

CITY OF GREENFIELD
Department of Public Works

CONTRACT DPW 19-28

Transit Center Area Pedestrian and ADA Improvements

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ADVERTISEMENT FOR BIDDERS
DEPARTMENT OF PUBLIC WORKS
189 Wells Street
Greenfield, MA 01301

Sealed Proposals addressed to the Department of Public Works, 189 Wells Street, Greenfield, Massachusetts and endorsed “Proposal for Contract DPW 19-28, Transit Area Pedestrian & ADA Improvements” will be accepted by the Department of Public Works in the new DPW Administration Building adjacent to the DPW Yard. Bids will be accepted until 2:00 p.m. on May 9, 2019, at which time said bids will be publicly opened and read aloud in the Administration Building Meeting Room.

Work consists of the demolition and disposal of existing concrete and asphalt sidewalk and berm and the construction of new concrete sidewalk with granite curbing on Olive St.; installation of ADA ramps on Bank Row, Hope St. and Olive St.; installation of a bump-out and Rectangular Rapid Flashing Beacons on Bank Row; a 1.5-inch mill and HMA overlay of Olive Street; and related work to include installation of a catch basin and adjustment of structures.

The Engineer’s opinion of probable cost is \$135,500.

Plans, specifications, and proposal forms will be emailed upon request by contacting alan.twarog@greenfield-ma.gov or by downloading them from the City’s Purchasing Department’s webpage at <http://greenfield-ma.gov/p/290/Active-BidsRFQRFPP>. To get on the Bidder’s List, proposers should contact the DPW at alan.twarog@greenfield-ma.gov or by calling 413-772-1528 x6104. Plans and Specifications will be available after April 24, 2019.

The Bid Security from the Contractor in the form of cash, certified check, treasurer’s check, or cashier’s check, drawn upon a responsible bank in the Commonwealth of Massachusetts or a bid bond in the amount of five percent (5%) of the bid shall be made payable to the City of Greenfield, Massachusetts and shall be enclosed with the bid.

A 100% Performance Bond and 100% Payment Bond will be required of the successful bidder.

Attention is called to the following:

- A. Bids for this project are subject to the provisions of the Massachusetts General Laws Chapter 30, Section 39M, as amended.
- B. Wages are subject to Massachusetts minimum wage rates as per M.G.L. Chapter 149, Section 26 to 27H inclusive, and federal minimum wage rates pursuant to the Davis-Bacon Act, whichever pays more.
- C. All pertinent regulations ordinances and statutes of the City of Greenfield, the State of Massachusetts, and the Federal Transit Administration will be rigidly enforced.
- D. The successful bidder must comply with Chapter 151B as amended, of the Massachusetts General Laws and with the provisions of Executive Order No. 74, as amended by

Executive Order No. 116 dated May 1, 1975 pertaining to Equal Opportunity Anti-Discrimination and Affirmative Action.

A non-mandatory pre-bid site visit is scheduled for Tuesday, April 30, 2019 at 1:00pm at 11 Olive Street.

This project is being funded by the Federal Transit Administration.

The responsive and responsible bidder offering the lowest price shall be awarded the project, subject to the availability of funding. The City of Greenfield reserves the right to reject any or all bids or to waive any informalities in the bidding.

The Contract/Bid/Proposal awarding authority is:

City of Greenfield
Department of Public Works
Greenfield, Massachusetts

INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

1.1 **Location and work to be done:**

The work herein specified to be done (herein sometimes referred to as the “Work”) consists of the demolition of existing concrete and asphalt sidewalk and berm; construction of new concrete sidewalk with granite curbing; installation of ADA ramps, a bump-out on Bank Row and Rectangular Rapid Flashing Beacons; a 1.5-inch mill and HMA overlay of Olive Street; and related work to include installation of a catch basin and adjustment of structures.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other items necessary to do all the work required for the completion of the Work, as specified.

The Work to be done and paid for shall not be limited to the extent mentioned or described, but shall include all incidental work necessary or customarily done for the completion of the work.

1.2 **Questions Regarding Drawings and Documents.** In general, no answers will be given to prospective bidders in reply to an oral question if the question involves an interpretation of the intent or meaning of the Drawings or other Contract Documents, or the equality or use of products or methods other than those designated or described on the drawings or in the specifications. Any information given to bidders other than by means of the Drawings and other Contract Documents, including Addenda, as described below, is given informally, for information and the convenience of the bidder only and is not guaranteed. The bidder agrees that such information shall not be used as the basis of nor shall the giving of any such information entitle the bidder to assert any claim or demand against the owner or the engineer on account thereof.

To receive consideration, such questions shall be submitted in writing to the City at least 7 days before the established date for receipt of bids. If the question involves the equality or use of products or methods it must be accompanied by drawings, specifications or other data in sufficient detail to enable the City to determine the equality or suitability of the product or method. In general, the City will neither approve nor disapprove particular products prior to the opening of Bids; such products will be considered when offered by the Contractor for incorporation into the Work.

The City will set forth as Addenda, which shall become a part of the Contract Documents, such questions received as above provided as in his sole judgment are appropriate or necessary and his decision regarding each. At least three days prior to the receipt of Bids, the Awarding Authority will send a copy of these Addenda to those prospective bidders known to have taken out sets of the Drawings and other Contract Documents.

The Contractor agrees to use the products and methods designated or described in the Specifications as amended by the Addenda.

- 1.3 **Bidders to Investigate.** Bidders are required to submit their Bids upon the following express conditions which shall apply to and be deemed a part of every Bid received, viz:

Bidders must satisfy themselves by personal examinations of the site of the work and by such other means as they may wish, as to the actual conditions there existing, the character and requirements of the Work, the difficulties attendant upon its execution, and the accuracy of all estimated quantities stated in the Bid.

- 1.4 **Information not Guaranteed.** All information given on the Drawings or in the Contract Documents relating to sub-surface and other conditions, natural phenomena, existing pipes and other structures is from the best sources at present available to the City. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the City does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes or other structures encountered during construction, will be the same as those indicated on the Drawings or in the other Contract Documents.

It is agreed further and understood that no bidder or contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the City, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

- 1.5 **Submitting Bids.** All Bids must be upon the blank form for Bid annexed hereto, state the proposed price of each item of the Work, both in words and in figures, and be signed by the Bidder with his business address and place of residence. The Bid Security shall be enclosed with the Bid. In the event of a conflict in the bid amount, words shall govern.

Bidders shall not remove and submit the Bid pages separate from the volume of Contract Documents, but shall submit their Bids bound with the complete volume of attached Contract Documents, including all pages correctly assembled.

Each bid shall be submitted to the City in a sealed envelope. On the outside of the envelope shall be written the bidder's name and address and the name of and description of the project for which the Bid is submitted.

If forwarded by mail, the sealed envelope containing the Bid and marked as directed above, must be enclosed in another envelope addressed to the City.

- 1.6 **Time for Completion.** The successful bidder will be required to substantially complete the Work no later than 60 days from the date of the Notice to Proceed.

- 1.7 **Withdrawal of Bids.** Except as hereinafter in this subsection otherwise expressly provided, once his Bid is submitted and received by the City for consideration and comparison with other bid similarly submitted, the bidder agrees that he may not and will not withdraw it within 40 (forty) consecutive calendar days after the actual date of the opening of Bids.

Upon proper written request and identifications, Bids may be withdrawn as follows:

1. At any time prior to the designated time for the opening of Bids.
2. Provided the Bid has not therefore been accepted by the City at any time subsequent to the expiration of the period during which the bidder has agreed not to withdraw his Bid. Unless a Bid is withdrawn as provided above, the Bidder agrees that it shall be deemed open for acceptance until the City notifies a Bidder in writing that his Bid is rejected or that the City does not intend to accept it. Notice of acceptance of a Bid shall not constitute rejection of any Bid.

- 1.8 **Ability and Experience of Bidder.** No award will be made to any Bidder who cannot satisfy the City that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable said firm to prosecute and complete the Work successfully within the time established for the project. The City decision or judgment on these matters shall be final, conclusive, and binding.

The Bidder is to submit a list of comparable projects completed within the past five (5) years with a list of references, minimum of three (3) required.

The City may make such investigations as it deems necessary, and the Bidder shall furnish to the City, under oath if so required, all such information, and data for this purpose as the City may request.

- 1.9 **Bids.** The City may reject Bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities, or the City may waive such omissions, conditions or irregularities.
- 1.10 **Right to Reject Bids.** The City reserves the right to reject any or all Bids, or alternative Bid Items should the City deem it to be in the public interest to do so.
- 1.11 **Execution of Agreement.** The Bidder whose bid is accepted will be required and agrees to duly execute the AGREEMENT, after notification that the AGREEMENT is ready for signature within 7 calendar days. All required documentation shall accompany the signed contract including but not limited to certificates of insurance, payment and performance bonds, debarment statement, contractor and subcontractor certifications and OSHA training certifications, waste reduction/energy efficiency plan and superintendent qualifications.

1.12 **Insurance Certificates.** The Contractor will not be permitted to start any construction work until he has submitted certificates covering all insurance called for, and has obtained approval in writing of such certificates from the City.

Before starting, and until completion of the guarantee period, the Contractor shall procure, deposit, and maintain with the City, insurance satisfactory to the City as follows:

- A. Workmen’s Compensation and Employer’s Liability Insurance as required by the Workmen’s Compensation Laws of the Commonwealth of Massachusetts.
- B. Comprehensive Commercial Liability Insurance covering Bodily Injury and Property Damage (Broad Form) as follows:

Limits of Liability*	\$1,000,000 each occurrence
	\$2,000,000 aggregate

* or \$1,000,000 single limit combined Bodily Injury and Property Damage.

