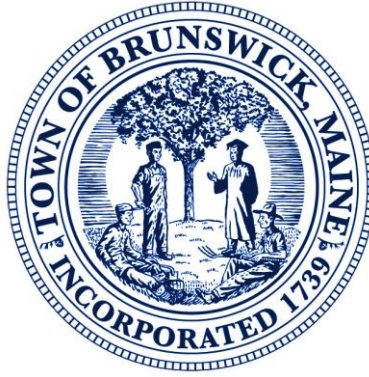


**TOWN OF BRUNSWICK, MAINE
ENGINEERING DEPARTMENT**



**CONTRACT AND SPECIFICATIONS
Downtown Streetscape Enhancement Project**

Dated: October 2, 2023

Pre-Bid Meeting: October 6, 2023 at 10:00 AM

Bids Due: November 6, 2023 at 10:00 AM

***Prepared For:
Town of Brunswick
Engineering Department
85 Union Street
Brunswick, Maine 04011***



***Prepared by:
SLR Consulting
2 Market St, 5th Floor
Portland, Maine 04101***

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**NOTICE TO CONTRACTORS
TOWN OF BRUNSWICK, MAINE
Downtown Streetscape Enhancement Project**

Sealed proposals for **Downtown Streetscape Enhancement Project** shall be received by the office of the Town Engineer until **10:00 AM on November 6, 2023** and at that time will be publicly opened and read. A pre-bid conference (non-mandatory) will be held at **10:00 AM on October 6, 2023** in Room 206 at the Town of Brunswick located at 85 Union Street.

**Downtown Streetscape Enhancement Project
SCOPE OF WORK**

The project generally consists of:

The full depth reconstruction of approximately 5,000 square yards of the Downtown Streetscape sidewalks along Maine Street in Historic Brunswick, including:

- the removal of all existing granite curbing and replacement with new granite curbing,
- construction of new hybrid sidewalks (combination of concrete and brick pavers), driveway ramps, ADA accessible ramps, and raised granite tree pits,
- placement of topsoil and/or engineered soils and associated trees/landscaping,
- supplying and setting streetscape amenities (trash receptacles, bike racks, benches),
- resetting and/or minor relocation of pedestrian lighting and street signage,
- restoration and other ancillary work as described in the Contract Documents.

Each bidder is required to state, in his/her proposal, his/her name and place of residence and the names of all persons or parties interested as principals with him/her, and that the proposal is made without any connection with any other bidder making any proposal for the same work, and that no person acting for or employed by the Town of Brunswick is directly or indirectly interested in the proposal or in any contract which may be entered into to which the proposal relates, or in any portion of the profits there from, except as provided by the Town Charter.

The proposal must be signed by the bidder with his/her full name and address and be enclosed in a sealed envelope together with the bid security. The sealed envelope shall be marked with the name and address of the bidder and entitled:

“Downtown Streetscape Enhancement Project”

and addressed to "Town Engineer, Town Hall, Brunswick, Maine 04011". If the Proposal is forwarded by mail, the sealed envelope, containing the Proposal and marked as above, must be enclosed in a second envelope which shall be addressed to: "Town Engineer, Town Hall, 85 Union St., Brunswick, Maine 04011". All mailed Proposals should be sent by registered mail to insure delivery.

Any bidder may withdraw his/her Proposal prior to the scheduled time for the opening of Proposals upon presentation to the "Town Engineer" of a request, in writing, to do so. Any bidder who withdraws his/her Proposal within thirty (30) days after the actual opening thereof shall be considered to have abandoned his/her Proposal and the bid security accompanying the proposal will be forfeited to the Town of Brunswick. Any Proposal received after the scheduled opening time will not be considered. The Town reserves the right to waive any formality and may consider as informal any Proposal not prepared and

submitted in accordance with these provisions. The Town reserves the right to accept any Proposal or reject any or all Proposals if it is deemed to be in the public interest to do so.

Proposals will not be considered unless they are accompanied by a bid security in the form of a bid bond of a security company satisfactory to the "Town Engineer" in the amount of five (5%) percent of the total bid price, made out in favor of the Town of Brunswick. Projects with a bid price below \$250,000 do not require a bid bond. All bid securities will be released upon deliverance of the Performance Bond and the Labor and Material Payment Bond and execution of the Contract, or, if no Contract award is made, within forty-five (45) days after the opening of the Proposals, unless forfeited as herein stipulated.

The Contract must be signed within two weeks, Saturdays, Sundays, and holidays excepted, after the date of notification to the bidder by the "Town Engineer" of the acceptance of his/her Proposal and readiness of the Contract to be signed. If the bidder fails or neglects, after such notification, to execute the Contract, the Town may determine that the Proposal has been abandoned; and, in such case, the bid security accompanying the Proposal will be forfeited to the Town of Brunswick.

A Performance Bond and a Labor and Material Payment Bond, preferably executed on AIA Bond Form Number A311 in an amount equal to the total Contract price, of a surety company satisfactory to the "Town Engineer", will be required of the successful bidder to insure completion of the work and the proper fulfillment of the conditions of the Contract. The total Contract price shall mean the total bid price as stated in the Proposal based on the estimated quantities of the various items of work.

The work is to be commenced within ten (10) days after the date of the Contract unless otherwise specified in the Specifications or directed by the "Town Engineer", in writing, and is to be continued with diligent regularity until its completion within the time limit specified.

All Proposals must be made on the blank Proposal Form bound in the Contract Documents, or as otherwise provided for in the Specifications. Bidders shall state prices for each separate item of work as called for in the Proposal Form. These prices are to cover the entire expenses incidental to the completion of the work in full conformity with the Contract Documents.

The prices must be stated in figures for all bid items. Proposals which do not contain prices for all items which are called for or which otherwise are not in conformity with this Notice may be rejected.

Each bidder shall make his/her Proposal from his/her own examinations and estimates, and shall not hold the Town, its agents or employees responsible for, or bound by, any schedule, estimate, sounding, boring, or any plan of any thereof, and shall, if any error in any plan, drawing specifications or direction relating to anything to be done under this Contract comes to his/her knowledge, report it at once, in writing, to the Town Engineer.

All materials and labor required to complete the work shall be supplied by the Contractor unless otherwise provided for in the Supplemental Specifications. The cost and expense of all the necessary materials, labor, tools and equipment required to complete the work shall be included in the prices stated in the Proposal.

All questions by prospective bidders pertaining to the Contract Documents, Plans and Specifications must be received, in writing, by the Engineer, at least five (5) days before the date set for the opening of the Proposals. Any questions which, in the opinion of the Engineer, require interpretation, will be sent by email, with the interpretation, in the form of a numbered Addendum, to each person or firm who has taken out a set of Contract Documents, not later than three (3) days prior to the scheduled opening of the

Proposals. Bidders shall acknowledge receipt of all Addenda in the space provided therefore in the Proposal Form, whether the Addenda are in response to questions or otherwise issued by the Town.

The Supplemental Specifications and the Contract Plans delineate the particular project to which the Contract Documents pertain. Should any discrepancy be found to exist between the Supplemental Specifications and the Standard Specifications and/or the Contract Plans, the Supplemental Specifications and/or Contract Plans shall govern.

If the Bid Price of any or several bid items submitted with this Proposal appear to be extremely low or high, compared to the actual cost of performing the work, the Bidder may be asked to explain, in writing, how the work in question is to be performed at the price or prices bid before a decision is made by the Town to award a Contract or reject the Bid.

Proposals will be considered irregular and will be rejected for the following reasons:

- (a) If the Proposal is on a form other than that furnished by the Town or if the form is altered in any way.
- (b) If there are unauthorized additions, conditional or alternate bids or irregularities of any kind which may make the Proposal incomplete, indefinite or ambiguous as to its meaning.
- (c) If the Bidder adds any provisions reserving the right to accept or reject an award or to enter into a Contract pursuant to an award.
- (d) If the Proposal does not contain a unit price for each pay item listed unless otherwise specified.
- (e) If any of the bid prices are unbalanced, or do not reflect the actual cost required to Perform the work, as outlined in the Plans and Specifications.

The Town reserves the right to accept or reject any bid, to waive any formalities or informalities in the bidding process, and to award the bid deemed to be in the best interest of the Town.

PROPOSAL
TOWN OF BRUNSWICK, MAINE
Downtown Streetscape Enhancement Project

To: Town Engineer

Town Hall, Brunswick, Maine

The undersigned hereby declares that he/she has carefully examined the location of the proposed work, the proposed Contract Form and the Contract Documents therein referred to and that he/she proposes and agrees, if this Proposal is accepted, that he/she will contract with the Town of Brunswick, by its Town Manager, to provide all machinery, tools, labor, equipment and other means of construction and to do all the work and furnish all the materials, except those specified in the Specifications to be furnished by the Town, necessary to complete the work in the manner and time therein prescribed, in accordance with the conditions and requirements set forth in the Contract Documents and the requirements of the Engineer as provided for therein; and that he/she will accept in full payment therefore the following sums to wit:

Schedule of Items

Downtown Streetscape Enhancement Project

Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Cost		Bid Amount	
				Dollars	Cents	Dollars	Cents
201.23	REMOVING SINGLE TREE TOP ONLY	23	EA				
201.24	REMOVING STUMP	29	EA				
203.20	COMMON EXCAVATION	2,820	CY				
203.21	ROCK EXCAVATION	5	CY				
SP -304.09	AGGREGATE BASE COURSE - CRUSHED (TYPE A)	1,400	CY				
SP-304.10	AGGREGATE SUBBASE COURSE - GRAVEL (TYPE D)	455	CY				
403.207	HOT MIX ASPHALT 19.0 MM HMA	120	TON				
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	40	TON				
403.209	HOT MIX ASPHALT 9.5 MM (HAND PLACED)	90	TON				
409.15	BITUMINOUS TACK COAT APPLIED	80	GAL				
603.15	12" CULVERT PIPE OPTION I	250	LF				
604.18	ADJUST CATCH BASIN OR MANHOLE TO GRADE	16	EA				
604.249	CATCH BASIN TYPE F6-C	14	EA				
SP-607.132	2-RAIL STEEL PIPE FENCE	48	LF				
SP-608.08	REINFORCED CONCRETE SIDEWALK	2,680	SY				
SP-608.09	BRICK SIDEWALKS - AGGREGATE BASE	1,760	SY				
SP-608.091	BRICK SIDEWALKS - BITUMINOUS BASE	250	SY				

Schedule of Items

Downtown Streetscape Enhancement Project

Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Cost		Bid Amount	
				Dollars	Cents	Dollars	Cents
SP-608.092	BRICK SIDEWALKS - STRUCTURAL SOIL BASE	110	SY				
608.26	CURB RAMP DETECTABLE WARNING FIELD	40	SY				
608.261	RESET CONCRETE PAVERS	10	SY				
608.471	RECONSTRUCT PEDESTRIAN RAMP	1	EA				
SP-609.11	VERTICAL CURB TYPE 1	2,041	LF				
SP-609.12	VERTICAL CURB TYPE 1 - CIRCULAR	343	LF				
SP-609.234	TERMINAL CURB TYPE I - 4 FOOT	17	EA				
SP-609.237	TERMINAL CURB TYPE I - 7 FOOT	15	EA				
SP-609.238	TERMINAL CURB TYPE I - 8 FOOT	29	EA				
SP-609.2371	TERMINAL CURB TYPE I - 7 FOOT CIRCULAR	12	EA				
SP-609.2381	TERMINAL CURB TYPE I - 8 FOOT CIRCULAR	14	EA				
SP-615.071	LOAM, SEED, AND MULCH	160	CY				
SP-615.075	STRUCTURAL STABILITY SOIL	90	CY				
SP-621.2091	LARGE DECIDUOUS TREE	39	EA				
626.11	PRECAST CONCRETE JUNCTION BOX	23	EA				
SP-626.225	ELECTRICAL, TELEPHONE AND CABLE TV WORK	1	LS				
626.31	18" FOUNDATION (FOR PED CROSSING)	2	EA				
626.32	24" FOUNDATION (FOR LIGHT POLES)	21	EA				
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	1,215	SF				
627.76	REMOVE EXISTING PAVEMENT MARKING	1,200	SF				
SP-634.7151	RELOCATE PEDESTRIAN LIGHT POLE & LUMINARE	21	EA				
SP-641.12	BENCH	43	EA				

Schedule of Items

Downtown Streetscape Enhancement Project

Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Cost		Bid Amount	
				Dollars	Cents	Dollars	Cents
SP-641.30	RAISED GRANITE TREE PIT	27	EA				
SP-641.301	EXTERIOR PLANTER (NOT FIXED)	26	EA				
SP-641.34	TRASH RECEPTICLE	24	EA				
SP-643.922	RELOCATE PEDESTRIAN BUTTON POLE	2	EA				
645.10	REMOVE AND RESET EXISTING SIGN	75	EA				
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE ASSEMBLY SIGN, TYPE I	250	SF				
652.33	DRUM	100	EA				
652.34	CONE	100	EA				
652.35	CONSTRUCTION SIGNS	300	SF				
SP-652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS				
652.38	FLAGGERS	1,000	HR				
652.41	VARIABLE MESSAGE SIGNS	2	EA				
656.41	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS				
659.10	MOBILIZATION	1	LS				
803.01	TEST PITS	10	EA				
SP-890.07	BIKE RACKS	7	EA				
	MATERIALS TESTING (ALLOWANCE)	1	LS				
TOTAL AMOUNT OF SECTION , WRITTEN AND IN FIGURES BASED ON ESTIMATE OF QUANTITIES: <hr/> (written)							

The undersigned acknowledges the receipt of Addenda numbered _____

and further agrees that, after notification by the Town Engineer of the acceptance of his/her Proposal and the readiness of the Contract for signature, he/she will execute the Contract and furnish the required

Bonds within ten (10) days, Saturdays, Sundays and Holidays, excepted, and that he/she will commence the work within ten (10) days after the execution of the Contract and deliverance of the Bonds, unless otherwise specified in the Supplemental Specifications or directed by the Director of Public Works in writing and that he/she will prosecute the work to its completion within the time limit specified in the Supplemental Specifications.

The undersigned hereby further declares that the only persons or parties interested in this Proposal, as principals, are named below; that the Proposal is made without any connection with any other person or party making any proposal for the same work; and that no person acting for or employed by the Town of Brunswick is directly or indirectly interested in this Proposal or in any Contract which may be made under it or in profits expected to arise therefrom, except as provided by the Town Charter. The full names and addresses of all persons and parties interested in this Proposal, as principals, are as follows: (Give first and last names in full, and in the case of a Corporation, give names and addresses of President, Treasurer, and Manager; and in case of a Partnership, give names and addresses of members):

Accompanying this Proposal is a bid security deposit in the amount of (\$ _____) which is to become the property of the Town of Brunswick, by forfeiture, if the undersigned fails, after notification by the Town Engineer of the acceptance of his/her Proposal, to execute a contract with the Town and furnish the required Bonds within the time agreed to herein; or, in case the undersigned withdraws his/her Proposal within thirty (30) days after the opening of the Proposals. Otherwise, the deposit will be returned to the undersigned in accordance with the provisions in the Notice to Contractors.

Company Name:	
Address:	
Signature:	
Printed Name and Title:	
Firm's IRS ID#:	
Date:	
Telephone Number:	
Fax #:	
Email Address:	

CONTRACT
TOWN OF BRUNSWICK, MAINE
Downtown Streetscape Enhancement Project

This Agreement, made and entered into the date noted below in the year Two Thousand and Twenty Three, by and between the Town of Brunswick, Maine, a municipal corporation existing under the laws of the State of Maine, hereinafter called "Owner", by its Town Manager, party of the first part, and

Hereinafter called "Contractor", with legal address and principal place of business at

Party of the second part:

WITNESSETH:

That the parties to these presents, each in consideration of the covenant and agreements on the part of the other herein contained, have covenanted and agreed and do hereby covenant and agree, the party of the first part for itself and the party of the second part for himself/herself and his/her heirs, executors, Managers and assigns under the penalties expressed in the Performance Bond and the Labor and Material Payment Bond as follows:

That this Agreement includes the following documents hereinafter referred to as Contract Documents, which are attached hereto and incorporated by reference into this Agreement:

1. Notice to Contractors
2. Proposal
3. Contract
4. Notice of Award
5. Notice to Proceed
6. Supplemental Specifications
7. Special Provisions
8. Contract Plans, if any
9. Addenda, if any
10. Federal Conditions, if any

That the party of the second part will do all the work, furnish all the materials, tools and equipment, except as otherwise specified, and do everything necessary and proper for performing and faithfully completing the work required by the Contract Documents in strict conformity with the provisions of the Contract Documents within the time specified in the Supplemental Specifications. That the party of the

first part will pay the party of the second part as full compensation for well and faithfully completing the whole work according to the Contract Documents as follows:

INSERT AWARDED CONTRACTORS SIGNED BID FORMS

The party of the second part represents and warrants;

(a) That he/she is financially solvent; and is experienced in and competent to perform the work; and is able to furnish the plant, materials, supplies, labor, and equipment to be furnished by him/her; and:

(b) That he/she is familiar with all Federal, State, Municipal and Departmental laws, ordinances and regulations which may in any way affect the work or those employed therein; and:

(c) That such temporary and permanent work required by the Contract Documents to be done by him/her can be satisfactorily constructed and used for the purposes for which it is intended; and that such construction will not injure any person or damage any property other than that damage caused by the construction; and:

(d) That he/she has carefully examined the Contract Documents and the site of the work; and from his/her own investigation has satisfied himself/herself as to the nature and location of the work, the character, quality and quantity of surface and subsurface material likely to be encountered, the character of equipment and other facilities needed for the performance of the work, the general and local conditions; and all the other materials and conditions which may in any way affect the work or its performance.

