Contractor does hereby agree, as a partial consideration for the awarding of this Contract, to pay the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such Breach of Contract as hereinafter set forth, for each and every calendar day the Contractor shall be in default after the time stipulated in the Contract for completing the work.

The said amount of liquidated damages is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would sustain in such event and said amount shall be retained from time to time by the Owner from current periodic estimates.

It is further agreed that time is of the essence of each and every portion of this Contract and of any specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract as additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extensions are acceptable to the Owner; provided further, that the Contractor shall not be charged with liquidated damages or an excess cost when the delay in completion of the work is due to:

- a. *Any preference, priority or allocation order duly issued by the government*
- b. *Unforeseeable cause beyond the control and without fault of negligence of the Contractor, including, but not restricted to, acts of God or the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and severe weather*

- c. Any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a.) and (b.) of this article.*

Provided further, that the Contractor shall within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter. The amount of liquidated damages for this project shall be Five Hundred Dollars (\$500.00) per consecutive calendar day.

21. Correction of Work: All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Director of Marine and Environmental Affairs or their designee, who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture and methods of construction for the purposes for which they are used. Should they fail to meet the Director's approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at their own expense. Rejected materials shall immediately be removed from the site. If, in the opinion of the Director of Marine and Environmental Affairs, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgement of the Director shall be equitable.
22. Subsurface Conditions Found Different: Should the Contractor encounter subsurface and/or latent conditions in the site materially differing from those shown on the Plan or indicated in the Specifications, they shall immediately give notice to the Director of Marine and Environmental Affairs of such conditions before they are disturbed. The Director of Marine and Environmental Affairs will thereupon promptly investigate the conditions, and if they find that they materially differ from those shown on the Plans or indicated in the Specifications, will at once make such changes in the Plans and/or Specification as they may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 19 of the General Conditions.
23. Right of the Owner to Terminate Contract: The Owner may terminate this Contract by providing the Contractor and the Surety with ten (10) days written notice specifying the reasons for termination as outlined below:
- a. Violation of any of the provisions of this Contract by the Contractor or any of their subcontractors
 - b. A determination by the Owner that the Contractor has engaged in fraud, waste, mismanagement, misuse of funds, or criminal activity with any funds provided by this Contract.
 - c. Failure of the Contractor, for any reason, to fulfill in a timely and proper manner their obligations under this Contract, including compliance with applicable Federal, State and/or local law or regulations, and such procedures or guidelines as may be established.

In the event if any such termination, the Surety shall have the right to take over and perform the Contract; provided, however, that if the Surety does not commence performance within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion at the expense of the Contractor, and the Contractor and their Surety shall be liable to the Owner for any excess cost occasioned by the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances and plants as may be on the site of the work and necessary therefore.

If the Owner determines that a continuation of work on the project would endanger the life, health or safety of those working or living at or near the project site, or that immediate action is necessary to protect public funds and/or property, the Owner may suspend work or terminate this agreement by providing notice to the Contractor in the form of a telegram, mailgram, hand-carried letter, or other appropriate written means.

In addition, notwithstanding anything to the contrary in the Contract, the Owner may also terminate this Contract for its conveniences, including due to the lack of sufficient funds to complete the work. In such event, the Owner shall provide written notice of termination to the Contractor, and the Contractor shall thereupon cease all work other than work that is required to make the work and surrounding property safe, and the Owner shall pay the Contractor for all work performed in accordance with the terms of the Contract up to the date of the Contract, provided the Contractor shall not be entitled to any termination (or similar) damages or other costs and expenses that may be associated with a termination for convenience.

24. Payments to the Contractor:

- a. Not later than the tenth (10th) day of each calendar month, the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this Contract, but to insure the proper performance of the Contract, the Owner shall retain five percent (5%) of the amount of each estimate until final completion and acceptance of all work covered by this Contract; provided that the Contractor shall submit their estimate not later than the first (1st) day of the month; provided further that on completion and acceptance of each separate building, public work or other division of the Contract, on which the price is stated separately in the Contract, payment may be made in full, including retained percentages thereon, less authorized deductions.
- b. In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration.

25. Indemnification: The Contractor shall comply with the requirements of all applicable laws, rules and regulations in connection with the services of the Contractor, and shall exonerate, indemnify and hold harmless the Owner's officers, agents, and all employees from and against them, and local taxes or contributions imposed or required under the Social Security, Worker's Compensation, and Income Tax laws. Further, the Contractor shall exonerate, indemnify and hold harmless the Owner with respect to any damages, expenses or claims arising from or in connection with any of the work performed or to be performed under this Contract. This shall not be construed as a limitation of the Contractor's liability under the Contract or as otherwise provided by law.

26. Acceptance of Final Payment Constitutes Release: The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and liability to the Contractor. No payment, however, final or otherwise, shall operate to release the Contractor or their Sureties from any obligations under the Contract or the performance and payment bond.

27. Insurance: The Contractor shall not commence work under this Contract until they have obtained all the insurance required in the Invitation to Bid and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on a subcontract until the insurance required of the subcontractor has been so obtained and approved.

28. Flood Disaster Protection: The Owner of land subject to acquisition or improvement under this Contract, and their successors or assigns, are hereby obligated to obtain and maintain, during ownership of the land which is the subject of this Contract, such flood insurance as required with respect to financial assistance of acquisition or construction purposes under §102 (a) of the Flood

Disaster Protection Act of 1973. This obligation is binding notwithstanding the fact that construction on the land, which is the subject of this Contract, is not itself funded out of assistance provided under the Housing and Community Development Act of 1974.

29. Contract Security: The Contractor shall furnish a payment bond in an amount not less than fifty percent (50%) of the Contract Price or in a penal sum not less than that prescribed by State or local law, as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with the Contract.
30. Assignments: The Contractor shall not assign or subcontract the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this Contract.
31. Authority of the Director of Marine and Environmental Affairs: The Director of Marine and Environmental Affairs or their designee shall give all orders and directions contemplated under this Contract and Specifications relative to the execution of the work. The Director or their designee shall determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are to be paid for under the Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Director's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract and Specifications, the determination or decision of the Director shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

The Director or their designee shall decide the meaning and intent of any portion of the Specifications and of any Plans or Drawings where the same may be found obscure or be in dispute.
32. Notice and Service Thereof: Any notice to any Contractor from the Owner relative to any part of this Contract shall be in writing and considered delivered and the service thereof completed when said notice is posted, by certified or registered mail, to the said Contractor at their last given address, or delivered in person to the said Contractor or their authorized representative on the work.
33. Subcontract: The Contractor will insert in any subcontracts the Federal Labor Standards Provisions and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.
34. Interest of Member of or Delegate to Congress: No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this Contract or to any benefit what may arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.
35. Other Prohibited Interest: No official of the Town of Plymouth who is authorized in such capacity and on behalf of the Town to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of this project shall become directly or indirectly interested personally in this Contract or in any part thereof. No officer,

employee, architect, attorney, engineer or inspector of or for the Town who is authorized in such capacity and on behalf of the Town to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract or any other contract pertaining to the project.

36. Suspension of Work: Notwithstanding anything to the contrary in the Contract and related documents:

Should the work be delayed in any manner, for any reason, and by whomever caused, including but not limited to, due to the lack or delay of funding, and/or should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by any reason, including the absence of sufficient funds to complete the work, or as a result of any litigation or any other reason whether within or beyond the control of the Owner, the Contractor shall not be entitled to any additional compensation or any other damages on account of any such delays, and shall not make or assert claim for such compensation or damages, whether such claims are titled, claims for delay damages, out of sequence work, acceleration of the work, hindrance, or otherwise; but time for completion of the work will be extended to such reasonable time as the Town may determine will compensate for time lost by such delay with such determination to be set forth in writing, and this shall be the Contractor's sole remedy on account of any delay.

37. Access to Records: The Contractor shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Contract and such other records as may be deemed necessary by the Town to assure proper accounting for all project funds, both CDBG and non-CDBG shares. These records will be made available for audit purposes to the Owner or any authorized representative, and will be retained for three (3) years after final MSCP audit.

38. Age Discrimination Act of 1975: No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination from receiving Federal Financial Assistance.

The Contractor shall comply with the provisions of the Age Discrimination Act of 1975 (42 USC 6101 et seq.).

The Age Discrimination in Employment Act prohibits arbitrary age discrimination in employment.

39. Non-Discrimination: The Contractor shall adhere to the requirements set forth in Title VI of the Civil Rights Act of 1964 (Public Law 88-352), and the regulation issued pursuant thereto by HUD (24 CFR Part 1); Title VIII of the Civil Rights Act of 1968 (Public Law 90-284), as amended; §109 of the Housing and Community Development Act of 1974, and the HUD regulations issued pursuant thereto (24 CFR 570.601); Federal Executive Order 11063, as amended by Executive Order 12259 and the HUD regulations issued pursuant thereto (24 CFR 107); Executive Order 11246 and the rules, regulations and relevant orders of the U.S. Secretary of Labor, if applicable; the Age Discrimination Act of 1975 (42 USC 6101 et seq.); §402 of the Veterans of the Vietnam Era Act; §504 of the Rehabilitation Act of 1973 (29 USC 794); Massachusetts General Laws c.151B §1 et seq.; State Executive Order 74 as amended and revised by Executive Orders 116, 143 and 227, and EOCD regulation, procedures or guidelines; Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1979; and EOCD guidelines, procedures, or regulations.

The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, age, handicap, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and the employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, age, handicap, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rate of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of this non-discrimination clause. The Contractor shall state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, age, handicap, or national origin. The Contractor shall incorporate the foregoing requirements of this paragraph in all contracts for work to be performed in this paragraph in all contracts for work to be performed in accordance with this Contract and will require all of its subcontractors to incorporate such requirements in all subcontracts for program work.

Contracts are subject to Federal Executive Order 11246, as amended, shall be subject to HUD Equal Employment Opportunity regulation at 24 CFR Part 130 applicable to HUD assisted construction contracts.

The Contractor shall send to each labor union or representative or workers with which they have a collective bargaining agreement or other contract or understanding, a notice advertising the said labor union or worker's representatives of the Contractor's commitment under this subsection and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

In the event of noncompliance by the Contractor with the non-discrimination clauses of this Contract or with any such rules, regulations, or orders of the Secretary of Labor, the Contract may be cancelled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contract or Federally assisted construction contract procedures authorized in Executive Order 11246, or by rules, regulations or orders of the Secretary of Labor, as otherwise provided by law.

The Contractor shall include the provisions set forth herein in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to §204 of Executive Order 11245, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such actions with respect to any subcontract or purchase order as HUD or EOCD may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

40. Non-Federal Labor-Standards Provisions: The following Non-Federal Labor-Standards Provisions, including the provisions concerning maximum hours of work, minimum rates of pay, and overtime compensation, with respect to the categories and classifications of employees hereinafter mentioned are included in this Contract pursuant to the requirements of applicable State or local laws, but the inclusion of such provisions shall not be construed to relieve the Contractor or subcontractor from the pertinent requirements of any corresponding Federal Labor-Standard Provisions of this Contract. In case the minimum rates of pay set forth below shall be higher than the minimum rates of pay required by or set forth in the Federal Labor Standards Provisions of this Contract for corresponding

classifications, the minimum rates of pay for such classifications. The limitations, if any, in these Non-Federal Labor-Standards Provisions upon the hours per day, per week or per month which employees engaged on the work covered by this Contract may be required or permitted to work thereon shall not be exceeded.

41. Schedule of Salaries and Wages: The minimum wage rates and health and welfare contributions applicable to this Contract as determined by the Commonwealth of Massachusetts Executive Office of Labor and Workforce Development Department of Labor Standards under the provisions of M.G.L. c.149 §26-27H, inclusive as amended are attached hereto and incorporated herein. The greater of Federal or State prevailing wages, when both are applicable, shall be paid under this Contract and reported as required.
42. Massachusetts Labor Provisions:
 - a. In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers by the Contractor and subcontractors, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six (6) months at the commencement of their employment, who are male veterans as defined in M.G.L. c.4 §7 43rd Clause, and who are qualified to perform the work to which the employment relates; and secondly to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six (6) months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, in accordance with M.G.L. c.149 §26.
 - b. The minimum rates of wages to be paid mechanics and apprentices, chauffeurs, teamsters and laborers shall be set for in the schedule of rates of wages determined by the Massachusetts Department of Labor Standards.
 - c. In accordance with M.G.L. c.149 §34A, the Contractor shall, before commencing performance of the Contract, provide insurance for the payment of compensation and the furnishing of other benefits under c.152 to all persons to be employed under the Contract, and the Contractor shall continue such insurance in full force and effect during the terms of the Contract. Sufficient proof of compliance with this section must be furnished at the time of execution of this Contract. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the Contract and shall operate as an immediate termination thereof. The attention of the Contractor is directed to that portion of M.G.L. c.149 §34A which provides that whoever violates any of its provisions shall be punished by a fine of not more than One Hundred Dollars (\$100.00) or by imprisonment for six (6) months, or both; and, in addition, any Contractor who violates any provision of this section shall be prohibited from contracting, directly or indirectly, with the Commonwealth or any political subdivision thereof for the construction, alteration, demolition, maintenance or repair of, or addition to, any public works or public building for a period of two (2) years from the date of conviction of said violation.
 - d. The Contractor shall pay to any reserve police officer employed by them the prevailing rate of wage paid to regular police officers, as required by M.G.L. c.149 §34B.
43. Interest of Contractor and Employees: The Contractor covenants that he presently has no interest and shall not acquire interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degrees with the performance of their services hereunder. The Contractor further covenants that in the performance of the Contract, no person having any such interest shall be employed. Further, the Contractor shall adhere to the provisions of the Hatch Act (5 USC 1501 et seq.), which limits political activities by employees whose principal employment is in connection with an activity which is financed in whole or in part by Federal funds.

44. Severability: If any provision of this Contract is held invalid, the remainder of the Contract shall not be affected thereby, and all other parts of this Contract shall nevertheless be in full force and effect.
45. Confidentiality: The Contractor will protect the privacy of, and respect the confidentiality of, information provided by program participants, consistent with applicable Federal and State regulations, including M.G.L. c.66 §10, regarding access to public records.

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CONTRACTUAL LIABILITY

To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify, and hold harmless OWNER and its consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of designers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from performance of the work, provided that any such claim, damage, loss or expense(s) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

In any and all claims against OWNER or any of its consultants, agents or employees by any employee of CONTRACTOR, and subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, the indemnification obligation under the above paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefits acts.

Policies for General Liability, Automobile Liability, Workers' Compensation Insurance, and Umbrella Liability shall remain in effect during the one year correction period.

Such insurance as is herein certified applies to all operations of the insured in connection with, and necessary and incidental to, the work herein described at the locations stated.

It is hereby understood and agreed that the above policies will not be restrictively amended, materially changed nor canceled without 30 days advance notice by registered mail to OWNER.

SAMPLE – DO NOT SIGN

SAMPLE – DO NOT FILL IN

Authorized Representative Signature
(Include Evidence of Authorization)

Address

**TOWN OF PLYMOUTH
CONTRACTOR SAFETY ACKNOWLEDGEMENT FORM**

Contractor Company Name: SAMPLE – DO NOT FILL IN

Bid Number / Assigned Work:

Location(s):

Please initial each item:

_____ 1. Contractor, subcontractor, and any/all laborer(s) have been trained in the general safe work practices applicable to their trade.

_____ 2. Any Contractor personal or property accidents or cases of job-related injuries/illnesses must be immediately reported to the Safety Compliance Officer.

_____ 3. Contractors shall know the location of the nearest fire extinguisher, pull station alarm and first aid equipment.

_____ 4. Contractor work will be periodically monitored by management to ensure adherence to Town of Plymouth work requirements.

_____ 5. Depending on the nature of the Contractor's activities, the following permits must be issued prior to beginning work: Confined Space Entry Permit, Hot Work Permit, Roof-Top/Ceiling Permit and/or Excavation/Trenching.

All Contractors are required to sign, in agreement that they have received the Contractor Safety Acknowledgement and Agreement Form and have read and fully understand its contents. This form must be returned to Procurement, to be forwarded to the Safety Compliance Officer, and will be kept on file.

The undersigned Contractor represents and warrant that they shall comply with all applicable Federal, State and local laws, regulations and rules while engaged to perform services for the Town of Plymouth, Massachusetts. Any Contractors who violate these rules may be precluded from conducting work for the Town. The Contractor is also responsible for ensuring that all employees and subcontractors comply with the Town of Plymouth's safe work practices.

Contractor/Subcontractor

SAMPLE
Print Name

SAMPLE
Signature

Date

Safety Compliance Officer or Designee

SAMPLE
Print Name

SAMPLE
Signature

Date

All injuries/incidents must be reported to the Safety Compliance Officer, Michelle Newell, at (508) 747-1620, ext. 10123.

ATTACHMENT 1
SPECIAL PROVISIONS AND SPECIFICATIONS

INTRODUCTION TO THE SPECIAL PROVISIONS

The work to be performed hereunder shall conform to the Commonwealth of Massachusetts, Department of Transportation, “Standard Specifications for Highways and Bridges”, dated 2021, the "Supplemental Specifications", dated June 30, 2021, the Massachusetts Department of Transportation, "Construction Standard Details", dated 2017 and the By-Laws of the Town of Plymouth, Massachusetts, all as amended or supplemented herein.

References in the following Special Provisions, unless otherwise stated, are to the aforesaid “Standard Specifications.” In case of conflict between these Special Provisions and the aforesaid Standard Specifications, these Special Provisions shall take precedence and shall govern. The enforcement of the requirements of any of these Special Provisions shall not be construed as waiving any of the rights of the Party of the First Part contained in any of the other provisions of this Contract.

All work done under this contract shall be in conformance with the following:

- Commonwealth of Massachusetts Department of Transportation Standard Specifications for Highways and Bridges dated 2021
- Commonwealth of Massachusetts Department of Transportation Supplemental Specifications dated 2021
- Construction Standard Details dated October 2017
- 2009 Manual on Uniform Traffic Control Devices with Massachusetts Amendments dated May 2012
- Notes on Walks and Wheelchair Ramps for Designers and Construction Engineers dated March 2012
- Latest edition of American Standard for Nursery Stock; the Plans and these Special Provisions

Note: Any reference made to the "Department" shall be, for the purposes of this contract only, considered the Board of Selectman of the Town of Plymouth, Massachusetts.

Note: Any reference made to the "Engineer" shall be, for the purposes of this contract only, considered the Board of Selectman, acting directly or through an authorized representative, such representative acting within the scope of the particular duties entrusted to him.

Note: Any reference made to the "Party of the First Part" shall be, for the purposes of this contract only, considered the Town of Plymouth, Massachusetts or their duly authorized officials.

The Standard Specifications are hereby amended by the following modifications, additions and deletions.

NOTICE(S) TO CONTRACTOR

Note: It is the intent of these Special Provisions to modify the Method of Measurement and Basis of Payment for the Standard Massachusetts Department of Transportation (MassDOT) work items identified. Nothing in this specification shall relieve the contractor of his duty to perform his work in accordance with the MassDOT Standard Specifications.

SCOPE OF WORK

The proposed work for this project includes the removal of the existing pedestrian bridge at Jenney Pond Park, construction of proposed bridge abutments and wingwalls, installation of a prefabricated bridge superstructure, and installation of lighting and electrical components associated with the bridge and adjacent parking lot. Work also includes site improvement features including, but not limited to, the installation of new concrete sidewalks, a stone dust path, a paver pedestrian plaza, a cast-in-place concrete wall with stone veneer and granite cap, a granite block staircase, granite block seating, planting beds, landscaping features and other work as identified on the plans and detailed herein. The scope includes but is not limited to the following:

- Removal of the existing pedestrian bridge, including wooden abutments, piles, and superstructure.
- Demolition of existing trees and other items shown on the drawings.
- Excavation for new bridge abutments, wing walls and concrete footings,
- Installation of prefabricated bridge, bridge railings, abutments, wing walls, concrete columns and concrete footings.
- Installation of cast-in-place concrete wall and concrete sidewalks.
- Installation of pedestrian paver plaza with granite curb planting bed.
- Installation of a stone dust path, granite block staircase and granite block seating.
- Backfilling.
- Grading.
- Installation of electrical components, including lighting, within the proposed bridge and within the adjacent parking lot
- Installation and maintenance of sediment and erosion control measures.
- Installation of shrubs, perennials, mulch and seed mix.
- Restoration.