The Comprehensive Commercial Liability Policy shall provide insurance for the Contractor for Bodily Injury and Property Damage to third persons arising out of:

- 1. Work performed by the Contractor himself with his own employees, called “premises operations.”
- 2. Work performed by his subcontractors, called “sublet work” or Independent Contractors (this is referred to as Contractor’s Protective Liability).
- 3. The Contractor’s liability assumed under this contract, called “Hold Harmless” clauses or indemnity agreement. (This is referred to as Contractual Liability Insurance).
- 4. Products liability coverage covering the completed building or installation or products furnished. (This is called Products Liability Insurance for the manufacturer and Complete Operations Liability Insurance for the Contractor).
- 5. If any work is to be performed below the surface of the ground, the coverage shall be extended to include protection against property damage caused by explosion (including blasting), collapse of structures and damage to underground pipes and utilities. (This is known as “XCU” coverage).

- C. Comprehensive Automobile Liability Insurance covering Bodily Injury and Property Damage, as follows:

Limits of Liability

Bodily Injury	\$500,000 each person
	\$1,000,000 each accident

Property Damage

\$1,000,000 each accident

* or \$500,000 single limit combined Bodily Injury and Property Damage.

This insurance is to apply with respect to all owned or hired vehicles of the Contractor and non-ownership protection for all employees of the Contractor engaged in the performance of this contract.

D. All policies shall be so written that the City will be notified of cancellation or restrictive amendment at least 30 days prior to the effective date of such cancellation or amendment. Certificates from the insurance carrier stating the limits of liability and expiration date shall be filed in triplicate with the City before operations are begun. Such certificates not only shall name the types of policy provided, but also shall refer specifically to this Contract* and article and the above paragraphs in accordance with which insurance is being furnished and shall state that such insurance is as required by such paragraphs of this Contract and shall be sufficiently comprehensive as to permit the owner to determine that the required insurance coverage has been provided without the necessity of examining the individual insurance policies.

If the initial insurance expires prior to completion of the Work, renewal certificates shall be furnished by the date of expiration.

* If blanket coverage is furnished, this particular Contract need not be referred to.

E. The Contractor shall require each of his sub-contractors to procure and maintain until the completion of that sub-contractor's work, insurance of the types and to the limits specified in paragraphs A to C, inclusive, above. It shall be the responsibility of the Contractor to insure that all his sub-contractors comply with all of the insurance requirements contained herein relating to such sub-contractors.

No insurances required or furnished hereunder shall, in any way, relieve the Contractor of, or diminish any of his responsibilities, obligations and liabilities under the Contract.

1.13 **Comparison of Bids.** Bids will be compared on the basis of lump-sum or unit prices stated in the BID.

In the event that there is a discrepancy in the Bid between the lump-sum or unit prices written in words and figures, the prices written in words shall govern.

The City agrees to examine and consider each Bid submitted in consideration of the Bidder's agreements, as hereinabove set forth and as set forth in the BID.

1.14 **Bid Security.** The Bid Security from the contractor in the form of cash, certified check or treasurer's or cashier's check drawn upon a responsible bank in the Commonwealth of Massachusetts or a bid bond in the amount of five percent (5%) of the bid shall be made payable to the City of Greenfield, Massachusetts and shall be enclosed with the bid.

Each such check may be held by the City as security for the fulfillment the bidder's agreements as hereinabove set forth and as set forth in the BID. Should the bidder fail to fulfill such agreements, his bid check shall become the property of the City as liquidated damages; otherwise, the bid check shall be returned to the bidder as hereinafter provided.

Bid checks will be returned to all except the three lowest bidders within three days, Sundays and legal holidays excluded, after the owner and the accepted bidder have executed the AGREEMENT. In the event that the AGREEMENT has not been executed by both the accepted bidder and the owner within 40 consecutive calendar days after the opening of bids, the bid check will be returned promptly upon demand of any bidder who has not been notified of the acceptance of his bid.

None of the three lowest bids shall be deemed rejected, notwithstanding acceptance of any bid, until the AGREEMENT has been executed by both the City and the accepted bidder.

The bid deposit must be enclosed in the sealed envelope containing the bid.

- 1.15 **Disputes.** In the event of any dispute as to any of the terms and conditions of this contract, it shall be determined in accord with the laws of the Commonwealth of Massachusetts and the Courts of the Commonwealth of Massachusetts shall have exclusive jurisdiction of the same.
- 1.16 **Minimum Wage Rates.** In the employment of mechanics, teamsters, chauffeurs, and laborers in the construction of the public work projects, the Minimum Wage rates shall be paid as issued by the Commissioner of Labor and Industries of Massachusetts, in accordance with Sections 26 and 27 of Chapter 149, of the General Laws, as amended, and as included in Appendix B or Federal Wage rates as included in Appendix C, whichever pays more.
- 1.17 **Equal Employment Opportunity Anti-Discrimination and Affirmative Action.** The successful bidder must comply with Chapter 151B as amended, of the Massachusetts General Laws and with the provisions of Executive Order No. 74, as amended by Executive Order No. 116 dated May 1, 1975 pertaining to Equal Opportunity Anti-Discrimination and Affirmative Action.
- 1.18 **Notice to Proceed and Pre-Construction Conference.** A written Notice to Proceed shall be issued to the Contractor after receipt of proof of required insurance. No work shall be performed by the Contractor until he has received the Notice to Proceed.

Prior to the start of construction, the Contractor, all subcontractors, the project manager, and the owner shall attend a pre-construction conference. The conference will serve to acquaint the participants with the general plan of contract administration and requirements under which the construction operation is to proceed.

The date, time, and place of the conference will be furnished to the Contractor by the project manager.

1.19 **Bonds**. Performance, as well as Labor and Material Bonds are required in the full amount of the contract. Payment and Performance Bonds shall be for 100% of the contract price. The Bonding Company shall be acceptable to the Awarding Authority.

FORMS FOR BID

Bidder's Name

PROPOSAL FORM

To the City of Greenfield, Massachusetts, (hereinafter called the "Owner") acting through its Department of Public Works, duly authorized therefore, who act solely for said City and without personal liability to themselves:

Gentlemen:

The undersigned _____, as bidder, declares that the only persons or parties interested in this bid as principals are those named herein; that the bidder has carefully examined the proposed form of Proposal and the Specifications (and amendments thereto); and he bids and agrees, if this bid is accepted, that the bidder will furnish all materials and labor necessary for the completion of the Work as specified in the Proposal, in the manner and time therein prescribed and according to the requirements of Owner as herein set forth.

The Bidder agrees that the Owner will have forty (40) consecutive days from date of opening to accept the bid, except as described in the specifications, the unit(s) at the price, therein. The Bidder also understands that the Owner reserves the right to accept or reject any or all bids and to waive any informalities in the Proposals if it is in the Owner's interest to do so. The Advertisement for Bidders, Information for Bidders, Specifications and Proposal Form attached thereto, shall become a contract upon the receipt by the Bidder of written acceptance of this bid by the Owner.

The Bidder will take in full payment, therefore, the following price(s):

Item Number	Estimated Quantity	Brief Description; unit or lump-sum price bid in both words and figures	Total in Figures
1	1 Lump Sum	Site Preparation and Cleanup (Mobilization/Demobilization – Maximum of 5%)	
			_____ dollars
			and _____ cents (\$_____)
2	ALL.	Uniformed Traffic Police	
			_____ Five Thousand _____ dollars
			and <u>Zero</u> cents (\$_____) <u>\$5,000</u>

3	10 C.Y.*	Earth Excavation (Unsuitable Materials)	_____dollars and _____cents (\$_____)
4	25 C.Y.*	Processed Gravel Base	_____dollars and _____cents (\$_____)
5	275 S.Y.	Removal and Disposal of Existing Sidewalks and Bituminous Asphalt	_____dollars and _____cents (\$_____)
6	42 L.F.	Removal and Disposal of Existing Granite Curb	_____dollars and _____cents (\$_____)
7	7 EA.	Adjusting Existing Water Gate Boxes	_____dollars and _____cents (\$_____)
8	10 EA.	Adjusting Existing Manholes	_____dollars and _____cents (\$_____)
9	7 EA.	Adjusting Existing Catch Basins	_____dollars and _____cents (\$_____)

10.	2 Each	26 x 8" MassDOT Standard Manhole Frame & Cover "SEWER"	_____dollars and _____cents (\$_____)
11.	3 Each	26 x 8" MassDOT Standard Manhole Frame & Cover "DRAIN"	_____dollars and _____cents (\$_____)
12.	2 Each	24 x 8", 4-Flange Mass DOT Standard Catch Basin Frame & Grate	_____dollars and _____cents (\$_____)
13	150 L.F.	Furnishing and Setting Granite Curb	_____dollars and _____cents (\$_____)
14	35 S.Y.	Bituminous Concrete Driveway Repair	_____dollars and _____cents (\$_____)
15	1,720 S.Y.	1.5 " Cold Planing of Olive Street	_____dollars and _____cents (\$_____)

16	120 GAL.	Tack Coat	_____dollars and _____cents (\$_____)
17	50 TONS	Bituminous Concrete Leveling Course	_____dollars and _____cents (\$_____)
18	141 TONS	Bituminous Concrete Surface Course (1.5")	_____dollars and _____cents (\$_____)
19	210 S.Y.	4" Thick Concrete Sidewalk	_____dollars and _____cents (\$_____)
20	40 S.Y.	6" Thick Concrete Sidewalk	_____dollars and _____cents (\$_____)
21	12 S.Y.	4" Thick Brick Colored/Stamped Concrete Sidewalk	_____dollars and _____cents (\$_____)
22	35 S.Y.	ADA Compliant Concrete Sidewalk Ramps	_____dollars and _____cents (\$_____)

23	1 Lump Sum	Pedestrian Barrier/Barricade at Southwest Corner of Olive St. and Bank Row	_____dollars and _____cents (\$_____)
24	1 Lump Sum	Concrete Curb Barrier in Front of #33 Olive Street	_____dollars and _____cents (\$_____)
25	8 EA.	Detectable Warning Panels	_____dollars and _____cents (\$_____)
26	2 EA.	Double Sided Rectangular Rapid Flashing Beacons (Solar Powered)	_____dollars and _____cents (\$_____)
27	1 EA.	4' Deep Pre-cast Concrete Catch Basin (Single Grate) W/Frame & Grate	_____dollars and _____cents (\$_____)
28	25 L.F.	10" HDPE Storm Drain Pipe	_____dollars and _____cents (\$_____)

29	20 S.Y.	4" HMA Permanent Road Patch	_____dollars	and _____cents (\$_____)
30	6 EA.	Silt Sack (Catch Basin Protection)	_____dollars	and _____cents (\$_____)
31	5 C.Y.*	Loaming	_____dollars	and _____cents (\$_____)
32	25 S.Y.*	Seeding	_____dollars	and _____cents (\$_____)

* Indeterminate quantity assumed for comparison of Bids.