IN WITNESS WHEREOF, the said Town, by its Town Manager and the said

by its _____ thereunto duly authorized have hereunto set their hands and seals the day and year below written.

Signed in the presence of:

Witness

By: _____
John Eldridge, Town Manager

Date: _____

Witness

By: _____
Contractor

Date: _____

NOTICE OF AWARD

To:

Bid: **Downtown Streetscape Enhancement Project**

The Town of Brunswick has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated **October 2, 2023** and Information for Bidders.

You are hereby notified that your BID has been accepted for all items for a total award of \$_____. You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance Security and certificates of insurance within ten (10) days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said Town of Brunswick will be entitled to consider all your rights arising out of the Town acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The Town will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of the NOTICE OF AWARD to the Town of Brunswick.

Dated this: _____

By: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By (firm) _____

This the _____ day of _____, 2023

By: _____

Title: _____

NOTICE TO PROCEED

To:

Bid : **Downtown Streetscape Enhancement Project**

You are hereby notified to proceed with the work entitled **Downtown Streetscape Enhancement Project**, together with all necessary appurtenances, and to diligently prosecute the work.

You are instructed to immediately take the necessary steps for execution of the work within ten (10) calendar days (or other start time as specified) from the date of this Notice to Proceed. The work is to be completed by **{August 15, 2025}** or otherwise stated in the Contract.

By: _____

Title: _____

Date: _____

SUPPLEMENTAL SPECIFICATIONS
Downtown Streetscape Enhancement Project
DEFINITIONS

Contract Documents: Whenever the term Contract Documents, or a pronoun in its stead, is used, it shall mean and include, but not necessarily limited to, these items: The Notice to Contractors, the Proposal, the Contract, the Supplemental Specifications, the Standard Specifications, the Contract Plans, any other documents included with these Specifications and attached thereto, and any Addenda to the above issued prior to the date of this Contract.

Contract Plans: Whenever the term Contract Plans, or a pronoun in their stead, is used, it shall mean and include all drawings, graphic representations, diagrams and any notes or explanations thereon supplied to the Contractor before the date of this Contract.

Contractor: Whenever the term Contractor, or a pronoun in its stead, is used, it shall mean the person or persons or co-partnership or corporation or other entity which has entered into this agreement or their legal representative.

Director of Public Works or Director: Whenever the term Director of Public Works, Director or a pronoun, in their stead is used, it shall mean the Director of Public Works of the Town of Brunswick or his/her assistants or inspectors acting under him/her, limited to the particular duties entrusted to them.

Lump Sum Bid Price: Whenever the term Lump Sum Bid Price, Lump Sum Bid, Lump Sum or a pronoun in their stead is used, it shall mean the amount of money mutually agreed to by the Contractor to furnish the labor, machinery, tools, apparatus and other means of construction and for doing all the work and furnishing all material called for by the Contract Documents except rock excavation and those items specifically stated as being considered extra work or for which unit prices have been established in the Contract and Proposal.

MUTCD: Whenever the abbreviation MUTCD is used, it shall mean the Manual on Uniform Traffic Control Devices; and, unless otherwise stated, refer to the latest revision of the particular standard.

Owner: Whenever the term Owner, or a pronoun in its stead is used, it shall mean the Town of Brunswick, acting through its designated officials and/or employees.

Specification: Whenever the term Specifications or a pronoun in its stead is used, it shall mean and include the Standard Specifications as herein set forth and any Supplemental Specifications included in the Contract Documents.

Town Engineer or Engineer: Whenever the term Town Engineer, or a pronoun in its stead, is used, it shall mean the Town Engineer of the Town of Brunswick or his/her assistants or inspector acting under him/her or his/her duly authorized representatives acting for him/her, limited to the particular duties entrusted to them.

Unit Bid Price: Whenever the term Unit Bid Price, Unit bid, Unit Price or a pronoun in their stead is used, it shall mean the amount of money mutually agreed to by the Contractor and the Town as full payment to the Contractor for furnishing all necessary labor, materials and equipment (except that which is specifically excluded in the Supplemental and Standard Specifications and Contract Plans) necessary to do one unit of work, i.e., the unit price for one cubic yard of excavation multiplied by the actual number of cubic yards excavated, yields the total payment for the work done.

TIME LIMIT

The work outlined in these specifications shall be complete by the date specified below. The Contractor shall be aware that the work to be done will not necessarily be continuous and that the Contractor shall perform the work in accordance with the requirements of the Town as established from time to time throughout the progress of the work.

All paving, including driveways, is to be completed within 2 weeks of work being completed on each street. Final loaming and touch up work must be completed within 2 weeks of final paving. Contractor will not be allowed to begin work on multiple streets unless this schedule can be met.

No work shall commence prior to **{April 1, 2024}** unless previously approved by the Town Engineer.

All work including final cleanup shall be completed by **August 15, 2025** unless otherwise stated in the Contract.

INSURANCE AND LIABILITY

The Contractor shall take all responsibility of the work and take all precautions for preventing injuries to persons and property in or about the work; shall bear all losses resulting to him/her on account of the amount or character of the work or because the nature of the land in or on which the work is done is different from what was estimated or expected or on account of the weather, elements or other cause; and he/she shall assume the defense of and indemnify and save harmless the Town and its officers, agents and servants from all claims relating to labor and materials furnished for the work; to inventions, patents and patent rights used in doing the work; to injuries to any person or corporation received or sustained by or from the Contractor and his/her employees in doing the work, or in consequence of any improper materials, implements or labor used therein; and to any act, omission or neglect of the Contractor and his/her employees therein.

The Contractor shall furnish proof of coverage with adequate insurance of the types and to the limits specified below naming the Town of Brunswick as additional insured. Certificate of such insurance shall be filed with the Director of Budget/Purchasing for his/her approval before permission to commence work will be granted.

INSURANCE REQUIREMENTS

The OWNER shall indemnify and hold harmless the CONTRACTOR, its officers, agents and employees from claims, suits or liabilities resulting from the negligence of the OWNER, its officers, agents and employees. The CONTRACTOR shall indemnify and hold harmless the OWNER its officers, agents and employees from claims, suits or liabilities resulting from the negligence of the CONTRACTOR, its officers, agents and employees.

This obligation to indemnify shall not waive any defense immunity or limitation of liability, which may be available to the OWNER, its officers, agents or employees, under the Maine Tort Claims Act pursuant to the provisions of 14 MRSA Section 8101 et seq. or any other privileges or immunities as may be provided by law.

The Contractor and Subcontractors shall purchase and maintain such liability and other insurance. The limits of liability shall provide coverage not less than the following amounts, or greater where required by law:

A. Worker's Compensation:

(1)	Worker's Compensation	Statutory
(2)	Employer's Liability	\$1,000,000

B. Comprehensive General Liability including Operations/Premises, Contractor's Protective, Products/Completed Operations Liability and Personal Injury Liability:

(1)	Bodily Injury:	
	\$1,000,000	Each Occurrence
	\$2,000,000	Annual Aggregate
(2)	Property Damage	
	\$1,000,000	Each Occurrence
	\$2,000,000	Annual Aggregate

Property Damage Liability insurance to include coverage for Explosion, Collapse, and Underground Coverage. Property Damage Liability insurance shall provide coverage for property in the Care, Custody, and Control of the insured.

(3)	Personal Injury	
	\$1,000,000	Each Occurrence
	\$2,000,000	Annual Aggregate

Personal injury coverage to have employment exclusion deleted.

C. Comprehensive Automobile Liability including owned, hired and non-owned vehicles:

\$1,000,000	Combined Single Limit
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D. Umbrella or Excess Liability Insurance Coverage

\$2,000,000	Each Occurrence
\$4,000,000	Aggregate

E. Work Site and Materials

Contractor shall provide physical damage coverage for work and materials stored at the site, off-site and in-transit. Coverage shall be for the full replacement cost thereof.

All the policies of insurance (or the certificates or other evidence thereof) required to be purchased and maintained by CONTRACTOR will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least thirty days' prior written notice has been given to OWNER by certified mail. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage, the insurer will have no rights of recovery against any of the parties named as insured or additional insured, and if the insurers require separate waiver forms to be signed by ENGINEER or ENGINEER's consultant OWNER will obtain the same, and if such waiver forms are required of any Subcontractor, CONTRACTOR will obtain the same.

If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with this Article on the basis of its not complying with the Contract Documents, OWNER will notify CONTRACTOR in writing thereof within ten days of the date of delivery of such certificates to OWNER in accordance with paragraph this contract. CONTRACTOR will provide such additional information in respect of insurance provided by him as OWNER may reasonably request.

LAWS AND REGULATIONS

The Contractor shall keep himself/herself informed of all existing and future State and Federal laws and Municipal ordinances and regulations which in any way affect those engaged or employed in the work, or the materials used in the work; or in any way affect the conduct of the work and of all orders and decrees of bodies of tribunals having any jurisdiction is discovered in the Plans or Specifications or Contract for this work in relation to any such law, ordinance, regulation, order or decree, he/she shall forthwith report the same to the Director in writing. He/she shall at all times himself/herself observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Town and its officers and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself/herself or his/her employees.

PERMITS

The Contractor shall, at his/her own expense, obtain all necessary permits from the County, Municipal or other public authorities, shall give all notices required by law or ordinances; and shall post all bonds and pay fees and charges incident to the due and lawful prosecution of the work covered by this Contract. Fees associated with street opening permits and obstruction permits on Town projects shall be waived.

DIRECTIONS AND EXPLANATIONS, CORRECTIONS OF ERRORS

The Plans and Specifications are understood to be explanatory of each other, but should any discrepancy appear or any misunderstanding arise as to the import of anything contained in either of them, the parties hereto further agree that the explanation and decision of the Engineer shall be final and binding on the Contractor; and all directions or explanations required or necessary to complete any of the provisions of this Contract and these Specifications and give them due effect shall be given by the Engineer. Correction of any error in the Plans or Specifications may be made by the Engineer, when such correction is necessary for the proper fulfillment of the intention of such Plans or Specifications, the effect of such correction to date from the time that the Engineer gives due notice in writing to the Contractor.

DUTY TO NOTIFY ENGINEER IF AMBIGUITIES DISCOVERED

The Contractor shall not take advantage of any ambiguity, error, omission, conflict, or discrepancy ("ambiguity, etc.") contained in the Plans and Specifications that may significantly affect the cost, quality, conformity, or timeliness of the work. If the Contractor discovers any such ambiguity, etc., for which the Contractor may seek adjustments to compensation, time, or other Contract requirements, the Contractor shall provide a written notice stating the nature of the ambiguity, etc. within forty-eight (48) hours of discovering or being notified of the ambiguity and before performing any work related to the ambiguity, etc., as provided in Early Negotiation below. Failure to provide such written notice in compliance with the Contract shall constitute a waiver of all claims related to the ambiguity, etc.

EARLY NEGOTIATION

A. Notice Required: When the Contractor becomes aware of facts or circumstances that may cause the Contractor to seek additional compensation, time, or any other change in the requirements of the Plans and Specifications ("Issue"), then the Contractor shall notify the Engineer in writing within forty-eight (48) hours of identification of the issue and at least 48 hours before commencing any part of the Work relating to the Issue. The notice must describe the basic nature and extent of the Issue.

Such notice may be verbal only if confirmed in writing in one of the two following ways: (A) if a Progress Meeting is held within fourteen (14) days of the date that the Issue became known, such Notice may be confirmed with an entry in the Progress Meeting minutes. Such entry must describe the basic nature and extent of the Issue. (B) Otherwise, the Contractor shall confirm a verbal notice by delivering to the Engineer, within fourteen (14) days of the date the Issue arose, a Written Notice that describes the basic nature and extent of the Issue.

The written notice or confirmation will be known as a "Notice of Issue for Consideration". The Contractor will not be entitled to any additional compensation, time, or any other change to the requirements of the Plans and Specifications without a timely Notice of Issue for Consideration.

B. Negotiation: When the Engineer receives the Notice of an Issue for Consideration conforming to (A) above, *Notice Required*, the Engineer and the Contractor will negotiate in good faith to attempt to resolve the Issue. Any resolution will be noted in the Progress Meeting minutes or confirmed otherwise in writing by the Engineer. Any changes to the Plans and Specifications that affect compensation, time, quality, or other requirements of the Plans and Specifications shall be by written Change Order.

ALTERATIONS

It is further agreed that the Engineer may make alterations in the line, grade, form, position, dimension or material of the work herein contemplated, or any part thereof, either before or after the commencement of the work; and that the Engineer may at any time, order an alterations increase in the amount of work. Such increase shall be paid for according to the quantity actually done as extra work as provided for in *Extra Work*, Below. If such alterations diminish the quantity of work to be done, they shall not constitute a claim by the Contractor for damages or for anticipated profits on the work dispensed with and payment will be reduced in an amount determined as provided for in *Reduction of Work*, below.

EXTRA WORK

The Town of Brunswick reserves the right to add portions of the work required under this Contract, using the unit prices established in the proposal. The Town will determine if all work outlined in the plans or portions thereof shall be built under this Contract prior to the Contract signing.

The term Extra Work as used herein refers to and includes work required by the Town which, in the judgment of the Town Engineer, involves changes in or additions to that are required by the Plans and Specifications; provided, however, such changes or additions do not result from the fault of the Contractor.

The Contractor shall do any extra work when and as ordered in writing by the Engineer or his/her agents specially authorized thereto in writing, and shall, when requested by the Engineer so to do, furnish itemized statements of cost of the extra work ordered and give the Engineer access to the accounts, bills and vouchers relating thereto. If the Contractor claims compensation for extra work not ordered as

aforesaid, or for any damage sustained, he/she shall, within one week after the beginning of any such work or of the sustaining of any such damage, make a written statement to the Engineer of the nature of the work performed or damage sustained and shall, on or before the fifteenth (15th) day of the month succeeding that in which any such extra work shall have been done or any such damage sustained, file with the Engineer an itemized statement of the details and amount of such work or damage; and unless such statements shall be made as so required, his/her claim for compensation shall be forfeited and invalid and he/she shall not be entitled to payment on account of such work or damage. The determination of the Engineer shall be final upon all questions of the amount and value of extra work. If a unit price does not exist, payment for extra work will be actual cost plus fifteen (15%) per cent. For work performed by subcontractors, payment shall be the subcontractor's actual cost plus 10%, plus an additional 5% for the Contractor's oversight. No allowance will be made for overhead costs.

REDUCTION OF WORK

The Town of Brunswick reserves the right to delete portions of the work required under this Contract, using the unit prices established in the Proposal. The Town will determine if all work outlined in the Plans or portions thereof shall be built under this Contract prior to the Contract signing.

The Contractor shall omit and not perform any portion of the work required by the Contract Documents when ordered in writing by the Town Engineer or his/her agents specially authorized thereto in writing. If no unit price exists, it will be an estimate to be made by the Director and the Engineer. Their estimate will be final and binding. These reductions shall not constitute a claim by the Contractor for damage or for anticipated profit on the work dispensed with.

DISPUTE RESOLUTION COSTS AND EXPENSES:

In the event of any dispute between or involving the Town of Brunswick and Contractor, whether resolved by arbitration, litigation or some other mechanism of dispute resolution, in the event that the Town shall be a prevailing party, Contractor shall reimburse the Town for its attorney's fee and costs reasonably incurred in connection with the resolution of the dispute.

ESTIMATES AND PAYMENTS

The Engineer will, each month, make an approximate estimate of the amount of work done since the last preceding estimate and of the value thereof, and upon such estimate being made, the Town will pay to the Contractor ninety (90%) per cent of the estimate; provided, however, that no such estimate or payment shall be required to be made when, in the judgment of the Engineer, the total value of the work done since the last estimate or payment amounts to less than three hundred (\$1,000.00) dollars. Payment may at any time be withheld if the work is not proceeding in accordance with the provisions of this Contract. The Engineer may, if he/she deems it expedient so to do, cause estimates to be made more frequently than once in each month, and he/she may approve payments to be made more frequently to the Contractor. The Engineer may at his/her option retain, temporarily or permanently, a smaller amount than aforesaid, and may approve payment to the Contractor, either temporarily or permanently from time to time during the progress of the work, of such portion of the retained amount as he/she may deem prudent. The Town, may keep any money which would otherwise be payable at any time hereunder, and apply the same, or so much as may be necessary therefore, to the payment of any expenses, losses, or damage incurred by the Town and determined as herein; and may retain, until all claims are settled, so much of such money as the Director shall be of the opinion will be required to settle all claims against the Town, its officers, agents or servants.

FINAL ESTIMATE AND PAYMENT

It is further mutually agreed that whenever, in the opinion of the Engineer and the Director, the Contractor shall have completely performed all the work embraced in this Contract, the Engineer shall proceed with all reasonable diligence to measure the work and shall make out the final estimate for the same and shall certify the same in writing; and his/her certificate shall state the whole amount of the payments previously paid and the amount retained in all previous estimates. Within the term of thirty (30) days after the date of such final estimate, the Town will pay to the said Contractor the amount due. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

Provided that nothing herein contained shall be construed to affect the right of the Town by its Town Engineer hereby reserved, to reject the whole or any portion of the aforesaid work should the said certificate or certificates be found or known to be inconsistent with the terms of this Agreement or otherwise improperly given.