WORK SCHEDULE

The Contractor must maintain traffic on at least one travel lane on Spring Lane and Willard Place during working hours and maintain two-way traffic during nonworking hours, with the exception of the time when the road must be closed to enable replacement of the existing bridge. Traffic setups for lane closures shall not begin prior to 7:00 a.m., and all construction equipment shall be off the road by 3:30 p.m., including the removal of traffic control setups.

The contractor may be allowed extended working hours upon prior written approval of the Engineer.

SURVEY

The Contractor shall promptly report to the Engineer any survey discrepancies or design issues of which the Contractor or subcontractors become aware, so that the Engineer may take measures to resolve or minimize the consequences of any changes deemed necessary by the Engineer. The Contractor shall impose a similar notification requirement in all subcontracts.

CONTROL OF WATER AND DEWATERING

Compensation for any control of water or dewatering operations necessary to complete any work required in the contract shall be conducted in accordance with applicable local, state, and federal environmental permits, and the cost of permit compliance shall be included in Item 991.1.

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK

The Contractor shall prosecute his work so that traffic will be maintained through the work site through Spring Lane and Willard Place with a maximum of safety and convenience in accordance with the provisions of Section 7.09, Public Safety and Convenience.

Access to the parking spots on Spring Lane, except those designated on the drawings, must be maintained to vehicular traffic for the duration of this project. Temporary road closures are permitted for the installation of the prefabricated bridge in accordance with the typical traffic management details shown on the drawings. Access to the roundabout on Willard Place must be maintained to vehicular and pedestrian traffic.

HAUL ROUTES AND POSTED LIMITS

It is the Contractor's responsibility to ascertain whether haul routes are over accepted public ways or private ways prior to using same for hauling purposes, and it is further the Contractor's responsibility to ascertain whether there are any weight limitations or other restrictions and to abide by them. If the Contractor or his Subcontractor utilizes any bridges with posted limits, he shall submit to the Engineer a list of all vehicles including equipment used during construction and shall verify that weight restrictions are not exceeded. No additional compensation shall be granted due to any inconvenience imposed on the Contractor due to any haul routes.

TRAFFIC CONTROL

Traffic control shall comply with the applicable sections of Part VI of the latest edition of the *Manual on Uniform Traffic Control Devices*. Sign placement shall conform to the applicable sketches herein and/or as shown in said Part VI.

The Contractor shall provide and use the necessary (as directed) warning devices, barricades, drums, signs, special lighting units, special apparel, etc. in accordance with the provisions of Section 850, Traffic Controls for Construction and Maintenance Operations in the performance of the work.

Work areas on this project shall not be left overnight without adequate protection. A sufficient amount of traffic cones, drums, barricades, and hazard warning lighting devices will be placed and maintained as necessary and approved, or where and when directed by the Engineer.

Where the Town authorizes general traffic from a traveled way to be detoured over Town streets, the Contractor shall be responsible for maintenance of such detours and placing them in the equivalent condition they were in prior to general traffic being detoured. No extra payment will be made for such work.

ENGINEERING DIRECTIVES

Contractors can access MassDOT, Highway Division Engineering Directives at: <http://www.massdot.state.ma.us/highway/publications.aspx>

PERSONAL PROTECTIVE SAFETY EQUIPMENT FOR CONTRACTOR PERSONNEL

The Contractor is responsible to ensure that all personnel, including all subcontractors, working on the project are issued and are wearing all necessary personal protective safety equipment while working within the project limits. This equipment shall include, as a minimum, a hardhat and a safety vest regardless of the type of work being performed. Other safety equipment shall be added as required to perform the work in which the contractor and its subcontractors are engaged and in accordance with all local, state, and federal requirements in effect. Safety equipment shall be provided at no additional cost to the Town.

APPROVED EQUIVALENT (Supplementing Subsection 5.03 and Section 6.00)

For any materials named or described in these specifications, an approved equivalent to that named or described in the said specifications may be furnished.

SECTION 4.00 – SCOPE OF WORK

Section 4.00 – Scope of Work is amended as follows:

4.07 Maintenance of Detours – Delete paragraph "A" and replace with the following:

1. Where the Town authorizes general traffic from a traveled way to be detoured over Town streets, the Contractor shall be responsible for maintenance of such detours and placing them in the equivalent condition they were in prior to general traffic being detoured. No extra payment will be made for such work.

SECTION 5.00 – CONTROL OF WORK

Section 5.00 – Control of Work is amended as follows:

5.02 Plans and Detail Drawings – All submittals, shop drawings and working drawings shall be submitted directly to:

SLR International Corporation
99 Realty Drive
Cheshire, CT 06410
Attn: Mr. Andrew Greene, PE
Email: agreene@slrconsulting.com

5.03 Conformity with Plans and Specifications – The Contractor shall make his own determination of dimensions and details in the field and have no claim for difference between the plan and the actual field measurements.

5.07 Construction Survey Control– Delete the entire subsection and replace with the following:

- A. Construction baselines and benchmarks are shown on the plans. The survey control points (CP) provided herein are based on information derived from the original survey and **HAVE NOT** been verified by SLR International Corporation (SLR) since. These points are being furnished for informational purposes only and the user of this information is cautioned to verify the existence of, and field check the accuracy of these points prior to use. Any other information contained herein is copied from previous maps or plans and may not reflect current conditions. The user is cautioned not to rely on its accuracy. **SLR DISCLAIMS ANY LIABILITY** whatsoever to user of this document due to lost, damaged and/or disturbed CP's. There are no warranties, representations, expressed or implied and SLR cannot be held responsible for any discrepancies that may arise.
- B. The Contractor is responsible to perform his own construction stakeout of the project as defined within these specifications.
- C. The Contractor shall be responsible for the placement and preservation of adequate ties to all control points, whether established by him or found on the project, necessary for the accurate re-establishment of all base lines or center lines shown on the plans.
- D. All stakes, references, and batter boards including original, additional or replacement, which may be required for the construction operations, signing and traffic control shall be furnished set and properly referenced by the Contractor. He shall be solely and completely responsible for the accuracy of the line and grade of all features of the work. Any errors or apparent discrepancies found in previous surveys, plans, specifications or special provisions shall be called to the Engineer's attention by the Contractor for correction or interpretation prior to proceeding with the work.
- E. All staking shall be performed by qualified engineering or surveying personnel who are trained, experienced and skilled in construction layout and staking of the type required under the contract and who are acceptable to the Engineer. The personnel shall perform this staking under the direct supervision of a person, or persons, of engineering background experienced in the direction of such work and acceptable to the Engineer.
- F. The Engineer may check the control of the work, as established by the Contractor, at any time as the work progresses. The Engineer will inform the Contractor of any deficiencies identified; however, said notification does not relieve the Contractor of any responsibility for the accuracy of the layout work. Further, the Contractor shall, at his expense, correct or replace as required any deficient layout and construction work which may be the result of inaccuracies in his staking operations or of his failure to report inaccuracies in his staking operations or of his failure to report inaccuracies found in work done by the Engineer or by others. If, as a result of these inaccuracies, the Engineer is required to make further studies, redesign, or both, all expenses incurred by the Owner due to such inaccuracies will be deducted from any monies due the Contractor.
- G. The Contractor shall provide at his own expense all materials and labor as may be required to establish and maintain all project horizontal and vertical control grade lines, additional

reference marks and line and grade stakes. The Contractor's plan for project control shall be submitted to the Engineer for approval prior to starting any work.

- H. If the Contractor, through willfulness or carelessness, removes or permits to be removed such reference marks before the prosecution of the work requires it, they shall be replaced at his own expense. All work shall conform, during its progress and its completion, truly to the lines and grades shown on the plans and shall be done in a thoroughly substantial and workmanlike manner, in accordance with the plans and directions given by the Engineer from time to time as shall be deemed necessary by him during its execution.
- I. The Contractor shall exercise due care when working around property bounds at all locations.
- J. The Contractor shall promptly report to the Engineer any survey discrepancies, changed conditions, or design issues of which the Contractor or subcontractors become aware, so that the Engineer may take measures to resolve or minimize the consequences of any changes deemed necessary by the Engineer. The Contractor shall impose a similar notification requirement in all subcontracts.
- K. Should any damage to a bound result from the actions of the Contractor, it shall be replaced and/or realigned by the Contractor as directed by the Engineer. No further compensation will be due the Contractor for the materials and labor required to reestablish this bound in its proper orientation as shown on the plans.
- L. The Contractor will be provided with digital pdfs of the Contract Drawings upon which he will detail the "As-Built" line, grade and measurements. Completed As-Built drawings shall be submitted to the Engineer before final approval of the work and before final acceptance.
- M. The Contractor shall furnish all necessary personnel, engineering equipment and supplies, materials, transportation, and work incidental to the accurate and satisfactory completion of this work.

5.09 **Inspection of Work** – An inspector representing the Town of Plymouth may be present whenever work is being performed. Whenever the term "Engineer" appears in these documents, it shall be interpreted as meaning the Town's authorized inspector.

The Contractor will notify the Engineer whenever work is being performed and whenever materials are being placed. If for any reason the placing of materials is not carried on continuously, the Contractor shall give the Town sufficient advance notice so the inspector may be present when materials arrive. No materials shall be used or paid for under the Contract that have not been examined and passed outside the prescribed limits of work.

5.10 **Removal of Defective or Unauthorized Work** – The Contractor shall guarantee that the Work and services to be performed under this Contract, and all workmanship, materials and equipment performed, furnished, used, or installed in the construction of the same, shall be performed and furnished in strict accordance with the Plans, Contract Specifications, and other Contract Documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall

be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the Work as stated in the final estimate. If part of the Work is accepted in accordance with subsections 5.11 and 9.05, the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance.

If at any time within the said period of guarantee, any part of the Work requires repairing, correction or replacement, the Engineer may notify the Contractor in writing to make the required repairs, corrections, or replacements. If the Contractor neglects to commence making such repairs, corrections, or replacements to the satisfaction of the Engineer within three (3) days from the date of receipt of such notice, or having commenced fails to prosecute such Work with diligence, the Engineer may employ other persons to make the same and all direct and indirect costs of making said repairs, corrections, or replacements, including compensation for additional professional services, shall be paid by the Contractor.

Add the following:

5.12 Landscape Preservation – The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works and for excavation operations, all trees, native shrubbery, and vegetation shall be preserved and protected from damage that may be caused directly or indirectly by the Contractor's operations. Movement of men and equipment shall be done in a manner that will prevent damage to property.

All work areas shall be groomed and regraded in a manner to conform to the natural appearance of the landscape. Where destruction, scarring, damage, or defacing may occur as a result of the Contractor's operations, the same shall be repaired, replanted, reseeded, replaced or otherwise corrected at the Contractor's expense.

The location and grade of temporary access roads shall be subject to the approval of the Engineer. When no longer required by the Contractor, temporary access roads shall be regraded to conform to the natural contours and shall be left in a condition that will promote revegetation.

SECTION 6.00 – CONTROL OF MATERIALS

Section 6.00 – Control of Materials is amended as follows:

6.01 Source of Supply and Quality – The Contractor will be required to submit to the Engineer for approval, three copies of the manufacturer's or supplier's statement for each kind of material furnished, which shall certify compliance with these Contract Specifications and shall contain the information required by Section 6.01 of the Standard Specifications.

Whenever it is written that an equipment manufacturer must have a specified period of experience with his product, equipment that does not meet the specified experience period can be considered if the equipment supplier or manufacturer is willing to provide a bond or cash deposit for the duration of the specified time period that will guarantee replacement of that equipment in the event of failure. All shop drawings are to be clearly legible and

complete, including the title block. The following information should appear in the title block:

- a) Project location and City/Town
- b) Bridge, culvert or pole number or description
- c) Contract number
- d) Contractor
- e) Description of what is on drawing

A clear, signed Massachusetts Professional Engineer's Stamp is to be affixed.

SECTION 7.00 – CHANGED CONDITIONS

The following Subsections shall be amended as follows:

7.01 Laws to be Observed – Add the following to the end of "Section A. General":

In the conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize atmospheric emissions of air contaminants.

Combustible construction materials and rubbish shall not be burned. In lieu of burning trees and brush, these materials shall be removed from the site, chipped or shredded as provided in Section 101.

Dust nuisance resulting from construction activities shall be prevented by sprinkling water or by other methods wherever and as often as necessary. Salt shall not be used adjacent to wells, wetlands and waterways without the approval of the Engineer. The Contractor will be held liable for any damage resulting from dust originating from the work under Contract.

7.02 Prevention of Water Pollution – Sanitary Provisions – Add the following to the end of "Section A. General":

The Contractor's activities shall be performed by methods that will prevent entrance, or accidental spillage of solid matter, contaminants, debris or other objectionable pollutants and wastes into streams, watercourses, lakes and underground water sources. Objectionable pollutants and wastes include but are not limited to refuse, garbage, cement, steel, concrete, sewage, petroleum products, salts, paints, solvents and chemicals. Dewatering for earthwork operations or structure foundations adjacent to, or encroaching on waterways or wetlands shall be conducted in a manner to prevent muddy water and silty materials from entering the waterways or wetlands by construction of intercepting ditches, hay barriers, settling ponds, or by other approved means.

Turbidity increases in a waterway that are caused by construction activities shall be limited to that permitted by State water quality standards. This construction may include the diversion of a stream, construction and removal of a cofferdam, earthwork in or adjacent to a waterway, or construction of ditches and settling ponds. Mechanized equipment shall not be operated in flowing water except as necessary to perform the required work.

Note: The Contractor shall not store fuel nor permit any refueling of construction equipment while such equipment is in the stream or within 50 feet of its bank.

7.04 Motor Vehicles – The Department will not accept any materials delivered to any project in motor vehicles or semi-trailer units that exceed the legal maximum gross weight allowed for the particular class as specified in Section 19A of Chapter 90 of the General Laws of Massachusetts.

7.05 Insurance Requirements – The limits of the several kinds of liability insurance required for this Contract are as follows:

Contractor's Public Liability	\$500,000/\$1,000,000
Contractor's Property Damage Liability	\$500,000/\$1,000,000
Contractor's Protective Public Liability	\$500,000/\$1,000,000
Contractor's Protective Property Damage	\$500,000/\$1,000,000

The following "save harmless clause" must be written out on each of the Contractor's insurance certificates.

"Assume the defense of the indemnity and save harmless the Town of Plymouth together with its officers, employees and agents, from all suits, loss, cost or damage arising out of or attributable to claims related to the Project".

7.09 Public Safety and Convenience – The Contractor's attention is directed to the fact that the work on this Project may be performed on streets that are utilized by pedestrians as well as by vehicles. The Contractor shall be responsible for the installation of adequate precautions and other safety measures and controls deemed necessary by the Engineer for his own personnel. Any automotive equipment not protected by traffic cones or flares while working on a public way under this Project shall have one amber flashing warning light mounted on the cab roof or on the highest practical point of the machinery. This light shall be in operation while the equipment is so working. Private drives and walks shall be maintained passable by the Contractor at his own expense, and the Contractor shall assume full responsibility for the adequacy and safety of the provisions made.

The Contractor shall not work on Saturday, Sunday, or Holidays without the approval of the Engineer, and he shall submit a proposed work schedule to the Engineer for his review before any work is started.

The Contractor shall be responsible for the prosecution of all necessary work in order to meet the schedule requirements with no additional compensation therefore, other than as provided under the Contract Proposal. The Contractor shall have no claim for damages of any kind on account of any interruption, delay or suspension of the work affected by the schedule

requirements. Trenches shall not be opened in traveled ways until all materials and equipment required for the work are at the site and available for immediate use. When work is not in progress, trenches in areas subject to public travel shall be covered with steel plates capable of safely sustaining a 20-ton truck-load with impact. The work at each trench shall be such that the placing of pipe, backfilling and patching of the surface closely follows each preceding operation.

The Contractor shall be responsible for maintenance of flow in all water courses, water pipes, drains and other pipes in the flow way of the proposed work or for any conveyance of the flow to a suitable point of discharge in such a manner that there will be no flow upon or hindrance to other work or cause a nuisance of any kind.

- 7.10 Barricades and Warning Signs** – All automotive equipment, not protected by traffic cones or flares that is in use in areas that are open to traffic shall have one amber flashing warning light mounted on the roof or the highest practical point of the machinery. These lights shall be in operation whenever the equipment is working on the road and/or traveling in the work area at a speed less than 20 MPH. Amber flashers working must be visible to both oncoming and overtaking vehicular traffic and shall have a minimum of 32 candlepower and a flashing frequency of 50-60 times per minute.

All vehicles, except passenger cars, that are assigned to the project and that operate at speeds of 25 MPH or less, shall have an official SLOW MOVING VEHICLE EMBLEM displayed. A sketch of the Emblem is included in the Construction Standards.

All personnel who are working on the traveled way or breakdown lanes and who are not protected by traffic cones shall wear approved safety vest.

SUBSECTION 8.00 – PROSECUTION AND PROGRESS

Section 8.00 - Prosecution and Progress is amended as follows:

- 8.02 Schedule of Operations** – The Contractor will submit a proposed schedule of operations at the pre-construction meeting.

- 8.08 Preservation of Roadside Growth** – The Contractor shall take all necessary care when excavating or working in the vicinity of existing trees that are to remain so that the root systems, trunks, and branches are not damaged. All precautions shall be taken to ensure that heavy equipment does not damage any roots, including those that lie below the limits of excavation.

Avoid any direct soil contamination in root zone areas by petroleum, petroleum products or solvents, salts, or any other pollutant during construction.

All cutting or trimming of trees to be preserved shall be executed by a Massachusetts Certified Arborist. The Contractor shall provide the Engineer with a copy of the certification prior to any work on trees.

Trees that, in the judgment of the Engineer and the Town of Plymouth Tree Warden, have been irreparably damaged by the Contractor shall be removed at no cost to the Owner. Cost of removal of destroyed trees shall be paid for by the Contractor.

8.11 Failure to Complete Work on Time – Delete Schedule of Liquidated Damages and replace with the following:

The Contractor shall pay, as liquidated damages, the sum of five hundred dollars (\$500.00) for each consecutive calendar day of delay for each phase in completing the Contract as further discussed in Section B.

SUBSECTION 9.00 – MEASUREMENT AND PAYMENT

Section 9.00 – Measurement and Payment is amended as follows:

9.04 Partial Payment – Delete the first two paragraphs and replace with the following:

The Engineer shall make a monthly estimate of the total amount of the work completed from one estimate to the next. The Town will process the estimated value from the Engineer's report. The Party of the First Part shall retain 5% of such estimated value, as part security for the fulfillment of the Contract by the Contractor, and shall also retain from said estimates an amount sufficient to cover claims which it may have against the Contractor and claims filed pursuant to Chapter 149, Section 29 and Chapter 30, Section 39A and F. The party of the First Part shall pay monthly to the Contractor while carrying on the work the balance not retained as hereinbefore provided. No such estimates or payment shall be required to be made when, in the Engineer's judgment, the work is not proceeding in accordance with the provisions of the Contract, or when in his judgment the total value of the work done since the last estimate amounts to less than \$1,000.00.

PROTECTION OF UNDERGROUND UTILITIES

The Contractor's attention is directed to the necessity of making his own investigation in order to assure that no damage to existing structures, drainage lines, traffic signal conduits, etc., will occur.

The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. The telephone number of the Dig Safe Call Center is 811 or 1-888-DIG-SAFE (888-344-7233).

DISPOSAL OF EXCESS MATERIAL

Surplus materials obtained from any type of excavation, and all existing and other materials not required to be removed and stacked or needed for use on the project, as determined by the Engineer, shall become the property of the Contractor and disposed of subject to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation.

Excess soil material acceptable to the town may be transported at the contractor's expense to the Plymouth DPW Facility at 159 Camelot Drive, Plymouth, MA.