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the annexed form of AGREEMENT, he will accept compensation as stipulated therein in full payment for such extra work.

If this BID is accepted by the City, the undersigned agrees to complete the entire work provided to be done under the Contract within the time stipulated as otherwise expressly provided in the AGREEMENT.

The total price for the base bid, derived as described in the INFORMATION FOR BIDDERS under the heading "Comparison of Bids," is \$** _____.
 _____.(in words)

As provided in the INFORMATION FOR BIDDERS, the bidder hereby agrees that he will not withdraw this BID within 40 consecutive calendar days after the actual date of the opening of BIDS and that, if the City shall accept this BID, the bidder will duly execute and acknowledge the AGREEMENT and furnish, duly executed and acknowledged, the required CONTRACT BONDS within ten (10) days after notification that the AGREEMENT and other Contract Documents are ready for signature.

Should the bidder fail to fulfill any of his agreements as hereinabove set forth, the City shall have the right to retain as liquidated damages the amount of the bid check which shall become the City's property.

This BID includes Addenda number *** _____, _____, _____, _____, _____.

** Bidder must fill in this blank

*** To be filled in by Bidder if Addenda are issued.

The Bidder, by submittal of this BID, agrees with the Owner that the amount of the bid security deposited with this BID fairly and reasonably represents the amount of damages the Owner will suffer due to the failure of the Bidder to fulfill his agreements as above provided.

The Bidder hereby certifies he shall comply with the minority manpower ration and specific action steps contained in the STATE REQUIREMENTS under Massachusetts Equal Employment Program, including the minority contractor compliance. Prior to the award of the Contract, the Contractor must submit a Contractor's Certification of Compliance. The Contractor receiving the award of the Contract shall be required to obtain from each of its Sub-Contractors and submit to the contracting or administering agency prior to the performance of any work under said Contract a certification by said Sub-Contractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in the Massachusetts Equal Employment Program.

(SEAL)

By _____
(Signature and title of authorized representative)

(Business Address)

(City & State)

Date _____

The Bidder is a corporation incorporated in the State (or Commonwealth) of _____

(Bidder must add and delete, as necessary, to make this sentence read correctly).

(Note: If the Bidder is a corporation, affix corporate seal and give below the names of its president, treasurer, and general manager, if any; if a partnership, give full names and residential addresses of all partners, and if an individual, give residential address if different from business address.)

CERTIFICATE OF NON-COLLUSION

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

Signature of individual submitting bid or proposal

Name of Business

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. Ch. 62C, Sec. 49A, I certify under the penalties of perjury that I, to the best of my knowledge and belief, am in compliance with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Signature of individual submitting bid or proposal

Name of business

DEBARMENT STATEMENT
(to be used for any public construction project)

Any person or corporation that fails to date, sign with original signature, and submit the following statement shall not be awarded this contract.

DEBARMENT (Chapter 550, Acts of 1991)

The undersigned certifies under penalties of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of Section 29F of Chapter 29 of the General Laws, or any other applicable debarment provisions of any other Chapter of the General Laws, or any Rule or Regulation promulgated thereunder.

DATE: _____

Typed or Printed Name of Person Signing

Authorized Official's Signature

Company or Corporation

A. Contractor's Certification

Name of Project _____

A contractor will not be eligible for award of a contract unless such contractor has submitted the following certification, which is deemed a part of the resulting contract:

CONTRACTOR'S CERTIFICATION

_____ certified that:

1. it tends to use the following listed construction trades in the work under the contract _____

and

2. will comply with the minority manpower ration and specific affirmative action steps required by law, and
3. will obtain from each of its Sub-Contractors and submit to the contracting or administering agency prior to the award of any Sub-Contract under this contract the Sub-Contractor certification required by these bid conditions.

Signature of authorized representative
of Contractor.

B. Sub-Contractor's Certification

Name of Project _____

Prior to the award of any sub-contract, regardless of tier, the prospective sub-contractor must execute and submit to the prime contractor the following certification, which will be deemed a part of the resulting sub-contract:

SUB-CONTRACTOR'S CERTIFICATION

_____ certifies that:

- 1. it tends to use the following listed construction trades in the work under the sub-contract _____

and;

- 2. will comply with the minority manpower ration and specific affirmative action steps required by law; and
- 3. will obtain from each of the sub-contractors prior to the award of any sub-contract under this sub-contractor certification required by these bid conditions.

Signature of Authorized Representative

In order to ensure that the said sub-contractor's certification becomes a part of all sub-contractors under the prime contract, no sub-contract shall be executed until an authorized representative of the City agency (or agencies) administering this project has determined, in writing, that the said certification has been incorporated in such sub-contract, regardless of tier. Any sub-contract executed without such written approval shall be void.

OSHA TRAINING CERTIFICATION

Pursuant to M.G.L. Ch. 30, Sec. 39S(A), I certify under the penalties of perjury to the following:

- (1) that I am able to furnish labor that can work in harmony with all other elements of labor employed or to be employed at the work;
- (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and
- (3) that all employees to be employed in the work subject to this contract have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(Signature of authorized representative of Bidder)

(Name of authorized representative of Bidder)

(Name of business)

AGREEMENT

AGREEMENT FOR CONTRACT DPW 19-28

Transit Area Pedestrian & ADA Improvements

THIS AGREEMENT, executed this _____ day of _____
in the year Two Thousand and Nineteen.

(herein referred to as the “AGREEMENT”), by and between the City of Greenfield, Massachusetts, acting by and through its Department of Public Works, duly authorized therefore, which acts solely for said City and without personal liability to itself, party of the first part, and _____ party of the second part.

WITNESSETH, that the parties to these presents, each in consideration of the undertakings, promises, and agreements on the part of the other herein contained, have undertaken, promised and agreed and do hereby undertake, promise, and agree, the party of the first part for itself, its successors and assigns, and the party of the second part for himself and his heirs, executors, administrators, successors and assigns, as follows:

The Contractor agrees to furnish all equipment, machinery, tools and labor, to furnish and deliver all materials required to be furnished and delivered in and about the improvement and to do and perform all work in accordance with the specifications and conditions attached hereto and made a part hereof, in strict conformity with the provisions herein contained and the Advertisement for Bidders, Information for Bidders, Proposal, and General, Supplemental and Special Conditions hereto annexed. All said Advertisement for Bidders, Information for Bidders, Proposal, General, Supplemental, and Special Conditions, and Contract Drawings are hereby specifically made a part of this contract as fully and to the same effect as if the same had been set forth at length herein.

In consideration of the foregoing premises, the Owner agrees to pay and the Contractor agrees to receive as full compensation for everything furnished and done by the Contractor under this contract; including all work required, for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any delay or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, such price or prices as are set out in the accompanying proposal, and for all work required, for which there is no item in the proposal, such compensation as is provided for in the aforesaid specifications.

The Contractor’s bid price for this project is _____.

IN WITNESS WHEREOF, the Owner has caused this instrument to be signed and its corporate seal to be hereto affixed in its behalf, and the Contractor has caused this instrument to be signed in its behalf.

AGREEMENT FOR CONTRACT DPW 19-28

Transit Area Pedestrian & ADA Improvements

FOR THE OWNER,

By the _____

FOR THE CONTRACTOR,

Witness: _____

By the _____

(If a corporation, attach to each signed Agreement a notarized copy of the corporate vote authorizing the signatory to sign this Agreement.)

Approved as to Appropriation:

City Accountant

Certificate of Acknowledgment of Contractor if a Corporation

For AGREEMENT

State of _____)

SS:

County of _____)

On this _____ day of _____, 20____,

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he knows the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order of the Board of Directors of said corporation; and that by the like order he signed thereto his name and official designation.

Notary Public (Seal)

My commission expires: _____

NOTICE TO PROCEED

Date: _____

Project: Transit Area Pedestrian & ADA Improvements	
Owner: City of Greenfield, MA	Owner's Contract No.: DPW 19-28
Contract: Transit Area Pedestrian & ADA Improvements	
Contractor:	
Contractor's Address: <i>[send Certified Mail, Return Receipt Requested]</i>	

You are notified that the Contract Times under the above Contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. The date of Substantial Completion is _____.

Before you may start any Work at the Site, Paragraph 1.12 of the Information for Bidders provides that you must deliver to the Owner (with copies to Engineer and other identified additional insured and loss payees) certificates of insurance which Contractor is required to purchase and maintain in accordance with the Contract Documents.

_____	Owner
_____	Given by:
_____	Authorized Signature
_____	Title
_____	Date

Copy to Engineer

BONDS

PERFORMANCE BOND

(NOTE: This Bond is issued simultaneously with the attached Labor and Materials Bond in favor of the Owner.)