LAST PAYMENT TO TERMINATE LIABILITY OF TOWN

No person or corporation other than the signer of this Contract as Contractor now has any interest hereunder, and no claim shall be made or be valid; and neither the Town, nor any member or agent thereof, shall be liable for, or be held to pay any money, except as provided in the Standard Specifications and in the Contract. The Acceptance by the Contractor of the last payment aforesaid shall operate as and shall be a release to the Town, and every member or agent thereof, from all claim or liability to the Contractor for anything done or furnished for, or relating to the work, or for any act or neglect of the Town, or of any person relating to or affecting the work, except the claim against the Town for the

SUB-CONTRACTING OF WORK

The sub-contracting of work on this project will not be allowed unless approved in writing by the Town Engineer.

PRECONSTRUCTION CONFERENCE

A preconstruction conference will be held at 85 Union Street, Brunswick, Maine at a mutually agreeable time following the award of the contract. At this time the Contractor shall submit a graphically illustrated construction schedule and a plan showing project activities. In addition to the Contractor, all subcontractors are required to attend. Town officials and representatives of the various utility companies involved in this project will be in attendance.

It is the purpose of this meeting to inform the various agencies of the proposed work schedule and to allow the opportunity to discuss any project difficulties and to promote cooperation during the implementation of the work.

FIELD DESIGN AND LAYOUT

The Contractor shall be responsible for the field design and layout for the work on any street in this Project. The Town shall provide plans for each project delineating desired elements in the design and the Contractor shall be responsible for transferring the intent to the ground and constructing a project that meets the intent of the Town.

SITE INVESTIGATION

The Contractor shall examine the Plans, Specifications and site of the work and from his/her own investigation, determine the nature and location of the work, the general and local conditions, particularly those bearing on access, transportation, quality and quantity of surface and sub-surface materials to be encountered, and all other aspects of the work, machinery and services required to complete the project as required by the Contract Documents. The Town will not be responsible for any understanding or representation made by any Town employee during or prior to negotiation and execution of the Contract, unless such understanding or representation shall be in writing and become a part of the Contract Documents.

BORINGS AND ESTIMATE OF QUANTITIES NOT WARRANTED

It is expressly understood and mutually agreed to by the parties hereto that the quantities of the various classes of work to be done and materials to be furnished under this Contract have been estimated and are approximate and only for the purpose of comparing on a uniform basis the bids offered for the work. It is also understood that the Contractor has made his/her proposal from his/her own examinations and estimates and shall not hold the Town, its agents or employees responsible for or bound by any schedule, estimate, sounding, boring or any plan thereof as being even approximately correct; and should the Contractor encounter

quicksand or other difficulties, he/she shall have no claim on that account; and he/she shall, if any error in any plan, drawing, specification or direction relating to anything to be done under this Contract comes to his/her knowledge, report it at once to the Engineer. The Contractor further agrees that neither the Town of Brunswick, nor the Director of Public Works, the Engineer, nor either of them separately or together are to be held responsible that any of the quantities be found even approximately correct in the construction of the work, and that the Contractor will make no claim for anticipated profits or for loss of profit because of a difference between the quantities of the various classes of work actually done, or of the materials actually delivered, and any estimated quantities stated in the bids. The Contractor hereby agrees that he/she will complete the entire work to the satisfaction of the Engineer and in accordance with the Specifications and Plans herein mentioned and at the prices agreed upon and fixed therefore.

COMMENCEMENT OF WORK

The Contractor agrees to commence the work required in the Contract Documents within ten (10) days after the signing of the Contract and deliverance of the Bond, unless otherwise specified in the Supplemental Specifications or directed by the Town Engineer; and at his/her own cost and expense do and complete all the work and furnish all the labor, machinery, tools and materials, except as specified in the Supplemental Specifications, and to do everything required to build and put into complete working order for the Town of Brunswick the work described in the Contract Documents.

TIME AND ORDER OF DOING WORK

The Contractor agrees that the work shall be commenced and carried on at such points and in such order of precedence and at such times and seasons as may from time to time be directed by the Engineer.

It is further agreed that no work shall be done under this Contract on Saturdays or Sundays or on days declared by the State Legislature as Legal Holidays, except in cases of emergency and then only with the consent in writing of the Town Engineer; nor shall any work be done at night unless authorized in writing by the Engineer. The Contractor shall make his/her work week conform to that of the Public Works

Department. When permission is granted to perform work during times other than this work week, the Contractor shall reimburse the Town for any costs for inspection during these periods.

NO DAMAGES FOR DELAY

The Engineer may delay the beginning of the work or any part thereof if the Town shall not have obtained possession of the land in or upon which the same is to be performed or if for any other reason it becomes necessary to do so. The Contractor shall have no claim for damages on account of such delay, but shall be entitled to so much additional time wherein to perform and complete this Contract on his/her part as the Engineer shall certify in writing to be just. Whenever any part of the work covered by this Agreement is done in part by or connects with the work so as to accommodate the work of the other contractors and to cooperate with such contractors in mutual agreements as to all such work, and no contractor shall have a claim against the Town growing out of the negligence or delay of any other contractor or contractors; but each contractor shall be liable to every other contractor for any such delay or negligence.

COMPETENT PERSONNEL TO BE EMPLOYED

The Contractor shall employ only competent personnel to do the work; and whenever the Director shall notify the Contractor, in writing, that any person on the work is, in his/her opinion, incompetent, unfaithful, disorderly or otherwise unsatisfactory, such person shall be discharged from the work and shall not again be employed on it except with the consent of the Director.

A person certified by the DEP in erosion control best practices must be on-site for any activity that disturbs more than one cubic yard of soil –including earth moving and landscaping operations in the shore land zone until work is complete and the site stabilized.

NOT TO SUBLET OR ASSIGN

The Contractor shall give his/her personal attention constantly to the faithful prosecution of the work, shall keep the same under his/her personal control and shall not assign, by power of attorney or otherwise, nor sublet the work or any part thereof, without the previous written consent of the Engineer; and shall not, either legally or equitably, assign any of the money payable under this Agreement or his/her claim thereto, unless by and with the like consent of the Engineer.

SUPERINTENDENCE BY 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 Engineer and shall be one who can be continued in that capacity for the particular job involved unless he/she ceases to be on the Contractor's payroll. All directions given to such representative in the Contractor's absence shall be as binding as if given to the Contractor.

NO TOWN EMPLOYEE TO BE INTERESTED

It is further agreed that this Contract shall be utterly void as to the Town if any person employed in any capacity by the Town of Brunswick is either directly or indirectly interested therein, except as provided by the Town Charter.

WAIVE

No order by the Inspector or the Engineer or any of his/her employees, nor any order, measurement or certificate by the Engineer, nor any order by him/her for the payment of money, nor any payment for, or acceptance of, the whole or any part of the work by the Engineer, nor any extension of time, nor any possession taken by the Engineer or his/her employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved by the Engineer, or of any right to damages herein provided; nor shall any waiver of any breach of this Contract be held to be a waiver of any other or subsequent breach. Any remedy provided in this Contract shall be taken and construed as cumulative, that is, in addition to each and every other remedy herein provided and the Town and the Engineer shall also be entitled to a writ of injunction against any breach of any of the promises of this Contract.

ACCESS TO WORK

The Engineer and Director, their assistants and inspectors may, for any purpose, enter upon the work and premises used by the Contractor, and the Contractor shall provide safe and proper facilities therefore. Other Town contractors may also, for all the purposes which may be required by their contracts, enter upon the work and premises used by the Contractor. Any difference or conflicts which may arise between the Contractor and other contractors of the Town in regard to their work shall be adjusted and determined by the Engineer.

ENGINEER TO DETERMINE AMOUNT AND QUANTITY OF WORK, INSPECTION OF MATERIALS

To prevent all disputes and litigations, it is hereby agreed by and between the parties to this Contract that the Engineer shall in all cases determine the amount and quality of the various classes of work which are to be paid for under this Contract; and that the Engineer by himself/herself, or his/her representatives acting under him/her, shall inspect all the materials to be furnished and all work to be done under this Contract to see that the same corresponds to the Specifications herein set forth. The Contractor further agrees that he/she will furnish the Engineer with such information and vouchers relating to the work, the materials therefore, and the persons employed thereon, as he/she shall from time to time request, and will give to the Engineer or his/her representatives all necessary labor, tools and facilities for inspecting the material to be furnished and the work to be done under this Contract.

The Engineer has the authority to stop the work whenever such a stoppage may be necessary to insure proper execution of this Contract. He/she also has the authority to reject all work and materials which do not conform to the Specifications or Plans, to direct application of forces to any portion of the work and to order the force increased or diminished as in his/her judgment is required.

DEFECTIVE WORK AND MATERIALS

The inspection of the work shall not relieve the Contractor of any of his/her obligations to fulfill this Contract as herein prescribed and defective work shall be made good and unsuitable materials may be rejected, notwithstanding that such work and materials have been previously overlooked by the Engineer and accepted or estimated for payment. If the work or any part thereof shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good such defect, in a manner satisfactory to the Engineer, and if any materials brought upon the ground for use in the work, or selected for the same, shall be condemned by the Engineer as unsuitable or not in conformity with the Specifications, the Contractor shall forthwith remove such materials from the vicinity of the work. Nothing in this Contract shall be construed as vesting in the Contractor any right of property in the materials used

after they have been attached or affixed to the work or the soil; but such materials shall, upon being so attached or affixed, become the property of the Town.

SANITARY REGULATIONS

Necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation and made fly proof and satisfactory to the Engineer, shall be constructed and maintained by the Contractor in such a manner and their use shall be strictly enforced.

NO INTOXICATING DRINKS

The Contractor shall neither permit, nor suffer the introduction or use of intoxicating substances upon or about the works embraced in this Contract or upon any grounds occupied by him/her.

PAYMENT FOR MATERIALS

Payments will be made in accordance with the price stated in the Contract. The Contractor may include requests for payment of material delivered to the job site when such requests are accompanied by invoices substantiating the requests for material payment satisfactory to the Town.

GUARANTEE

The Contractor guarantees that the work to be done under this Contract will be done in a good and workmanlike manner and all materials, whether furnished by him/her or the Town used in the construction of the work, will be free from defects and flaws and in conformity with the Plans and Specifications in all respects. This guarantee will be for a period of one (1) year after the date of acceptance of the whole work by the Town of Brunswick.

The Contractor shall at all times, until the final acceptance of the whole work, keep the surface of the streets in the position and condition required by these Plans and Specifications. If at any time within the period of the guaranty, any other part of the work constructed under the terms of this Contract shall in the opinion of the Town Engineer require repairing, the Engineer shall notify the Contractor in writing to make the required repairs. If the Contractor shall neglect to make such repairs to the satisfaction of the Director within the time limit as set forth in the notice in writing to the Contractor of the required repairs, then the Director of Public Works may make the necessary repairs, by contract or otherwise, and the Town shall have a claim against the Contractor in the amount of the expense incurred by the Town in making such repairs.

It is hereby, however, specifically agreed and understood that this guaranty shall not include any repairs made necessary by any cause or causes other than defective work or materials.

WORKING HOURS

No work shall proceed in this project prior to 7:00 A.M. or after 7:00 P.M. (prevailing time) on any weekday. No work shall commence on Saturday prior to 8:00 A.M. or after 6:00 P.M. (prevailing time) No Sunday work or work on Holidays will be allowed on this project. The definition of work for this specification shall include the starting or moving of equipment, machinery or materials.

LIMIT OF OPERATIONS

The Contractor shall conduct work at all times in such a manner and in such sequence as will assure the least interference with traffic. He shall not open up work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections, if this is essential to public convenience.

Waste and surplus material shall not be stockpiled but shall be disposed of as designated in the Specifications.

SCHEDULE OF OPERATIONS

A schedule shall be provided consisting of a bar chart detailing the following activities:

- Work Plan/Sequencing of Construction

Although a bar chart is acceptable as a minimum, more complex and detailed schedules (i.e. flow charts, critical path method, etc.) are encouraged and will be acceptable to the Town. Updates will be required.

SETTING PIPES TO LINE AND GRADE

If the Contractor elects to use a laser to set line and grade for the drainage pipe then the equipment shall be frequently checked to verify that it is still accurate and still set to the proper line and grade. If laser equipment is not used then batter boards shall be set at a maximum of 25-foot intervals and the grades transferred to the boards with a transit, level or line level. Setting pipe grades via the use of "pop" level or a carpenter's level will not be permitted.

OCCUPATIONAL HEALTH AND SAFETY

The contractor shall perform all work in accordance of the pertinent requirements of the Occupational Safety and Health Act requirements of the State of Maine and with the regulations for construction as specified by the Department of Labor and Occupational Safety and Health Administration (OSHA) as currently amended.

OPEN EXCAVATIONS

All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. Warning signs, barricades, and traffic cones shall meet the latest OSHA standards, Manual on Uniform Traffic Control Devices (MUTCD) and all other applicable Federal, State, and local requirements. The Contractor shall, at his/her own expense, provide suitable and safe bridges and other crossings for accommodating pedestrian travel. Bridges provided for access to private property during construction shall be removed when no longer required.

The length of any open excavation shall not exceed fifty (50) linear feet, unless authorized by the Engineer. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open excavation, prohibiting the stacking of excavated material in the street, and/or requiring that the excavation shall not remain open overnight. The Contractor shall hold the Town harmless from all liability related to open excavations.

Open excavations will not be allowed overnight unless approved by the Town Engineer in advance. If approved the open excavation shall be completely covered with steel road plates and secured with temporary chain link construction fencing.

The Contractor shall take precautions to prevent injury to the public due to open excavations. All excavations, excavated material, equipment, or other obstacles that could be dangerous to the public shall be well lighted at night. Open excavations shall be allowed overnight, except on heavily traveled streets, or when ordered by the Engineer.

MAINTENANCE OF TRAFFIC

The Contractor shall perform his/her work to maintain at least one lane available for the use of traffic and emergency vehicles at all times. Completely closing the traffic lanes will not be permitted except under special permission from the Town Engineer, Fire Chief and the Police Chief. As the work progresses, the Contractor shall maintain the street to its original width, by removing stockpiles of earth, maintaining trenches at street grade, and providing adequate drainage.

“Stop” signs shall be maintained at their original locations at all times during the progress of work.

Prior to the start of any construction work the Contractor and the Engineer shall prepare a mutually acceptable inventory of all signs within the project limits which shall be used as a guide for replacement should signs be removed for construction purposes. The signs shall be inventoried by station location and offset, legend of sign and post. This work shall be considered incidental to the project and no direct payment shall be made. All signs shall conform to MUTCD standards, most current edition.

All existing traffic signs which are to be removed during construction shall be carefully dismounted and the posts removed and shall be stacked in an area approved by the Engineer. The Contractor shall protect the signs from damage and shall repair or replace, at no additional cost to the Town, any damaged sign or post that was damaged as a result of his operations.

Stockpiling materials in the adjacent travel lane shall not be permitted even in situations where the contractor is granted permission to close the roadway. The contractor shall maintain the adjacent travel lane in such a manner that it can be immediately opened for emergency vehicles, busses, garbage trucks, and other vehicles requiring access to the neighborhood.

The Contractor shall submit the Name and Contact Information of the Responsible Person for the project and a Traffic Control Plan (TCP) in writing at least five (5) work days prior to the planned start of work. The TCP shall contain all flagger’s signage, barricades, cones, barrels or other Traffic Control Devices required on the project. The TCP shall also contain a detour plan when necessary. When the Project Engineer and the Contractor are satisfied with the TCP/Detour Plan it shall be submitted to the Permit Office at Brunswick Town Hall for a Street Occupancy Permit and approval of the Fire chief, Police Chief and the Director of Public Works. The Contractor shall provide continuous and effective traffic control during the life of the project. The Town may require certain Traffic Control Limitations such as allowable road closures, Minimum lane widths, or timing of Lane or Road Closures. In all cases the Contractor shall be responsible for supplying signage and traffic control devices.

No work shall commence until all flaggers and traffic control devices are in place per the approved TCP. The Contractor shall keep the Emergency Communications Center informed as to the status of how traffic moving thru the work Zone Daily or as necessary.

On heavily traveled streets the Contractor may be required to provide a Police Detail at his or her own expense to control a busy street or intersection. If a Traffic Light is to be switched to flash mode so the intersection can be controlled by Qualified Flaggers or uniformed Officers the Contractor shall coordinate the process between the Town of Brunswick Police Department and Town Engineer. If any night work is required, the requirements of the latest Manual on Uniform Traffic Control Devices (MUTCD) shall apply including the requirement for Lighted Flagger Stations.

NOTIFICATION OF RESIDENTS

The Contractor shall notify residents sufficiently in advance of any construction activities that may affect the resident's driveway to allow removal of personal vehicles. At least one access to businesses shall be maintained at all times.

CARE AND PROTECTION OF PROPERTY

During construction, the Contractor shall, at his/her own expense, provide for the use of sewers, drains, and natural drainage interrupted by his/her work, and immediately cart away and remove all offensive material, as required or directed by the Engineer.

The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, including poles, signs, services to buildings, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Plans. The Contractor, at his/her own expense, shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him/her at his/her expense.

The Contractor shall restore all ground surfaces outside the limits of construction that are damaged or disturbed by his/her operations, to their original condition. Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. In case of cutting or unavoidable damage to branches, limbs, and trunks of trees, the cut or damaged portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint, as directed.