ITEM 1.

SITE PREPARATION

LUMP SUM

General

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges for:

- Subsection 101 – Clearing and Grubbing
- Subsection 140 – Excavation for Structures
- Subsection 170 – Grading
- Subsection 440 – Roadway Dust Control
- Subsection 670 – Sedimentation Fence
- Subsection 748 – Mobilization
- Subsection 767 – Mulching and Erosion Control

For the following standard work Items:

- Item 101. Clearing and Grubbing
- Item 102. Selective Clearing and Thinning
- Item 102.51 Individual Tree Protection
- Item 103. Tree Removed – Diameter Under 24 Inches
- Item 104. Tree Removed – Diameter 24 Inches and Over
- Item 105. Stump Removed
- Item 141.1 Test Pit for Exploration
- Item 657. Temporary Fence
- Item 697. Sedimentation Fence
- Item 698.1 Geotextile Fabric for Stabilization
- Item 756. NPDES Stormwater Pollution Prevention Plan
- Item 767.8 Bales of Hay for Erosion Control

And the following:

Existing Utility Location and Protection

Work included under this item shall include the location and verification of all utilities and underground structures. The location of all utilities and underground structures shown on the drawings shall be considered approximate and shall be verified by the Contractor prior to any construction. The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. The contractor is responsible for the protection of all existing utilities at the project site and any costs associated with the repair of existing utilities should damage occur.

Temporary Facilities and Utilities

Work included under this item shall consist of furnishing all labor, equipment, and materials to operate, maintain, and remove all temporary facilities required by the Contractor during the construction period. Temporary facilities include, but are not limited to, temporary trailers and field offices, temporary plumbing, temporary wiring and lighting, temporary HVAC equipment, temporary fire protection and temporary waste disposal facilities.

Construction Entrance Anti-Tacking Pad

A construction entrance anti-tracking pad is a pad of aggregate located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a construction entrance anti-tracking pad is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust. Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. Permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways and parking lots, where a significant source of sediment is derived from mud and dirt carried out from unpaved roads and construction sites. The entrance should be a minimum length of 50 feet and minimum width of 30 feet, comprised of a 12-inch layer of Gravel Borrow Type A as shown on the plans. Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.

Temporary Construction Access Road

The work under this item shall consist of furnishing all labor, materials, tools and equipment, as and when required, to install the temporary construction access road to gain access to the work area. Work includes clearing and grubbing, formation of subgrade, grading, processed aggregate base (Division III, Section M2, of the Standard Specifications), compacted gravel borrow (Type C), and filter fabric as shown on plans.

The Contractor is responsible for the quantity of stone to construct the access road and is required to maintain the access road. The quantity of stone is unknown, depending on the proposed access road location. The Contractor is responsible to place the necessary quantity of stone. The Contractor is also responsible to supplement the access road as necessary during construction to maintain the top elevation of the access road.

Temporary Turbid Water Sump, Pump, and Settling Basin

The work under this item shall consist of furnishing all labor, materials, tools and equipment, as and when required to install and maintain temporary turbid water sumps, pumps, and settling basins on the site to manage sediment. The turbid water sump, pump, and settling basin may be required within the work area behind the cofferdams or at any other locations necessary for the contractor to control sediment on the site.

Debris Collection

Work included under this item shall include the installation, maintenance and removal of a debris collection system for the removal of the existing pedestrian bridge as indicated on the drawings. The debris collection system shall be installed underneath the existing bridge superstructure and shall be consist of netting or other material capable of capturing and containing any debris generated during the demolition of the existing timber bridge. The debris collection shall be designed and installed to prevent any construction materials and debris from entering the Jenney Pond waterbody. The contractor shall provide shop drawings to the Engineer for the debris collection system for approval prior to installation and prior to beginning any part of the bridge demolition.

Inlet Protection (Silt Sack)

Work included under this item shall include the installation, maintenance and removal of temporary inlet protection as indicated on the drawings. Inlet protection shall be the Silt Sack or approved

equal. Inlet protection shall be installed at all locations indicated on the drawings or as directed by the Engineer.

Item 102.51 Individual Tree Protection

Work included under this item shall include the protection of individual trees with highly visible orange construction fence as shown on the drawings.

Item 141.1. Test Pit for Exploration

The contract price shall include provisions for up to five (5) test pits within the project area, as determined by the Engineer.

Item 657. Temporary Fence

Work included under this item shall include the installation, maintenance and removal of temporary orange construction safety fence as required at the locations shown on the drawings. Temporary fence shall be highly visible orange construction fence Beacon Plus by TENAX, or approved equal.

Item 698.1 Geotextile Fabric for Stabilization

Temporary erosion control blanket shall be a biodegradable straw and coconut fiber erosion control blanket designed to provide all-natural erosion protection and assist with vegetation establishment on slopes of 2:1 or greater for 18 months. After the blankets degrade, soil erosion is controlled by the root, stem, and leaf structures of the mature vegetation. ECB shall be North American Green SC150BN, or approved equal.

U-shaped wire staples, metal geotextile stake pins, or triangular wooden stakes can be used to anchor ECBs and TRMs to the ground surface. Wire staples should be a minimum of 11 gauge. Metal stake pins should be 3/16-inch diameter steel with a 1.5-inch steel washer at the head of the pin. Wire staples and metal stakes should be driven flush to the soil surface.

All anchors should be 6 to 8 inches long and have sufficient ground penetration to resist pullout. Longer anchors might be required for loose soils. Use biodegradable composite or wooden stakes where dislodged metal staples or stakes might cause extreme hazards, such as near airport runways or areas where future mowing might cause risk.

Installation on Slopes – Begin at the top of the slope and anchor the blanket in a 6-inch deep by 6-inch wide trench. Backfill trench and tamp earth firmly. Unroll blanket downslope in the direction of the water flow. The edges of adjacent parallel rolls must be overlapped at least 3 inches and be stapled through the overlapped area at least every 2 feet. When blankets must be spliced, place uphill blanket end over downhill blanket (shingle style) with 6-inch overlap. Staple through overlapped area, approximately 12 inches apart. Lay blankets and mats loosely and maintain direct contact with the soil – do not stretch. Ensure good, consistent, direct soil contact.

ECBs must be stapled sufficiently to anchor the blanket and maintain contact with the soil. Staples must be placed down the center and staggered with the staples placed along the edges. Steep slopes (1H:1V to 2H:1V) require at least two staples per square yard. Moderate slopes (2H:1V to 3H:1H) require one to two staples per square yard (one staple every three feet on center). Gentle slopes require one staple per square yard.

Inspection and Maintenance – Temporary erosion control blanket shall be placed over any disturbed areas to prevent erosion during predicted large storms and at the direction of the Owner/Engineer to prevent sediment erosion. All blankets should be inspected periodically following installation. Inspect installation after significant rainstorms to check for erosion and undermining. Any failure should be repaired immediately. If washout or breakage occurs, reinstall the material after repairing the damage to the slope.

Item 756. NPDES Stormwater Pollution Prevention Plan

This item addresses the preparation and implementation of a Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit.

Pursuant to the Federal Clean Water Act, construction activities that disturb one acre or more are required to apply to the U.S. Environmental Protection Agency (EPA) for coverage under the NPDES General Permit for Storm Water Discharges from Construction Activities. On February 16, 2017 (82 FR 6534), EPA issued the final NPDES Construction General Permit (CGP) for construction activity. The 2017 CGP replaces the 2012 CGP (which expired on February 15, 2012), and will provide coverage for eligible new and existing construction projects for a period of five years.

The proposed construction activities disturb less than one acre, and coverage under the NPDES CGP and the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) *will not be required for this project.*

Method of Measurement and Basis of Payment

There shall be no measurement under this item. This work shall be paid for at the contract lump sum (L.S.) price and shall include all work, materials, tools, equipment, and labor necessary to complete the items listed above, under Item #1 “Site Preparation” including all clearing and grubbing activities, selective clearing and thinning, removal of existing vegetation as shown on the plans including tree limbs and branches that extend into the work area, installation and maintenance of all sedimentation and erosion control measures for the duration of construction, installation and maintenance of temporary fencing and any coordination with utility companies.

ITEM 2.

TRAFFIC MANAGEMENT

LUMP SUM

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highway and Bridges, Section 850 and the following:

The Contractor shall at his own expense furnish and maintain such traffic warning devices, safety cones, amber flashing lights, portable breakaway barriers Type III, Temporary Precast Concrete Median Barrier, Reflectorized Drum with flashers and temporary 72” chain link fence around the work area as specified in Sections 850 and 644 of the Standard Specification in order to protect the work and afford adequate protection to the traveling public.

The work conducted under this item consists of the work required under Item 851.1 Traffic Cones for Traffic Management and Item 852. Safety Signing for Traffic Management. The term Traffic Management shall refer to the operation in which the Contractor is required to install traffic safety control devices to protect his work zone from the motoring public, including the furnishing, transporting, and installation of Safety Signs and Traffic Cones.

Work under this Section consists of furnishing, installing, and maintaining in proper operating condition various traffic control devices (including signage, cones, arrow boards, and other items identified on the plans) for the protection of the traveling public and working personnel during construction and maintenance operations. The design, application, and installation of all devices shall conform to MassDOT's "Standard Details and Drawings for the Development of Temporary Traffic Control Plans" and the "Manual on Uniform Traffic Control Devices" latest edition, Part VI, hereinafter referred to as MUTCD, and/or as directed.

The Contractor shall be responsible for the installation of adequate safety precautions for the protection of the traveling public and all project personnel. All construction vehicles not protected by any form of traffic control device on a project that is open to traffic shall have an amber flashing light mounted on the cab roof or on the highest practical point of the machinery. The light shall be in operation whenever the equipment is working on the highway or travel way. Amber flashers must be a minimum of 40 candelas and have a flashing frequency of 50 to 60 times per minute. Either rotating beacons or strobe lights meeting these requirements are acceptable.

All materials provided by the Contractor under the items of this section shall remain the property of the Contractor upon completion of the project unless otherwise specified below.

All work under this Section shall conform to the approved Temporary Traffic Control Plan.

Traffic Cones for Traffic Management consists of furnishing, positioning, repositioning, maintaining, and removing, as needed and/or as directed, traffic cones and necessary ballast for the purpose of closing a lane, shifting traffic, channelizing, or otherwise redirecting traffic.

Traffic Cones shall be in good condition and sufficiently ballasted as determined by the Engineer. Any cones damaged by traffic shall be immediately replaced. The Contractor shall keep an adequate supply of spare cones on hand to replace any damaged cones.

The Contractor shall take steps to prevent cones from being blown over or displaced by wind or moving vehicular traffic. Cones shall not be left in position or on the highway when the construction

operations have ceased. If it becomes necessary for the Owner to remove any cones from the project due to negligence by the Contractor, all costs for this work will be charged to the Contractor.

Positioning, adjusting, and repositioning of all devices such as traffic cones, high-level warning devices, etc. not otherwise classified and paid for under other items in this contract are considered incidental, and no separate payment will be made.

Signs shall be fabricated from plywood, aluminum, or approved alternate substrate material. Plywood sign material shall be 5/8-inch Exterior MDO – General (one sided). Aluminum sign material shall be Type A, 0.080 inch thick, as specified in Subsection 828.42. The entire sign face shall be retro-reflectorized. Reflective sheeting shall conform to M9.30.0. Background sheeting for all construction warning signs shall be of a fluorescent orange color. The minimum spectral radiance factor, in accordance with Section 5.1 of ASTM E991, for the fluorescence shall be as follows:

New 110% minimum
Weathered 60% minimum

Furnishing, installation, and maintenance of traffic signs shall be included in the payment for this item. Signs that are damaged or are missing from their locations shall be replaced by the Contractor without additional compensation.

All signs shall be maintained in a satisfactory manner including the removal of dirt or road film that causes a reduction in sign reflective efficiency. All signs shall be mounted in compliance with the requirements of the MUTCD.

All signs not consistent with the use of the roadway shall be removed, completely covered, or turned away from traffic each day. In no case shall signs or their portable supports be left in the traveled way when the traffic management setup has been removed. Roll-up signs shall only be used for single work shift setups.

Method of Measurement and Basis of Payment

There shall be no measurement under this item. This work will be paid for at the contract lump sum (L.S.) price for "Traffic Management," which price shall include all materials, equipment, tools, labor, and all work incidental thereto for the completion of the work, including furnishing and maintaining such traffic warning devices, safety cones, amber flashing lights, temporary chain link fencing, temporary gates and portable barricades as necessary for compliance with MUTCD requirements in order to protect the work and afford adequate protection to the traveling public.

No separate payment will be made for traffic signs, construction signs, barricades, barrels, flashers, warning lights, traffic person (police or flaggers), etc., and all costs in connection therewith shall be included in the contract lump sum item "Traffic Management."

The contract lump sum price for "Traffic Management" shall also include temporarily relocating existing signs and sign supports as many times as deemed necessary and furnishing, installing, and removing temporary signs, supports and foundations, traffic drums, traffic cones, Type III – construction barricades, Type III – construction signs, temporary barriers, temporary impact

attenuators, etc., if necessary during construction of the project. Payment shall be based on the overall percent complete of the work, in accordance with the project schedule.

ITEM 3.

DEMOLITION AND REMOVALS

LUMP SUM

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges for:

Subsection 112 – Demolition of Buildings, Structures and Bridges
Subsection 112.61 – Demolition of Bridges
Subsection 140 – Excavation of Structures
Subsection 482 – Sawcutting

For the following work items:

Item 120.1 Unclassified Excavation
Item 482.4 Sawcutting Portland Cement Concrete

General

- A. Work included under Item 3. Demolition and Removals shall consist of furnishing all labor, materials, equipment and performing all operations for demolition, loosening, cutting, removal and disposing of the existing timber bridge, existing abutments, existing timber piles, existing timber railings, and all other miscellaneous materials associated with the complete removal of the existing pedestrian bridge as shown on the Drawings.

Work shall also consist of furnishing all labor, materials, and equipment for the sawcutting and removal of the existing concrete sidewalk off of Willard Place as shown on the Drawings. The extend of sawcutting will be determined in the field.

Work under this item also includes delivery and stockpiling of steel, wood and other salvage materials at the Town of Plymouth Highway Garage.

- B. Work shall include, but not limited to, the following:
1. The complete excavation, removal, and off-site recycling of any and all timber and miscellaneous material used to construct or support the existing timber bridge, timber and concrete abutments, timber piles, and timber railings, and its appurtenances to the limits and extents indicated in the Drawings.
 2. The cutting of the timber piles at existing grade as shown on the Drawings and to the acceptance of the Engineer and Owner.
 3. The sawcutting and removal of the existing concrete sidewalk off of Willard Place and removal of all materials associated with the complete removal of the sidewalk including concrete, reinforcement, and subbase stone to the acceptance of the Engineer and in accordance with the Standard Specifications Subsection 482.

4. Special care shall be taken not to damage or disturb the section of sidewalk to remain. The contractor is responsible to patch or repair any damage to the section of concrete sidewalk to remain.
3. Before removing any part of the existing structures, the contractor shall implement the approved water handling plan as outlined in Section 990 Water Control and install the Debris Collection under the existing bridge as outlined in Site Preparation.
4. The Contractor shall make a complete investigation of the existing structures, and of any special requirements that may be necessary to perform this work. No extra compensation will be made because of special requirements.
5. All materials not meeting the specifications for reuse in on-site restoration features shall be disposed of off-site as noted herein and in accordance with all local, State, and Federal regulations at the Contractor's expense.

Removal Methods

- A. No blasting for the removal of the bridge shall be allowed. Existing material to be removed by the Contractor shall be removed by such mechanical methods as he may propose, subject to the approval of the Engineer.
- B. The timber bridge shall be removed to the limits shown on the plans. The portions of the cut timber piles that are to remain shall be cut flush and free of jagged edges and/ or exposed timber.
- C. The Engineer reserves the right to require the Contractor to change his demolition methods, sequence and/or equipment, if and when, in the opinion of the Engineer, the safety of the public, or the integrity of existing structures and or new construction is jeopardized.
- D. The Contractor shall take all precautions and do such work as may be necessary to prevent damage to the completed portions of any new construction and existing structures to remain, due to his removal operations. Any damage to any existing structures to remain shall be repaired, prior to final payment, at the Contractor's expense.
- E. Reinforcing steel, embedded steel items and timber may be encountered in portions of the structure to be removed. These items shall be removed and disposed of as part of the work, or may be salvaged by the Contractor as noted below.
- F. The Contractor shall take all precautions and do such work as necessary to prevent damage to the structures to remain. The contractor will be responsible to correct any damage to these walls at his own expense.
- G. Excess material may be disposed of at the Plymouth Department of Public Works (DPW) facility located at 159 Camelot Drive, Plymouth MA. The town will accept bituminous

concrete, brick, concrete and clean fill. The concrete must not have any steel reinforcing. All large pieces of material shall be smaller than 12 inches measured along the longest axis. The contractor will be responsible for transporting all materials to the DPW facility and for coordinating with DPW staff prior to delivery and the necessary segregation of soil from concrete, brick and asphalt.

Method of Measurement and Basis of Payment

There shall be no measurement under this item. The work will be paid for at the contract lump sum (L.S.) price for “Demolition and Removals” which price shall include all materials, equipment, tools, labor and all work incidental thereto for the completion of the work including demolition, removal, cutting and disposing of the existing timber bridge, concrete sidewalk and all other miscellaneous materials associated with the complete removal of materials as specified on the Drawings and as herein specified.

ITEM 4.

SITE IMPROVEMENTS

LUMP SUM

General

Work under this item shall consist of furnishing and installation of Site Improvements as follows:

Site Improvement work includes furnishing and installation of the concrete sidewalk, resin-bound aggregate path, edge restraints, granite block staircase and associated handrail, granite block seating, unit paver plaza, granite curb, and all associated materials of these site improvement features as described herein. Work shall include all materials, operations, and establishment necessary to complete the work as specified and provide a stable functioning surface to the satisfaction of the Engineer.

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges for:

- Section 120 – Excavation
- Section 140 – Excavation for Structures
- Section 170 – Grading
- Section 260 – Subdrains
- Section 402 – Dense Graded Crushed Stone for Sub-base
- Section 501—Curb, Curb Inlets, Curb Corners & Edging
- Section 660 – Metal Pipe Rail
- Section 701 – Sidewalks, Wheelchair Ramps and Driveways

And the following work items:

- Item 120. Earth Excavation
- Item 120.1 Unclassified Excavation
- Item 170. Fine Grading & Compacting
- Item 402. Dense Graded Crushed Stone for Sub-Base
- Item 501. Granite Curb
- Item 701. Cement Concrete Sidewalk

And the following:

Concrete Sidewalk

Work under this item shall consist of excavation, preparation of subgrade, furnishing and installing crushed stone and concrete and finishing of concrete for the complete installation of the concrete sidewalk to the extents and limits shown on the Construction Drawings and to the acceptance of the Engineer. Crushed stone base course shall consist of Dense Graded Crushed Stone for Sub-Base (Item M2.01.7) to the depths indicated on the Construction Drawings. Concrete shall be in accordance with Mass DOT Cement Concrete for Sidewalks – 4,000 PSI, ¾-inch, 610 (Item M4.02.00). Work under this item also includes the labor and materials to furnish and install 6X6 6/6 Welded Wire Mesh (WMM), 3/8”W x ½”D grooves with joint sealer, polyethylene filler, and stiff broom finishing of the concrete surface as shown on the Construction Drawings and to the acceptance of the Engineer. Polyethylene filler shall be Mass DOT Preformed Expansion Joint Filler (Item

M9.14.0). Construction for the Concrete Sidewalk shall be in accordance with Section 701: Cement Concrete Sidewalks.

Resin-Bound Aggregate Surface Path

Work under this item shall consist of excavation, preparation of subgrade, and furnishing and installation of non-woven geotextile fabric, stone base, surface material, and urethane stabilizer for the complete installation of the resin-bound aggregate surface path to the extents and limits shown on the Construction Drawings and to the acceptance of the Engineer. Surface material shall consist of crushed stone with a urethane binding agent to the depths indicated on the Construction Drawings. Surface course shall consist of crushed stone (M2.01.5) to the depths indicated on the Construction Drawings. Base course shall consist of Open Graded Stone (Item M2.01.1) to the depths indicated on the Construction Drawings. Geotextile shall meet the specifications of Item M9.50.0, Type I Geotextile Fabric for Separation. Surface finish: Lightly broadcast clear crushed glass grit grade 300 onto the finished surface to provide increased skid resistance.