KNOW ALL MEN BY THESE PRESENTS:

That we, _____

(an individual, a partnership, a corporation)

duly organized under the Laws of the State (or Commonwealth) of _____,

and having a usual place of business at _____, as

Principal, and _____, a corporation duly

organized under the Laws of the State (or Commonwealth) of _____, and

having a usual place of business at _____,

as Surety, are holden and stand firmly bound and obligated unto the City of Greenfield,

Massachusetts, as obligee, in the sum of _____,

lawful money of the United States of America to and for the true payment whereof we bind

ourselves and, each of us, our heirs, executors, administrators, successors, and assigns, jointly and

severally, firmly by these presents.

WHEREAS, the Principal, by means of a written AGREEMENT (which together with the Contract Documents in said AGREEMENT referred to are collectively sometimes referred to as the "Contract") dated _____.

Has entered into a contract with the said obligee for _____

_____ a copy of which AGREEMENT is attached hereto and by reference made a part hereof.

NOW THEREFORE, THE CONDITION of this obligation is such that if the Principal shall well and truly keep and fully and faithfully perform all of the terms and conditions of said AGREEMENT and of the "Contract Documents" referred to in said AGREEMENT (which collectively are hereinafter and in said AGREEMENT sometimes referred to as the "Contract") and all modifications thereof on the Principal's part to be performed, this obligation shall be void; otherwise it shall remain in full force and effect.

Whenever the said Principal shall be, and declared by the City to be in default under the said Contract, the City having performed the City's obligations thereunder, the Surety, for value received, shall promptly remedy the default, or, at the option of the City, shall promptly

- (a) Complete the said AGREEMENT and/or Contract in accordance with its terms and conditions, or
- (b) Obtain a bid or bids for submission to and the approval of the City for completing the said AGREEMENT and/or Contract and any modifications thereof in accordance with the terms and condition thereof, and upon determination by the City and the Surety of the lowest responsible and acceptable bidder, arrange for a contract between such bidder and the City, and make available to the City as the Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less a sum that shall be equal to the difference between the Contract price as fixed and provided in said AGREEMENT and/or Contract price as fixed and provided thereof to be paid thereunder to the Principal and the amount previously paid by the City to and/or for the account of and/or chargeable against the Principal, but not exceeding (including other costs and damages for which the Surety may be liable hereunder) the amount set forth in the first paragraph hereof.

The Surety, for value received, agrees further that no changes in, omissions from, or alteration, modifications or additions to the terms and provisions of said AGREEMENT, and/or Contract or the Work to be performed thereunder, and that no extensions of time given or changes made in the manner or time of making payments thereunder, shall in any way affect the Surety's obligations on this Bond, and the Surety hereby waives notice of any such changes, omissions, alteration, modification, additions or extensions.

IN WITNESS WHEREOF, we have hereunto set our hands and seals to _____
counterparts of this Bond, this _____ day of _____
in the year Two Thousand and Nineteen.

Principal (Seal)

Principal (Seal)

Principal (Seal)

Surety (Seal)

Surety (Seal)

Surety (Seal)

(NOTE: If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized officers.

If this Bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his power of attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the Bond corresponding to the number of counterparts of the AGREEMENT.)

LABOR AND MATERIALS (PAYMENT) BOND

(NOTE: This Bond is issued simultaneously with the attached Performance Bond in favor of the Owner.)

KNOW ALL MEN BY THESE PRESENTS:

That we, _____

(an individual, a partnership, a corporation)

duly organized under the Laws of the State (or Commonwealth) of _____,
and having a usual place of business at _____, as
Principal, and _____, a corporation duly
organized under the Laws of the State (or Commonwealth) of _____, and
having a usual place of business at _____,
as Surety, are holden and stand firmly bound and obligated unto the City of Greenfield,
Massachusetts, as obligee, in the sum of _____,
lawful money of the United States of America to and for the true payment whereof we bind
ourselves and, each of us, our heirs, executors, administrators, successors, and assigns, jointly and
severally, firmly by these presents.

WHEREAS, the Principal, by means of a written AGREEMENT (which together with the Contract Documents in said AGREEMENT referred to are collectively sometimes referred to as the "Contract") dated _____.

Has entered into a contract with the said obligee for _____

_____ a copy of which AGREEMENT is attached hereto and by reference made a part hereof.

NOW, THEREFORE, THE CONDITION of this obligation is such that if the Principal shall promptly make payments to all claimants as hereinafter defined, for all labor performed or furnished and for all materials and equipment furnished for or used or in connection with the Work called for by said AGREEMENT and/or Contract and any modifications thereof, including lumber used, but not incorporated in said Work, and for the rental or hire of vehicles, tools and other appliances and equipment furnished for or used in connection with said Work, this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, materials, and/or equipment used or reasonably required for use in the performance of the said Work, labor and materials, being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the said AGREEMENT and/or Contract and any modifications thereof.
2. The above named Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials or equipment were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by a claimant,
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the City or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials or equipment for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials or equipment were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, City, or Surety at any place where an office is regularly maintained for the transaction of business, or served in the state in which the said Work is located, save that such service need not be made by a public officer;
 - (b) After the expiration of one (1) year following the date on which the Principal ceased work on said AGREEMENT and/or Contract and any modifications thereof, it being understood, however, that if any limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the said Work, or any part thereof, is situated, or in the United States District Court for the district in which the said Work, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said AGREEMENT and/or Contract or said Work, whether or not claim for the amount of such lien be presented under and against this bond.

The Surety, for value received, agrees further that no changes in, omissions from, or alterations, modifications or additions to the terms and provisions of said AGREEMENT and/or Contract or the Work to be performed thereunder, and that no extensions of time given or changes made in the manner or time of making payments thereunder, shall in any way affect the Surety's obligations on this Bond, and the Surety hereby waives notice of any such changes, omissions, alterations, modifications, additions or extensions.

IN WITNESS WHEREOF, we have hereunto set our hands and seals to _____
counterparts of this Bond, this _____ day of _____
in the year Two Thousand and Nineteen.

(NOTE: If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.	_____ Principal _____ Principal
If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized officer or officers.	_____ Principal _____ Principal
If this Bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certi- fied copy of his power of attorney showing his authority to sign such Bonds.	_____ Surety _____ Surety
There should be executed an appropriate number of counter- parts of the Bond corresponding to the number of counterparts of the AGREEMENT.)	_____ Surety

Certificate of Acknowledgment of Contractor if a Corporation

For CONTRACT BONDS

State of _____)

SS:

County of _____)

On this _____ day of _____, 20____,

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he knows the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order of the Board of Directors of said corporation; and that by the like order he signed thereto his name and official designation.

Notary Public (Seal)

My commission expires: _____

SPECIAL CONDITIONS

SPECIAL CONDITIONS

TITLE

- 1.1 Construction Warning Signs
- 1.2 Traffic Control
- 1.3 Access to Property
- 1.4 Conflict or Inconsistency
- 1.5 Percentage of Progress Payments to be Retained
- 1.6 Waste Reduction/Energy Efficiency

1.1 **Construction Warning Signs.** All construction warning signs shall be erected in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways. All construction warning signs shall be erected and maintained by the Contractor at their own expense.

1.2 **Traffic Control.** For control of moderate traffic, the Contractor shall provide an adequate number of flagmen employed at his own expense.

Whenever and wherever, in the opinion of the Engineer, traffic is sufficiently congested or public safety is endangered, the Contractor shall be responsible for furnishing uniformed special officers to direct traffic and to keep traffic off the highway area affected by construction operations. Such officers shall be in addition to the watchmen, required under other provisions of the contract. The Owner shall be responsible for payment of all uniformed special officers. The Contractor shall be responsible for scheduling all uniformed special officers a minimum of 24 hours in advance and for submitting all detail slips to the DPW.

The employment or presence of traffic flagmen, special officers, or police shall, in no way, relieve the Contractor of any responsibility or liability, which is his under the terms of the Contract.

1.3 **Access to Property.** The Contractor shall maintain access to all properties whether over sidewalks or driveways through the use of ramps, bridges, or steel plating. Bridging is required for all properties where handicap accessibility must be maintained.

Temporary handicap ramps shall be constructed according to the Commonwealth of Massachusetts Architectural Barrier Board Regulations 521 CMR.

1.4 **Conflict or Inconsistency.** If there be any conflict or inconsistency between the provisions of the SPECIAL CONDITIONS and the provisions of the other Contract Documents, the provision of the SPECIAL CONDITIONS shall prevail. If there be any conflict or inconsistency between the provisions of the AGREEMENT and the provisions of any of the Contract Documents other than the SPECIAL CONDITIONS, the provisions of the AGREEMENT shall prevail.

1.5 **Percentage of Progress Payments to be Retained.** The percentage of value to be retained under that Subsection of the GENERAL CONDITIONS, entitled "Progress Estimates," shall be 5 percent.

1.6 **Waste Reduction/Energy Efficiency.** The City of Greenfield has a commitment to resource and energy conservation and the pursuit of renewable energy options. Greenfield was one of the first communities in the Commonwealth to be designated a “Green Community”. As part of this contract, the Contractor will provide a plan to reduce waste and conserve energy. This written plan will be provided as part of the contract.

GENERAL CONDITIONS

GENERAL CONDITIONS

TITLE

1.1	Definitions.....
1.2	Obligations and Liability of Contractor.....
1.3	Planning and Progress Schedules.....
1.4	Supervision of Work.....
1.5	Patents.....
1.6	Electrical Energy.....
1.7	Compliance with Laws.....
1.8	Provisions Required by Law Deemed Inserted.....
1.9	Permits.....
1.10	Not to Sublet or Assign.....
1.11	Delay by City.....
1.12	Time for Completion.....
1.13	Liquidated Damages.....
1.14	Employ Sufficient Labor and Equipment.....
1.15	Handling and Distribution.....
1.16	Occupying Private Land.....
1.17	Interference With and Protection of Streets.....
1.18	Safety.....
1.19	Sanitary Regulations.....
1.20	Intoxicating Liquors.....
1.21	Access to Work.....
1.22	Examination of Work.....
1.23	Defective Work, Etc.....
1.24	Precautions During Adverse Weather.....
1.25	Right to Materials.....
1.26	Changes.....
1.27	Extra Work.....
1.28	Extension of Time on Account of Extra Work.....
1.29	Changes Not to Affect Bonds.....
1.30	Claims for Damages.....
1.31	Abandonment of Work or Other Default.....
1.32	Prices for Work.....
1.33	Formal Acceptance.....
1.34	Progress Estimates.....
1.35	Partial Acceptance.....
1.36	Final Estimate and Payment.....
1.37	Liens.....
1.38	Claims.....
1.39	No Waiver.....
1.40	Liability of City.....
1.41	Guarantee.....
1.42	Cleaning Up.....
1.43	Legal Address of Contractor.....
1.44	Modification of Termination.....