Cultivated hedges, shrubs, and plants that might be damaged by the Contractor's operations shall be protected by suitable means, or shall be dug up and temporarily replanted and cared for. After the construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs and plants are injured to such a degree as to affect their growth or diminish their usefulness, they shall be replaced by items of kind and quality at least equal to that existing at the commencement of work. This work shall be performed at the expense of the Contractor. All work shall be inspected and approved by the Town Arborist, and it shall not be considered complete until the Contractor has completed all work to his/her satisfaction.

The Contractor shall preserve all property pins and monuments which are located outside the work area. If property pins or monuments are encountered in the work area where side slopes extend to or beyond the right-of way line, the Contractor shall halt work in the immediate area long enough for the Engineer to take such data as necessary to re-establish the location of the pin or monument. The Engineer will reset such pin or monument after completion of the work at no expense to the Contractor. If, however, pins or monuments outside the work area become damaged or lost, the restoration or replacement of such items shall be done by a licensed surveyor and shall be the Contractor's responsibility.

The cost of replacing or repairing damaged or broken fences, steps, mailboxes, shrubs, hedges, etc., will be considered incidental to the project and no payment will be made to the Contractor for this work. Resetting of mailboxes to new road elevations shall be considered incidental to the construction and no payment will be made for this work.

On paved surfaces, the Contractor shall not use or operate tractors, bulldozers, or other equipment that could damage such surfaces. All surfaces, which have been damaged by the Contractor's operations, shall be restored to the condition at least equal to that in which they were found immediately prior to the beginning of operations. Suitable materials and methods shall be used for such restoration and shall be performed at the expense of the Contractor.

DUST CONTROL

This work shall consist of sweeping all impacted pavement in a method to prevent dust and furnishing and applying water or calcium chloride on the roadway or haul roads for dust control as directed by the Engineer. When no items for dust control are included in the Contract, such work shall be considered incidental to the Contract.

The water shall not be salt or brackish and shall be free from oil, acid, and injurious alkali or vegetable matter. The calcium chloride shall conform to the requirements of AASHTO M144 latest version.

Water shall be applied by approved methods and equipment including a tank with a gauge-equipped pressure pump and a nozzle-equipped spray bar. Calcium chloride shall be applied by mechanical spreaders or by hand at the rate designated. Calcium chloride shall be used when authorized by the Engineer for controlling dust on the roadway under construction and where dust constitutes a hazard to traffic.

DISPOSAL OF WATER

The Contractor shall not be allowed to dispose of any water encountered or used during construction by discharging said water to any existing or new stormdrain, sanitary sewer or combined sewer unless expressly authorized by the by the Town Engineer and/or the Brunswick Sewer District. If discharge to existing facilities is approved minimum pretreatment prior to discharge shall include a dewatering filter bag. All existing and new catch basins shall be protected with approved silt sacs.

REMOVAL OF SURPLUS EXCAVATION

As the work progresses, all surplus excavation, rubbish, refuse and all unused material, tools and equipment shall be removed at once so as to confine the new work to as short a length as is practicable. All surplus material shall be removed by the Contractor at his/her own expense unless otherwise directed in the Supplemental Specifications.

When this clearing of surplus excavation, rubbish, repairing of street surfaces, fences or other damage is neglected, the Town Engineer will give notice, in writing, to that effect to the Contractor; and, if said material is not removed, or if said repairing is not done within forty-eight (48) hours thereafter, or if the Contractor does not at once take the necessary precautions to insure the safety of travel, the Town Engineer may employ other parties to do such work, and the expense thus incurred will be deducted from any monies due or that may become due the Contractor. Upon the completion of the work, the Contractor shall tear down and remove all structures built by him/her and shall remove all rubbish of any kind from

any street or grounds which he/she has occupied and shall leave the area of work in a neat and clean condition.

BLASTING PRECAUTIONS

When rock is to be removed by blasting, all blasts shall be suitably covered with mats chained together and every precaution taken for the protection of the work, traffic, adjacent buildings and other property. No blasting shall be done by any person or persons other than those approved for that purpose, nor shall any blasting be done without taking out a permit for the same stating the location where the blasting is to be done.

All explosives shall be stored in accordance with the laws and ordinances relating thereto and in accordance with and to the satisfaction of the Fire Chief. All explosives shall be brought upon the work only as needed and in small quantities. Exploders shall be kept entirely separate from explosives. The precautions against accident by blasting or premature explosions shall be entirely satisfactory to the Engineer. No blasting of rock will be permitted within twenty (20) feet of the work already finished, except as permitted by the Engineer. Blasts shall be made only between such hours as are approved by the Engineer. All Federal, State, and Town regulations relating to blasting and explosives shall be fully complied with.

DAMAGE BY BLASTING

The Contractor shall be liable for all damage to persons or property caused by blasting or explosions, or arising from neglect to properly guard and protect the excavations and all portions of the work; and the Contractor shall wholly indemnify the Town against claims on such account and no compensation will be allowed the Contractor in any event or under any circumstances for loss incurred by him/her or arising from blasting.

PROTECTION OF TREES

The Contractor shall be responsible for the preservation of all trees on the project which are not called to be removed. Any trees damaged by the Contractor's operations shall be repaired using approved tree dressing or paint in accordance with the appropriate provisions of Section 201 of the MaineDOT Standard Specifications.

PRIVATE LAND

The Contractor shall not, except after written consent from the proper parties, enter or occupy with personnel, equipment or materials, any land outside the limits of the Town Right of Way or location in which the work is to be done. The Contractor shall, whenever so required by the Engineer, erect and maintain fences along the roadways and around the grounds occupied by him/her of such character as will be sufficient for the protection of the adjoining property. The Contractor shall have access to the project only at such points as the obtained easements meet streets accepted by the Town of Brunswick and at such other points that the Engineer may designate. If other points of access are desired by the Contractor, he/she shall obtain the necessary permission from the property owners.

QUALITY ASSURANCE

The Contractor shall be responsible at all times for maintaining top quality assurance during the performance of the work. Particular attention to compaction shall be paid during backfilling operations.

Strict adherence to Sections 203.11 and 304.04 of the Standard Specifications will be required for all sub-grade and sub-base operations.

The contractor shall provide one gradation and proctor per 1000 cubic yards of each material used on the project. A minimum of one gradation and proctor per type of material used shall be provided. Gradations and proctors shall be completed by an independent testing lab. The testing shall be incidental to the other contract items. The Town reserves the right to complete their own gradations and proctors of materials and any failing tests will be means for rejection of materials.

During paving operations, the paving contractor shall have quality control personal present for the entire paving operation to check densities. In addition, the paving contractor shall supply copies of their quality control test results within 48 hours after placement of the pavement. The Town reserves the right to complete their own testing of the pavement materials and any failing tests will be means for rejection of materials.

CLEANING UP

The Contractor shall keep the work area free from accumulations of waste material or rubbish. Upon completion of the work, the work area and all other areas used by the Contractor shall be cleared of all temporary structures, waste material or rubbish of any kind.

RECORD DRAWINGS

The Contractor shall keep daily records of all changes in the work, ties to all new service connections, and elevations of all inverts. Upon completion of the project, the Contractor shall deliver to the Engineer a marked-up set of plans with all changes and required information indicated in red. The Contractor shall maintain a record of all service lead locations and locations of buried fittings, etc., throughout the project. The locations shall be recorded by 3 ties from fixed permanent points. Prior to requesting final payment, the Contractor shall submit the records in triplicate bound form. The records shall be clearly legible and include the street, tax map, lot number and reference contract drawing number. A blank form is provided at the end of this section and is to be used by the Contractor for preparation of record ties. Final payment will not be made until Engineer receives marked-up set of plans and service lead information.

SPECIAL PROVISIONS

The following Supplemental Specifications and Special Provisions shall amend the **“State of Maine, Department of Transportation, Standard Specifications, Revision of March 2020** including all current additions or modifications thereof. In case of conflicts, these Supplemental Specifications and Special Provisions shall take precedence and shall govern.

Federal wage rates, DBE utilization and other similar federal contract requirements in Section 100 shall not apply to this contract.

SPECIAL PROVISIONS
SECTION 101
CONTRACT INTERPRETATION

The provisions of Division 100 of the Supplemental Specifications shall apply with the following additions or modifications:

101.11 Commissioner:

This subsection is amended by the addition of the following: Commissioner shall mean the Town Manager, Town of Brunswick, Maine.

101.24 Department:

This subsection is amended by the addition of the following: whenever the word “Department” or the word “Highway Department” or “Department of Transportation” or the words or phrases which, by context of usage are clearly intended to mean the same thing, appear in the Standard Specifications, Special Provision or in or on any plan or other Contract Document, they shall mean the Town of Brunswick.

101.27 Engineer:

This subsection is revised to read as follows: The Engineer, Town of Brunswick, acting directly or through his duly authorized representatives, who are responsible for the inspection of the construction.

SPECIAL PROVISIONS
SECTION 102
BIDDING

102.01 Qualifications of Bidders:

This section is amended by the following: The Town reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder fails to satisfy the Town that such bidder is properly qualified to carry out the obligations of the Contract and to compete the work contemplated therein. The Town reserves the right to reject any or all bids if it would be in the public interest to do so. A proposal which included any combination of abnormally low or abnormally high unit prices, which results in an unbalanced bid, may be rejected. In addition, the Town of Brunswick reserves the right to negotiate with any bidder if it is deemed in the best interest of the Town do so.

102.03 Method of obtaining plans, specifications and proposal forms:

The subsection is revised to read as follows: Plans, Specifications and proposals forms may be inspected and purchased as described in the Advertisement for Bids.

102.11 Delivery of Proposals:

This subsection is revised to read as follows: Each proposal shall be submitted, document intact, in a sealed envelope. The envelope shall be clearly marked to indicate the name of the bidder, contract name, bid number and be addressed to Town Manager, Town of Brunswick, 85 Union Street, Brunswick, Maine 04011. Proposals may be delivered in person or mailed, but they shall be filed prior to the time and at the place specified in the Advertisement for Bids. Proposals received after the time for opening of bids will be returned to the bidder unopened.

102.12 No Town Employee to be Interested:

The following paragraph shall be added to Section 102: This contract shall be null and void as to the Town of Brunswick if any person employed in any capacity by the Town is either directly or indirectly interested therein.

SPECIAL PROVISIONS
SECTION 104
UTILITIES

104.4.6 Cooperation with Utilities:

General Information

These special provisions outline the arrangements that have been made for coordination of the work and the utility adjustments as defined in Section 104 of the Supplemental Specifications, which adjustments are to be made by the Brunswick Topsham Water District and Brunswick Sewer District, unless otherwise provided. Temporary utility adjustments are not anticipated. It is anticipated that several utility items (hydrants, valve boxes, service lines, etc) will need to be relocated and/or height adjusted to meet final grade by the utility companies to facilitate the construction of the sidewalks. The contractor shall be responsible for any fees from the utility companies to adjust the utility items which shall be considered incidental to the other contract items.

Any times and dates mentioned are estimates only and are dependent on favorable weather, working conditions and freedom from emergencies. The Contractor shall have no claim against the Town of Brunswick or if they are exceeded.

Utility working days are Monday through Friday, conditions permitting. Times are estimated on the basis of a single crew for each utility.

All clearing and tree removal, which is part of this contract, must be done by the Contractor in areas where utilities are involved before the utility may relocate their facilities. Any clearing of trees or limbs for the utility relocation shall be marked in the field by the contractor and approved by the Town and the Engineer.

In all cases the Utilities shall be advised well in advance (generally three weeks) before work dependent on other work to be done by the contractor is to be commenced.

Brunswick Sewer District Reset/raise manholes that are in conflict with proposed features or need adjustment due to grade changes. Replace services, as required.

Brunswick Topsham Water District Relocate Fire Hydrants, reset/relocate gate valves that are in conflict with proposed features or need adjustment due to grade changes. Replace services, as required.

Central Maine Power None anticipated

Comcast None anticipated

Consolidated None anticipated

Maine Natural Gas None anticipated

Blasting: In addition to any other notice that may be required, the Contractor shall notify an authorized representative of each utility having plant close to the blast site no later than twenty-four (24) hours prior to blasting. The notice shall state the approximate time of the blast.

Dig Safe: The Contractor shall be responsible for determining the presence of underground utilities prior to commencing any excavation work in accordance with MRSA Title 23 ss 3360-A, Maine Dig Safe System.

At points where the Contractor's operations are adjacent to the properties of utilities, damage to which might result in considerable expense loss or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

It is anticipated that the utility poles may not be relocated prior to the commencement of contract work. The contractor is advised to schedule his work to accommodate the possibility of utility pole obstruction.

It is anticipated that the several utilities poles will need to be held by the utility companies to facilitate the construction of the roadway. The contractor shall be responsible for any fees from the utility companies to hold the utility poles and shall be considered incidental to the other contract items.

The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress at a reasonable rate and the duplication or rearrangement work may be reduced to a minimum and that services rendered by those parties will not be unnecessarily interrupted. In the event of interruption to utility service as a result of accidental breakage or as a result of being exposed or supported the contractor shall promptly notify the proper authority. The contractor shall cooperate with the same authority in the restoration of such service.

The Contractor shall ascertain the location of existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

Bath Water District Attn: Trevor Hunt (207) 443-2391 thunt@bathwd.org	Comcast Attn: Kendall Blodgett Project Coordinator (207) 729-2623 kendall_blodgett@cable.comcast.com
Brunswick Sewer District Attn: Ernie Bergeron Director of Collection Systems (207) 729-0148 ebergeron@bsewer.org	Consolidated Attn: George Woods George.Woods@consolidated.com (207) 797-1554
Brunswick Topsham Water District Attn: T.C. Schofield, PE District Engineer (207) 729-9956 tschofield@btwater.org	Maine Natural Gas Attn: Joe Gauthier (207) 729-0420 jgauthier@mainenaturalgas.com
Central Maine Power Attn: Timothy Laney Project Manager Timothy.laney@cmpco.com	Public Works Attn: Jay Astle (207) 725-6654 jastle@brunswickme.org

The completeness of the above listing is not guaranteed by the Town of Brunswick.

SPECIAL PROVISIONS
SECTION 105
GENERAL SCOPE OF WORK
(Limitation of Operations)

105.2.6 Convenience of the Public:

This subsection shall be revised with the addition of the following:

105.2.6 A Maintaining Public Access to Facilities:

As this is a vibrant and active downtown business area it is expected that the contractor (and all its employees) will act in a safe and professional manner at all times and that work will be coordinated with the Town of Brunswick and the affected property owners so as to minimize disturbance to their businesses.

1. Work areas will be limited to one block at a time, and only on one side of the roadway at a time, unless otherwise approved by the Town of Brunswick. For approval, contractor must submit a plan indicating they have adequate resources and will commit the required equipment and staff to execute the anticipated work limits they are proposing.
2. Work is expected to begin on the West side of the roadway, beginning at the southern end of the project limits (i.e. STA 100+00 of the west side baseline) and progress in a northerly fashion.
3. It is anticipated that work on the west side of road will take place during the first construction season (i.e. 2024) and that the east side of the roadway will be constructed during the following construction year (i.e. 2025).
4. Contractor shall not move from one side of the road to the other unless and until specifically approved and/or authorized to do so by The Town of Brunswick.
5. Access to businesses will remain open at all times. Temporary access and ramps must comply with the requirements of the ADA.
6. Parking areas shall remain available during non-working hours and only the necessary and essential parking zones for the contractor to perform their scheduled work for that day shall be blocked at any one time. Contractor shall coordinate closures of parking areas with the Town of Brunswick throughout the duration of the project.

SPECIAL PROVISIONS
SECTION 107
TIME

107.1 Contract Time and Completion Date:

The contract may not begin work until **April 1, 2024**, unless otherwise authorized to do so by the Town.

For the contractor to be in compliance with the expected time requirements, **at a minimum**, all work on the west side shall be substantially complete by the end of season one (2024). Failure to meet the timelines herein may be cause for contract termination and/or assessment of liquidated damages.

All contract work must be completed by **August 15, 2025**.

107.7 Schedule of Liquidated Damages:

This subsection shall be amended to read that the Liquidated Damages be assessed per the below table.

Original Contract Amount		Liquidated Damages per Calendar Day
From More Than	To and Including	
\$0	\$500,000	\$500
\$500,000	\$1,000,000	\$1,000
\$1,000,000	And More	\$2,000

SPECIAL PROVISIONS
SECTION 108
PAYMENT

Section 108 of the Supplemental Specifications is hereby modified:

108.3 Retainage:

This subsection reads as follows: Retainage shall be 10% of the monthly payments claimed until construction is complete. The Town may hold, temporarily or permanently, retainage as needed to reflect amounts due the Town under the Contract and to assure timely Completion of the Work in Conformity with the Contract.

Upon Completion of Physical Work, the Contractor may request that the Department reduce retainage. The Department may grant or deny such request as it deems desirable and prudent. Otherwise, retainage will be held until Final Acceptance.

Add the following to the end of subsection 108, Partial Payments:

Prompt Payment

- A. Pay when Paid: The Contractor must pay subcontractors for all work satisfactorily performed and invoiced by the subcontractor no later than 30 days from the dated the Contractor received payment from the Town for such subcontractor work.
- B. Retainage: The Contractor must return to the subcontractor all retainage withheld from the subcontractor within 30 days after the date of the subcontractor's work.
- C. Flow Down: All subcontractors of the Contractor and all lower tier subcontracts must contain or reference all applicable provisions of the Contract concerning prompt payment.