Work under this item shall also include the furnishing and installation of the urethane binding agent for crushed stone mixes. The stabilizer shall be a urethane binding agent as manufactured by KB Industries, or approved equal. The binding agent shall be applied according to the manufacturer's instructions including the proper application rate, application time, compaction and required subsequent treatments to the acceptance of the Engineer. Refer to the manufacturer's specifications for required application times at various application temperatures.

Paver Edge Restraints

Work under this item shall consist of excavation, preparation of subgrade, and furnishing and installation of paver edging as indicated on the Construction Drawings. Paver edging shall be Permaloc StructureEdge Aluminum Paver Restraint as manufactured by Permaloc Corporation, or approved equal. Paver edging shall be 3/16" x 2 1/4" with 0.210" top lip and a Black (BL) Duraflex-Electrostatically applied baked on paint finish that meets AAMA 2603. Paver edging shall be installed with 3/8" x 10" spiral steel spikes at 12" O.C. as indicated on the Construction Drawings. Install paver edging per the manufacturer's installation guidelines, as indicated on the Construction Drawings, and to the acceptance of the Engineer.

Landscape Edge Restraint

Work under this item shall consist of excavation, preparation of subgrade, and furnishing and installation of landscape edging as indicated on the Construction Drawings. Landscape edging shall be Permaloc PermaStrip Aluminum Edging as manufactured by Permaloc Corporation, or approved equal. Aluminum Edging shall be 3/16" x 6", 0.076" thick with 0.200" top lip and a Black (BL) Duraflex-Electrostatically applied baked on paint finish that meets AAMA 2603. Aluminum edging shall be installed with 12" aluminum stakes as indicated on the Construction Drawings. Install aluminum edging per the manufacturer's installation guidelines, as indicated on the Construction Drawings, and to the acceptance of the Engineer.

Granite Block Staircase

Work under this item shall consist of excavation, preparation of subgrade, installation of cast-in-place concrete footings and furnishing and installation of granite block steps, geotextile filter fabric, compacted stone screenings, joint sealant, and aluminum pipe handrail. Concrete shall be paid for in accordance with Item #901., Crushed Stone shall be paid for in accordance with Item #156.1, and Steel Reinforcement shall be paid for in accordance with Item #910.1. All other work shall be

included with this Lump Sum (LS) item. Geotextile shall meet the specifications of Item M9.50.0, Type I Geotextile Fabric for Separation. Stone screenings shall be in accordance with Item M2.05.0.

Granite block steps shall have a sandblasted finish on the tread and sawn thermal face and shall be procured from a regional source. The contractor shall submit shop drawings to the Engineer for the granite block steps for approval prior to ordering and installation.

Aluminum pipe handrail shall be 1-1/4" aluminum with ground smooth welds to the dimensions shown on the Contract Drawings. The finish on the aluminum handrail shall be 60M Clear Anodized. The contractor shall submit shop drawings to the Engineer for the aluminum pipe handrail and associated components for approval prior to ordering and installation.

Granite Block Seating

Work under this item shall consist of cleaning and placement of granite stone blocks at the locations shown on the plans. Granite blocks shall be provided by the Town of Plymouth DPW and as shown on the Construction Drawings. Selection of granite blocks and placement within the plaza shall be at the approval of the Engineer.

Brick Paver Plaza

Work under this item shall consist of excavation, preparation of subgrade, non-woven geotextile fabric, granular base material, sand setting bed, perimeter soldier course, installation of brick pavers, polymeric sand and aluminum edge restraint. Brick pavers shall be provided by the Town of Plymouth DPW. Setting bed sand shall conform to M4.02.02, Fine Aggregate. Gravel base course shall consist of 3/4" Crushed Stone (Item M2.01.4) to the depth indicated on the Construction Drawings. Geotextile shall meet the specifications of Item M9.50.0, Type I Geotextile Fabric for Separation. Pattern shall be as shown on the plans and details. The brick paver plaza shall be installed to the extents and limits shown on the Construction Drawings and to the acceptance of the Engineer.

Granite Stone Planter Curb

Work under this item shall consist of the furnishing and installation of the granite stone planter curb to the extents and limits shown on the Construction Drawings and to the acceptance of the Engineer. The work under this item shall consist of excavation, preparation of subgrade, stone base material, formwork, concrete for joints, and granite curbing. Granite stone curbing shall be 6" x 18" with a 2" radius bullnose as indicated on the Construction Drawings. Granite shall be Williams Blue Sky or approved equal. The contractor shall submit a sample of granite curbing to the engineer for approval prior to installation. Granite shall be from the same source to match Granite Block Steps and Stone Masonry Granite Wall Cap or as approved by the Engineer. Stone subbase shall be Dense Graded Crushed Stone for Sub-Base (Item M2.01.7) to the depths indicated on the Construction Drawings. Construction and joints for granite curbing shall be as shown on the Construction Drawings.

Concrete Wall

Work under this item shall consist of excavation, preparation of subgrade, installation of cast-in-place concrete footing and cast-in-place concrete wall and furnishing and installation of geotextile filter fabric. Concrete shall be paid for in accordance with Item #902., Crushed Stone shall be paid for in accordance with Item #156.1, Steel Reinforcement shall be paid in accordance with Item #910.1, Bituminous Damp Proofing shall be paid in accordance with Item #970, Stone Masonry Veneer shall

be paid in accordance with Item #997.2 and Stone Masonry Granite Wall Cap shall be paid in accordance with Item #997.3. All other work shall be included with this Lump Sum (LS) item.

Method of Measurement and Basis of Payment

There shall be no measurement under this Item but shall be paid for on a lump sum (L.S.) basis for all work, equipment, labor, materials and tools necessary to furnish and complete the Site Improvement features for Item 4 outlined above with the following exceptions:

- Item 151.01 Gravel Borrow – Type C
- Item 151.2 Gravel Borrow for Backfilling Structures and Pipes
- Item 156.1 Crushed Stone for Bridge Foundations
- Item 901. 4,000 PSI, 1.5 Inch, 565 Cement Concrete
- Item 902. 3,500 PSI, 1.5 Inch, 520 Cement Concrete
- Item 904.3 5,000 PSI, 3.4” Inch, 685 HP Cement Concrete
- Item 910.1 Steel Reinforcement for Structures – Epoxy Coated
- Item 970 Bituminous Damp Proofing
- Item 997.2 Stone Masonry Veneer
- Item 997.3 Stone Masonry Granite Wall Cap

Work to be completed as described under those sections shall be bid and paid for under their respective unit price items and shall include all work, materials, tools, labor and operations required to complete the installation of the related items as described and outlined in the Construction Drawings and described in the Technical Specifications.

No separate payment for Item 120. Earth Excavation shall be made. The work shall be included in the Lump Sum bid.

Payment for Site Improvements under Item 4 shall be determined on a monthly basis as a percentage of the total contract unit price for Item 4 Site Improvements. The Contractor shall identify the work completed under this Item for approval by the Engineer.

ITEM 5.

SITE RESTORATION

LUMP SUM

General

Work under this item shall consist of furnishing, grading and treatment of topsoil to finish grade elevations, including mulching, seeding, and fertilization, planting and maintenance of trees, shrubs, and perennials as shown on the Contract Drawings, and as specified herein and/or as directed by the Engineer. This item shall also include furnishing and importing to the site sufficient topsoil to provide six inches of depth installation of seed mix over all disturbed areas as shown on the contract drawings. Work shall include all materials, operations, and establishment necessary to complete the work as specified to the satisfaction of the Engineer and Owner.

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highway and Bridges, Section 765 Seeding, Section 771 and the following:

Planting season shall be from April 15-June 1, or as soil temperatures reach 55 degrees, or August 15-November 1.

Materials

Seed Mix

- (a) Lawn Restoration Seed Mix: Shall consist of the following:
 - i. Kentucky Bluegrass 20% by weight
 - ii. Perennial Rye Grass 50% by weight
 - iii. Fine and Red Fescue 30% by weight

The seed mixtures are to have no noxious weeds. Provide submittal of species for approval.

APPLICATION RATE: Sow at 220 lb/acre

- (b) New England Showy Wildflower Mix shall be as blended by New England Wetland Plants, South Hadley, MA, tel. 413-548-8000, or approved equivalent. Always apply on clean bare soil. The mix may be applied by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper seed to soil contact. Best results are obtained with a Spring or late Fall dormant seeding. Late Spring and early Summer seeding will benefit with a light mulching of weed free straw to conserve moisture. If conditions are drier than usual, watering may be required. Late Fall and Winter dormant seeding require an increase in the seeding rate. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

APPLICATION RATE: 23 lbs/acre | 1900 sq ft/lb

- (c) Spring Bulb Mix: Bulb mix shall be specified by the landscape architect. Plant in September through October once soils have cooled.

Contractor is required to submit seed mixes to Engineer for approval prior to ordering.

Special Product Warranty: The Contractor shall supply the Engineer with all warranties or certificates, or both, furnished with the seed mixture prior to use of the material, if so requested.

Products

- (a) Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
- (b) Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - 1. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.
 - 2. Additional loam, if required, shall be fertile, friable, agricultural soil, typical for locality, pH value compatible, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay lumps, stones, and other objects over two (2) inches in diameter, and free from other impurities, plants, weeds and roots.

Inorganic Soil Amendments

- (a) Lime: ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.
 - 2. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.
- (b) Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 6 sieve and a maximum of 10 percent passing through No. 40 sieve.
- (c) Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- (d) Aluminum Sulfate: Commercial grade, unadulterated.
- (e) Perlite: Horticultural perlite, soil amendment grade.
- (f) Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- (g) Sand: Clean, washed, natural or manufactured, free of toxic materials.

Organic Soil Amendments

- (a) Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m.
- (b) Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- (c) Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
- (d) Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
- (e) Manure: Well-rotted, unbleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- (f) Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of vegetation.

Fertilizer

- (a) A 10-10-10 mixture is recommended for grasses with fifty percent of the element derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated in analysis.
- (b) Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- (c) Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- (d) Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- (e) Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

Mulches

- (a) Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
- (b) Organic Mulch: Ground or shredded bark.
- (c) Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 2 to 5 decisiemens/m.
- (d) Mineral Mulch: Rounded riverbed gravel or smooth-faced stone.
 - 1. Size Range: 3/4 inch maximum, 1/4 inch minimum.
 - 2. Color: Uniform tan-beige color range acceptable to Engineer.

Tree & Shrub Material

- (a) General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- (b) Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- (c) Tree and shrub sizes indicated on Drawings are sizes after pruning.

Herbaceous Plants

- (a) Refer to Contract Drawings for herbaceous plant species and quantity.

Quality Assurance

- (a) The Owner reserves the right to test and reject for cause any material not meeting material specifications by tests in accordance with methods adopted by the Association of Official Agricultural Chemists. Costs for these tests shall be borne by the Contractor [subcontractor].
- (b) Analysis and standards: Package standard products with manufacturers certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.
- (c) Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- (d) Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.

1. Report suitability of topsoil for lawn growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- (e) Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
 - (f) Pre-installation Conference: Conduct conference with Owner/Engineer/Contractor/Local Authorities at Project site.

Special Product Warranty

Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period.

- (a) Failures include, but are not limited to, the following:
 - Death and unsatisfactory growth resulting from lack of adequate maintenance, neglect or abuse, or incidents.
 - Structural failures including plantings falling or blowing over.
- (b) Warranty Periods from Date of Substantial Completion:
 1. Trees and Shrubs: One year.
 2. Ground Cover and Plants: One year.

Construction Methods

Delivery, Storage, and Handling

- (a) Deliver fertilizer in sealed waterproof bags showing weight, chemical analysis and name of manufacturer.
- (b) Do not prune shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery and handling.
- (c) Handle planting stock by root ball.
- (d) Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants in shade, protect from weather and mechanical damage, and keep roots moist.

Sequencing and Scheduling

Coordinate the work of this Section with the respective trades responsible for installing interfacing work to ensure that the work performed thereunder is scheduled to minimize damage to lawn areas.

Maintenance Service

Provide full maintenance by skilled employees of landscape installer. Maintain as required below. Begin maintenance immediately after each area is planted and continue until acceptable seeded vegetation is established and until plantings are acceptable healthy and well established, but for not less than 12 months from date of substantial completion.

Examination

- (a) Verify prepared soil base is properly rough graded and ready to receive the work of this Section.
- (b) Verify backfilling has been inspected.
- (c) Verify substrate base has been contoured and compacted.
- (d) Beginning of landscaping work means acceptance of existing soil base, and site conditions.

Preparation

- (a) Prepare sub-soil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes in level areas.
- (b) Remove foreign materials, debris, weeds, undesirable plants, roots, branches, stones in excess of 1/2 inch in size. Remove subsoil contaminated with petroleum products, or other materials, which would inhibit healthy plant growth.
- (c) Scarify subgrade to depth of four (4) inches where topsoil is scheduled. Scarify in areas where equipment is used for hauling and spreading topsoil and has compacted subsoil. The contractor should plan to use track machines to minimize the use of rubber tire machines to reduce over compaction of the subsoil.
- (d) Saturate soil with water to test drainage.

Placing and Treating Topsoil

- (a) Place both stockpiled topsoil and additional loam during dry weather; place to a minimum compacted depth of six (6) inches on dry unfrozen subgrade. Treat additional loam with ground limestone.
- (b) Fine grade topsoil, making changes in grade gradual, eliminating rough or low areas. Blend slopes into level areas. Manually spread topsoil close to trees and plants to prevent damage. Roll, fill depressions to ensure positive drainage.
- (c) Remove roots, weeds, rocks and foreign material while spreading.

- (d) Remove surplus subsoil and topsoil from site. Leave stockpile areas and site clean and raked ready to receive grass.
- (e) Apply fertilizer in accordance with manufacturer's instructions, or testing agency recommendations (if tests are made), within 10 days of seeding, after smooth raking of topsoil and prior to roller compaction.
- (f) Do not apply fertilizer at same time or with same machine as will be used to apply seed.
- (g) Mix thoroughly into upper six (6) inches of topsoil.
- (h) Lightly water to aid the dissipation of fertilizer.
- (i) After incorporation of fertilizer and limestone into the soil, fine grade the seed bed to remove all ridges and depressions, and the surface cleared of all stones one inch or more in diameter and all other debris.
- (j) Smooth rake again and clear surface of all stones one inch or more in diameter and all other debris.

Trees and Shrubs

- A. Excavation of Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - 1. Excavate approximately three times as wide as container diameter.
 - 2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
- B. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1.
- C. Stock with Root Balls: Set trees and shrubs plumb and in center of pit or trench with top of root ball flush with adjacent finish grades.
 - 1. Balled and Potted and Container Grown: Carefully remove root ball from container without damaging root ball or plant.
 - 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
- (d) Bare-Root Stock: Set and support bare-root trees and shrubs in center of pit or trench with trunk flare flush with adjacent finish grade. Spread roots without tangling or turning toward surface, and carefully work backfill around roots by hand. Puddle with water until backfill layers are completely saturated. Plumb before backfilling, and maintain plumb while working backfill around roots and placing layers above roots. Tamp final layer of backfill. Remove injured roots by cutting cleanly; do not break.

- (e) Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.

Tree and Shrub Pruning

- (a) Remove only dead, dying, or broken branches. Do not prune for shape.
- (b) Prune, thin, and shape shrubs according to standard horticultural practice. Prune trees and shrubs to retain natural character.

Plant Maintenance

- (a) Tree and Shrub Maintenance: Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
- (b) Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

Site Cleaning and Repair

- (a) Absolutely no debris may be left on the site. Excavated material shall be removed as directed. Repair any damage to site or structures to restore them to their original condition.

Cleanup and Protection

- (a) During restoration work, keep pavements clean and work area in an orderly condition.
- (b) Protect restoration work and materials from damage due to operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged restoration work as directed.
- (c) Compaction: The Contractor shall keep all equipment, vehicular and pedestrian traffic off areas that have been seeded to prevent excessive compaction and damage to young plants. Where such compaction has occurred, the Contractor shall rework the soil to make a suitable seedbed; then re-seed and mulch such areas with the full amount of the specified materials, at no extra charge to the Owner.
- (d) This work will not be considered complete until all cleanup operations are complete. This shall include the removal of all debris resulting from the seeding operation. The Contractor shall be required to shape, grade, and establish vegetative cover in accordance with the specifications on all areas disturbed outside the normal limits of the construction.

Inspection and Acceptance

- (a) When restoration work is completed, including maintenance, the Owner will, upon request, make an inspection to determine acceptability.
- (b) When inspected restoration work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by the Owner and found to be acceptable.

Method of Measurement and Basis of Payment

This item consists of the lump sum (L.S.) bid price for all equipment, labor, materials, and tools, to complete all site restoration as shown in the Contract Drawings and described in the Special Provisions.

SUBSECTION 120 EXCAVATION

ITEM 120.

EARTH EXCAVATION

LUMP SUM

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highway and Bridges, Subsection 120 Excavation, Subsection 140 Excavation for Structures, Subsection 170 Grading, and the following:

General

Work included under Item 120. shall consist of furnishing all labor, materials, equipment and performing all earthwork operations to construct the new pedestrian bridge and all site improvement features as shown on the Drawings. Material excavated that conforms to the requirements of the specifications for Ordinary Borrow (M1.01.0) and Gravel Borrow (M1.03.0) shall be re-used within the project limits to achieve the proposed grade as indicated on the Drawings prior to the importation of borrow material under Item 151.01. This item includes the excavation for proposed structures and site features and stockpiling, dewatering, placement, and compaction of the excavated material in those areas where fill is proposed to meet the finished grades shown on the Drawings and to blend with the surrounding topography.

The Contractor is responsible to remove any excess material from the site that does not comply with project specifications and dispose of off-site in accordance with federal, state and local regulations. Excess material may be disposed of at the Plymouth Department of Public Works (DPW) facility located at 159 Camelot Drive, Plymouth MA. The town will accept bituminous concrete, brick, concrete and clean fill. The concrete must not have any steel reinforcing. All large pieces of material shall be smaller than 12 inches measured along the longest axis. The contractor will be responsible for transporting all materials to the DPW facility and for coordinating with DPW staff prior to delivery. Soil will need to be segregated from brick, concrete or asphalt prior to delivering to the town.

Method of Measurement and Basis of Payment

No separate measurement will be made for Item 120. Item 120. shall be paid for at the contract lump sum price for “Earth Excavation” which price shall include all materials, equipment, tools, labor, and all work incidental thereto for the completion of the work. No separate payment shall be made for on-site reuse of excess material, compaction, fine-grading or off-site export of excess or unsuitable material. Item 120. shall be measured Lump Sum for all work complete and in place, as described above.

SUBSECTION 150 EMBANKMENT

ITEM 151.01

GRAVEL BORROW – TYPE C

CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications Highway and Bridges, Subsection 150.

ITEM 151.2 GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications Highway and Bridges, Subsection 150.

ITEM 156.1

CRUSHED STONE FOR BRIDGE FOUNDATION

CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications Highway and Bridges, Subsection 150.

Work included under Item 156.1 shall cover the crushed stone associated with the following structures: wingwalls, abutments, concrete wall, and granite block staircase.

SECTION 748 MOBILIZATION

ITEM 748.

MOBILIZATION

LUMP SUM

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highway and Bridges, Section 748.

SECTION 801 CONDUIT, MANHOLES, HANDHOLES, PULL BOXES AND FOUNDATIONS

<u>ITEM 801.60</u>	<u>TRENCHING & BACKFILL</u>	<u>LINEAR FEET</u>
<u>ITEM 812.10</u>	<u>LIGHT POLE FOUNDATIONS</u>	<u>EACH</u>
<u>ITEM 804.2</u>	<u>2 INCH ELECTRICAL CONDUIT TYPE NM – PLASTIC – (UL)</u>	<u>LINEAR FEET</u>
<u>ITEM 806.2</u>	<u>2 INCH ELECTRICAL CONDUIT TYPE RM – GALVANIZED STEEL</u>	<u>LINEAR FEET</u>
<u>ITEM 811.3</u>	<u>PULL BOX 16 X 12 X 12 INCHES</u>	<u>EACH</u>

The work to be done under this item shall conform to the relevant provisions of Section 801 of the Standard Specifications.