1.1 **Definitions.** Wherever the words hereinafter defined or pronouns used in their stead occur in the Contract Documents, they shall have the following meanings:

The word “Owner” shall mean the City of Greenfield.

The word “Contractor” shall mean the party of the second part above designated.

The word “Specifications” when used herein shall be deemed to refer to both the General and Technical Specifications.

The words “herein”, “hereinafter”, hereunder” and words of like import shall be deemed to refer to the Contract Documents.

1.2 **Obligations and Liability of Contractor.** The Contractor shall do all the work and perform and furnish all the labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies and all other things (except as otherwise expressly provided herein) necessary and as herein specified for the proper performance and completion of the Work in the manner and within the time hereinafter specified, in strict accordance with the Specifications and other Contract Documents, in conformity with the directions and to the satisfaction of the City, and at the prices herein agreed upon.

All parts of the Work and all fixtures, equipment, apparatus and other items indicated in the Specifications and all work and material usual and necessary to make the Work complete in all its parts, including all incidental work necessary to make it complete and satisfactory and ready for use and operation, whether or not they are mentioned in the Specifications, shall be furnished and executed the same as if they were called for by the Specifications.

The Contractor shall conduct his work so as to interfere as little as possible with private business and public travel. Wherever and whenever necessary or required, he shall maintain fences, provide barriers, furnish watchmen, maintain lights, and take such other precautions as may be necessary to protect life and property.

The Contractor shall indemnify and save harmless the City and its officers, agents, servants, and employees from and against any and all claims, demands, suits, proceedings liabilities, judgments, awards, losses, damages, costs and expenses, including attorney’s fees, on account of bodily injury, sickness, disease or death sustained by any person or persons or injury or damage to or destruction of any property, directly or indirectly arising out of, relating to or in connection with the Work, whether or not due or claimed to be due in whole or in part to the active, passive or concurrent negligence or fault of the Contractor, his officers, agents, servants or employees, any of his subcontractors, the City or any of its respective officers, agents, servants or employees and/or any other person or persons, and whether or not such claims, demands, suits or proceedings are just, unjust, groundless, false or fraudulent; and the Contractor shall and does hereby assume and agrees to pay for the defense of all such claims, demands, suits and proceedings.

The Contractor shall have complete responsibility for the Work and the protection thereof, and for preventing injuries to persons and damage to the Work and property and utilities on or about the Work, until final completion and final acceptance thereof. He shall, in no way, be relieved of his responsibility by any right of the City to give

permission or directions relating to any part of the Work, by any such permission or directions given, or by failure of the City to give such permission or directions. The Contractor shall bear all costs, expenses, losses and damages on account of the quantity or character of the Work or the nature of the land (including but not limited to subsurface conditions) in or under or on which the Work is done being different from those indicated or shown in the Contract Documents or from what was estimated or expected, or on account of the weather, elements, or other causes.

The Contractor shall conduct his operations so as not to damage existing structures or work installed either by him or by other contractors. In case of any such damage resulting from his operations, he shall repair and make good as new the damaged portions at his own expense with the consent of the damaged party. In the event that consent is not given, the Contractor shall continue to be liable for the damage caused.

The Contractor shall be as fully responsible to the City for the acts and omissions of his subcontractors, their officers, agents, servants and employees as he is for his own acts and omissions and those of his officers, agents, servants and employees.

Should the Contractor sustain any loss, damage or delay through any act or omission of any other contractor or any subcontractor of any such other contractor, the Contractor shall have no claim against the City therefore, other than for any extension of time, but shall have recourse solely to such other contractor or subcontractor.

If any other contractor or any subcontractor of any such other contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of his subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other contractor or subcontractor for such loss or damage. The Contractor agrees to and does hereby indemnify and save harmless the City from and against any and all claims by such other contractors or subcontractors alleging such loss, damage or delay and from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, arising out of, relating to or resulting from such claims.

The Contractor shall promptly pay all federal, state and local taxes which may be assessed against him in connection with the Work or his operations under the AGREEMENT and/or the other Contract Documents, including but not limited to, taxes attributable to the purchase of material and equipment, to the performance of services, and the employment of persons in the prosecution of the Work.

- 1.3 **Planning and Progress Schedules.** The Contractor shall submit to and for the approval of the Engineer, a detailed schedule of operations. The schedule shall show the proposed methods of construction and sequence of work and the time the Contractor proposes to complete the various items of work within the time specified in the Contract. The schedules are to be submitted within 10 days of contract award. No work shall begin until the Progress Schedule is approved by the Engineer.

If the Contractor's operations are materially affected by changes in the plans or in the quantity of the Work or if he has failed to comply with the submitted and approved schedule, the Contractor shall submit a revised schedule if requested by the Engineer within seven days after the date of the Engineer's request. This revised schedule shall

show how the Contractor proposes to prosecute the balance of the Work, so as to complete the Work within the time specified in the Contract.

- 1.4 **Supervision of Work.** The Contractor shall be solely responsible for supervision of the Work, shall give the Work the constant attention necessary to ensure the expeditious and orderly progress thereof, and shall cooperate with the City in every possible way.

At all times, the Contractor shall have as his agent on the Work a competent superintendent capable of reading and thoroughly understanding the Specifications, with full authority to execute the directions of the City, without delay, and to supply promptly such labor, services, materials, equipment, plant, apparatus, appliances, tools, supplies and other items as may be required. The qualifications of the superintendent shall be submitted with the contract. Such superintendent shall not be removed from the Work without the prior written consent of the City. If, in the opinion of the City, the superintendent or any successor proves incompetent, the Contractor shall replace him with another person approved by the City; such approval, however, shall, in no way, relieve or diminish the Contractor's responsibility for the supervision of the Work.

Whenever the Contractor or his agent or superintendent is not present on any part of the Work where it may be necessary to give directions or instructions with respect to such Work, such directions or instructions may be given by the City to, and shall be received and obeyed by the foreman or any other person in charge of the particular work involved.

- 1.5 **Patents.** The Contractor shall indemnify and save harmless the City and all persons acting for or on behalf of the City from all claims and liability of any nature or kind, and all damages, costs and expenses, including attorneys' fees, arising from or occasioned by any infringement or alleged infringement of any patents or patent rights on any invention, process, material, equipment, article or apparatus, or any part thereof, furnished and installed by the Contractor, or arising from or occasioned by the use or manufacture thereof, including their use by the City.

- 1.6 **Electrical Energy.** The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the Work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections and meters.

The Contractor shall provide sufficient lighting so that all work may be done in a workman like manner when there is not sufficient daylight.

- 1.7 **Compliance with Laws.** The Contractor shall keep himself fully informed of all existing and future federal, state and local laws, ordinances, rules, and regulations affecting those engaged or employed on the Work, the material and equipment used in the Work or the conduct of the Work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the Specifications or other Contract Documents in relation to any such law, ordinance, rule, regulation, order, decree, or other requirement, the Contractor shall forthwith report the same to the City in writing. The Contractor shall, at all times, observe and comply with, and cause all his agents, servants, employees and subcontractors to observe and comply with all such existing and future laws, ordinances,

rules, regulations, orders, decrees and other requirements, and he shall protect, indemnify and save harmless the City, its officers, agents, servants and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, penalties, losses, damages, costs and expenses, including attorneys' fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulation, order, decree or other requirement, whether committed by the Contractor or any of his agents, servants, employees or subcontractors.

- 1.8 **Provisions Required by Law Deemed Inserted.** Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion.
- 1.9 **Permits.** The Contractor shall, at his own expense, take out and maintain all necessary permits from the county, municipal, or other public authorities; shall give all notices required by law; and shall post all bonds and pay all fees and charges incident to the due and lawful prosecution of the Work.
- 1.10 **Not to Sublet or Assign.** The Contractor shall constantly give his personal attention to the faithful prosecution of the Work, shall keep the same under his personal control, shall not assign the Contract or sublet the Work or any part thereof without the previous written consent of the City, and shall not assign any of the monies payable under the Contract, or his claim thereto, unless by and with the like written consent of the City and the surety on the contract bonds. Any assignment or subletting in violation hereof shall be void and unenforceable.
- 1.11 **Delay by City.** The City may delay the beginning of the Work or any part thereof if the necessary lands or rights of way for such work shall not have been obtained. The Contractor shall have no claim for additional compensation or damages on account of such delay, but shall be entitled only to an extension of time as hereinafter provided.
- 1.12 **Time for Completion.** The rate of progress shall be such that the Work shall be performed and completed in accordance with the Contract before the expiration of the time limit stipulated under INFORMATION FOR BIDDERS, except as otherwise expressly provided herein.

It is agreed that the rate of progress herein required has been purposely made low enough to allow for the ordinary and foreseeable delays incident to work of this character. No extension of time will be given for ordinary or foreseeable delays, inclement weather, or accidents, and the occurrence of such will not relieve the Contractor from the necessity of maintaining this rate of progress and completing the Work within the stipulated time limit.