108.8 Final Payment:

This subsection is revised by adding the following paragraphs: Prior to final payment the following shall be accomplished:

- A. Contractor and the Engineer shall jointly inspect the project to assure completion of all items including Punch List.
- B. Contractor shall submit Record Drawings indicating all changes and additions made during construction.
- C. Waivers of Lien shall be provided to the Town for the project.
- D. Contractor shall submit the Warranty and Maintenance Bonds in the amount specified in the contract.
- E. Contractor shall submit all Service Lateral Records.
- F. Final Clean-up shall be completed. No payment will be made for the final clean-up and the cost thereof shall be considered incidental to the appropriate item.

G. Final Acceptance Notification will be prepared by the Town and forwarded to the Contractor for the project along with Final Payment.

The Contractor shall guarantee the project for a period of one (1) year from the date of completion.

SPECIAL PROVISIONS
SECTION 202
REMOVING OF STRUCTURES AND OBSTRUCTIONS

The provisions of Section 202 of the Standard Specifications shall apply with the following additions and modifications:

202.01 Description:

This work shall consist of the removal (milling, grinding or planing) of the surface of the bituminous concrete pavement to the depth, width, grade and cross sections as directed by the Engineer at intersection joints. The pavement butt joints item shall be used for driveways, side streets, perimeter of trenches and the terminus of overlay projects. The removal of structures shall be incidental unless they are greater than 10' from the proposed structure. Sawcutting pavement shall be incidental to all other work items.

202.02 Removing Material:

The equipment for removing the bituminous surface shall be a power operated planing machine or grinder capable of removing the bituminous concrete pavement to the required depth. The equipment shall be capable of accurately establishing profile grade by referencing from either the existing paving or from an independent grade control and shall have a positive means for removing excess material from the surface and for preventing accidents from flying material in compliance with subsection 107.24, Safety and Accident Prevention, of the Standard Specification. Pavement millings shall become the property of the contractor and shall be disposed of in an approved location.

202.03 Basis of Payment:

The accepted quantity of removing pavement surface for butt joints will be paid for at the contract unit price per square yard which price will be full compensation for removing, hauling, clean up and stockpiling the material. The accepted quantity of catch basin or manhole removal will be paid for at the contract unit price per each and will be full compensation for removing at full depth, hauling, clean up and stockpiling the material. Removal of existing pipe within four feet of the horizontal limits of excavation for a proposed pipe will be considered incidental to that applicable pipe pay item.

Payment will be made under:

Pay Item	Description	Pay Unit
202.15	Remove Existing Manhole or Catch Basin	Each
202.20	Remove Bituminous Concrete Surface	Square Yard
202.202	Removing Pavement Surface	Square Yard
202.203	Pavement Butt Joint	Square Yard

SPECIAL PROVISIONS
SECTION 203
COMMON EXCAVATION

The provisions of Section 203 of the Standard Specifications shall apply with the following additions and modifications:

203.01 Description:

Granular Borrow and Crushed Stone must be previously approved by the Engineer.

203.02 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
203.20	Common Excavation	Cubic Yard
203.21	Rock Excavation	Cubic Yard
203.24	Common Borrow	Cubic Yard
203.25	Granular Borrow	Cubic Yard
203.35	Crushed Stone ¾-inch	Cubic Yard

SPECIAL PROVISIONS
SECTION 206
STRUCTURAL EXCAVATION

The provisions of Section 206 of the Standard Specifications shall apply with the following additions and modifications:

206.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
206.07	Structural Rock Excavation – Drainage & Minor Structures	Cubic Yard

SPECIAL PROVISIONS
SECTION 304
AGGREGATE BASE AND SUBBASE COURSE

The provisions of Section 304 of the Standard Specifications shall apply with the following additions and modifications:

304.1 MATERIALS

- A. MDOT Aggregate for Base and Subbase (MDOT 703.06)
1. Shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances.
 2. Recycled Asphalt Pavement (RAP) shall not be used for or blended.
 3. "Crushed" shall be defined as consisting of rock particles with at least 50 percent of the portion retained on the 1/4 inch square mesh sieve, having a minimum of fracture faces.
 4. MDOT Type A Base Gravel (MDOT 703.06)
 - a. The gradation of the part that passes a 2-inch sieve shall meet the grading requirements of the following table:

<u>Sieve Size</u>	<u>Percentage By Weight Passing</u>
½ Inch	45 - 70
¼ Inch	30 - 55
No. 40	0 - 20
No. 200	0 - 6.0

- b. Type A aggregate for base shall only contain particles of rock that will pass the 2 inch square mesh sieve.
5. MDOT Type D Subbase Gravel (MDOT 703.06)
 - a. The gradation of the part that passes a 3-inch sieve shall meet the grading requirements of the following table:

<u>Sieve Size</u>	<u>Percentage By Weight Passing</u>
½ Inch	35 - 80
¼ Inch	25 - 65
No. 40	0 - 30
No. 200	0 - 7.0

- b. Aggregate for subbase shall not contain particles of rock which will not pass the 3-inch square mesh sieve.

304.07 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
304.09	Aggregate Base Course – Crushed (Type A)	Cubic Yard
304.10	Aggregate Subbase Course – Gravel (Type D)	Cubic Yard

SPECIAL PROVISIONS
SECTION 403
HOT MIX ASPHALT PAVEMENT

The provisions of Section 403 of the Standard Specifications shall apply with the following additions and modifications.

403.01 Description:

The **most recently** revised special provision Section 108 using the New England Selling Price shall apply to this contract. Also, a price adjustment for performance graded binder on all asphalt, as outlined in Section 108.4.1 Price Adjustment for Hot Mix Asphalt, shall apply to this contract.

403.02 Basis of Payment:

The accepted quantities of hot mix asphalt pavement will be paid for at the contract unit price per ton for the mixtures, including hot mix asphalt material complete in place.

Payments will be made under:

Pay Item	Description	Pay Unit
403.207	Hot Mix Asphalt – 19.0mm	Ton
403.208	Hot Mix Asphalt – 12.5mm Surface	Ton
403.209	Hot Mix Asphalt – Hand Placed	Ton
403.210	Hot Mix Asphalt – 9.5mm Surface	Ton
403.211	Hot Mix Asphalt – Shim	Ton
403.213	Hot Mix Asphalt – 12.5mm Base	Ton

SPECIAL PROVISIONS
SECTION 409
BITUMINOUS TACK COAT

The provisions of Section 409 of the Standard Specifications shall apply with the following additions and modifications.

409.01 Application of Bituminous Material:

The rate of application shall be 0.02 to 0.1 gallons per square yard as directed. During application, care shall be taken to assure areas outside of the work area shall not be discolored. Tack coat shall be required between all layers of Hot Mix Asphalt.

409.02 Basis of Payment:

The accepted quantity of bituminous tack coat will be paid for at the contract unit price per gallon for the designated type of material complete in place.

Payments will be made under:

Pay Item	Description	Pay Unit
409.15	Bituminous Tack Coat. Applied	Gallon

SPECIAL PROVISIONS
SECTION 419
SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT

The provisions of Section 419 of the Standard Specifications shall apply with the following additions and modifications.

419.01 Description:

All sawing and sealing joint in bituminous pavement shall be incidental to the contract.

SPECIAL PROVISIONS
SECTION 603
PIPE CULVERTS AND STORM DRAINS

The provisions of Section 603 of the Standard Specifications shall apply with the following additions and modifications.

606.01 Materials:

All pipes less than 12" shall be PVC SDR 35. All pipe 12" to 18" in diameter shall be PVC SDR 35, HDPE (ADS N-12 or approved equivalent), or PPE (SaniTite or approved equivalent). All pipes greater than 18" in diameter shall be PPE (SaniTite or approved equivalent). Pipe shall be bedded and backfilled with crushed stone from 6" below the pipe to 6" above the pipe.

606.02 Basis of Payment:

Crushed stone is incidental to pipe installation.

Payment will be made under:

Pay Item	Description	Pay Unit
603.149	10" Diameter PVC Pipe	Linear Foot
603.15	12" Culvert Pipe Option I	Linear Foot
603.159	12" Culvert Pipe Option III	Linear Foot
603.16	15" Culvert Pipe Option I	Linear Foot
603.169	15" Culvert Pipe Option III	Linear Foot
603.17	18" Culvert Pipe Option I	Linear Foot
603.179	18" Culvert Pipe Option III	Linear Foot
603.19	24" Culvert Pipe Option I	Linear Foot
603.199	24" Culvert Pipe Option III	Linear Foot

SPECIAL PROVISIONS
SECTION 604
CATCH BASINS

The provisions of Section 604 of the Standard Specifications shall apply with the following additions and modifications.

604.01 Description:

604.1601 Core Structure: Structures to be cored shall be mechanically cored and booted to accept a new pipe connection(s).

604.02 Materials:

Manholes shall have hinged covers (East Jordan Ergo or approved equivalent); abandoned pipe shall use a masonry plug. Brick and cover shall be replaced if rebuilding catch basins or manholes unless otherwise directed by the Engineer. A cascade cover shall be used if altering manholes to catch basins.

604.03 Method of Measurement:

Item 604.1601 Core Structure shall be measured by each new pipe connection, complete and accepted.

604.03 Basis of Payment:

The accepted quantity of item 604.1601 Core Structure will be paid for at the contract unit price each, including labor and furnishing all materials.

Payment will be made under:

Pay Item	Description	Pay Unit
604.072	Catch Basin Type A1-C	Each
604.076	60" Catch Basin Type A1-C	Each
604.092	Catch Basin Type B1-C	Each
604.096	60" Catch Basin Type B1-C	Each
604.15	Manhole	Each
604.153	60" Manhole	Each
604.154	72" Manhole	Each
604.16	Alter Catch Basin to Manhole	Each
604.1601	Core Structure	Each
604.161	Altering Catch Basin	Each
604.164	Rebuilding Catch Basin	Each
604.166	Rebuilding Manhole	Each
604.167	Alter Catch Basin Grate to Cascade	Each
604.17	Alter Manhole to Catch Basin	Each
604.18	Adjust Manhole or Catch Basin to Grade	Each
604.243	Catch Basin Type F3-C	Each
604.245	Catch Basin Type F4-C	Each
604.247	Catch Basin Type F5-C	Each
604.249	Catch Basin Type F6-C	Each

SPECIAL PROVISION
SECTION 607.132
2-RAIL STEEL PIPE FENCE

The provisions of Section 607 of the Standard Specifications shall apply with the following additions and modifications.

607.01 Description:

The work under this item consists of Installing 2-Rail Steel Pipe Fence (Handrail) and appurtenances thereto conforming to the dimensions and details shown on the Drawings and in accordance with the provisions of these Specifications, or as directed by the Engineer.

607.02 Materials:

Handrails and Railings: 1-1/2 inch outside diameter galvanized steel pipe, meeting requirements of ASTM A 53 or galvanized steel tubing meeting requirements of ASTM A 501.

Pipe Sleeves: 2 inch inside diameter by 6 to 9 inches long galvanized standard round pipe.

Rail Setting Grout: Commercial nonshrink grout conforming to requirements of ASTM C 1107, Type B or Type C.

Concrete: Class A: Shall conform to MEDOT Section 502.05.

Factory-applied powder-coated finish. Color as selected by Engineer from Manufacturer's standard colors.

607.03 General:

Construction Methods

- A. Verify measurements in field. Notify the Engineer in writing of any discrepancies between plan dimensions and field dimensions which would adversely affect the installation of any railings.
- B. Before starting work, examine adjoining work to which these items fit, connect. Arrange for any necessary corrective work before attaching. All corrective work must be done with the approval of Owner.
- C. Fit and shop assemble components in largest practical sizes, for delivery to site.
- D. Accurately form components to suit wall geometry.
- E. Provide inserts and other anchorage devices for connecting handrails and railing systems to concrete or masonry work.
- F. Install components plumb and level, accurately fitted, free from distortion or defects.
- G. Touch-up welds and damaged surfaces with paint. Grind welds smooth.

607.06 Method of Measurement:

This work will be measured by the actual number of Linear Feet complete and accepted of 2-Rail Steel Pipe Fence (Handrail) measured from end to end along the center line of the hand rail.

607.07 Basis of Payment:

This work will be paid for at the contract unit price per liner feet "2-Rail Steel Pipe Fence" complete in place, which price shall include but is not limited to all handrail systems, shop drawings, fabrication, installation, metal sleeves, non-shrink gout, drilling, disposal of surplus material, coloring and all equipment, tools, labor, and materials incidental thereto.

Pay Item	Description	Pay Unit
607.132	2-Rail Steel Pipe Fence	Linear Foot

SPECIAL PROVISIONS
SECTION 608
SIDEWALKS

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications, including Special Provisions Sections 608.08 and 608.09.

608.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
608.08	Reinforced Concrete Sidewalk	Square Yard
608.09	Brick Sidewalk with Aggregate Base	Square Yard
608.26	Curb Ramp Detectable Warning Field	Square Yard
608.261	Reset Concrete Pavers	Square Yard
608.45	Construct Sidewalk	Square Yard
608.451	Reconstruct Concrete Sidewalk	Square Yard
608.46	Regrading Sidewalk	Square Yard

SPECIAL PROVISIONS
SECTION 608.08
REINFORCED CONCRETE SIDEWALK

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications.

608.01 Description:

This work shall consist of furnishing and placing a Portland cement concrete sidewalk and incidental construction for all reinforced concrete sidewalks. Except as otherwise specified in this Special Provision, all work shall be in conformity with the applicable provisions of Section 502, Structural Concrete; Section 503, Reinforcing Steel; and, Section 515, Protective Coating for Concrete Surfaces.

608.02 Materials, General:

- A. Diamond shaped load plate: 1/4" and 3/8" saw cut from hot rolled steel plate meeting ASTM A 36. 3/4" saw cut from cold rolled steel plate for acceptable tolerances meeting ASTM 108-03 grade 1018.
- B. Pocket former: High density plastic with internal collapsible fins and spacer that hold diamond shaped load plate in correct position and creates a void to its vertical faces. This void, in addition to its tapered shape, shall allow for differential movement and shall prevent horizontal stress accumulation at joint, thus reducing likelihood of random cracking.
- C. Refer to ACI 302.1R-04 for selection of plate size and spacing.
- D. Dimensions and spacing of plates:
 - 1. 5" to 6" slab thickness: 1/4" by 4-1/2" by 4-1/2" at 18" on center
 - 2. 7" to 8" slab thickness: 3/8" by 4-1/2" by 4-1/2" at 18" on center
 - 3. 9" to 11" slab thickness: 3/4" by 4-1/2" by 4-1/2" at 20" on center
- E. Expansion joint material: non-extruding and resilient non-bituminous types of preformed expansion joint fillers meeting AASHTO-M153
- F. Expansion joint filler: Polyurethane sealant meeting ASTM C-920, Sikaflex Self-Leveling or equivalent.
- G. WWF – Epoxy Coated
- H. A protective coating shall be used.

Portland Cement Concrete Sidewalks: Preparation of Foundation - Existing sidewalks shall be removed and the existing subgrade shall be graded and compacted as directed by the Engineer to provide adequate and uniform load-bearing characteristics. Prior to concrete placement the foundation bed shall be thoroughly and uniformly saturated with water, and shall be free of puddles and excessive surface water.

Placement of Concrete - Concrete shall be placed in a continuous operation between preformed expansion joints. No construction joints will be allowed. Expansion Joints shall have an approved

expansion joint sealer matching the color of the concrete, installed as detailed on the plans. Preformed Expansion Joints shall be continuous and of an approved material; and, Control Joints shall be soft cut 24 hours after the placement.

Weather and Curing Limitations - Concrete shall only be placed between the dates of May 1 and October 1, provided the air temperature as determined by an approved thermometer placed in the shade at the site location is 10 degrees C (50 degrees F) or higher. A curing compound admixture shall be used.

Mixing, Placing and Finishing - The concrete mix shall be controlled to provide good batch-to-batch uniformity. Ready-mix trucks shall be in good condition.

When depositing, the concrete shall be deposited near its final position to avoid segregation due to re-handling or flowing. The concrete shall be placed and consolidated so that it completely fills all space inside the forms and provides a suitable surface for finishing.

No water shall be added after the truck has left the batch plant. Concrete that has started to set must not be re-tempered, but shall be discarded.

The surface of the concrete shall receive a float finish in accordance with Subsection 502.14(A) of the Standard Specifications. Immediately following the float finish, the surface shall be textured perpendicular the direction of traffic flow using an approved open pile, stiff bristle broom or mat. Extra precautions shall be taken to ensure that the surface is uniformly finished so that it will not be slippery. Surrounding areas, landscaping, and adjacent surfaces shall be protected. The work area shall be roped off, nearby vehicles removed, and appropriate sections closed to traffic.

Approved curing agents shall be used per the manufacturer's recommendations to cure the concrete. The curing period for the concrete shall be seven days and shall meet the requirements of Standard Specification 502.15. The finished surface of the concrete shall receive a protective coating in accordance with Section 515.

608.03 Method of Measurement:

Reinforced Concrete Sidewalks satisfactorily placed and accepted, will be measured for payment by the number of square yards of Reinforced Concrete Sidewalks accepted in place, in accordance with the dimensions shown on the plans or authorized by the Engineer. There will be no separate measurement for admixtures, reinforcement, expansion and contraction joints, joint filler material, joint sealant, concrete coloring or finishing, or related and incidental construction.