SECTION 813 **WIRING, GROUNDING AND SERVICE CONNECTIONS**

ITEM 813.30 **WIRE TYPE 7 NO. 10 GENERAL PURPOSE** **LINEAR FEET**

ITEM 813.31 **WIRE TYPE 7 NO. 8 GROUND WIRE** **LINEAR FEET**

ITEM 813.32 **WIRE TYPE 7 NO. 10 GROUND WIRE** **LINEAR FEET**

The work to be done under this item shall conform to the relevant provisions of Section 813 of the Standard Specifications.

SECTION 820 HIGHWAY LIGHTING

ITEM 823.7 AREA LIGHTING LUMINAIRE 90.43 WATT EACH

The work to be done under this item shall conform to the relevant provisions of Section 820 of the Standard Specifications.

General:

This item shall consist of furnishing and installing light fixtures of the type specified with mounting and connections, complete in place, at the locations, and as described herein, and to the dimensions shown on the plans or as directed by the Engineer.

Materials:

The materials for this work shall conform to the applicable requirements of Section 820 of the Standard Specifications and the following requirements:

1. Pedestrian Light Fixture:
 - a. Luminaire shall be as manufactured by Lumca Inc, 2645 Avenue Watt, Quebec, QC G1P 3T2, Canada telephone +1 418-650-1693, web address: www.lumca.com. The luminaire shall be catalog #LS-8614-54-LED05-90W-35K-L5S-120-BK-GFR-IC. Typical for all fixtures Type S1. No substitutions will be authorized.
2. Fixture shall be of all-black construction with natural finish.
3. All luminaries to be wired for 120 volt, single phase operation.

Construction Methods:

Light fixture shall be fastened securely to the concrete structure foundation with manufacturer supplied or recommended anchors and shall be plumb with the vertical.

Each light fixture shall be effectively grounded with a copper ground wire matching the specified branch circuit conductors and attached to the light standard by an approved lug and a stainless steel bolt.

Method of Measurement:

This work will be measured for payment by the number of complete decorative light fixtures of the type specified, and accepted in place.

Basis of Payment:

This work will be paid for at the Contract unit price each for "Area Lighting Luminaire 90.43 Watt" of the type specified, complete in place, which price shall include all work and materials, including washers, bolts, connections, and all equipment, materials, tools, and labor incidental thereto.

SECTION 820 HIGHWAY LIGHTING

ITEM 823.8 AREA LIGHTING LUMINAIRE 88.96 WATT EACH

The work to be done under this item shall conform to the relevant provisions of Section 820 of the Standard Specifications.

General:

This item shall consist of furnishing and installing light fixtures of the type specified with mounting and connections, complete in place, at the locations, and as described herein, and to the dimensions shown on the plans or as directed by the Engineer.

Materials:

The materials for this work shall conform to the applicable requirements of Section 820 of the Standard Specifications and the following requirements:

1. Pedestrian Light Fixture:
 - a. Luminaire shall be as manufactured by Lumca Inc, 2645 Avenue Watt, Quebec, QC G1P 3T2, Canada telephone +1 418-650-1693, web address: www.lumca.com. The luminaire shall be catalog #LS-8614-54-LED05-88W-35K-L3FL-120-BK-GFR-IC. Typical for all fixtures Type S2. No substitutions will be authorized.
2. Fixture shall be of all-black construction with natural finish.
3. All luminaries to be wired for 120 volt, single phase operation.

Construction Methods:

Light fixture shall be fastened securely to the concrete structure foundation with manufacturer supplied or recommended anchors and shall be plumb with the vertical.

Each light fixture shall be effectively grounded with a copper ground wire matching the specified branch circuit conductors and attached to the light standard by an approved lug and a stainless steel bolt.

Method of Measurement:

This work will be measured for payment by the number of complete decorative light fixtures of the type specified, and accepted in place.

Basis of Payment:

This work will be paid for at the Contract unit price each for "Area Lighting Luminaire 88.96 Watt" of the type specified, complete in place, which price shall include all work and materials, including washers, bolts, connections, and all equipment, materials, tools, and labor incidental thereto.

SECTION 820 HIGHWAY LIGHTING

ITEM 823.9 AREA LIGHTING LUMINAIRE 80 WATT EACH

The work to be done under this item shall conform to the relevant provisions of Section 820 of the Standard Specifications.

General:

This item shall consist of furnishing and installing light fixtures of the type specified with mounting and connections, complete in place, at the locations, and as described herein, and to the dimensions shown on the plans or as directed by the Engineer.

Materials:

The materials for this work shall conform to the applicable requirements of Section 820 of the Standard Specifications and the following requirements:

1. Pedestrian Light Fixture:
 - a. Luminaire shall be as manufactured by Lumca Inc, 2645 Avenue Watt, Quebec, QC G1P 3T2, Canada telephone +1 418-650-1693, web address: www.lumca.com. The luminaire shall be catalog #LS-8614-36-LED07-80W-35K-L2B-120-BK-GFR-IC. Typical for all fixtures Type S4. No substitutions will be authorized.
2. Fixture shall be of all-black construction with natural finish.
3. All luminaries to be wired for 120 volt, single phase operation.

Construction Methods:

Light fixture shall be fastened securely to the concrete structure foundation with manufacturer supplied or recommended anchors and shall be plumb with the vertical.

Each light fixture shall be effectively grounded with a copper ground wire matching the specified branch circuit conductors and attached to the light standard by an approved lug and a stainless steel bolt.

Method of Measurement:

This work will be measured for payment by the number of complete decorative light fixtures of the type specified, and accepted in place.

Basis of Payment:

This work will be paid for at the Contract unit price each for "Area Lighting Luminaire 80 Watt" of the type specified, complete in place, which price shall include all work and materials, including washers, bolts, connections, and all equipment, materials, tools, and labor incidental thereto.

SECTION 820 **HIGHWAY LIGHTING**

ITEM 823.60

HIGHWAY LIGHTING LOAD CENTER

LUMP SUM

All of the provisions of Section 820 of the Standard Specifications shall apply with the following modifications:

General:

Work under these Items shall consist of furnishing, installing and coordination of new utility service and distribution system to power new loads as indicated on the drawings. The work shall include providing all material, labor, tools, equipment, wiring, fees and coordination with NSTAR, and the Town of Plymouth.

Required Submittals

Material Certificate of Compliance:

Submit 5 copies of material certificate of compliance for service equipment in accordance with the contract general requirements.

Shop Drawings:

Submit 5 copies of shop drawings for service equipment in accordance with the contract general requirements. Include meter socket, GFI service receptacle, panelboard, lighting controls, breakers, fuses, enclosure and concrete base.

Utility Service Connections

General: The necessary work, coordination and CRS submission required to meet utility requirements per the latest Information and Requirements issued by NSTAR. Contractor shall pay all Utility fees associated with new service.

Materials

General: The Service enclosure shall include the following pieces of equipment: meter socket, GFI service receptacle, lighting controls, panelboard with main breaker, breakers and fuses. Utility service shall be 240/120V, 1-phase, 3-wire and will be provided from an existing utility pole as indicated on the drawings. Service conduit shall be furnished and installed by Contractor. Service cable shall be furnished and installed by the Utility unless otherwise coordinated. All wire and labor for connection from meter to panelboard shall be by the Contractor.

Hinged Door Service Enclosure

Manufacturers shall be equal to Hoffman, Marlin Controls or McKinstry and shall be constructed of NEMA 3R enclosure; 12 gauge stainless steel (304) with continuously welded seams. The door shall be continuous hinge with stainless steel pin held closed by three-point latching mechanism with recessed cylinder lock and latch dead bolt with protective shroud. Lock shall be keyed as directed by the Town of Plymouth. Provide 5 keys for the lock. The door shall be provided with a 90 degree

locking door stop to prevent the door from opening more than 90 degrees and to prevent the door from closing on workers. Provide door with a drawing pocket. The interior shall be provided with 12 gauge metal panel for mounting electrical equipment; finish with white enamel. Provide grounding lug on panel for bonding.

Circuit Breaker Panelboard

Manufacturers shall be equal to Square D or GE with ratings as indicated on drawings. Panelboard bus shall be Tin-plated copper, ratings as indicated. Provide with Copper ground bus. Minimum short circuit rating: 100,000 amperes RMS symmetrical for 240 volt panelboards. Molded case circuit breakers shall be NEMA AB1. Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Provide circuit breakers UL Listed as SWD for control of high-intensity discharge lighting. Provide cabinet front in surface type hinged front construction, fastened with screws. Circuit breaker operating handle access door shall have key locks, with all panels keyed alike. Finish in manufacturer's standard gray enamel.

Electric Meter Socket

Manufacturer shall be as listed for approved manufacturers by the Utility Company.

Ground Rods

Service Pedestal shall be provided with a Copper, 3/4 inch Diameter, 10 feet long ground rod equal to Erico Products Company.

Concrete Base

Poured concrete base shall be sized to provide a minimum 3" lip on all sides of enclosure. Base shall be provided with formed opening for conduit entry or conduits shall be coordinated and cast in place. Exact dimensions, reinforcement and materials shall be as detailed on Drawings.

Construction Methods:

All electrical work shall be installed in accordance with the latest edition of the national electrical code. All electrical equipment utilized shall be U.L. listed.

The Contractor shall coordinate all final electrical service connection with NSTAR and meet utility company's requirements. Coordination with the Town of Plymouth's Electrical Inspector is required.

Method of Measurement and Basis of Payment:

Highway Lighting Load Center – This item shall include the complete installation of a service enclosure as detailed on the drawing including the concrete base, ground rod, wiring, panel, lighting control, meter socket, including conductors, ground wire, anchor bolts, circuit breakers, GFI receptacle, trenching and backfilling for conduit. Payment will be at the contract lump sum price for "Highway Lighting Load Center".

SUBSECTION 901 CEMENT CONCRETE

ITEM 901. 4,000 PSI, 1.5 INCH, 565 CEMENT CONCRETE CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges, subsection 901.

Work included under Item 901. shall include all work, materials, tools, labor and operations required to complete the installation of concrete associated with the following structures: wingwalls, abutments, and all footings for park features. Concrete installed in conjunction with the Site Improvement features Item 4 shall be paid for as part of those lump sum items and shall not be paid for as part of these unit price items.

ITEM 902. 3,500 PSI, 1.5 INCH, 520 CEMENT CONCRETE CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications Highway and Bridges, subsection 901.

Work included under Item 902. shall include all work, materials, tools, labor and operations required to complete the installation of concrete associated with the concrete walls.

ITEM 904.3 5,000 PSI, 3/4 INCH, 685 CEMENT CONCRETE CUBIC YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges, subsection 901.

Work included under Item 904.3 shall include all work, materials, tools, labor and operations required to complete the installation of concrete associated with the abutment stems.

Work included under Section 901 shall be revised to include:

The Contractor is responsible for and will pay for all site testing of the concrete, as directed by the Engineer. This site testing includes but is not limited to the following:

1. Slump Test
2. % Air Content
3. Yield Test
4. Standard Cylinders 3 each

Each of the above to be performed for each ten (10) cubic yards of concrete placed or portion thereof.

Concrete installed in conjunction with the Site Improvement features Item 4 shall be paid for as part of those lump sum items and shall not be paid for as part of these unit price items.

ITEM 910.1 STEEL REINFORCEMENT FOR STRUCTURES – EPOXY COATED POUND

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges, subsection 901.

SUBSECTION 970 BITUMINOUS DAMP-PROOFING

ITEM 970.

BITUMINOUS DAMP-PROOFING

SQUARE YARD

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highways and Bridges, Section 970.

SUBSECTION 990 WATER CONTROL

ITEM 991.1

CONTROL OF WATER

LUMP SUM

The work performed under this item shall conform to the relevant provisions of the Standard Specifications for Highway and Bridges, and the following:

General

Work under this item shall include control of water for the construction of the pedestrian bridge and the construction of the concrete abutments, wingwalls, stems, and columns.

Work shall also include any temporary diversions or pumping of storm drainage within the project area.

Work under this item shall include construction of all temporary water diversion measures as herein specified, as directed by the Engineer, and as evidently required to properly complete the work.

Water diversion measures include construction, maintenance and removal of cofferdams and temporary diversion culverts, dewatering excavations and all other measures required for construction work to proceed in-the-dry. Upon completion of the work, all temporary water control measures shall be removed to the limits and elevations shown on the plans.

The work under this item shall consist of control of water, flow diversions and construction dewatering associated with the construction of the pedestrian bridge, site features and selective demolition; acquiring and paying for all permits and approvals related to running of pumps, discharging water, and other work incidental to the dewatering operations; furnishing, installing, operating and maintaining dewatering equipment and systems as specified, shown on the Contract Drawings, or required during the construction of the project; providing standby equipment and power supply for maintaining uninterrupted construction dewatering; and obtaining and complying with all necessary permits from state and local agencies required for operation of the dewatering system, monitoring groundwater, and disposal of dewatering effluent. The Contractor shall maintain all dewatering measures in good operating form until such time that the measures are no longer needed. Upon completion of the work, and approval of the Contracting Officer. The Contractor shall remove pumps and hoses from the site, as well as cofferdams from the channel.

Method of Construction

“Control of Water”, Item 991.1 shall be measured as a complete unit. There will be no separate measurement of any quantities under this item.

Note: Any earthwork related to cofferdams or temporary diversions shall be paid for under this item and will not be measured for payment under any other item.

Project site is subject to flooding. Contractor shall monitor weather reports and be prepared to stop work and stabilize site if more than one inch (1") of rainfall is predicted by the National Weather Service (70% chance or higher) within 24 to 48 hours. Work shall be halted until precipitation

stops, and chances of further rainfall fall below 50%. All temporary cofferdams, channel, and hydraulic facilities intended to divert the flow of water shall be constructed to an adequate height to prevent overtopping during construction during a precipitation event of 3 inches or less. If the water level within the channel rises to a potentially unsafe level, the Contractor shall remove all equipment, construction materials (i.e. fuels, solvents, hydraulic fluids, etc.) and stockpiles from the floodplain and alert the Owner of potential emergency.

The Contractor shall investigate and verify existing stream conditions, and evaluate the need for, and the type of protection and facilities required. The Contractor is responsible for water control during the project, and for submitting a proposed Water Control Plan, Temporary Cofferdam Plan, and Emergency Operations and Flood Contingency Plan to the Project Engineer for approval prior to the start of construction.

The Contractor's Water Control Plan shall be submitted a minimum of two weeks prior to construction and shall show arrangement, location, and details of wells and well points; pumps, discharge lines, and means of discharge; control of sediment; cofferdams, and disposal of water. The Water Control Plan must address a contingency strategy for addressing increased flows due to storm events which occur during construction. The Contractor may use sandbags, inflatable dams, cofferdams, or other types of protective facilities as approved by the Engineer. The furnishing of such plans and methods shall not relieve the Contractor of any of his responsibility for the safety of the work and for the successful completion of the project.

The Contractor's Emergency Operations and Flood Contingency Plan shall be submitted within seven (7) days of the contract signing and before any work commences. The plan shall include a detailed narrative describing the various types of emergencies and corresponding actions to be taken in response; and identification on the plans of the location where all construction equipment, oils, fuels, lubricants, and other supplies will be stored. The Contractor shall certify that personnel are familiar with all provisions of his plan and are able to execute same.

The discharge from any dewatering pumping shall be clear of turbidity or debris. Any turbidity shall be addressed through the use of a settling basin or frac tank, as required. When in-stream construction requires deep excavation for the placement of structures, the Contractor shall keep the excavation reasonably clear of water to allow observation of the footer placement. Excavation can be accomplished with a small diameter pump (2" or larger) with water pumped to the channel or to a filter area if excessive turbidity is produced in the channel.

Method of Measurement and Basis of Payment

"Control of Water", Item 991.1, will be paid for at the contract lump sum price for all water control measures associated with the entire project; including structure removal, bridge construction, stormwater diversions or by-passes, and all other water control measures. Price shall include design and implementation of temporary water control measures, including all labor, materials, and equipment related to construction and maintenance of cofferdams, pumping of water to allow placement of concrete in-the-dry, temporary culvert pipes, removal of all water control measures upon completion of work, cleanup, and incidental work. There shall be no claims for extra compensation due to delays or damage associated with high water levels from natural events such as heavy rainfall, floods, snow melt, etc.

SUBSECTION 995 BRIDGE STRUCTURE

ITEM 995. PEDESTRIAN BRIDGE SUPERSTRUCTURE LUMP SUM

General

This item shall consist of designing, fabricating, transporting, furnishing and erecting a fully engineered prefabricated pedestrian bridge consisting of a half-through truss style superstructure, in steel construction for the span length and width as detailed on the plans. The superstructure shall include all bridge bearings, railings, and all other materials and equipment necessary to complete the work.

Pedestrian Bridge Superstructure Selection: The Contractor shall identify their intended bridge supplier as part of the bid submittal. The supplier must have at least 5 years of experience fabricating these types of structures. Stick-built' alternatives shall not be allowed. The contractor shall supply a proprietary prefabricated pedestrian bridge as manufactured by one of the following pre-approved suppliers or as approved by the Engineer:

Contech Engineered Solutions, LLC. (Continental Bridge)
8301 State Highway 29 North
Alexandria, Minnesota 56308
Phone: 1-800-328-2047

Echo Bridge, Inc.
P.O. Box 89
Elmira, NY 14902
Phone: 888-327-4343

Big R Bridge
P.O. Box 1290
Greeley, Colorado 80632
Phone: 970-347-2210

Wheeler
9531 W 78th St Ste 100
Eden Prairie, MN 55344
Phone: 800-328-3986

Pioneer Bridges, A Division of Bailey Bridges, Inc.
119 40th Street NE
Fort Payne, AL 35967
Phone: 256 304-0004
Fax: 256 845-7775

The contractor must provide the following documentation, for any proposed supplier who is not pre-approved, at least 10 days prior to bid:

- * Product Literature

* All documentation to insure the proposed substitution will be in compliance with these specifications. This shall include:

- Representative design calculations
- Representative drawings
- Splicing and erection procedures
- Warranty information
- Inspection and Maintenance procedures
- AISC Shop Certification
- Welder Qualifications

* Proposed suppliers must have at least five (5) years' experience designing and fabricating these type structures and a minimum of five (5) successful bridge projects, of similar construction, each of which has been in service at least three (3) years. List the location, bridge size, owner, and a contact for reference for each project.

The engineer will evaluate and verify the accuracy of the submittal prior to bid. If the engineer determines that the qualifying criteria have not been met, the contractor's proposed supplier shall be rejected. The engineer's ruling shall be final.

Designer's Liability Insurance: The Designer of the proprietary prefabricated pedestrian bridge shall secure and maintain at no direct cost to the Town or Department, a Professional Liability Insurance Policy for errors and omissions in the minimum amount of One Million Dollars (\$1,000,000). The Designer may, at her or his election, obtain a policy containing a maximum Two Hundred Fifty Thousand Dollars (\$250,000) deductible clause, but if he or she should obtain a policy containing such a clause, the Designer shall be liable to the extent of the deductible amount. The Designer shall obtain the appropriate and proper endorsement to its Professional Liability Policy to cover the indemnification clause in this contract as the same relates to negligent acts, errors or omissions in the work performed by the Designer. The Designer shall continue this liability insurance coverage for a period of three years from the date of the acceptance of the work by the agency head as evidenced by a certificate of acceptance issued to the contractor or for three years after the termination of the contract, whichever is earlier, subject to the continued commercial availability of such insurance.

The Designer shall supply the certificate of this insurance to the Engineer prior to the start of fabrication, furnishing and erection of the prefabricated pedestrian bridge. The designer's insurance company shall be licensed in the State of Massachusetts.