If delays are caused by acts of God, acts of Government, unavoidable strikes, extra work, or other causes or contingencies clearly beyond the control or responsibility of the Contractor, the Contractor may be entitled to additional time to perform and complete the Work, provided that the Contractor shall, within ten (10) days from the beginning of such delay notify the City, in writing, of the cause and particulars of the delay. Upon receipt

of such notification, the City shall review and evaluate the cause and extent of the delay. If, under the terms of the AGREEMENT, the delay is properly excusable, the City will, in writing, appropriately extend the time for completion of the Work. The Contractor agrees that he shall not have or assert any claim for nor shall he be entitled to any additional compensation or damages on account of such delays.

- 1.13 **Liquidated Damages.** In case the Contractor fails to complete the Work satisfactorily on or before the date of completion fixed herein or as duly extended as hereinbefore provided, the Contractor agrees that the City shall deduct from the payments due the Contractor each month, the sum of five hundred (\$500) dollars for each calendar day of delay. If the payments due the Contractor are less than the amount of such liquidated damages, said damages shall be deducted from any such monies due or to become due the Contractor, and, in case such damages shall exceed the amount of all monies due or to become due the Contractor, the Contractor or his surety shall pay the balance to the Owner.
- 1.14 **Employ Sufficient Labor and Equipment.** If, in the sole judgment of the City, the Contractor is not employing sufficient labor, plant, equipment or other means to complete the Work within the time specified, the City may, after giving written notice, require the Contractor to employ such additional labor, plant, equipment and other means as the City deems necessary to enable the Work to progress properly.
- 1.15 **Handling and Distribution.** The Contractor shall handle, haul, and distribute all materials on the different portions of the Work, as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the Work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until the final completion and acceptance of the Work.
- 1.16 **Occupying Private Land.** The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment, any land outside the rights-of-way or property of the Owner. A copy of the written consent shall be given to the Engineer.
- 1.17 **Interference With and Protection of Streets.** The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the City.

Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefore.

The Contractor shall, at least 24 hours in advance, notify the Police and Fire Departments, in writing, with a copy to the Department of Public Works, if the closure of a street or road is necessary. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

- 1.18 **Safety.** The Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. The Contractor shall provide protection for all persons including but not limited to his employees and employees of other contractors or subcontractors; members of the public; and employees, agents, and representatives of the City, and regulatory agencies that may be on or about the Work. The Contractor shall provide protection for all public and private property including but not limited to structures, pipes and utilities, above and below ground.

The Contractor shall provide and maintain all necessary safety equipment such as fences, barriers, signs, lights, walkways, guards and fire prevention and fire fighting equipment and shall take such other action as is required to fulfill his obligations under this subsection.

The Contractor shall comply with all applicable federal, state and local laws, ordinances, rules and regulations and lawful orders of all authorities having jurisdiction for the safety of persons and protection of property.

The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This responsible person shall have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce safety precautions and programs.

- 1.19 **Sanitary Regulations.** The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required or approved.

The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

The City shall have the right to inspect such facilities at all times to determine whether or not they are being properly and adequately maintained.

- 1.20 **Intoxicating Liquors.** The Contractor shall not sell and shall neither permit nor suffer the introduction or use of intoxicating liquors upon or about the Work.

- 1.21 **Access to Work.** The City and its officers, agents, servants and employees may at all times and for any and all purposes, enter upon the Work and the site thereof and the premises used by the Contractor, and the Contractor shall at all times provide safe and proper facilities therefore.

- 1.22 **Examination of the Work.** The City shall be furnished by the Contractor with every reasonable facility for examining and inspecting the Work and for ascertaining that the Work is being performed in accordance with the requirements and intent of the Contract, even to the extent of requiring the uncovering or taking down portions of finished work by the Contractor.

Should the work thus uncovered or taken down prove satisfactory, the cost of uncovering or taking down and the replacement thereof shall be considered as extra work unless the original work was done in violation of the Contract in point in time or in the absence of the Engineer or his inspector and without his written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered or taken down prove unsatisfactory, said cost shall likewise be borne by the Contractor.

Examination or inspection of the Work shall not relieve the Contractor of any of his obligations to perform and complete the Work as required by the Contract.

- 1.23 **Defective Work, Etc.** Until acceptance and during the applicable guarantee period thereafter, the Contractor shall promptly, without charge, repair, correct or replace work, equipment, materials, apparatus or parts thereof which are defective, damaged or unsuitable or which in any way fail to comply with or be in strict accordance with the provisions and requirements of the Contract or applicable guarantee and shall pay to the City all resulting costs, expenses, losses or damages suffered by the City.

If any material, equipment, apparatus or other items brought upon the site for use or incorporation in the Work, or selected for the same, is rejected by the City as unsuitable or not in conformity with the Specifications or any of the other Contract Documents, the Contractor shall forthwith remove such materials, equipment, apparatus and other items from the site of the Work and shall at his own cost and expense make good and replace the same.

- 1.24 **Precautions During Adverse Weather.** During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done, and satisfactory in all respects.

- 1.25 **Right to Materials.** Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials, equipment, apparatus and other items furnished after they have been installed or incorporated in or attached or affixed to the Work or the site, but all such materials, equipment, apparatus and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the City. Nothing in this subsection shall relieve the Contractor of his duty to protect and maintain all such materials, equipment, apparatus and other items.

- 1.26 **Changes.** The City may make changes in the Work and in the Specifications therefore by making alterations therein, additions thereto or omissions therefrom. All work resulting from such changes shall be performed and furnished under and pursuant to the terms and conditions of the Contract. If such changes result in an increase or decrease in the work to be done hereunder, or increase or decrease the quantities thereof, adjustment in compensation shall be made therefore at the unit prices stipulated in the Contract for such work.

Except in an emergency endangering life or property, no change shall be made unless in pursuance of a written order from the City authorizing the change, and no claim for additional compensation shall be valid unless the change is so ordered.

The Contractor agrees that he shall neither have or assert any claim for or be entitled to any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

- 1.27 **Extra Work.** The Contractor shall perform any extra work (work in connection with the Contract but not provided for herein) when and as ordered in writing by the City, at the unit prices stipulated in the Contract for such work or, if none are so stipulated, either (a) at the price agreed upon before such work is commenced and named in the written order for such work, or (b) if the City so elects, for the actual cost of such work, as determined by the Contractor and approved by the City, plus a percentage of such cost, as set forth below. No extra work shall be paid for unless specifically ordered as such in writing by the City.

The cost of extra work done under (b) above shall include the actual cost to the Contractor of materials used and equipment installed, common and skilled labor, and foremen, and the fair rental of all machinery and equipment used on the extra work for the period of such use.

At the request of the City, the Contractor shall furnish itemized statement of the cost of the extra work ordered as above and give the City access to all records, accounts, bills and vouchers and correspondence relating thereto.

The Contractor may include in the cost of extra work the amounts of additional premiums, if any, (other than premiums on bonds) paid on the required insurance on account of such extra work, of Social Security or other direct assessments upon the Contractor's payroll by federal or other properly authorized public agencies, and of other approved assessments when such assessments are not normally included in payments made by the Contractor directly to his employees, but in fact, are, and are customarily recognized as, part of the cost of doing work.

The fair rental of all machinery and equipment shall be based upon the most recent edition of "Compilation of Rental Rates for Construction Equipment", published by the Associated Equipment Distributors, or a similar publication approved by the City. Rental for machinery or equipment shall be based upon an appropriate fraction of the approved monthly rate schedule. If said extra work requires the use of machinery or equipment not already on the site of the Work, the cost of transportation, not exceeding a distance of 100 miles, of such machinery or equipment to and from the Work shall be added to the fair monthly rate; provided however, that this shall not apply to machinery or equipment already required to be furnished under the terms of the Contract.

The Contractor shall not include in the cost of extra work any cost or rental of small tools, building, or any portion of the time of the Contractor, his superintendent, or his office and engineering staff.

To the cost of extra work done by the Contractor's own forces under (b) above (determined as stated above), the Contractor shall add 15 percent to cover his overhead, use of capital, the premium on the bonds as assessed upon the amount of this extra work, and profit.

In the case of extra work done under (b) above by a subcontractor, the subcontractor shall compute, as above, his cost for the extra work, to which he shall add 15 percent as in the case of the Contractor, and the Contractor shall be allowed an additional 15 percent of the subcontractor's cost for the extra work to cover the costs of the Contractor's overhead, use of capital, the premium on the bonds as assessed upon the amount of this extra work, and profit. Said subcontractor's cost must be reasonable and approved by the City.

If extra work is done under (b) above, the Contractor and/or subcontractor shall keep daily records of such extra work. The daily record shall include the names of men employed, the nature of the work performed, and hours worked, materials and equipment incorporated, and machinery or equipment used, if any, in the prosecution of such extra work. This daily record, to constitute verification that the work was done, must be signed both by the Contractor's authorized representative and by the City. A separate daily record shall be submitted for each extra work order no later than the proceeding day.