608.04 Basis of Payment:

Reinforced Concrete Sidewalks will be paid for at the contract unit price per square yard, which payment will be full compensation for all labor, materials, tools, equipment, and incidentals necessary to complete the work, including the fabrication, delivery and placement of concrete and reinforcement, admixtures, furnishing and placement of expansion and contraction joints and joint filler material and sealant, and the furnishing and application of curing agents and protective coatings.

Payment will be made under:

Pay Item	Description	Pay Unit
608.08	Reinforced Concrete Sidewalks	Square Yard

SPECIAL PROVISIONS

SECTION 608.09

BRICK SIDEWALK

608.01 Description:

The work under this item shall include all excavation, sawcutting, removal of existing sidewalks and/or driveways, removal of miscellaneous material, and furnishing and installing clay brick paver sidewalks where shown on the drawing.

Installation shall be by a contractor and crew with:

1. At least five years of experience installing brick pavers on projects of similar nature or dollar cost.
2. A portfolio and references for 5 projects of 25,000 square feet or greater in size.

608.02 Materials, General:

a. Brick Paver:

Products from qualified manufacturers having a minimum of 5 years experience manufacturing clay brick pavers will be acceptable by the Engineer as equal, if approved in writing, ten days prior to bidding, and if they meet or exceed the specifications for design, size, color and fabrication of the specified Product.

Product name: Belden Brick Company (basis of design), Whitacre Greer Company®, Pine Hall Brick®

Product shape(s): 4" x 8" x 2-1/4"

Product option(s): Bevel & lug, smooth

Product color(s):

Infill: Equal mix of No.31, No.32, & No.33

Soldier Course: No.30

b. Joint Material:

Alliance Gator MAXX G2, Color: Tan or approved equivalent.

c. Setting Bed:

1. The setting bed shall be clean, non-plastic and free from deleterious or foreign material. Natural or manufactured from crushed rock and sand is suitable. Unsuitable materials include limestone screenings and stone dust. The setting bed sand gradation shall conform to ASTM C-33 or ASTM C-136 Concrete Sand meeting the gradation of ASTM C-33 is acceptable as follows:

Table 1 ASTM C 33 requirements		Table 2 CSA A23.1 (FA1) requirements	
Sieve Size	Percent Passing	Sieve Size	Percent Passing
3/8 in. (9.5 mm)	100	10mm	100
No. 4 (4.75 mm)	95 to 100	5 mm	95 to 100
No. 8 (2.36 mm)	85 to 100	2.5 mm	80 to 100
No. 16 (1.18 mm)	50 to 85	1.25 mm	50 to 90
No. 30 (0.600 mm)	25 to 60	0.630 mm	25 to 65
No. 50 (0.300 mm)	10 to 30	0.315 mm	10 to 35
No. 100 (0.150 mm)	2 to 10	0.160 mm	2 to 10
No. 200 (0.075 mm)	0 to 1	0.080 mm*	0 to 1

*Although the ASTM equivalent for the No. 200 sieve size is 75 microns (0.075 mm), CSA standards use the German (DIN) and French (ANFOR) standard equivalent sieve size of 80 microns (0.080 mm).

2. Laboratory Materials properties shall be meet or exceed the following in the shop drawing submittal:

Material Properties	Test Method	Recommended Maximum or Minimum
Primary Properties		
Micro-Deval Degradation	CSA A23.2-23A	Maximum 8%
Constant Head Permeability	ASTM D2434	Minimum 2 x 10-3 cm/second (2.83 in/hr)
Gradation	ASTM C33 CSA A23.1 (FA1)	Maximum 1 % passing No. 200 (0.075 or 0.080 mm) sieve
Secondary Properties		
Soundness – Sodium Sulfate or Magnesium Sulfate	ASTM C88	Maximum 7%
Silica (Quartz and Quartzite)/ Carbonate Ratio	MTO LS-616 ASTM C295	Minimum 80/20 ratio
Angularity and Particle Shape	ASTM D 2488	Minimum 60% combined sub- angular and sub- rounded

d. Aggregate Base:

Shall be Type A Aggregate Base Course per MDOT 703.06 supplemental item with 100% passing 2" sieve

e. Metal Flashing:

Shall be of the type and dimensions called for on the plans, and the quality shall be acceptable to the Engineer.

- f. Edge Restraint:
Shall be as manufactured by Permaloc, 13505 Barry Street, Holland, Michigan 49424 USA, 1-800-356-9660 or approved equivalent.
Model: 3/16" x 2-1/4" structured edge
Fastener: Ramset/Hilti 1" Nail at 12" spacing for concrete applications, manufacturer supplied spike for aggregate installations
Color: Black duraflex-electrostatically applied baked on paint meeting AAMA 2603

608.03 Submittals:

1. Portfolio and references for 5 projects greater than 25,000sf with pavers installed on concrete.
2. Shop drawings, product drawings, and product data shall be submitted with the following samples:
 - a. Joint Sand: (1) 1-Pint container and product data
 - b. Setting Bed Sand: (1) 1-Pint container
 - c. Aggregate Base (Type A): (1) 1-Gallon container
 - d. Structural Soil Base: (1) 5-Gallon container with sieve chart from supplier
 - e. HMA – Job Mix Formula (JMF) per Section 401
3. Pavers: (5) Full size samples, for each color, of each brick paver type shall be submitted to indicate color and shape selections. (1) of each paver shall be supplied broken in half.
4. Paver Test results shall be submitted from an independent testing laboratory for compliance to:
 - a. Light Duty Paver meeting minimum criteria of ASTM C 902, Class SX, Type I, Application PX.
 - b. Average cold water absorption - shall not be greater than 6% with no individual unit testing greater than 7%. Absorption test results may not be achieved through the use of sealers or other products applied to the clay paver. (Sealer protection degrades over time requiring re-application after several years.)
 - c. Resistance of 50 freeze thaw cycles, when tested in accordance with ASTM C67. In addition the clay paver must pass CSA-A231.2 freeze thaw test in saline solution without the use of sealers or other products applied to the paver. A test report must be submitted by the manufacturer. (Salt is the most common substance used for de-icing during the winter months.)
 - d. Dimensional tolerances should meet the PX standard. In addition, the dimensional tolerances around the mean values for length, width, and depth shall be 1/16". (Studies show that dimensional tolerances are directly linked to joint width size and proper interlock.)
 - e. The pavers shall be solid units without core holes or other perforations.
 - f. The contractor shall ensure that the manufacturer conducts a test sampling of 24 pavers every 50,000 pavers manufactured to determine the pavers compliance with dimensional and water absorption characteristics. The 24 paver sample shall be representative of the color mix in the typical finished package and chosen on a

consistent basis from one kiln car. (Proper control procedures and testing are standard operating procedure for high quality manufacturers.)

5. Paver and sidewalk sample panel width is defined below. This portion of that panel shall be installed as specified and detailed, the dimensions will be adjusted in the field as directed by the Engineer to achieve a full width sample:

Panel: Sidewalk pattern – panel shall include:

Full section depth, with portions of each material visible for approval

- i. 20% of the panel shall be exposed subgrade
- ii. 20% of the panel shall be complete to the processed aggregate base
- iii. 20% of the panel shall be complete to the concrete
- iv. 20% of the panel shall be complete to the sand setting bed
- v. 20% of the panel shall be complete to represent final product

Paver sample panel shall be installed in an area approved by the Engineer and shall be protected throughout duration of the project.

The sample panel will be used to determine joint sizes, lines, laying pattern(s), color(s), and other design features. The approved paver material samples shall be the standard for which all supplied pavers shall be judged against.

These panels shall be the standard from which the workmanship will be judged.

608.04 Construction Methods:

General Paver Installation Notes:

The Contractor shall not use any pavers with chips, cracks, voids, discolorations, and other defects that might be visible or cause staining in finished work. Efflorescence shall be cause for rejection.

Along all edges where pavers do not abut any other pavement, curbing, structures, or any stable materials, the Contractor shall install edging in order to retain pavers, regardless if edging is not identified on drawings and paid for under this item at no extra cost.

It is the responsibility of the Contractor to remove and replace unit pavers that are loose, chipped, broken, stained, discolored, or otherwise damaged or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment to eliminate evidence of replacement.

Provide final protection and maintain conditions in a manner acceptable to the Engineer that ensures that unit paver work is without damage or deterioration at the time of Substantial Completion. The Contractor shall replace any damaged pavers identified by the Engineer during final inspection.

Subgrade:

- Engineer to approve subgrade, compacted density, and elevations conform to the specifications.

- Shall be stripped of all topsoil and other objectionable materials to the grades specified.
- All sub drainage of underground services within the pavement area shall be complete.
- Proof rolled to 95 percent Standard Proctor Density in the presence of the Engineer, with soft spots or localized pockets of objectionable material excavated and properly replaced with approved processed aggregate base.
- Shall be trimmed to within 0 to ½ in. of the proposed finished grades with the surface of the prepared subgrade deviating no more than 1/2 in. from the bottom edge of a 10 ft. straight edge laid in any direction.
- Shall be protected from precipitating weather events.
- Shall be protected from traffic, with repairs of any resulting damage the responsibility of the Contractor.

Under no circumstances shall further pavement construction proceed until the Town and/ or the Engineer has approved the subgrade.

Aggregate Base:

- Install in conformance with Section 304 of the Standard Specifications and as shown on the details.
- Under no circumstances shall further pavement construction proceed until the Owner and/ or the Engineer has approved the subgrade and aggregate base.

Bituminous Base Installation:

For those areas shown on the plans to have HMA as the base material for the brick pavers (generally the wide amenity strip areas) the top two inches (2”) of Aggregate Base shall be substituted with 2” of 12.5mm HMA in lieu of the Aggregate Base.

- Install the HMA in accordance with Sections 401 & 403 of the Standard Specifications and as shown on the details.
- Under no circumstances shall further pavement construction proceed until the Owner and/ or the Engineer has approved the subgrade, aggregate base and/or bituminous base.

Structural Soil Base Installation:

For those areas shown on the plans to have structural soil installed as the base material for the brick pavers (generally the areas around tree pits) the following procedure shall be implemented in lieu of the Aggregate Base

- Install CU-Structural Soil® in 6 inch lifts and compact each lift.
- Compact all materials to at least 95% Proctor Density from a standard compaction curve AASHTO T 99 (ASTM D 698). No compaction shall occur when moisture content exceeds maximum as listed herein. Delay compaction if moisture content exceeds maximum allowable and protect CU-Structural Soil® during delays in compaction with plastic or plywood as directed by the engineer.
- Bring CU-Structural Soil® to finished grades as shown on the drawings. Immediately protect the CU-Structural Soil® from contamination by toxic materials, trash, debris, water containing cement, clay, silt or materials that will alter the particle size distribution of the mix with plastic or plywood as directed by the engineer.
- The engineer may periodically check the material being delivered, prior to installation for color and texture consistency with the approved sample provided by the installing contractor as part of

the submittal for CU-Structural Soil®. If the engineer determines that the delivered CU-Soil™ varies significantly from the approved samples, the engineer shall contact the licensed producer.

- Engineer shall ensure that the delivered structural soil was produced by the approved CU-Soil™ licensee by inspecting weight tickets showing source of material.
- CU-Soil™ should not be stockpiled long-term. Any CU-Soil™ not installed immediately should be protected by a tarp or other waterproof covering.

Under no circumstances shall further pavement construction proceed until the Town and/ or the Engineer has approved the subgrade, structural soil base, and/or aggregate base.

Edge Restraint:

Shall be installed per manufacturers recommendations

Sand for Leveling Course:

- Place sand for leveling course and screed to a thickness required for pavers to meet proposed finished grades accounting for compaction.
- Moisture content and density shall be uniform until pavers are set and compacted.
- Shall be finished 0 in. to 1/16 in. of the specified grade and uncompacted.
- Under no circumstances shall further pavement construction proceed until the Owner and/ or the Engineer has approved the subgrade, processed aggregate base, concrete base, and leveling course.

Paver Installation:

- The Contractor shall not install any pavers until after the Engineer has approved the paver sample panels, subgrade, aggregate base, and the sand setting bed.
- Pavers shall be installed in patterns as shown on the Contract Drawings. Pavers shall be mixed from several pallets or cubes as they are placed to produce a uniform blend of colors and textures.
- Where standard patterns do not apply, the Contractor shall obtain design modifications from the Engineer prior to the installation of the pavers.
- Set pavers with a minimum joint width of 1/16 inch and a maximum of 3/16 inch, being careful not to disturb leveling base. Place pavers hand tight. Use string lines to keep straight lines.

Paver Cutting:

- The design intent is to avoid and minimize cuts and slivers. Cutting is required to negotiate radius sections and angle points such as the parallel parking area.
- Cut pavers with motor-driven masonry wet-saw equipment to provide clean, sharp, unchipped edges and to reduce dust.
- Use of a block splitter or chopsaw or other dry motor driven cutting equipment will not be acceptable.
- Cutter to fit accurately, neatly, and without damaged edges.
- Cut units to provide the pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible
- Pavers shall be cut to prevent sliver pieces less than an approximate 1/2 paver in width or length by adjusting the solidier course and running bond patterns.

- Cut pieces shall be located in the middle of the soldier course and the running bond patterns as opposed to the beginning, end or outer edges.

Paver Vibration and Joint Sweeping:

- Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 4,500lbf compaction force at 80 to 90 Hz.
- Insulate paver surface from vibrator with ¼” to ½” plywood protective layer between the pavers and the vibratory mechanism.
- Do not allow traffic on installed pavers until joint sand is vibrated into joints.
- Spread Joint Sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add joint sand until joints are completely filled, then remove excess sand.
- Perform vibratory passes after every joint sweeping exercise until the joints are full of joint sand. Vibrate under the following conditions:
- After edge pavers are installed and there is a completed surface or before surface is exposed to rain.
- Before ending each day's work, fully compact installed pavers within 36 inches of the laying surface. Cover the open layers with nonstaining plastic sheets overlapped 48 inches on each side of the laying face to protect it from rain.
- Do not wet the joint sand until all of the sand is removed from paver surface to avoid adhering jointing sand to the finished paver surface.
- Wet the sand per manufacturer recommendations.

608.05 Method of Measurement and Basis of Payment:

All work associated with this item shall be paid as follows: "Brick Sidewalk" by the square yard complete in place, which price shall include all excavation, sawcutting, removal of existing sidewalks, removal of existing driveways, removal of miscellaneous material, subgrade, sand leveling course, expansion and construction joint dowels, reinforcing, pavers, all materials, equipment, tools, and labor incidental thereto.

Notes:

- Base materials as shown below are paid for under other pay items, as appropriate.
- The cost for furnishing and installing approved unit paver sample panels will be paid at the unit price per square foot for "Brick Sidewalk" regardless of paver type installed. There will be no additional payment for the removal of the sample pavers.

Pay Item	Description	Pay Unit
608.09	Brick Sidewalks – Aggregate Base	Square Yard
608.091	Brick Sidewalks – Bituminous Base	Square Yard
608.092	Brick Sidewalks – Structural Soil Base	Square Yard

SPECIAL PROVISIONS
SECTION 608.47
RECONSTRUCT EXISTING AND CONSTRUCT NEW PEDESTRIAN RAMP

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications:

608.01 Description:

This work shall consist of reconstructing existing and constructing new pedestrian ramps to make them compliant with the Americans with Disabilities Act (ADA).

608.02 Construction Requirements:

This work shall consist of the complete removal of any existing pedestrian ramp and adjacent sidewalk as necessary for reconstruction and new construction. The sidewalk and pedestrian ramp shall be reconstructed and/or constructed to meet ADA compliance and MaineDOT minimum ADA requirement for Pedestrian Facilities as shown on page 4 through 6 of this Special Provision. The pedestrian ramp shall be constructed of the same material as existing pedestrian ramp and/or sidewalk and shall meet the requirements shown in the MaineDOT Standard Details and MaineDOT Standard Specification or other contract documents.

The Contractor shall construct all new paved ramps with 12 inches of aggregate subbase course-gravel and 2 inches of hot mix asphalt unless otherwise noted in the plans or directed by the Resident.

The Contractor shall construct all new concrete ramps with 10 inches of aggregate subbase course-gravel and 4 inches of concrete unless otherwise noted in the plans or directed by the Resident.

The Contractor shall construct Reconstructed Existing and Construct New Pedestrian Ramps flush with adjacent existing sidewalk surfaces to allow proper drainage. Constructed ramps will allow proper drainage at the gutter. Standing surface water will not be accepted.

608.03 Materials:

Where the thickness of new aggregate to be placed exceeds 4 inches, material meeting the requirements of Section 703.06(c) Aggregate for Subbase, Type D, or Section 703.10 - Aggregate for Untreated Surface Course and Leveling Course shall be placed to the required grade. Where the thickness of new aggregate to be placed is 4 inches or less, material meeting the requirements of Section 703.10 Aggregate for Untreated Surface Course and Leveling Course shall be used. The Contractor may, at their option, grade the existing ramp to an elevation of 4 inches or more below the proposed finished gravel surface and place material meeting the requirements of Section 703.06(c) Aggregate for Subbase, Type D.

Aggregate for subbase, Type D.	703.06
Untreated Aggregate Surface Course	703.10
Welded Steel Wire Fabric	709.02

Portland cement concrete for the pedestrian ramps and concrete sidewalk areas shall meet the requirements of Section 502, Structural Concrete, Class A.

Brick pedestrian ramps and brick sidewalk areas shall meet the requirements of Section 608, sidewalks and other contract documents.