General Design Requirements:

The prefabricated superstructure shall be designed and manufactured to the following requirements:

1. Span: Bridge span shall be 75'-2" feet (straight line dimension) and shall be as measured from inside of backwall to inside of backwall.
2. Width: Bridge width shall be 10 feet clear opening and shall be measured from the inside face of structural elements/rub rails.

3. Bridge System Type: Bridge(s) shall be designed as arch shown on construction documents. Interior vertical members may be plumb or perpendicular to the chord faces.
 - a. The overall height of the bridge structure shall be determined based on structural and shipping considerations by the bridge manufacturer.
4. The prefabricated bridge design shall follow the dimensions of the bridge envelope shown in the contract drawings. The prefabricated pedestrian bridge shall be located as depicted on the plans. The low chord elevation shall be as shown on the plans, with no deviation permitted.
5. The prefabricated pedestrian bridge shall be designed to be within all property lines and easement lines shown on the contract drawings. If additional work areas are necessary for the construction, the Contractor shall be responsible for obtaining the rights from the affected property owners. Copies of these rights shall be forwarded to the Town.
6. Member Components:

All members of the vertical trusses (top and bottom chords, verticals, and diagonals) shall be fabricated from square and/or rectangular structural steel tubing. Other structural members and bracing shall be fabricated from structural steel shapes or square and rectangular structural steel tubing.

To provide lateral support for the top flange of open shape stringers (W-shapes or channels), a minimum of one stiffener shall be provided in each stringer at every floor beam location.

7. Attachments:
 - a. Illuminated Handrail

The bridge shall be provided with illuminated handrails per the contract drawings. The handrails shall be secured with fittings and all attachments and hardware shall match the color of bridge.

- b. Railing

The bridge shall be provided with a steel toe rail and steel vertical pickets with a maximum opening of 4".

The railing system shall be designed for a pedestrian infill loading of 200 lbs applied at any point in the system or a load of 25 psf over the entire tributary area, whichever produces the larger forces. These loads shall be applied at right angles to the railing. The framing system shall be designed so that no gaps around the framing are greater than the 4" maximum opening size specified.

Toe rail and vertical pickets shall be painted, matching the bridge superstructure.

Engineering:

Structural design of the bridge structure(s) shall be performed by or under the direct supervision of a licensed professional engineer and done in accordance with recognized engineering practices and principles. The engineer shall be licensed to practice in Massachusetts. All designs for the prefabricated pedestrian bridge shall conform to the latest edition of the American Association of State Highway and Transportation Officials (AASHTO) LRFD Guide Specifications for Design of Pedestrian Bridges except as noted otherwise herein.

1. Design Loads

In considering design and fabrication issues, this structure shall be assumed to be statically loaded. No dynamic analysis shall be required nor shall fabrication issues typically considered for dynamically loaded structures be considered for this bridge.

A. Dead Load

The bridge structure design shall consider its own dead load (superstructure and original decking), as well as the additional loads listed below.

B. Uniform Live Load

1. Pedestrian Live Load

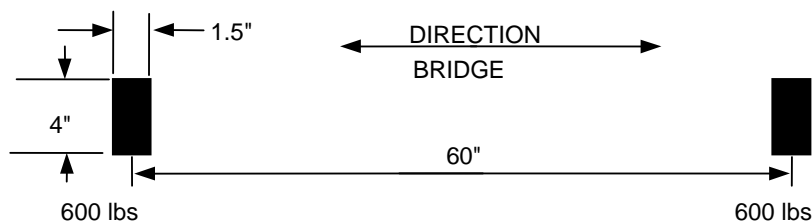
Main Members: Main supporting members, including girders, trusses and arches shall be designed for a pedestrian live load of 90 psf of bridge walkway area. The pedestrian live load shall be applied to those areas of the walkway so as to produce maximum stress in the member being designed.

Secondary Members: Bridge decks and supporting floor systems, including secondary stringers, floor beams and their connections to main supporting members shall be designed for a live load of 90 psf, with no reduction allowed.

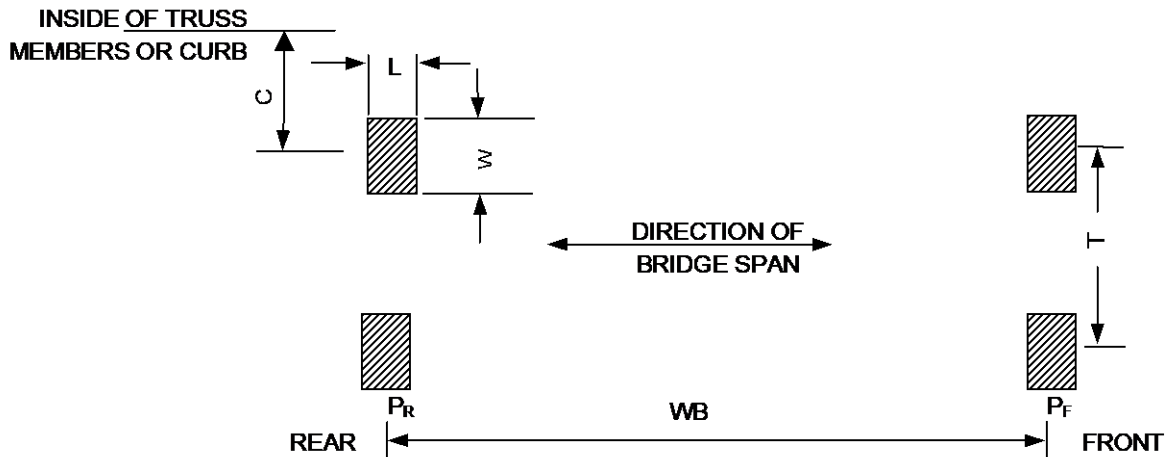
C. Concentrated Loads

The bridge superstructure, floor system and decking shall be designed for each of the following point load conditions:

1. A concentrated load of 1000 lbs placed on any area 30"x30".
2. A 1200 lbs two wheel vehicle with a wheelbase and tire print area as shown in the following diagram:



3. A 10,000 lb four wheeled H-5 vehicle (4,000 lb front axle and a 6,000 lb rear axle) having a 14 ft x 6 ft wheelbase.
4. A 10,000 lb four wheeled vehicle with the appropriate wheelbase, tire track and tire print area as shown in the following diagram: (See Table I for the values corresponding to the selected vehicle.)



Vehicle	Axle and Wheel Spacings		Front Wheels			Rear Wheels			C*
	WB	T	P _F	L	W	P _R	L	W	
4,000#	48"	32"	1,000#	2.0"	5.0"	1,000#	2.0"	5.0"	9"
6,000#	66"	48"	1,500#	2.5"	6.0"	1,500#	2.5"	6.0"	12"
8,000#	102"	60"	1,600#	3.0"	8.0"	2,400#	3.0"	8.0"	15"
10,000#	120"	72"	2,000#	3.5"	8.5"	3,000#	3.5"	8.5"	18"

(*C is the minimum dimension from center of wheel to the inside face of truss or curb.)

TABLE I

All of the concentrated or wheel loads shall be placed so as to produce the maximum stress in each member being analyzed. Critical stresses need be calculated assuming there is only one vehicle on the bridge at any given time. Assumptions that vehicles only travel down the center of the bridge or that the vehicle load is a uniform line load will not be allowed.

Each four wheeled vehicle load listed in Table I, up to and including the maximum weight vehicle selected, must be used in determining critical deck stresses. The wheel distribution for deck design shall be as specified in Section 4.3.1. Stringers shall be designed for the applied wheel loads assuming no lateral load distribution to adjacent stringers.

A vehicle impact allowance is not required.

Two sets of inventory and operating load ratings shall be submitted in summary form along with back-up calculations. The analysis shall be performed using the LRFD method described in the AASHTO Manual for Condition Evaluation of Bridges. The live load to be used in the analysis for the inventory and operating ratings shall be the pedestrian loading.

D. Wind Load

1. Horizontal Forces

The bridge(s) shall be designed for a wind load 35 psf on the full vertical projected area of the bridge as if enclosed. The wind load shall be applied horizontally at right angles to the longitudinal axis of the structure.

The wind loading shall be considered both in the design of the lateral load bracing system and in the design of the truss vertical members, floor beams and their connections.

2. Overturning Forces

The effect of forces tending to overturn structures shall be calculated assuming that the wind direction is at right angles to the longitudinal axis of the structure. In addition, an upward force shall be applied at the windward quarter point of the transverse superstructure width. This force shall be 20 psf of deck.

E. "Sway" Frame Loads

The chords, wind bracing, verticals, floor beams, and top struts shall be designed for lateral wind (or seismic) loads as applicable. Also, the interior "sway" frames formed by the truss verticals, floor beams and top struts, along with their connections, shall be capable of withstanding, in combination with loads derived from a 3-D analysis of the structure, a lateral load of 1% of the top chord compression applied at the elevation of the top chord. This lateral load is based on the compression in the chord due to the load combination being considered and will be calculated assuming no lateral resistance from the top bracing system. In no case shall the interior "sway" frames be designed for a lateral load of less than either of the following loads (whichever is larger), acting alone on each box:

1% of the maximum top chord compression, or

(1% of the maximum top chord compression plus full wind) x 0.75.

The end portal frame shall be capable of withstanding, in the appropriate combinations with other loads from the analysis, a lateral load acting at the elevation of the top bracing system. This lateral load will be calculated assuming all interior truss joints are pinned (i.e. the wind load applied at the top of the end portals shall be based on a tributary area assuming no load is carried between the top and bottom bracing systems by the interior portal frames).

NOTE: The effects of three dimensional loading (including "sway" frame loads) shall be considered in the design of the structure. The "sway" frame loads in full through trusses shall be added to the forces derived from a three dimensional analysis of the bridge.

F. Load Combinations

The loads listed herein shall be considered to act in the following combinations, whichever produce the most unfavorable effects on the bridge superstructure or structural member concerned.

[DL=Dead Load; LL = Live Load; WL = Wind Load; VEH = Vehicle Load]

DL + LL

DL + VEH

DL+WL

DL+LL+.3WL

DL+VEH+.3WL

NOTE: For service load design, the percentage of the basic unit stress used for each combination shall be in accordance with table 3.22.1A of the AASHTO "LRFD Bridge Design Specifications (9th Edition)".

It shall be the responsibility of the foundation engineer to determine any additional loads (i.e. earth pressure, stream force on abutments, wind loads other than those applied perpendicular to the long axis of the bridge, etc.) and load combinations required for design of the abutments.

G. Steel: Criteria for bridge design and standards for tubular steel members shall be in accordance with the American Association for State and Transportation Officials (AASHTO) LRFD Bridge Design and AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges.

H. Temperature: Bridge shall be designed to accommodate a temperature differential of 120 degrees Fahrenheit. At least 1" clearance shall be provided between the bridge and concrete abutments.

I. Camber: The bridge shall have a vertical camber dimension at midspan equal to 100% of the full dead load deflection.

J. Deflection: The vertical deflection of the main trusses due to pedestrian live load shall not exceed 1/500 of the span length. For pedestrian comfort, the load used for deflection check, shall be a minimum of 500 pounds per lineal foot of the bridge or a uniform load of 90 pounds per square foot, whichever is greater.

The horizontal deflection due to wind load shall not exceed 1/500 of the span length.

The deflection of floor system members (floor beams and stringers) due to service pedestrian live load shall not exceed 1/360 of their respective spans.

Materials

Pedestrian Bridge Superstructure: Materials shall conform to the following requirements and those not listed below shall be as prescribed within the AASHTO LRFD Guide Specification for the Design of Pedestrian Bridges. and the Commonwealth of Massachusetts Department of Transportation Standard Specifications for Highways and Bridges dated 2021, including supplemental and amended.

Markings: The date of manufacture, name of manufacturer, the production lot number, orientation of the sections, and the piece-mark shall be clearly marked on the side of each panel or module.

Steel: All members of the vertical trusses (top and bottom chords, verticals, and diagonals) and of the top horizontal truss (top struts and top braces) shall be fabricated from square and/or rectangular structural steel tubing. Other structural members and bracing shall be fabricated from structural steel shapes or square and rectangular structural steel tubing. Bridges which are to be painted shall be fabricated using ASTM A500 grade C cold-formed welded square and rectangular tubing (Fy = 50 ksi) and/or high strength, low allow, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing (Fy = 50 ksi) and/or ASTM A588, ASTM A242, ASTM A572, ASTM A 606 (Fy = 50ksi) and/or ASTM A36 (Fy = 36 ksi) plate and structural steel shapes. Splice plates, if required, shall be ASTM A588.

All structural steel bridge members shall have a minimum thickness of at least 1/4". All steel shall be painted black.

Anchor Bolts: The anchor bolts shall be fully threaded stainless steel rods, and conform to ASTM A193, Class 2, Grade8 (UNS designation S 30400 (304)). The nuts shall be prevailing-torque reusable-type (with nylon insert) lock nuts and conform to ASTM A194, Grade 8, strain hardened (UNS designation S 30400 (304)): Washers shall be 5/16" thick stainless steel and conform to ASTM A276, Type 304, annealed

Bolts: Field splices and other connections shall be fully bolted with ASTM A325 type 3 high strength bolts in accordance with the "Specifications for Structural Joints Using ASTM A325 or A490 Bolts".

Welding: Welding and weld procedure qualification tests shall conform to Form 817, Section 6.03.03-6.

Welders: Welders shall be properly accredited operators, each of whom shall submit certification of satisfactorily passing AWS standard qualification tests for all positions with unlimited thickness of base metal, have a minimum of 6 months experience in welding tubular structures and have demonstrated the ability to make uniform sound welds of the type required.

Bearing Devices: Bridge bearings shall consist of a steel masonry plate placed on the abutment or grout pad along with an elastomeric bearing pad. The bridge bearing plate which is welded to the bridge structure shall bear on the elastomeric bearing pad. One end of the bridge will be fixed by fully tightening the nuts on the anchor bolts at that end. The opposite end will have finger tight only nuts to allow movement under thermal expansion or contraction.

The bridge bearings shall sit on a raised pad on the concrete abutment. The step height (from bottom of bearing to top-of-deck) shall be determined by the bridge manufacturer.

Timber Decking: Timber deck design shall be performed by the bridge manufacturer. The deck shall be designed for all loads specified as prescribed within the AASHTO LRFD Guide Specification for the Design of Pedestrian Bridges and this specification.

Timber decking shall be naturally durable hardwood Ipe (*Tabebuia Spp*) Lapacho Group or Cumaru (*Dipteryx*). All planks shall be partially air dried to a moisture content of 15% to 20% and shall be supplied S4S (surfaced four sides) with one face "hit or miss" allowed up to 10% of the total length, E4E (eased four edges), with the edges eased to a radius of 1/8". Measured at 30% moisture content, the width and thickness shall not vary from the specified dimensions by more than ± 1 mm. All planks shall be supplied with the ends sealed with "Anchorseal" Mobil SER-M or approved equal aqueous wax timber sealer.

Railings:

1. In accordance with AASHTO, railings for pedestrian use shall be a minimum of 42" above the floor deck.
2. Safety rail shall be located on the inside of the truss and include vertical pickets with a maximum opening of 4 inches.

Submittals:

Preliminary Submissions for Pedestrian Bridge Superstructure: Prior to the start of fabrication or construction, the Contractor shall submit to the Engineer a design package, which shall include, but not be limited to the following:

A. Detailed Plans:

- For submittals in PDF form, the working drawings shall be printed on ANSI B (11"x17" Ledger/Tabloid) sheets. Each drawing shall have a border and title block. Located in lower right hand corner of the drawing adjacent to the title block, each drawing shall have a rectangular box, 2 1/4" wide x 1 3/4" high, for the reviewer's stamp. Design computations, , installation procedures and other supporting data shall be submitted on ANSI A (8 1/2" x 11" Letter) sheets.
- For submittals in an electronic portable document format (.pdf), the working drawings shall be created on ANSI D (22" x 34") full scale (1" electronic file = 1" paper) sheets. (The purpose of creating the drawings on ANSI D sheets is so that the sheets may be printed/plotted at that size or smaller without loss of legibility.) Each drawing shall have a border and title block. Located in lower right hand corner of the drawing adjacent to the title block, each drawing shall have a rectangular box, 2 1/4" wide x 1 3/4" high, for the reviewer's stamp. Design computations, , installation procedures and other supporting data shall be submitted on ANSI A (8 1/2" x 11"; Letter) sheets.
- Stamped by a licensed Professional Engineer (Massachusetts).

- Full plan view of the prefabricated pedestrian bridge drawn to scale. The plan view must reflect the horizontal alignment with beginning and ending coordinates. All utilities, guiderail, signs, lights, etc. that affect the construction along with all property lines and easement lines adjacent to the structure shall be shown.
- Full elevation view of the prefabricated pedestrian bridge drawn to scale. Elevation views should indicate the elevations at the top of deck, bottom of low chord, abutment seats, and the location of finished grade.
- Typical cross section of the prefabricated pedestrian bridge drawn to scale including all appurtenances.
- Details of all prefabricated pedestrian bridge components and their connections such as the bearings and anchor bolts and their length, size and type.
- Design parameters used along with AASHTO and other pertinent references.
- Material designations for all materials to be used.
- Show shop coatings, steel thickness, fabrication details, size, location, and spacing of fasteners for attaching bridge components to itself, details of attachment to the abutment, accessories and their installation, and critical installation procedures.

B. Design Computations:

- Stamped by a licensed Professional Engineer (Massachusetts).
- Computations shall clearly refer to the applicable AASHTO provisions as stated in the Notes on the Contract Drawings.

Data Required to be Shown:

- Data Input for 3-D Analysis of Bridge
 - Joint Coordinates & Member Incidences
 - Joint and Member Loads
 - Member Properties
 - Load Combinations
- AASHTO Member Capacity Checks for Each Member Type
 - Weld Failure Checks (Ultimate)
 - Local Buckling of the Main Member Face Checks
 - Main Member Yielding Failure Checks
 - Main Member Crippling Failure Checks
- Main Member Buckling Failure Checks

- Main Member Shear Failure Checks
- All Bolted Splice Checks (if applicable)
- Main Truss Deflection Checks
- Decking Material Checks
- "U-Frame" Stiffness Checks (if applicable)
- Interior and End Portal Design Checks (if applicable)
- Determination of Top Chord K Factor Based on "U-Frame"
- Stiffness (if applicable)
- Consideration of Individual Member Moments Due to Truss
- Deflection, Joint Fixity and Joint Eccentricity
- Documentation of computer programs including all design parameters.
- The design shall conform to the criteria listed below.

C. Construction Specifications:

- Construction methods specific to the proprietary prefabricated pedestrian bridge. These specifications should include construction limitations including vertical clearance, right-of-way limits, etc. Submittal requirements for materials such as certification, quality, and acceptance/rejection criteria should be included. Details on connection of reinforcements such that assurance of uniform stress transfer should be included.
- Any requirements not stated herein.

The submissions of working drawings and computations for proprietary prefabricated pedestrian bridge shall be treated as working drawings in accordance with Article 1.05.02 amended as follows:

The Contractor shall allow 21 days for the review of each submission. If subsequent submissions are required as a result of the review process, 21 days shall be allowed for review of each submission. No extensions in contract time will be allowed for the review of these submissions.

Final Submissions for Prefabricated Pedestrian Bridge:

Once the prefabricated pedestrian bridge design has been reviewed and accepted by the Client, the Contractor shall submit the final plans. The final submission shall include one set of full size PDF (

The final submission shall be made within 14 days of acceptance by the Engineer. No work shall be performed relating to the prefabricated pedestrian bridge until the final submission has been received.

Acceptance of the final design shall not relieve the Contractor of his responsibility under the contract for the successful completion of the work.

The actual designer of the prefabricated pedestrian bridge is responsible for the review of any shop drawings prepared for fabrication and construction. One set of full size blue line copies of all approved shop drawings shall be submitted for the Town's permanent records.