- 1.28 **Extension of Time on Account of Extra Work.** When extra work is ordered near the completion of the Contract or at any time during the progress of the Work which unavoidably increases the time for the completion of the Work, an extension of time shall be granted as hereinbefore provided.
- 1.29 **Changes Not to Affect Bonds.** It is distinctly agreed and understood that any changes made in the Work or the drawings or specifications therefore (whether such changes increase or decrease the amount thereof or the time required for its performance) or any changes in the manner or time of payments made by the City to the Contractor, or any other modifications of the Contract, shall in no way annul, release, diminish or affect the liability of the surety on the contract bonds given by the Contractor, it being the intent hereof that notwithstanding such changes the liability of the surety on said bonds continue and remain in full force and effect.
- 1.30 **Claims for Damages.** If the Contractor makes claim to any damages alleged to have been sustained by breach of contract or otherwise, he shall, within ten (10) days after occurrence of the alleged breach or within ten (10) days after such damages are alleged to have been sustained, whichever date is earlier, file with the City a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, his claim for damages shall be deemed waived, invalid and unenforceable, and that he shall not be entitled to any compensation for any such alleged damages.
- 1.31 **Abandonment of Work or Other Default.** If the Work shall be abandoned, or any part thereof shall be sublet without previous written consent of the City, or the Contract or any monies payable hereunder shall be assigned otherwise than as herein specified, that the conditions herein specified as to rate of progress are not being complied with, or that the Work or any part thereof is being unnecessarily or unreasonably delayed, or that the Contractor has violated or is in default under any of the provisions of the Contract, or if the Contractor becomes bankrupt or insolvent or goes or is put into liquidation or dissolution, either voluntarily or involuntarily, or petitions for an arrangement or reorganization under the Bankruptcy Act, or makes a general assignment for the benefit of creditors or otherwise acknowledges insolvency, the happening of any of which shall be and constitute a default under the Contract, the City may notify the Contractor in writing, with a copy of such notice mailed to the surety, to discontinue all work or any

part thereof; thereupon the Contractor shall discontinue such work or such part thereof as the City may designate; and the City may, upon giving such notice by contract or otherwise as it may determine, complete the Work or such part thereof and charge the entire cost and expense of so completing the Work or such part thereof to the Contractor. In addition to the said entire cost and expense of completing the work, the City shall be entitled to reimbursement from the Contractor and the Contractor agrees to pay to the City any losses, damages, costs and expenses, including attorney's fees, sustained or incurred by the City by reason of any of the foregoing causes. For the purposes of such completion, the City may, for itself, or for any contractors employed by the City, take possession of and use or cause to be used any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the Work.

All costs, expenses, losses, damages, attorney's fees and any and all other charges incurred by the City under this subsection shall be charged against the Contractor and deducted and/or paid by the City out of the monies due or payable or to become due or payable under the Contract to the Contractor; in computing the amounts chargeable to the Contractor, the City shall not be held to a basis of the lowest prices for which the completion of the Work or any part thereof might have been accomplished, but all sums actually paid or obligated therefore to effect its prompt completion shall be charged to and against the account of the Contractor. In case the costs, expenses, losses, damages, attorney's fees and other charges together with all payments therefore made to or for the account of the Contractor if the Work had been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the difference, and, in case such costs, expenses, losses, damages, attorney's fees and other charges, together with all payments therefore made to or for the account of the Contractor, shall exceed the said sum, the Contractor shall pay the amount of the excess to the City.

- 1.32 **Prices for Work.** The City shall pay and the Contractor shall receive the prices stipulated in the BID made a part hereof as full compensation for everything performed and furnished and for all risks and obligations undertaken by the Contractor under and as required by the Contract.
- 1.33 **Formal Acceptance.** Fixing of the date of completion and acceptance of the Work or a specified part thereof shall only be effective when accomplished by a writing specifically so stating and signed by the City (EJCDC Form C-625 attached at end of section).
- 1.34 **Progress Estimates.** Once a month, except as hereinafter provided, the City shall make an estimate in writing of the total amount and value of the work done to the first of the month by the Contractor. The City shall retain 5 percent of such estimated value, as part security for fulfillment of the Contract by the Contractor and shall deduct from the balance of all previous payments made to the Contractor, all sums chargeable against the Contractor and all sums to be retained under the provisions of the Contract. The City shall pay monthly to the Contractor the balance not deducted and/or retained as aforesaid, except that payment may be withheld at any time, if in the judgment of the City, the work is not proceeding in accordance with the Contract. If the City deems it expedient to do so, it may cause estimates and payments to be made more frequently than once in each month. No progress estimate or payment need be made when in the judgment of the City, the total value of the Work done since the last estimate amounts to less than \$5,000.

Estimates of lump-sum items shall be based on a schedule dividing each such item into its appropriate component part, together with a quantity and a unit price for each part so that the sum of the products of prices and quantities will equal the contract price for the item. This schedule of values shall be submitted by the Contractor at minimum 10 days prior to a request for payment for and must have the approval of the City before the first estimated payment becomes due.

If the City determines that the progress of the Work will be benefited by the delivery to the site of certain materials and equipment, when available, in advance of actual requirement therefore and if such materials and equipment are delivered and properly stored and protected, the cost to the Contractor or subcontractor as established by invoices or other suitable vouchers satisfactory to the City, less the retained percentages as above provided, may be included in the progress estimates; provided always that there be duly executed and delivered by the Contractor to the City at the same time a Bill of Sale/Transfer of Title in form satisfactory to the City, transferring and assigning to the City full ownership and title to such materials or equipment.

- 1.35 **Partial Acceptance.** The City may at any time, in a written order to the Contractor (1) declare that he intends to use a specified part of the Work which, in his opinion, is sufficiently complete, in accordance with the Contract Documents, to permit its use; (2) enclose a tentative list of items remaining to be completed or corrected, and (3) fix the date of acceptance of that specified part of the Work.

Within 45 days after acceptance under this subsection, the City shall make an estimate, in writing, of the amount and value of the part of the Work, so accepted and shall pay said amount to the Contractor after deducting therefrom all previous payments, all charges against the Contractor as provided for hereunder, and all amounts to be retained under the provisions of the Contract, said payment to be made at the time of the next monthly progress estimate.

Acceptance by the City under this sub-section shall not relieve the Contractor of any obligations under the Contract Documents except to the extent agreed upon in writing between the City and the Contractor.

The City shall have the right to exclude the Contractor from any part of the Work which has been accepted, but the City will allow the Contractor reasonable access thereto to complete or correct items on the tentative/incomplete work list.

- 1.36 **Final Estimate and Payment.** As soon as practicable (but not more than sixty-five (65) days) after final completion of the Work, the City shall make a final estimate, in writing, of the quantity of work done under the Contract and the amount earned by the Contractor.

The City shall pay to the Contractor the entire amount found to be earned and due hereunder after deducting therefrom all previous payments, all charges against the Contractor as provided for hereunder, and all amounts to be retained under the provisions of the Contract. Except as in this sub-section otherwise provided such payment shall be made not later than fifteen (15) days after, but in no event before, the expiration of the time within which claims for labor performed or materials or equipment furnished must be filed under the applicable Lien Law, or, if such time is not specified by law, the expiration of thirty (30) days after the completion of the Engineer's final estimate. All

quantities shown on progress estimates and all prior payments shall be subject to correction in the final estimate and payment.

- 1.37 **Liens.** If, at any time, any notices of lien are filed for labor performed or materials or equipment manufactured, furnished, or delivered to or for the Work, the Contractor shall, at its own cost and expense, promptly discharge, remove or otherwise dispose of the same, and until such discharge, removal or disposition, the City shall have the right to retain from any monies payable hereunder an amount which, in its sole judgment, it deems necessary to satisfy such liens and pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.
- 1.38 **Claims.** If, at any time, there be any evidence of any claims for which the Contractor is or may be liable or responsible hereunder, the Contractor shall promptly settle or otherwise dispose of the same, and until such claims are settled or disposed of, the City may retain from any monies which would otherwise be payable hereunder so much thereof as, in its sole judgment, it may deem necessary to settle or otherwise dispose of such claims and to pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce such claims, or incurred in connection therewith or by reason thereof.
- 1.39 **No Waiver.** Neither the inspection by the City, nor any order, measurement, approval, determination, decision of certificate by the City for the payment of money; nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the work by the City, nor any extension of time, nor any other act or omission of the City shall constitute or be deemed to be an acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirement or provision of the Contract, nor of any remedy, power or right of or herein reserved to the City, nor of any right to damages for breach of contract. Any and all rights and/or remedies provided for in the Contract are intended and shall be construed to be cumulative; and, in addition to each and every other right and remedy provided for herein or by law, the City shall be entitled as of right to a writ of injunction against any breach or threatened breach of the Contract by the Contractor, by his sub-contractors or by any other person or persons.
- 1.40 **Liability of City.** No person, firm or corporation, other than the Contractor, who signed the Contract as such, shall have any interest herein or right hereunder. No claim shall be made or be valid either against the City or any agent of the City and neither the City nor any agent of the City shall be liable for or be held to pay any money, except as herein provided. The acceptance by the Contractor of the payment as fixed in the final estimate shall operate as and shall be a full and complete release of the City and of every agent of the City of and from any and all claims, demands, damages and liabilities of, by or to the Contractor for anything done or furnished for or arising out of or relating to or by reason of the Work or for or on account of any act or neglect of the City or of any agent of the City or of any other person, arising out of, relating to or by reason of the Work, except the claim against the City for the unpaid balance, if any there be, of the amounts retained as herein provided.
- 1.41 **Guarantee.** The Contractor guarantees that the Work and services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same, shall be free from defects and flaws, and shall

be performed and furnished in strict accordance with the drawings, specifications, and other contract documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled.

The Contractor shall warranty all work to be free of defects for a minimum of one year from the date of substantial completion. Any work found to be deficient shall be repaired by the Contractor at no additional cost to the Owner.

- 1.42 **Cleaning Up.** The Contractor, at all times, shall keep the site of the Work free from rubbish and debris caused by his operations under the Contract. When the Work has been completed, the Contractor shall remove from the site of the Work all of his plant, machinery, tools, construction equipment, temporary work and surplus materials so as to leave the Work and the site clean and ready for use.
- 1.43 **Legal Address of Contractor.** The Contractor's business address and his office at or near the site of the Work are both hereby designated as places to which communications in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the Post Office Department or the delivery at either designated address of any letter, notice, or other communication by mail or otherwise shall be deemed sufficient service thereof upon the Contractor, and the date of such service shall be the date of receipt. The first named address may be changed at any time by an instrument, in writing, executed and acknowledged by the Contractor and delivered to the City. Service of any notice, letter or other communication upon the Contractor personally shall likewise be deemed sufficient service.
- 1.44 **Modification of Termination.** Except as otherwise expressly provided herein, the Contract may not be modified except in writing signed by the parties hereto.