Hot mix asphalt (HMA) for the pedestrian ramps and HMA sidewalk areas shall meet the requirements of Section 401, Hot Mix Asphalt Pavement.

All curbing shall meet the requirements specified in the 609 section of the standard specification, standard details or other contract documents

608.04 Method of Measurement:

Reconstructed and construct new pedestrian ramps will be measured by the number of units complete and accepted in place.

608.05 Basis of Payment:

The accepted quantity of reconstructed and construct new pedestrian ramps will be paid for at the contract price per each. This payment shall be full compensation for but not limited to the following:

- A. Removal and disposal of existing concrete, brick, HMA and granite.
- B. Furnishing, grading and compacting of Aggregate for Subbase Gravel.
- C. Furnishing, regrading and compacting of additional Untreated Aggregate Surface Course Gravel if necessary.
- D. CURB - Removal, cutting, installing, and furnishing curb to match existing sidewalk, including furnishing and installing new terminal curb (sloped curb) to match the existing materials to ADA compliance.
- E. Furnish and place wearing surfaces to new pedestrian ramps matching the existing sidewalk. Saw Cutting of all joints between new and old concrete and staggering of all brick joints. HMA is paid for under the appropriate items at the contract price in addition to the unit item of Reconstructed and/or Construct New pedestrian ramps.
- F. The Contractor shall place expansion joints and seal with silicone if necessary.
- G. All necessary grading, materials and restoration at the back edge of sidewalk is incidental.

Payment will be made under:

Pay Item	Description	Pay Unit
608.471	Reconstruct Pedestrian Ramp	Each
608.472	Construct New Pedestrian Ramp	Each

		Minimum Requirements for <u>EXISTING</u> Pedestrian Facilities <u>COLUMN A</u>	Minimum Requirements for <u>NEW or RECONSTRUCTED</u> Pedestrian Facilities <u>COLUMN B</u>
SIDEWALKS			
Cross Slope		Max. 2.08% (1:48)	Max. 2% (1:50)
Clear Width		Min. 3 feet Width may be reduced to 32 inches for a 24-inch length. Widths less than 5 feet require 5 foot by 5 foot passing spaces at least every 200 feet.	Min. 5 feet (standard) Width may be reduced to 4 feet. Widths less than 5 feet require 5 foot by 5 foot passing spaces at least every 200 feet.
* CURB RAMPS			
Running Slope	A	Max. 8.33% (1:12) Max. 10.0% (1:10), with maximum 6" Rise Max. 12.5% (1:8), with maximum 3" Rise	Max. 8.33% (1:12)
Cross Slope	B	Max. 2.08% (1:48)	Max. 2% (1:50)
Clear Width	C	Min. 3 feet	Min. 6 feet
Counter Slope	D	Max. 5% (1:20) Adjacent surface must be flush with the ramp.	Max. 5% (1:20) Adjacent surface must be flush with the ramp.
Flared Sides	E	Max. 10% (1:10)	Max. 10% (1:10)
Landings <i>(Turning Space flatter than 2% in any direction)</i>	F	A turning space 3 feet long and as wide as the ramp must be present to be compliant. <i>Detectable Warnings may be included within the landing.</i> Ramps constructed or altered prior to March 15, 2012 are compliant without turning spaces if the flared sides do not exceed 8.33% (1:12).	A turning space 4 feet long and as wide as the ramp must be present to be compliant. <i>Detectable Warnings may be included within the landing.</i>
Diagonal Ramp Clear Space <i>(Ramps on a radius)</i>	G	A 4-foot square clear space must be present at the bottom of the ramp outside active travel lanes.	A 4-foot square clear space must be present at the bottom of the ramp outside active travel lanes.
Detectable Warnings	H	Required at traffic controlled intersections and mid-block crossings.	Required at traffic controlled intersections and mid-block crossings, full ramp width.

*Letters designate elements in the Figures.

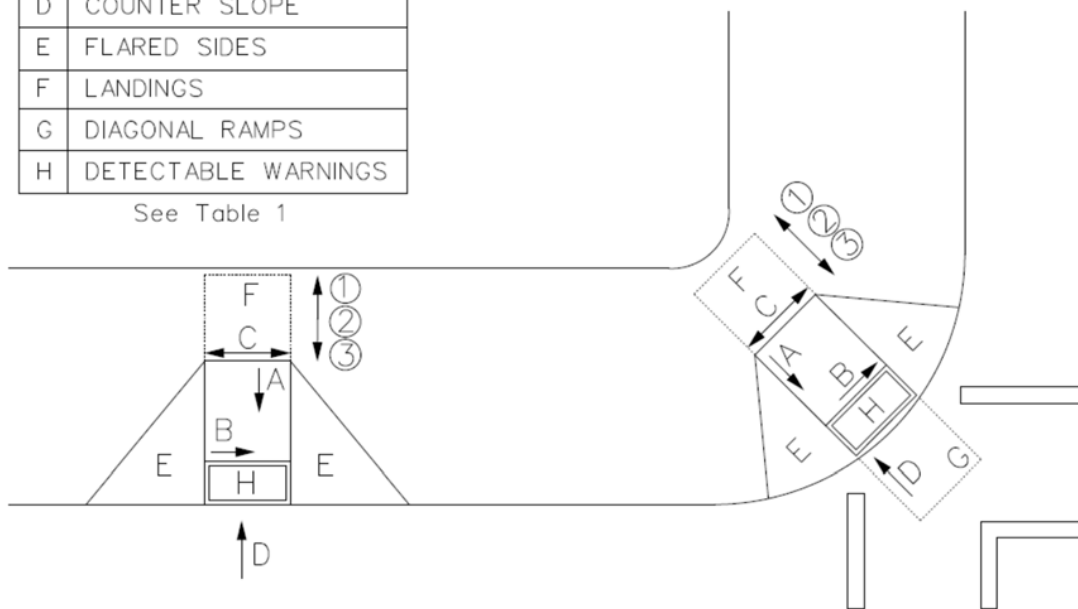
Table 1. Minimum Requirements for Pedestrian Facilities

LEGEND

A	RUNNING SLOPE
B	CROSS SLOPE
C	CLEAR WIDTH
D	COUNTER SLOPE
E	FLARED SIDES
F	LANDINGS
G	DIAGONAL RAMPS
H	DETECTABLE WARNINGS

See Table 1

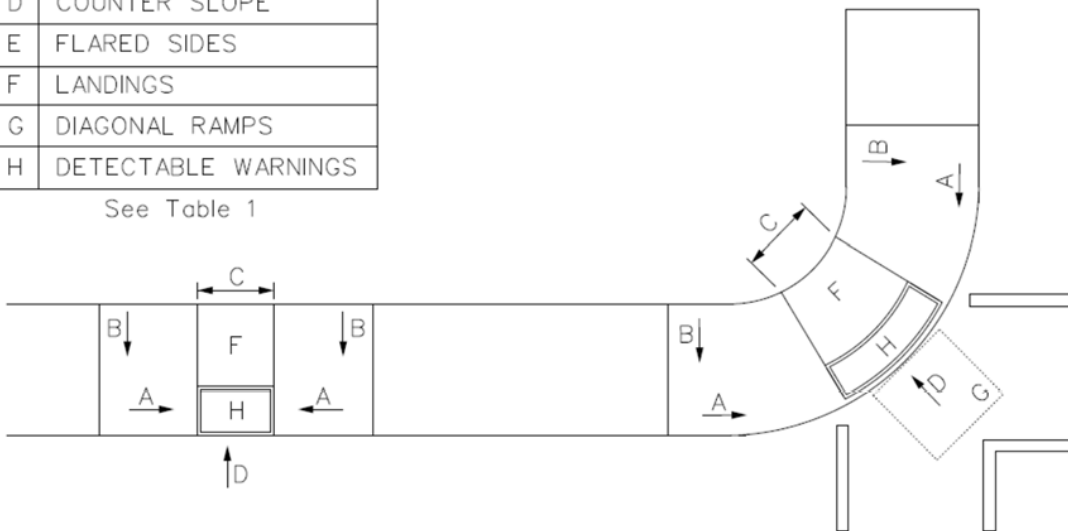
- ① EXISTING RAMPS 3 FEET
- ② PROPOSED RAMPS 4 FEET
- ③ PROPOSED RAMPS 5 FEET WHEN BUILDING FACE IS PRESENT



PERPENDICULAR CURB RAMPS

LEGEND	
A	RUNNING SLOPE
B	CROSS SLOPE
C	CLEAR WIDTH
D	COUNTER SLOPE
E	FLARED SIDES
F	LANDINGS
G	DIAGONAL RAMPS
H	DETECTABLE WARNINGS

See Table 1



PARALLEL CURB RAMPS

SPECIAL PROVISIONS

SECTION 609

CURB

The provisions of Section 609 of the Standard Specifications shall apply with the following additions and modifications.

609.01 Description:

- 1.01 The existing granite stone curbing shall remain the property of the Town unless otherwise ordered by the Town and shall be transported to a Town storage lot, where the Town may designate. Existing stone curbing deemed to be in unsatisfactory condition by the Town shall be removed from the site and disposed of by the Contractor.

Submittals:

1. Straight Curb - 5-inch x 18-inch x 12-inch (5"W x 18"D x 12"L) size sample of granite curbing shall be submitted to indicate color, shape selections, and conformance to the Contract Drawings.
2. Curved Curb - 5-inch x 18-inch x 12-inch (5"W x 18"D x 12"L) size sample of granite curbing shall be submitted to indicate color, shape selections, and conformance to the Contract Drawings.
3. Photos of the exposed granite and are to be provided to the Engineer for approval prior to ordering.

609.02 Materials:

Granite curb shall conform to the following requirements:

Average Results of 4 ASTM specimen samples shall be

<u>Requirement</u>	<u>Minimum Criteria</u>	<u>Testing Method</u>
Bulk Density:	165 lbs/cubic foot, min.	ASTM C-99
Absorption:	.37%, max.	ASTM C-97
Compressive Strength:	23,000psi, min.	ASTM C-170
Modulus of rupture:	1,500psi, min.	ASTM C-99

Black vein rejection - Curbs with vein of black through the stone shall be rejected. Curbs with black spots, splotches, or streaks may be accepted if they do not detract from physical appearance of exposed surfaces.

Quartz vein tolerance - Curbs with quartz veins may be accepted. However, all stones with quartz veins must be examined very closely to ascertain whether a seam exists along joint between granite and quartz. This is characterized by a discoloration (black, pink, Yellow) as fine as 1/16" along the joint. All such stones shall be rejected. Curbs with quartz veins shall be limited to 5% of total delivered and shall be evenly distributed throughout the job. All others shall be rejected.

Finishes:

5"x18" Granite Stone Curbing

Top	- Thermal
Front (Travel Way Face)	- Split
Back (Upper 3")	- Flamed
Back (Lower 12")	- Split
Bottom	- Sawn

The top/front edge shall incorporate a 1/4" radius eased edge.

The top/back edge abutting the landscape island shall incorporate a 1/4" radius eased edge.

5"x18" Granite Curved Stone Curbing

Top	- Thermal
Front (Travel Way Face)	- Split
Back (Upper 3")	- Flamed
Back (Lower 12")	- Split
Bottom	- Sawn

The top/front edge shall incorporate a 2" radius eased edge.

The top/back edge abutting the landscape island shall incorporate a 1/4" radius eased edge.

609.03 Vertical Stone Curb, Terminal sections, Transition Sections:

Curb Type 1 and Curb Type 5 shall be bedded in concrete or as otherwise directed by the Engineer.

a. Installing Stone Curbing: The curbing shall be set on edge and settled into place to the line and grade required, straight and true for the full depth. 'Fill Concrete' bedding shall be placed along each side of the curb as detailed. The granite curb to be installed in areas where tree areas are proposed shall have reinforced concrete supports at all joint locations as shown in details. Stone curbing shall extend across driveways and shall be set so that there is a lip at the pavement edge. (The curb top elevation shall be 1" above the finished edge of pavement.) The ends of the stone curbing at driveways, handicap ramps, and intersections shall transition in elevation and shall have a beveled or rounded cut, as approved by the Town.

Excavation: Excavation shall extend below the bottom of the curbing as shown on detail, the trench being sufficiently wide to permit thorough tamping. The base material/backfill shall be compacted in layers not more than 6 inches in depth to a firm, even surface and shall be approved by the Town.

609.10 Basis of Payment:

The existing granite stone curbing shall remain the property of the Town unless otherwise ordered by the Town and shall be transported to a Town storage lot, where the Town may designate. Existing stone curbing deemed to be in unsatisfactory condition by the Town shall be removed from the site and disposed of by the Contractor. **Removal of existing curbing and transport to designated site is to be considered included in the appropriate pay items below.**

Payment will be made under:

Pay Item	Description	Pay Unit
609.11	Vertical Curb Type 1	Linear Feet
609.12	Vertical Curb Type 1 – Circular	Linear Feet
609.234	Terminal Curb Type 1 – 4 Foot	Each
609.237	Terminal Curb Type 1 – 7 Foot	Each
609.2371	Terminal Curb Type 1 – 7 Foot - Circular	Each
609.238	Terminal Curb Type 1 – 8 Foot	Each
609.2381	Terminal Curb Type 1 – 8 Foot - Circular	Each
609.35	Curb Type 5 – Circular	Linear Feet
609.38	Reset Curb Type 1	Linear Feet
609.4	Reset Curb Type 5	Linear Feet

SPECIAL PROVISIONS
SECTION 615.071
LOAM, SEED, AND MULCH

The provisions of Section 615, Section 618 and Section 619 of the Standard Specifications shall apply with the following additions and modifications.

615.01 Description:

Loam: Loam and its applications shall conform to the requirements of Section 615 of the Standard Specifications. Loam shall be spread evenly across subsoil to a minimum depth of four (4) inches and compacted lightly with a hand roller weighing not more than one hundred (100) pounds per foot of width. During the rolling, all depressions caused by settlement or rolling shall be fitted with loam and then shall be regraded and rolled until presenting a smooth even finish to the required grade.

Lime: Lime shall be applied separately at a rate of one hundred (100) pounds per one thousand (1000) square feet. It shall be thoroughly worked into the surface.

Fertilizer: Commercial fertilizer shall be applied separately at a rate of forty (40) lbs. per one thousand (1,000) square feet. The fertilizer shall be raked into the top two (2) inches of loam. The fertilizer and liming shall be done in a moist soil condition and at least twenty-four (24) hrs. before sowing seed.

Seed: Seeding shall be Method Number 1 and shall conform to the requirements of Section 618 of the Standard Specifications. Seed shall be sown by a mechanical seeder or other method that will sow the seed uniformly at a required rate of five (5) lbs. per one thousand (1,000) square feet. Spread seed when soil is moist. Seed shall be lightly raked into the soil to a depth of approximately one eighth (1/8) inch (and no more than one quarter (1/4) inch), and the entire area shall be lightly rolled with a two hundred (200) pound roller and watered with a fine spray.

Mulch: Mulch and its applications shall conform to the requirements of Section 619 of the Standard Specifications. Mulch shall be spread in a thin uniform layer over the entire seedbed.

615.02 Basis of Payment:

The accepted quantity of loam, seed, and mulch will be paid for at the contract **unit price per square yard for a successful growth of grass**. This price shall include the cost of excavation and all labor, materials, and equipment necessary to satisfactorily complete the work. All costs for watering, furnishing labor and equipment for mowing will not be paid for separately, but shall be considered as incidental to this pay item.

Payment will be made under:

Pay Item	Description	Pay Unit
615.071	Loam, Seed, and Mulch	Square Yards

SPECIAL PROVISIONS
SECTION 615.07
STRUCTURAL STABILITY SOIL

The provisions of Section 615 of the Standard Specifications shall apply with the following additions and modifications.

615.01 Description:

CU-Soil™ - For a list of Licensed producers call MAEREQ, INC. (800) 832-8788

Site Preparation:

- Do not proceed with the installation of the CU-Structural Soil® material until all walls, curb footings and utility work in the area have been installed. For site elements dependent on CU-Structural Soil® for foundation support, postpone installation of such elements until immediately after the installation of CU-Structural Soil®.
- Install subsurface drain lines as shown on the plan drawings prior to installation of CU-Structural Soil® material.
- Excavate and compact the proposed subgrade to depths, slopes and widths as shown on the drawings. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted subgrades of adjacent pavement or structures.
- Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope parallel to the finished grade and/or toward the subsurface drain lines as shown on the drawings.
- Clear the excavation of all construction debris, trash, rubble and any foreign material. In the event that fuels, oils, concrete washout silts or other material harmful to plants have been spilled into the subgrade material, excavate the soil sufficiently to remove the harmful material. Fill any over excavation with approved fill and compact to the required subgrade compaction.
- Do not proceed with the installation of CU-Structural Soil® until all utility work in the area has been installed. All subsurface drainage systems shall be operational prior to installation of CU-Structural Soil®.
- Protect adjacent walls, walks and utilities from damage. Use ½" plywood and/or plastic sheeting as directed to cover existing concrete, metal and masonry work and other items as directed during the progress of the work.
 - Clean up all trash and any soil or dirt spilled on any paved surface at the end of each working day.
 - Any damage to the paving or architectural work caused by the installing contractor shall be repaired, as directed by the engineer.
- Maintain all silt and sediment control devices required by applicable regulations. Provide adequate methods to assure that trucks and other equipment do not track soil from the site onto adjacent property and the public right of way. Install in conformance with the manufacturer specifications and recommendations.