Erection Drawings for Pedestrian Bridge Superstructure:

- Location and size of crane(s), features that limit the crane's operation, such as overhead utilities or difficult terrain and extended reach. Crane charts shall be submitted with proposed equipment.
- Erection Stress Analysis
- Sequence of installation.
- Installation manual
- Details of the methods used for field splicing sections together.
- Lifting weights
- Crane Mat sizing

Fabrication:

1. General Requirements

A. Drain Holes.

The proposed bridge will be under water during some storm events. All tubes shall have a drain hole provided at its lowest point to let water out.

B. Welds

Special attention shall be given to developing sufficient weld throats on tubular members. Fillet weld details shall be in accordance with AWS D1.1. Fillet welds which run onto the radius of a tube shall be built up to obtain the full throat thickness (See Figure 4.1). The maximum root openings of fillet welds shall be in conformance with AWS D1.1. Weld size or effective throat dimensions shall be increased in accordance with this same section when applicable (i.e. fit-up gaps > 1/16").

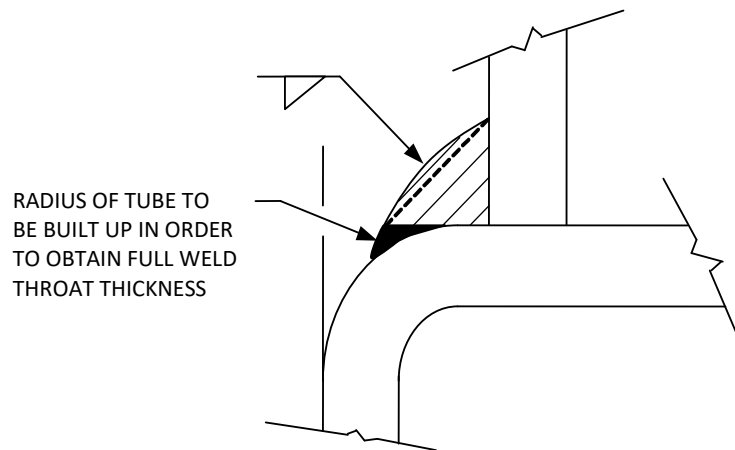


FIGURE 4.1
BUILD UP RADIUS WELD

The fabricator shall have verified that the throat thickness of partial joint penetration groove welds (primarily matched edge welds or the flare-bevel-groove welds on under hung floor beams) shall be obtainable with their fit-up and weld procedures. Matched edge welds shall be "flushed" out when required to obtain the full throat or branch member wall thickness.

For full penetration butt welds of tubular members, the backing material shall be fabricated prior to installation in the tube so as to be continuous around the full tube perimeter, including corners. Backing may be of four types:

- A "box" welded up from four (4) plates.
- Two "channel" sections, bent to fit the inside radius of the tube, welded together with full penetration welds.
- A smaller tube section which slides inside the spliced tube.
- A solid plate cut to fit the inside radius of the tube.

Corners of the "box" backing, made from four plates, shall be welded and ground to match the inside corner radii of the chords. The solid plate option shall require a weep hole either in the chord wall above the "high side" of the plate or in the plate itself. In all types of backing, the minimum fit-up tolerances for backing must be maintained at the corners of the tubes as well as across the "flats".

2. Quality Certification

Bridge(s) shall be fabricated by a fabricator who is currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the category "Simple Steel Bridges" as set forth in the AISC

Certification Program. Quality control shall be in accordance with procedures outlined for AISC certification.

Finishing

1. Blast Cleaning

A. Painted Steel

All exposed surfaces of steel to be painted shall be blast cleaned in accordance with the appropriate section of the Steel Structures Painting Council Surface Preparation Specifications to a "near white finish". SSPC-SP10-Latest Edition.

2. Painting

All exposed steel surfaces shall receive shop applied primer and finish coats. The paint system shall consist of the following:

Primer Coat:

- Sherwin Williams Premier Zinc Clad IV Epoxy Zinc Rich Primer, or approved equal.

Intermediate Coat:

- Sherwin Williams HD Epoxy B67 Series Polyamide Epoxy, or approved equal.

Top Coat:

- Sherwin Williams High Solid Urethane B65 Aliphatic Two-component Polyurethane, or approved equal.

The primer and top coat shall be applied in accordance with and to the minimum dry film thickness listed in the paint manufacturer's recommendations. The top coat paint color shall be as stated on the plans.

NOTE: Unless specified otherwise, connection faying surfaces and the interior surfaces of all structural tubing shall not be coated.

3. Touch-up Paint

A nominal quantity of touch-up paint will be provided to repair marred surfaces. Touch-up painting includes any and all painting required after the structure reaches the site, and is the responsibility of others. This painting shall include, but not be limited to, the following areas:

- a. Any areas damaged due to shipping, handling, and erection of the bridge and components.
- b. Bolt heads and exposed area of bolts and nuts as applicable.
- c. Non-galvanized attachments or anchor bolts if not made of corrosion resistant steel.

- d. If applicable, small areas (0 mm to 50 mm each side) around bolted field splices, designed as "slip critical", where one or all paint coats may be required to be left off the faying surfaces.

4. Painter Qualifications

All painters shall be certified by the appropriate paint manufacturer for proper handling, mixing, thinning (if required) and application of the paint system in accordance with the manufacturer's instructions. The painters shall also be certified by the Department of Transportation in the state in which the bridge is manufactured

Construction Methods

Delivery and Erection:

On Site Representative: A qualified and experienced representative from the bridge supplier shall be at the site at the initiation of the bridge construction to assist the Contractor and the Engineer. The representative shall also be available on as needed basis, as requested by the Engineer.

Installation: The pedestrian bridge superstructure shall be installed in accordance with manufacturer's recommendations.

Assembly of the various components shall be performed in such a manner that no undue strain or stress is placed on any of the members that constitute the completed structure.

Delivery is made to a location nearest the site which is easily accessible to normal over-the-road tractor/trailer equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival.

The manufacturer will provide detailed, written instruction in the proper lifting procedures and splicing procedures (if required). The method and sequence of erection shall be the responsibility of others. Note: Field erection procedures shall comply with erection procedures submitted by the Contractor for approval.

The staging area, crane locations, delivery truck turnaround and laydown areas shall be prepared as necessary to maneuver equipment and shall be removed upon completion of work.

The bridge manufacturer shall provide written inspection and maintenance procedures to be followed by the bridge owner.

Bearings:

1. Bearing Devices

Bridge bearings shall consist of a steel masonry plate placed on the abutment or grout pad along with an elastomeric bearing pad. The bridge bearing plate which is welded to the bridge structure shall bear on the elastomeric bearing pad. One end of the bridge will be fixed by fully tightening the nuts on the anchor bolts at that end. The opposite end will have finger tight only nuts to allow movement under thermal expansion or contraction.

The bridge bearings shall sit on a raised pad on the concrete abutment. Minimum 28-day strength for the abutment concrete shall be 3000 psi. The bearing seat shall be a minimum of 16" wide. The step height (from bottom of bearing to top-of-deck) shall be determined by the bridge manufacturer and shall not exceed dimension shown on plans.

Foundations:

Unless specified otherwise, the bridge manufacturer shall determine the number, diameter, minimum grade and finish of all anchor bolts. The anchor bolts shall be designed to resist all horizontal and uplift forces to be transferred by the superstructure to the supporting foundations. Engineering design of the bridge supporting foundations (abutment, pier, bracket and/or footings), including design of anchor bolt embedments, shall be the responsibility of the foundation engineer. The contractor shall provide all materials for (including anchor bolts) and construction of the bridge supporting foundations. The contractor shall install the anchor bolts in accordance with the manufacturer's anchor bolt spacing dimensions.

Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer after receipt of order and after the bridge design is complete.

Payment: A partial payment or "deposit" for the prefabricated bridge shall be made upon order and storage as required by the terms of the manufacturer.

Warranty: The bridge manufacturer shall warrant their steel structure(s) to be free of design, material and workmanship defects for a period of ten years from the date of delivery. This warranty does not include decking, railing attachments, on any other items not part of the steel truss structure.

This warranty shall not cover defects in the bridge caused by abuse, misuse, overloading, accident, improper maintenance, alteration or any other cause not the result of defective materials or workmanship.

This warranty shall be void unless owner's records can be supplied which shall indicate compliance with the minimum guidelines specified in the inspection and maintenance procedures.

Repair or replacements shall be the exclusive remedy for defects under this warranty. The bridge manufacturer shall not be liable for any consequential or incidental damages for breach of any express or implied warranty on their structures.

Approval Checklist: The following checklist will be used in the evaluation of all submittals to assure compliance with the Special Specifications for Prefabricated Bridge. This checklist is considered the minimum acceptable requirements for compliance with these specifications. Any deviations from this checklist shall be considered grounds for rejection of the submittal. Any costs associated with delays caused by the rejection of the submittal, due to non-compliance with this checklist, shall be fully borne by the contractor and bridge supplier.

Submittal Drawings

Data Required to be Shown:

- Bridge Elevation

- Bridge Cross Section
- All Member Sizes
- All Vertical Truss Members are Square or Rectangular Tubing
- Bridge Reactions
- General Notes Indicating
- AASHTO Stress Conformance
- Material Specifications to be Followed
- Design Live Load
- Design Vehicle Load
- Design Wind Load
- Other Specified Design Loads
- Welding Process
- Blast Cleaning
- Detailed Bolted Splices
- Bolted Splice Location
- Signature and Seal of Professional Engineer, licensed in State of Massachusetts

DESIGN CALCULATIONS

Data Required to be Shown:

- Data Input for 3-D Analysis of Bridge
 - Joint Coordinates & Member Incidences
 - Joint and Member Loads
 - Member Properties
 - Load Combinations
- AASHTO Member Capacity Checks for Each Member Type
 - Weld Failure Checks (Ultimate)
 - Local Buckling of the Main Member Face Checks
 - Main Member Yielding Failure Checks
 - Main Member Crippling Failure Checks
 - Main Member Buckling Failure Checks
 - Main Member Shear Failure Checks
- All Bolted Splice Checks (if applicable)
- Main Truss Deflection Checks
- Decking Material Checks
- "U-Frame" Stiffness Checks (if applicable)
- Interior and End Portal Design Checks (if applicable)
- Determination of Top Chord K Factor Based on "U-Frame" Stiffness (if applicable)
- Consideration of Individual Member Moments Due to Truss Deflection, Joint Fixity and Joint Eccentricity

FABRICATION SUBMITTALS

Data Required to be Shown:

- ** Written Installation Instructions
- ** Written Splicing Instructions
- ** Written Maintenance & Inspection Instructions
- ** Welder Certifications

- ** Welding Procedures
- Material Certifications (if applicable)
 - Structural Steel (if applicable)
 - Decking (if applicable)
 - Structural Bolts (if applicable)
 - ** Quality Control Section of AISC Certification Manual (if applicable)
 - Weld Testing Reports (if applicable)
- Critical Connection Failure Mode Checks For Each Member Type
 - Chord Face Plastification Checks
 - Punching Shear Checks
 - Material Failure Checks (Truss Webs)
 - Weld Failure Checks (Effective Length)

** NOTE: These items are required to be submitted along with Submittal Drawings and Design Calculations. Those Fabrication Submittal Items not marked are to be submitted prior to shipment of the bridge.

Method of Measurement and Basis of Payment

This work will be paid for on a lump sum basis and will not be measured for payment.

This work will be paid for at the contract lump sum price bid for "PEDESTRIAN BRIDGE SUPERSTRUCTURE", complete in place, which price shall include all equipment, materials, tools and labor incidental to the design, manufacture, furnishing, and installation of the pedestrian bridge superstructure at the locations specified on the contract drawings and as described herein.

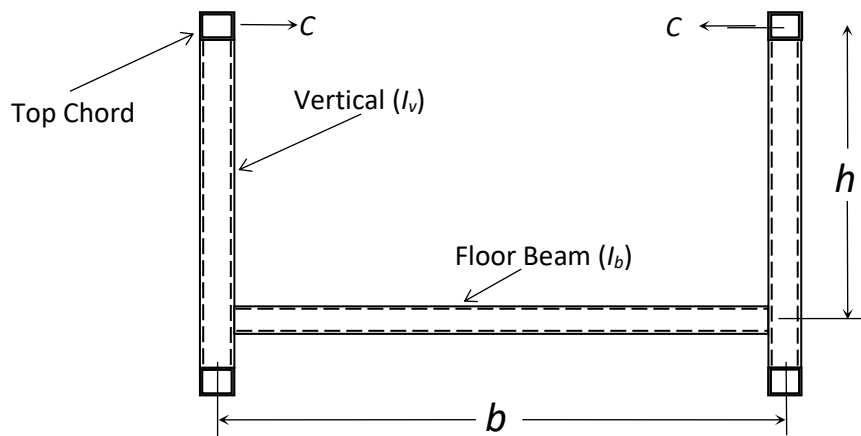
The price shall include the illuminated handrails per the contract drawings.

The price shall also include service of the On-Site Representative.

Appendix A

Table 7.1.2-1 Values of 1/K for various Values of CL/P_c and n

1/K	n=4	n=6	n=8	n=10	n=12	n=14	n=16
1.000	3.686	3.616	3.660	3.714	3.754	3.785	3.809
0.980		3.284	2.944	2.806	2.787	2.771	2.774
0.960		3.000	2.665	2.542	2.456	2.454	2.479
0.950			2.595				
0.940		2.754		2.303	2.252	2.254	2.282
0.920		2.643		2.146	2.094	2.101	2.121
0.900	3.352	2.593	2.263	2.045	1.951	1.968	1.981
0.850		2.460	2.013	1.794	1.709	1.681	1.694
0.800	2.961	2.313	1.889	1.629	1.480	1.456	1.465
0.750		2.147	1.750	1.501	1.344	1.273	1.262
0.700	2.448	1.955	1.595	1.359	1.200	1.111	1.088
0.650		1.739	1.442	1.236	1.087	0.988	0.940
0.600	2.035	1.639	1.338	1.133	0.985	0.878	0.808
0.550		1.517	1.211	1.007	0.860	0.768	0.708
0.500	1.750	1.362	1.047	0.847	0.750	0.668	0.600
0.450		1.158	0.829	0.714	0.624	0.537	0.500
0.400	1.232	0.886	0.627	0.555	0.454	0.428	0.383
0.350		0.530	0.434	0.352	0.323	0.292	0.280
0.300	0.121	0.187	0.249	0.170	0.203	0.183	0.187
0.293	0						
0.259		0					
0.250			0.135	0.107	0.103	0.121	0.112
0.200			0.045	0.068	0.055	0.053	0.070
0.180			0				
0.150				0.017	0.031	0.029	0.025
0.139				0			
0.114					0		
0.100						0.003	0.010
0.097						0	
0.085							0



" U - Frame "

Where: $C = \frac{E}{h^2 [h/3I_v + b/2I_b]}$

L = Length in inches of one truss panel

P_c = Buckling Load (= Top Chord Compression x F.S.)

n = Number of Panels

Reference: Galambos, T.V. (1988) "Guide to Stability Design Criteria for Metal Structures", 4th Edition

ITEM 997.2
ITEM 997.3

STONE MASONRY VENEER
STONE MASONRY GRANITE WALL CAP

SQUARE YARD
LINEAR FEET

Work included under Item 997.2 Stone Masonry Veneer and 997.3 Stone Masonry Granite Wall Cap shall consist of a surface course or facing of masonry of the hereinafter specified quality, applied to the exposed surfaces of the concrete and masonry block structures as a protection or ornamentation. It shall be constructed to the dimensions indicated on the plans or as ordered and in accordance with these specifications. It shall also include the placement of granite wall cap to the limits shown on the plans.

Materials

Materials for Item 997.2 Stone Masonry Veneer and 997.3 Stone Masonry Granite Wall Cap shall conform to the following requirements:

1. **Masonry Facing Stone:** This stone shall be random, split-faced stone, installed to the limits shown on the plans and shall be of a size, quality and color acceptable to the Engineer. The stone shall match the existing stone walls on the site at the Jenney Grist Mill and be hard and durable, resistant to weathering action, reasonably fine grained, and free from structural defects that would impair its strength or durability. Preferably, the stone shall be from a quarry the product of which is known to be of satisfactory quality. Stone shall be of such character that it may be truly cut to such lines and surfaces, either plain or curved, as may be required. Any stone having defects which have been repaired with cement or other materials will be rejected. A minimum of two 5' x 5' sample panels mockup of each stone pattern shall be submitted for approval by the Engineer. Masonry facing stone shall be similar to existing stone masonry at the nearby Holmes Park and Jenney Pond Park.

Masonry stone shall be of such sizes and shapes as to produce the general effect shown on the plans. For the purpose of these specifications, the finish of exposed surfaces of masonry facing stone shall be Split-Face. Exposed surfaces shall have face edges pitched to line and shall have no projection of more than 1-1/2 inches above the plane of the edges.

2. **Granite Wall Cap:** The granite wall caps shall be light grey granite. Granite caps shall be 2" thick by 24" wide for the concrete wall and 2" thick by 32" wide for the concrete columns. Length of the piece shall be a minimum of 4'-0" long. The finish of all exposed surfaces shall be split face. The width of the wall cap may need to be increased to provide a minimum of 2" overhang beyond the face of the stone veneer if the stone veneer thickness exceeds the thickness shown on the details. The granite wall cap material shall not be ordered for delivery to the site until after the masonry facing stone mock up panel has been approved and the wall thickness verified.

The Granite Wall Cap will be paid for at the linear foot price per wall length. The contractor will be responsible for any increase in wall cap width due to an increase in the veneer thickness beyond what is dimensioned.

3. **Mortar:** Mortar shall be composed of one part Portland cement and two parts, by

volume, of surface dry fine aggregate. Hydrated lime, in an amount not to exceed 4 pounds (1.8 kilograms)

of lime to each bag of cement, may be added at the option of the Engineer. Cement and hydrated lime shall conform to the following requirements: venire

- (a) Portland cement, Types I, II or IS, and water
- (b) Hydrated lime shall conform to the requirements of ASTM C 6.
- (c) For laying stone, precast units, or for shotcrete, fine aggregate shall conform to Grading A, table below.
- (d) For pointing stone or the precast units and for laying brick or sealing pipe joints, the fine aggregate shall conform to Grading B, table below:

Table of Gradation, Fine Aggregate for Mortar

Square Mesh Sieves Grading	A	B
Percentage Passing by weight (mass)		
Pass 3/8 inch (9.5 millimeters)	100	
Pass #4 (4.75 millimeters)	95-100	
Pass #8 (2.36 millimeters)	80-100	100
Pass #16 (1.18 millimeters)	50-85	
Pass #30 (600 microns)	25-60	
Pass #50 (300 microns)	10-30	10-40
Pass #100 (150 microns)	2-10	0-10

Metal dowels and ties: Dowels and tie bars for masonry facing and for granite curbing shall be galvanized, after fabrication, in accordance with ASTM A 767/A 767M, Class 1.

Construction Methods

Construction Methods for Item 997.2 Stone Masonry Veneer shall conform to the following requirements:

Each grade of masonry facing stone shall be constructed in the location and to the dimensions shown on the plans or as ordered and shall be built in conjunction with concrete backing. The backing shall not be placed until the masonry facing and any required dowels or ties have been properly placed. The work shall be carried on in successive layers or lifts as permitted by the Engineer. Care must be taken to prevent any movement of the masonry already in place while placing and compacting the concrete.

When required by the Engineer, the facing stone shall be supported by such bracing and form work as may be necessary to prevent movement.

All stone shall be set by competent and experienced masons. Stones shall be arranged with color and size variations uniformly dispersed for an evenly blended appearance.

1. Dressing Stone: All stones shall be dressed to the required size and shape before being laid and, except in the case of granite, shall be cut to lie on their natural beds. The

bottom bed shall be the full size of the stone, and no stone shall have an overhanging top. In rock-faced work the exposed surface of any stone shall not present an excessively undercut contour adjacent to its bottom arris giving a top heavy, unstable appearance when laid.

Beds and joints of dimensioned masonry stone, except for rock-faced surface finish stone, shall be fine finished a full 2 inches (50 millimeters) from the pitch line of the face from which point the bottom bed may fall under the square 1 inch in 12 inches (80 millimeters in 1 meter); the top bed 1 1/2 inches in 12 inches (125 millimeters in 1 meter); and the joints 2 inches in 12 inches (165 millimeters in 1 meter); but all beds must have a reasonable area of bearing spots back of the face. They shall be free from large depressions which might impair the stability of the work. On rock-faced stone, the beds shall be sawn or dressed full for at least the specified minimum width of the stone; beyond that the beds may fall under the square not in excess of 3 inches in 12 inches (250 millimeters in 1 meter). The joints shall be cut full and square for at least 2 inches (50 millimeters) back of the pitch lines from which point they may fall away not over 3 inches in 12 inches (250 millimeters in 1 meter). Headers, if called for, shall have a back dimension not less than 2/3 of the corresponding face dimension unless otherwise shown on the plans.

Beds and joints of stone shall be rough finished for a depth of not less than 2 inches (50 millimeters) in from the arris lines, and the balance of the stone shall not fall off more than 1/4 of the minimum dimension of the piece.

Holes for dowels or ties or for handling stone shall not be permitted to show in exposed surfaces.

2. Mixing Mortar: The mortar shall be hand or machine mixed as may be directed by the Engineer. In the preparation of hand mixed mortar, the fine aggregate, cement and lime, if used, shall be thoroughly mixed together in a clean, tight mortar box until the mixture is of uniform color, after which water shall be added in such quantity as to form a stiff paste. Machine mixed mortar shall be prepared in an approved mixer and shall be mixed not less than 1 1/2 minutes.

Mortar shall be used before obtaining initial set. Retempering of mortar will not be permitted.

3. Laying Stone: Stone shall not be laid when the air temperature in the shade and away from artificial heat is 40°F (5°C) or below and falling, except with the permission of the Engineer and subject to such conditions as he may impose.

Stone masonry shall be carefully and accurately constructed in accordance with the provisions of the approved plans. Stone masonry shall be so constructed as to produce the general effect shown on the plans. As an aid in determining the required appearance, the Contractor shall lay up a sample section of wall, under the direction of the Engineer, which when approved, shall be accepted as representing the appearance to be obtained in the construction.

Each stone shall be cleaned and thoroughly saturated with water before being set. Stone shall not be dropped on or slid over the wall, but shall be carefully set without jarring stone already laid and shall be handled with a lewis or other appliance which shall not cause disfigurement. Allstones shall be well bedded in freshly made mortar and settled in place with a suitable wooden maul before the setting of the mortar. Whenever possible the face joints shall be properly pointed before the mortar becomes set. Joints which cannot be so pointed shall be prepared for pointing by raking them out to a depth of about 2 inches (50 millimeters) before mortar has set. The face surfaces of stone shall not be smeared with the mortar forced out of joints or that used in pointing. No hammering, rolling or turning of stones will be allowed on the wall. Precautions shall be taken to prevent seepage of moisture, through or from the beds and joints, which may cause discoloration of the exposed surfaces.

For rock-faced stone, the course heights may vary from 2 feet to 3 feet 2 inches (0.6 meter to 1.0 meter) with the higher courses at the bottom. Face bond shall be not less than 12 inches (300 millimeters).

Headers shall be placed in the masonry only if so specified. They shall then be placed in each course and shall have a face length of not less than the rise of the stone. They shall bond with the core or backing not less than 12 inches (300 millimeters). A minimum face bond of not less than 12 inches (300 millimeters) shall be maintained. In no case shall a joint occur over or under a header. Approximately 1/5 of the area of the wall shall consist of headers. Beds and joints in dimensioned stone masonry, unless otherwise specified, shall be not less than 3/8 inch (10 millimeters) nor more than 3/4 inch (20 millimeters) in thickness and shall present a uniform appearance. Abrupt changes in the thickness of beds and joints will not be permitted.

Beds and joints in ashlar masonry shall have an average thickness of not more than 1 inch (25 millimeters).

4. Dowels and Ties: Metal ties shall be hot dipped galvanized steel and shall be surface mounted to the concrete face. The ties shall be spaced 16 inches on center for horizontal spacing and 24 inches on center for vertical spacing. The ties shall be Flexible dovetail anchors of 3/16 inch diameter as manufactured by Hohmann & Barnard, Inc or approved equal. The ties shall be anchored with Tapcon concrete Anchors or approved equal a minimum of 1-1/2" embedment into sound concrete. Ties shall be installed during the placing of the stone and before the backing is placed. Dowels shall also be hot-dipped galvanized.
5. Resetting: In case any stone is moved or the joint broken, the stone shall be taken up, the mortar thoroughly cleaned from bed and joints, and the stone reset in fresh mortar.
6. Concrete Backing: Before concrete backing is poured, the backs of all beds and joints shall be pargeled with not less than 1/2 inch (13 millimeters) of setting mortar. No concrete shall be poured until the pargeled mortar has set. In general, horizontal construction joints produced by successive pours of the backing concrete shall be located

not less than 6 inches (150 millimeters) below the top or above the bottom bed of any course of masonry.

7. Joints: Joints shall be pointed or raked as called for on the plans or in the special provisions.
8. Pointing: Pointing shall not be done in freezing weather or when the stone contains frost.

Joints not pointed at the time the stone is laid shall be thoroughly cleaned out, wet with water and filled with mortar. The mortar shall be well driven into the joints and finished with an approved pointing tool to produce the type of joint shown on the plans or required by the Engineer. The wall shall be kept wet while pointing is being done; and in hot or dry weather, the pointed masonry shall be protected from the sun and kept wet for a period of at least three days after completion.

After the pointing is completed and the mortar set, the wall shall be thoroughly cleaned and left in a neat and workmanlike condition. The use of acid for cleaning will not be permitted.

Method of Measurement and Basis of Payment

Item 997.2 "Stone Masonry Veneer" and Item 997.3 "Stone Masonry Granite Wall Cap" shall be measured for payment as follows:

1. Masonry Facing: The quantity of masonry facing shall be the actual number of square yards of the face area of accepted masonry facing, completed within the neat lines as shown on the plans, or as ordered by the Engineer. When the masonry facing is backed with concrete, the quantity to be paid under the concrete item shall be determined by assuming that the facing has the average thickness stated on the plans. The area calculated for payment will be the exposed wall surface area plus 6 inches below finished grade.
2. Granite wall cap: The quantity of the granite wall cap shall be the actual number of linear feet of the completed cap, measured along the center line of the wall or wall cap, completed within the neat lines as shown on the plans, or as ordered by the Engineer.
3. Metal Dowels or Ties: Metal dowels or ties will not be measured for payment and shall be included in the cost of masonry facing or granite wall cap.
4. Pointing: Unless otherwise specified, all pointing shall be included in the cost of the masonry facing or granite wall cap.

The work for Item 997.2 and Item 997.3 will be paid for as follows:

1. Masonry Facing: Masonry facing will be paid for at the contract unit price per square yard for "Stone Masonry Veneer", complete in place, which price shall include all equipment, tools and labor incidental thereto and all materials including metal dowels or ties. The cost of drilling holes for dowels or ties shall be considered as included in the general cost of the work.
2. Granite wall cap: Granite wall cap will be paid for at the contract unit price per linear foot of wall for "Stone Masonry Granite Wall Cap", complete in place, which price shall include all equipment, tools and labor incidental thereto and all materials including metal dowels or ties. The cost of drilling holes for dowels or ties shall be considered as included in the general cost of the work.

ATTACHMENT 2

DRAWINGS

ATTACHMENT 3

PERMITS

ATTACHMENT 4
PREVAILING WAGE RATES

BID FORMS

NAME OF BIDDER

Bids must be submitted on this form and the following table. Bids submitted on any other form will not be considered valid. Please return this form and associated documents to:

Town of Plymouth
ATTN: Procurement
26 Court Street
Plymouth, MA 02360

Bids must be received by 10:00 a.m., Tuesday, December 7, 2021. Postmarks will not be considered. All bids will be publicly opened and read at the above address, date and time. Prices are to include delivery charges unless otherwise specified. All offers are subject to the Invitation for Bids 22142. Please note the Bid Number on the outside of your submission.

In compliance with the above, the undersigned offers and agrees, if this offer is accepted within thirty (30) business days from date of receipt of offers specified above, to perform herein described work for the prices offered opposite each item, and that said prices will be good for the period of one (1) year.

The undersigned bidder hereby certifies:

No person in the employ of the Town of Plymouth has any pecuniary interest in this proposal or in the Contract for work, which is proposed.

Bidder has carefully read and examined all the documents herein referred to, and know and understands the terms and provisions therein. Bidder has satisfied themselves by personal examination of the site, and by such other means as they may wish, as to the actual conditions there existing, the character and requirements of the work, and the difficulties attendant upon its execution.

Bidder agrees that if this bid is accepted, they will contract with the Owner, as provided for in the Bid Documents, and that they will perform all the work, furnish all the material and equipment, and provide all labor, services, plant, machinery, apparatus, appliances, tools, supplies, and all other things required by the documents in the manner and within the time therein prescribed and according to the requirements of the Owner as therein set forth, and that they will take in full payment therefore, the lump sum applicable to the project as offered below.

Bidder understands that information relative to subsurface and other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) has been

furnished only for their information and convenience without any warranty or guarantee, expressed or implied, that the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered will be the same as those shown on the drawings or in any of the other Contract Documents, and agrees that the Bidder shall not use or be entitled to any such information made available to them through the Contract Documents or otherwise, or obtained by them in their own examination of the site, as a basis of or ground for any claim against the Owner or Engineer arising from or by reason of any variance which may exist between the aforesaid information made available to or acquired by them and the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered during the construction work, and has made due allowance therefor in this bid.

The foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount not less than the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor Standards. The undersigned bidder agrees to indemnify the Owner for, from and against any loss, expense, damages, action or claims, including any expense incurred in connection with any delay or stoppage of the project work, arising out of or as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the Contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten (10) hours in duration at the time the employee begins work, and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that they will comply fully with all laws and regulations applicable to awards made subject to M.G.L. c.149 §44A.

Bidder agrees that they will fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled "Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons)". The Contractor shall not award any subcontracts or purchase any materials from suppliers that appear on the Excluded Parties List System. The Contractor shall include this requirement in each subcontract, and require it to be included in all subcontracts regardless of tier. The Contractor shall maintain reasonable records to demonstrate compliance with these requirements.

Bidder will comply with the specific affirmative action steps contained in the EEO/AA provisions of this Contract, including compliance with the Disadvantaged Business Enterprise provisions required under these Contract provisions. The Contractor receiving the award of the Contract shall incorporate the EEO/AA provisions of this Contract into all subcontracts and purchase orders so that such provisions will be binding upon each subcontractor or vendor.

THE UNDERSIGNED BIDDER HEREBY CERTIFIES UNDER THE PAINS AND PENTALTIES OF PERJURY THE FOLLOWING:

This bid in all respects is bona fide, fair, and made without collusion or fraud with any other person. As used in this paragraph, the word PERSON shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.

Bidder has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support in accordance with M.G.L. c.62C §49A.

Bidder is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of M.G.L. c.29 §29F, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

JENNY POND PEDESTRIAN BRIDGE REPLACEMENT, AS SPECIFIED. PRICES SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, SERVICES, PLANT, MACHINERY, APPARATUS, APPLIANCES, TOOLS, SUPPLIES AND ALL OTHER REQUIREMENTS NECESSARY TO COMPLETE ALL WORK AS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ITEM #	QTY.	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL AMOUNT
1	1 (LS)	Site Preparation <hr/> Dollars _____ and Cents _____		
2	1 (LS)	Traffic Management <hr/> Dollars _____ and Cents _____		
3	1 (LS)	Demolition and Removals <hr/> Dollars _____ and Cents _____		
4	1 (LS)	Site Improvements <hr/> Dollars _____ and Cents _____		
5	1 (LS)	Site Restoration <hr/> Dollars _____ and Cents _____		

ITEM #	QTY.	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL AMOUNT
120.	1 (LS)	Earth Excavation <hr/> Dollars _____ and Cents _____		
151.01	600 (CY)	Gravel Borrow – Type C <hr/> Dollars _____ and Cents _____		
151.2	300 (CY)	Gravel Borrow for Backfilling Structures and Pipes <hr/> Dollars _____ and Cents _____		
156.1	80 (TON)	Crushed Stone for Bridge Foundations <hr/> Dollars _____ and Cents _____		
748.	1 (LS)	Mobilization <hr/> Dollars _____ and Cents _____		
750.	1 (LS)	Construction Staking & Survey <hr/> Dollars _____ and Cents _____		
801.60	1,000 (LF)	Trenching & Back Fill <hr/> Dollars _____ and Cents _____		
804.2	1,000 (LF)	2-inch Electrical Conduit Type NM – Plastic – (UL) <hr/> Dollars _____ and Cents _____		
806.2	100 (LF)	2-inch Electrical Conduit Type RM – Galvanized Steel <hr/> Dollars _____ and Cents _____		
811.3	10 (EACH)	Pull Box 16 X 12 X 12 inches <hr/> Dollars _____ and Cents _____		

ITEM #	QTY.	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL AMOUNT
812.10	11 (EACH)	Light Pole Foundations <hr/> Dollars _____ and Cents _____		
813.30	5,500 (LF)	Wire Type 7 No. 10 General Purpose <hr/> Dollars _____ and Cents _____		
813.31	1,500 (LF)	Wire Type 7 No. 8 Ground Wire <hr/> Dollars _____ and Cents _____		
813.32	3,000 (LF)	Wire Type 7 No. 10 Ground Wire <hr/> Dollars _____ and Cents _____		
823.53	1 (EACH)	Time Clock <hr/> Dollars _____ and Cents _____		
823.60	1 (LS)	Highway Lighting Load Center <hr/> Dollars _____ and Cents _____		
823.7	8 (EACH)	Area Lighting Luminaire 90.43 Watt <hr/> Dollars _____ and Cents _____		
823.72	15 (EACH)	Light Pole & Luminaire Removed & Disposed <hr/> Dollars _____ and Cents _____		
823.8	21 (EACH)	Area Lighting Luminaire 88.96 Watt <hr/> Dollars _____ and Cents _____		
823.9	6 (EACH)	Area Lighting Luminaire 80 Watt <hr/> Dollars _____ and Cents _____		

ITEM #	QTY.	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL AMOUNT
901.	90 (CY)	4000 PSI, 1.5-inch, 565 Cement Concrete <hr/> Dollars and Cents		
902.	80 (CY)	3500 PSI, 1.5-inch, 520 Cement Concrete <hr/> Dollars and Cents		
904.3	70 (CY)	5000 PSI, 3/4-inch, 685 HP Cement Concrete <hr/> Dollars and Cents		
910.1	25,000 (LB)	Steel Reinforcement for Structures – Epoxy Coated <hr/> Dollars and Cents		
970.	1,300 (SF)	Bituminous Damp-Proofing <hr/> Dollars and Cents		
991.1	1 (LS)	Control of Water <hr/> Dollars and Cents		
995.	1 (LS)	Pedestrian Bridge <hr/> Dollars and Cents		
997.2	200 (SY)	Stone Masonry Veneer <hr/> Dollars and Cents		
997.3	180 (LF)	Stone Masonry Granit Wall Cap <hr/> Dollars and Cents		

Total Amount of Bid (All work described in the Invitation for Bids and the above Table)

\$

(Amount in Figures)

(Amount in Words)

NOTE:

- The estimated quantities for unit price pay items are approximate only and are included solely for the purpose of comparison of bids. The quantities are based on estimates of the work to be performed during the term on the Contract; however, the Owner does not expressly or by implication agree or warrant that the actual amount of work will correspond with such estimates and the Owner reserves the right to increase or decrease the amount of any class or portion of the work as it may deem necessary, without change of price per unit, which unit prices shall be used for increase and decreases (credits) for adjustments in the quantity of work required.
- All prices, except item totals, shall be state both in words and figures. Discrepancies between unit prices and their respective total amounts will be resolved in favor of the unit price. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- All structural works should be priced for being installed with appropriate finishing works. Shop Drawings may be required for any additional design work.
- The successful bidder shall submit for review by the Owner, documentation to establish a “direct labor mark-up” for change orders which may be executed.
- The Owner reserves the right to withhold the fair market value for work not completed, in addition to the retainage on work completed as described in the Bid Documents.
- Unbalanced bid items will specifically be subject to review and to this potential withholding from periodic payment applications.

THE FOLLOWING ITEMS ARE TO BE SUBMITTED WITH THE BID:

- This completed and signed Bid Form
- Bid Security (5%)
- Delegation of Authority Form
- Certificate of Non-Collusion

- Certificate of OSHA Training
- Certificate of Tax Compliance
- Five (5) references for similar projects within the past five (5) years in the Commonwealth of Massachusetts

THE UNDERSIGNED ACKNOWLEDGES RECEIPT OF ADDENDA # _____.

*To be filled in by bidder if addenda are issued.

PLEASE NOT ANY EXCEPTIONS OF SEPARATE CONTRACTOR LETTERHEAD.

BIDDER _____

COUNTY _____

STATE OF INCORPORATION _____

PHONE _____

EMAIL _____

TAX I.D. NUMBER _____

AUTHORIZED SIGNATURE _____

Printed Name and Title _____

Date Offered _____

DELEGATION OF AUTHORITY

To be completed if this business is a Corporation.

At a meeting of the Board of Directors of _____ duly called and
(Name of Corporation)
held on _____ at which a quorum was present, and acting throughout, the
(Date)

Following vote was duly adopted: VOTED: That _____ the
(Name of Individual)
_____ of the Corporation, hereby is authorized to affix the Corporate
(Title)

Seal, sign and deliver in the name and on behalf of the Corporation, bids, proposals, contracts, bills of sale, conditional sale agreements, chattel mortgages, leases, bonds, applications, affidavits, certificates, and any other similar documents required in connection with sale of the Corporation's products to any purchaser, including assignments and satisfactions of any such documents.

Any and all applications, affidavits, statements, certificates, and similar documents required by law in connection with the licensing of the Corporation or its representatives for the sale, distribution, and servicing of its commercial products.

The authority is hereby delegated and shall be exercised by the aforesaid person in connection with the duties as _____ of _____ and not otherwise.
(Title) (Name of Corporation)

ATTEST: _____

DATE: _____

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under the penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

(Signature of person signing bid or proposal)

(Name of business)

CERTIFICATE OF OSHA TRAINING

In accordance with M.G. L. C.30, S.39S: The undersigned hereby certifies that all employees of

_____ (*Name of Company*) to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employees begins work and who shall furnish documentation of successful completion of said course with the first payroll report for each employee and that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(Authorized Signature)

(Title)

(Date)

CERTIFICATE OF TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,

_____, authorized signatory for _____,
do hereby certify under the pains and penalties of perjury that said contractor has complied with
all laws of the Commonwealth of Massachusetts relating to taxes.

CONTRACTOR

By: _____
(Signature of Authorized Representative)

Title _____

Date _____

REFERENCES OF BIDDER

By signing this page, the bidder certifies that they meet the minimum qualifications specified in the Bid Documents.

Signed:

Signature of Authorized Representative

Title

Date

Please provide the requested reference information on the following pages:

Project Name: _____
Project Location: _____
Contract Amount: \$_____ Completion Date: _____
Owner: _____
Contact Name: _____ Telephone: _____
Architect/Engineer: _____
Contact Name: _____ Telephone: _____

Project Name: _____

Project Location: _____

Contract Amount: \$_____ Completion Date: _____

Owner: _____

Contact Name: _____ Telephone: _____

Architect/Engineer: _____

Contact Name: _____ Telephone: _____

Project Name: _____

Project Location: _____

Contract Amount: \$_____ Completion Date: _____

Owner: _____

Contact Name: _____ Telephone: _____

Architect/Engineer: _____

Contact Name: _____ Telephone: _____

Project Name: _____

Project Location: _____

Contract Amount: \$_____ Completion Date: _____

Owner: _____

Contact Name: _____ Telephone: _____

Architect/Engineer: _____

Contact Name: _____ Telephone: _____

Project Name: _____

Project Location: _____

Contract Amount: \$_____ Completion Date: _____

Owner: _____

Contact Name: _____ Telephone: _____

Architect/Engineer: _____

Contact Name: _____ Telephone: _____