Installation:

- Install CU-Structural Soil® in 6 inch lifts and compact each lift.
- Compact all materials to at least 95% Proctor Density from a standard compaction curve AASHTO T 99 (ASTM D 698). No compaction shall occur when moisture content exceeds

maximum as listed herein. Delay compaction if moisture content exceeds maximum allowable and protect CU-Structural Soil® during delays in compaction with plastic or plywood as directed by the engineer.

- Bring CU-Structural Soil® to finished grades as shown on the drawings. Immediately protect the CU-Structural Soil® from contamination by toxic materials, trash, debris, water containing cement, clay, silt or materials that will alter the particle size distribution of the mix with plastic or plywood as directed by the engineer.
- The engineer may periodically check the material being delivered, prior to installation for color and texture consistency with the approved sample provided by the installing contractor as part of the submittal for CU-Structural Soil®. If the engineer determines that the delivered CU-Soil™ varies significantly from the approved samples, the engineer shall contact the licensed producer.
- Engineer shall ensure that the delivered structural soil was produced by the approved CU-Soil™ licensee by inspecting weight tickets showing source of material.
- CU-Soil™ should not be stockpiled long-term. Any CU-Soil™ not installed immediately should be protected by a tarp or other waterproof covering.
- Under no circumstances shall further pavement construction proceed until the Town and/ or the Engineer has approved the subgrade and processed aggregate base.

615.02 Basis of Payment:

The accepted quantity of structural stability soil will be paid for at the contract **unit price per cubic yard of material installed and accepted**. This price shall include the cost of excavation and all labor, materials, and equipment necessary to satisfactorily complete the work. All costs for supplying and installing PVC piping will not be paid for separately, but shall be considered as incidental to this pay item.

Payment will be made under:

Pay Item	Description	Pay Unit
615.075	Structural Stability Soil	Cubic Yards

SPECIAL PROVISIONS
SECTION 620
GEOTEXTILES

The provisions of Section 620 of the Standard Specifications shall apply with the following additions and modifications:

620.01 Materials:

Erosion Control Geotextile: Erosion Control Geotextile shall be Mirafi 140N or approved equivalent.

Separation Geotextiles: Separation Geotextile shall be Mirafi 600x or approved equivalent.

620.02 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
620.58	Erosion Control Geotextile	Square Yards
620.6	Separation Geotextile	Square Yards

SPECIAL PROVISIONS
SECTION 627
PAVEMENT MARKINGS

The provisions of Section 627 of the Standard Specifications shall apply with the following additions and modifications:

627.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
627.711	White or Yellow Pavement Marking Line – Plan Quantity	Linear Foot
627.75	White or Yellow Pavement & Curb Marking	Square Foot
627.76	Temporary Pavement Marking Line, White or Yellow	Lump Sum
627.77	Removing Existing Pavement Marking	Square Foot

SPECIAL PROVISIONS
SECTION 634
RELOCATE PEDESTRIAN LIGHT POLE & LUMINAIRE

The provisions of Section 634 of the Standard Specifications shall apply with the following additions and modifications:

Description:

This item shall consist of disassembling and re-installing pedestrian light poles and luminaries at the locations, and as described herein, and to the dimensions shown on the plans or as directed by the Landscape Architect/Engineer. Work shall include removal and proper storage of existing light pole assembly and luminaire, removal and disposal of existing concrete foundation, supplying and installing new concrete junction box (paid under separate item), supplying and installing new concrete foundation (paid under separate item), installing conduit and wire, connecting and re-assembling light pole and fixture in new location, as described.

Construction Methods:

1. Disconnect and remove existing light pole and light fixture. Cut conduit at pole base do not cut wire, pull wire out of base and remove pole base. Install pull box at removed pole base location and rework conduit and wire into the pull box. Extend conduit and wire to new pole base location.
2. Install new pole base at location indicated. New pole base shall have bolt pattern that matches existing pole. Install existing pole and fixture on new base and connect extended conduit and wire.

Light pole assemblies shall be fastened securely to the anchor bolts in the concrete light standard foundation and shall be plumb with the vertical. The completely assembled light standard shall be erected plumb with the aid of aluminum shims, if necessary.

Method of Measurement:

This work will be measured for payment by the number of complete pedestrian light poles, including light fixtures and concrete foundations of the type specified, accepted and in place.

Basis of Payment:

This work will be paid for at the Contract unit price each for "Relocate Pedestrian Light Pole & Luminaire" indicated on the plans, complete in place, which price shall include all work and materials, including excavation, trenching and backfilling, washers, bolts, ground wire, ground rod, strip tags, connections, and all equipment, materials, tools, and labor incidental thereto, including field checking bolt patterns.

Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
634.7151	Relocate Pedestrian Light Pole & Luminaire	Each

SPECIAL PROVISIONS
SECTION 637
DUST CONTROL

The provisions of Section 637 of the Standard Specifications shall apply with the following additions and modifications:

637.01 Description:

Dust Control shall be incidental to Section 656 – Temporary Soil Erosion and Water Pollution Control.

SPECIAL PROVISION
SECTION 641.12
BENCH

Description:

Work under this item shall consist of furnishing and installing benches, concrete footings, and mounting to concrete footings at the locations given on the plans and in accordance with the dimensions and details shown on the plans or as directed by the Engineer.

Materials:

1. Benches shall be manufactured by Victor Stanley (P.O. Drawer 330 Dunkirk, MD 20754 USA), Model No. CBF-10 (6') as detailed on the plan, or an approved equivalent.
2. Fasteners: Carriage bolts, threaded rod, and metal straps shall be galvanized steel and shall conform to the requirements of ANSI-B18.5 for round head, square neck bolts and shall conform to ASTM-A307. Washers shall be plain steel and shall conform to the requirements of ANSI-B18.22.1. Nuts shall be steel hex nuts conforming to the requirements of ANSI-B18.22.2.
3. Concrete: Class A: Shall conform to MEDOT Section 502.05.

Construction Methods:

Benches will be installed as indicated on the contract drawings in conformance with the manufacturer's recommendations.

Method of Measurement:

This item shall be measured for payment by the actual number of "Benches" installed or where indicated on the plans or ordered by the Engineer.

Basis of Payment:

Payment for this item shall be at the contract unit price bid per each "Bench" complete in place, which price shall include all materials, equipment, tools, and labor incidental to or necessary for the satisfactory installation of the timber benches.

Pay Item	Description	Pay Unit
641.12	Bench	Each

**SPECIAL PROVISION
SECTION 641.30
RAISED GRANITE TREE PIT**

Description:

This work shall consist of furnishing all labor, materials and equipment, for the construction of tree planter beds fixed to the ground. This work shall consist of furnishing and installing granite edging, excavation, backfill, and compaction of backfill materials. The Contractor will furnish materials and construct the planter in accordance with the "CU Soil at Tree Pit" detail shown on the Contract Drawings.

Material:

The tree, bark mulch, and backfill planting soils will be furnished and installed and paid for under other items after the tree wells have been installed and accepted. The Contractor shall backfill the inside of the Tree Well with sand or other suitable material approved by the Resident to within 4 inches of the top of the granite edging for safety purposes. The granite edging shall be "Granite Curbing" by Swenson Granite (or approved equal), gray, 5" x 18", with thermal top and split face 4 edges. The reveal on the sidewalk side shall be 6 inches with a tolerance of ¼ inch. All corners shall be drilled and pinned to prevent separation. The size of the tree planter, measured from the inside faces of the granite, shall be 7' 10" by 4'-6" rectangular with the long edge parallel with the street curbing.

Construction:

1. Excavate to subgrade.
2. Install Granite Curb Edging and pin corners.
3. Install and compact aggregate base course on the sidewalk side of Granite Curb.
4. Install and compact Structural Soils and/or topsoil (as specified) inside the planter.
5. Fill the inside of the planter with a suitable fill material (as specified) to within 4 inches of the top of the granite.
6. Install 4" of mulch.

Method of Measurement:

This work will be measured for payment by the number of each tree pit wells installed in-place, completed and accepted.

Basis of Payment:

The work shall be paid for at the contract unit price per each for all complete and accepted Raised Granite Tree Pit. This cost shall include all labor, materials and equipment necessary to construct the tree planters including excavation, removal/saw cutting of existing pavement and hardscape surfaces, furnishing and installing Granite Curb Edging, furnishing and installing backfill material, removal and disposal of surplus material, clean-up and all other incidentals required to complete the work.

Payment will be made under:

Pay Item	Description	Pay Unit
641.30	Raised Granite Tree Pit	Each

**SPECIAL PROVISION
SECTION 641.301
EXTERIOR PLANTER (NOT FIXED)**

Description:

Work under this item shall consist of furnishing and installing planters, concrete footings, and mounting to concrete footings at the locations shown on the plans and in accordance with the dimensions and details shown on the plans or as directed by the Engineer.

Materials:

1. Planters shall be manufactured by Dumor Incorporated (P.O. Box 142 Mifflintown, PA 17059), Model No. 114-00 as detailed on the plan, or an approved equivalent.
2. Fasteners: McMaster-Carr Part No. 93980A590 - Adhesive-Grip Female-Threaded Anchor (or equivalent, 316 Stainless Steel), Epoxy Adhesive (Dewalt Pure 110 or equivalent meeting ASTM E 488), ½"-13 Stainless Steel Threaded Bolts for mounting, ½"-13 Stainless Steel Socket Head Cap Screw (Grainger Part No 5wfe3 or equivalent meeting ANSI B18.3). Washers shall be plain steel and shall conform to the requirements of ANSI-B18.22.1.
3. Concrete: Class A: Shall conform to MEDOT Section 502.05.

Construction Methods:

Planters will be installed as indicated on the contract drawings in conformance with the manufacturer's recommendations.

Method of Measurement:

This item shall be measured for payment by the actual number of "Planters" installed or where indicated on the plans or ordered by the Engineer.

Basis of Payment:

Payment for this item shall be at the contract unit price bid per each "Planters" complete in place, which price shall include all materials, equipment, tools, and labor incidental to or necessary for the satisfactory installation of the timber benches.

Pay Item	Description	Pay Unit
641.301	Exterior Planter (Not Fixed)	Each

**SPECIAL PROVISION
SECTION 641.34
TRASH RECEPTACLE**

Description:

Work under this item shall consist of furnishing and installing trash receptacles, concrete footings, and mounting to concrete footings at the locations shown on the plans and in accordance with the dimensions and details shown on the plans or as directed by the Engineer.

Materials:

1. Trash Receptacles shall be manufactured by Dumor Incorporated (P.O. Box 142 Mifflintown, PA 17059), Model No. 107-32-FTO as detailed on the plan, or an approved equivalent.
2. Fasteners: McMaster-Carr Part No. 93980A590 - Adhesive-Grip Female-Threaded Anchor (or equivalent, 316 Stainless Steel), Epoxy Adhesive (Dewalt Pure 110 or equivalent meeting ASTM E 488), ½"-13 Stainless Steel Threaded Bolts for mounting, ½"-13 Stainless Steel Socket Head Cap Screw (Grainger Part No 5wfe3 or equivalent meeting ANSI B18.3). Washers shall be plain steel and shall conform to the requirements of ANSI-B18.22.1.
3. Concrete: Class A: Shall conform to MEDOT Section 502.05.

Construction Methods:

Trash Receptacles will be installed as indicated on the contract drawings in conformance with the manufacturer's recommendations.

Method of Measurement:

This item shall be measured for payment by the actual number of "Trash Receptacles" installed or where indicated on the plans or ordered by the Engineer.

Basis of Payment:

Payment for this item shall be at the contract unit price bid per each "Trash Receptacles" complete in place, which price shall include all materials, equipment, tools, and labor incidental to or necessary for the satisfactory installation of the timber benches.

Pay Item	Description	Pay Unit
641.34	Trash Receptacle	Each

SPECIAL PROVISIONS
SECTION 643
RELOCATE PEDESTRIAN BUTTON POLE

The provisions of Section 643 of the Standard Specifications shall apply with the following additions and modifications:

Description:

This item shall consist of disassembling and re-installing pedestrian push button poles and heads at the locations, and as described herein, and to the dimensions shown on the plans or as directed by the Landscape Architect/Engineer. Work shall include removal and proper storage of existing pole and head, removal and disposal of existing concrete foundation, supplying and installing new concrete junction box (paid under separate item), supplying and installing new concrete foundation (paid under separate item), installing conduit and wire, re-connecting pole and head in new location, as described.

Construction Methods:

1. Disconnect and remove existing push button pole and fixture head. Carefully mark all existing wire connections so that during re-assembly process all connections match existing.
2. Cut conduit at pole base do not cut wires, pull wires out of base and remove pole base. Install pull box at removed pole base location and rework conduit and wire into the pull box. Extend conduit and wire to new pole base location.
3. Install new pole base at location indicated. New pole base shall have bolt pattern that matches existing pole.
4. Install existing pole and fixture on new base and re-connect all wire extensions so that all wires are re-connected to their respective existing position (i.e. as marked in step 1).

Push button poles shall be fastened securely to the anchor bolts in the concrete foundation and shall be plumb with the vertical. The completely assembled push button pole shall be erected plumb with the aid of aluminum shims, if necessary.

Method of Measurement:

This work will be measured for payment by the number of complete pedestrian button poles, including heads and concrete foundations of the type specified, accepted and in place.

Basis of Payment:

This work will be paid for at the Contract unit price each for "Relocate Pedestrian Button Pole" indicated on the plans, complete in place, which price shall include all work and materials, including excavation, trenching and backfilling, washers, bolts, wire, connections, and all equipment, materials, tools, and labor incidental thereto, including field checking bolt patterns.

Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
643.9220	Relocate Pedestrian Button Pole	Each

SPECIAL PROVISIONS
SECTION 645
HIGHWAY SIGNING

The provisions of Section 645 of the Standard Specifications shall apply with the following additions and modifications:

645.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
645.10	Remove and Reset Existing Sign	Each
645.271	Regulatory, Warning, Confirmation and Route Assembly Sign, Type 1	Square Foot
645.301	Demountable Reflectorized Delineator, Single	Each
645.302	Demountable Reflectorized Delineator, Double	Each

SPECIAL PROVISIONS
SECTION 652
MAINTENANCE OF TRAFFIC

The provisions of Section 652 of the Standard Specifications shall apply with the following additions and modifications:

652.01 Method of Measurement:

Flaggers shall be measured hourly, per location occupied.

652.02 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
652.312	Type III Barricade	Each
652.33	Drum	Each
652.34	Cone	Each
652.35	Construction Signs	Square Foot
652.361	Maintenance of Traffic Control Devices	Lump Sum
652.38	Flaggers	Hour
652.39	Work Zone Traffic Control	Lump Sum
652.41	Portable-Changeable Message Sign	Each

SPECIAL PROVISIONS
SECTION 656
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

The provisions of Section 656 of the Standard Specifications shall apply with the following additions and modifications:

656.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
656.41	Temporary Soil Erosion and Water Pollution Control	Lump Sum

SPECIAL PROVISIONS
SECTION 659
MOBILIZATION

The provisions of Section 659 of the Standard Specifications shall apply with the following additions and modifications:

659.01 Basis of Payment:

Payment will be made under:

Pay Item	Description	Pay Unit
659.10	Mobilization	Lump Sum

SPECIAL PROVISIONS
SECTION 803.01
TEST PITS

803.01 Description:

This work shall consist of excavating test pits for buried site features. At least 10 CY of material must be excavated to qualify as a test pit. Only one test pit payment per specific site will be made.

803.02 Method of Measurement:

Test Pits will be measured by the unit each, complete.

803.03 Basis of Payment:

Payment for test pits shall include clearing, excavation, dewatering, backfill and compaction in locations as shown on the plans or as directed.

Payment will be made under:

Pay Item	Description	Pay Unit
803.01	Test Pits	Each

**SPECIAL PROVISION
SECTION 890.07
BIKE RACK**

Description:

Work under this item shall consist of furnishing and installing bike racks, concrete footings, and mounting to concrete footings at the locations shown on the plans and in accordance with the dimensions and details shown on the plans or as directed by the Engineer.

Materials:

1. Bike Racks shall be manufactured by Dumor Incorporated (P.O. Box 142 Mifflintown, PA 17059), Model No. 83-00/S-2 as detailed on the plan, or an approved equivalent.
2. Fasteners: McMaster-Carr Part No. 93980A590 - Adhesive-Grip Female-Threaded Anchor (or equivalent, 316 Stainless Steel), Epoxy Adhesive (Dewalt Pure 110 or equivalent meeting ASTM E 488), ½"-13 Stainless Steel Threaded Bolts for mounting, ½"-13 Stainless Steel Socket Head Cap Screw (Grainger Part No 5wfe3 or equivalent meeting ANSI B18.3). Washers shall be plain steel and shall conform to the requirements of ANSI-B18.22.1.
3. Concrete: Class A: Shall conform to MEDOT Section 502.05.

Construction Methods:

Bike Racks will be installed as indicated on the contract drawings in conformance with the manufacturer's recommendations.

Method of Measurement:

This item shall be measured for payment by the actual number of " Bike Racks" installed or where indicated on the plans or ordered by the Engineer.

Basis of Payment:

Payment for this item shall be at the contract unit price bid per each " Bike Rack" complete in place, which price shall include all materials, equipment, tools, and labor incidental to or necessary for the satisfactory installation of the bike racks.

Pay Item	Description	Pay Unit
890.07	Bike Racks	Each