MEASUREMENT AND PAYMENT

MEASUREMENT AND PAYMENT

General: The following subsections describe the measurement of and payment for the work to be done under items listed in the Bid.

Each unit or lump sum price stated in the Bid shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications, including cleaning up.

The price for those items that involve excavation shall include compensation for disposal of surplus excavated materials, handling water, and installation of all necessary sheeting and bracing.

The prices for all conduit items (sewers, drains, and water mains) shall constitute full compensation for furnishing, laying, jointing, and testing pipe, earth excavation, backfill, compaction and bedding materials.

In all items involving excavation, the price shall be based on doing the entire excavation in earth. Where rock is excavated, the price, therefore, shall be in addition to the cost of excavating earth and no deduction will be made in the amount for earth excavation. Trenching work shall include up to one (1) cubic yard boulders. Pay quantities for boulders greater than 1 cubic yard shall be quantified and cataloged for review and verification by the Engineer.

Item 1 Site Preparation and Cleanup (Mobilization/Demobilization). The total price bid for Site Preparation shall not exceed five (5) percent of the total amount of the remaining bid items. The lump sum price for Item 1 shall constitute full compensation for preparing the site including (but not limited to): sawcutting of sidewalks, roadways, and driveways; removal and stockpiling of loam; removal and disposal of trees, brush, and stumps as required; disposal of surplus loam material as directed; protecting property pins, bounds and other documentation, fences, walls, and walks; and removing and resetting signs as required. The price shall also include; erosion controls, dewatering, protection of excavations left open, all safety and construction signage, obtaining all permits, cleanup and all other related work necessary, indicated by the plans, or as specified or directed.

Item 2 Uniformed Traffic Police. Payment shall be made from the cash allowance noted under Item 2 in the bid form. The measurement and payment for uniformed traffic police will be on an hourly basis using the police invoices. The police department invoice shall include the officer's name, date, location, hours worked, and wage rate.

The Contractor is responsible for contacting the Police Department with regard to scheduling requirements.

Item 3 Earth Excavation (Unsuitable Materials). Under Item 3, the quantity of earth excavation to be paid for shall be the number of cubic yard of excavation not otherwise classified or paid for under other items. Slope re-grading is included under this item.

The unit price per cubic yard for Item 3 shall constitute full compensation for general excavation and disposal of surplus materials.

Item 4 Processed Gravel Base. The unit price for Item 4 shall constitute full compensation for the furnishing, placing, fine grading and compacting of processed gravel as directed and as specified, including all labor and equipment.

Under Item 4, the quantity of processed gravel shall be measured in cubic yards, placed and compacted. The amount of processed gravel paid for will be equal to the actual amount of processed gravel placed and compacted.

Item 5 Removal and Disposal of Existing Sidewalks and Bituminous Asphalt. The unit price for Item 5 shall constitute full compensation for the excavation and disposal of all existing sidewalks, aprons, and driveway materials as directed and as specified, including all labor and equipment.

Under Item 5, the quantity of existing sidewalks, aprons, and driveway materials shall be measured in square yards.

Item 6 Removal and Disposal of Existing Granite Curb. The unit price for Item 6 shall constitute full compensation for the excavation and disposal of all existing granite curb as directed and as specified, including all labor and equipment.

Under Item 6, the quantity of existing granite curb removed and disposed of shall be measured in linear feet along the vertical face of the curb.

Item 7 Adjusting Existing Water Gate Boxes. The unit price for Item 7 shall constitute full compensation for adjusting water gate boxes to grade, including all equipment, materials i.e. sand, cement, and labor.

The number of structures to be paid for under Item 7 shall be equal to the actual number of water gate boxes adjusted.

Item 8 Adjusting Existing Manholes.

The unit price for Item 8, shall constitute full compensation for adjusting manholes to grade, including all equipment, materials i.e. sand, bricks, cement, and labor. Frames and covers judged to be inadequate by the Engineer shall be removed and replaced with new frames and covers provided by the Contractor and compensation shall be the same for this alternative.

The number of structures to be paid for under Item 8 shall be equal to the actual number of manholes adjusted.

Item 9 Adjusting Existing Catch Basins. The unit price for Item 9, shall constitute full compensation for adjusting catch basins to grade, including all equipment, materials i.e. sand, bricks, cement, and labor. Frames and grates judged to be inadequate by the Engineer shall be removed and replaced with new frames and grates provided by the Contractor and compensation shall be the same for this alternative.

The number of catch basins to be paid for under Item 9 shall be equal to the actual number of catch basins adjusted.

Items 10 & 11 Furnishing Sewer and Drain Manhole Frames and Covers The unit price for Items 10 and 11 shall constitute full compensation for furnishing sewer and drain manhole frames and covers, according to the plans and specifications given, or as directed and specified.

Under Items 10 and 11, the quantity of sewer and drain frames and covers furnished shall be counted. The amount paid for will be the actual number of castings furnished.

Item 12 Furnishing Catch Basin Frames and Grates The unit price for Item 12 shall constitute full compensation for furnishing catch basin frames and grates, according to the plans and specifications given, or as directed and specified.

Under Item 12, the quantity of catch basin frames and grates furnished shall be counted. The amount paid for will be the actual number of castings furnished.

Item 13 Furnishing and Setting Granite Curb. The unit price for Item 13 shall constitute full compensation for furnishing and setting granite curb, according to the plans and specifications given, or as directed and specified.

Under Item 13, the quantity of granite curb furnished and set in place shall be measured in linear feet along the vertical face of the curb. The amount paid for will be the actual linear feet of granite curb furnished and set in place, including processed gravel and concrete patch and all labor and equipment.

Item 14 Bituminous Concrete Driveway Repair The unit price for Item 14 shall constitute full compensation for furnishing, hauling, placing, spreading, and compacting, gravel base and bituminous concrete, including all labor, materials, and equipment, in accordance with the plans and specifications given or as directed by the Engineer.

Under Item 14, the quantity of bituminous concrete driveway repair shall be measured in square yards. The amount paid for will be the actual square yards placed, including all labor, materials, and equipment required.

Item 15 1.5" Cold Planing of Olive Street. The unit price for Item 15 shall constitute full compensation for cold planing bituminous concrete as directed and as specified, including all labor and equipment, and disposal of bituminous concrete waste material.

Under Item 15, the quantity of bituminous concrete cold planed shall be measured in square yards of bituminous concrete planed and disposed. The amount paid for will be the actual square yards cold planed.

Item 16 Tack Coat. The unit price for Item 16 shall constitute full compensation for furnishing and placing tack coat as directed by the Engineer.

Under Item 16, the quantity of tack coat placed shall be measured in gallons, the amount paid for will be the actual gallons applied.

Item 17 Bituminous Concrete Leveling Course. The unit price for Item 17 shall constitute full compensation for furnishing, placing and compacting approved bituminous concrete leveling course on Olive St. as indicated on the description of work and the plans, or as directed by the Engineer.

Under Item 17, the quantity of bituminous concrete leveling course shall be measured in tons to the nearest one tenth of a ton. The amount paid for will be the actual tons of bituminous concrete placed and compacted.

Item 18 Bituminous Concrete Surface Course (1.5”). The unit price for Item 18 shall constitute full compensation for furnishing, placing and compacting approved bituminous concrete surface course (1.5”) on Olive St. as indicated on the description of work and the plans, or as directed by the Engineer.

Under Item 18, the quantity of bituminous concrete surface course shall be measured in tons to the nearest one tenth of a ton. The amount paid for will be the actual tons of bituminous concrete placed and compacted.

Item 19 Constructing Cement Concrete Sidewalk (4-inch). The unit price for Item 19 shall constitute full compensation for constructing a 4-inch reinforced cement concrete sidewalk with premolded joint filler and sealer, wire, dowels complete and in place according to the plans and specifications given, or as directed by the Engineer.

Under Item 19, the amount of 4-inch reinforced cement concrete sidewalk constructed shall be measured in square yards, and the quantity of 4-inch reinforced cement concrete sidewalk to be paid for is the actual square yards constructed.

Item 20 Constructing Cement Concrete Sidewalk (6-inch). The unit price for Item 20 shall constitute full compensation for constructing a 6-inch reinforced cement concrete sidewalk with premolded joint filler and sealer, wire, dowels complete and in place according to the plans and specifications given, or as directed by the Engineer.

Under Item 20, the amount of 6-inch reinforced cement concrete sidewalk constructed shall be measured in square yards, and the quantity of 6-inch reinforced cement concrete sidewalk to be paid for is the actual square yards constructed.

Item 21 Constructing Brick Colored/Stamped Cement Concrete Sidewalk (4-inch). The unit price for Item 21 shall constitute full compensation for constructing a brick pattern and colored stamped 4-inch reinforced cement concrete sidewalk with premolded joint filler and sealer, wire, dowels complete and in place according to the plans and specifications given, or as directed by the Engineer. The Greenfield DPW will provide the concrete stamp for temporary use of the contractor, which shall be returned to the DPW prior to the final payment application.

Under Item 21, the amount of brick pattern and colored stamped 4-inch reinforced cement concrete sidewalk constructed shall be measured in square yards, and the quantity to be paid for is the actual square yards constructed.

Item 22 Constructing ADA Compliant Concrete Sidewalk Ramps. The unit price for Item 22 shall constitute full compensation for constructing 4-inch reinforced cement concrete ADA compliant sidewalk ramps with premolded joint filler and sealer, wire, dowels complete and in place according to the plans and specifications given, or as directed by the Engineer.

Under Item 22, the amount of ADA compliant concrete sidewalk ramps constructed shall be measured in square yards, and the quantity of ADA compliant concrete sidewalk ramps to be

paid for is the actual square yards constructed, including all labor, materials, and equipment required.

Item 23 Pedestrian Barrier/Barricade at Southwest Corner of Olive St. and Bank Row. The unit price for Item 23 shall constitute full compensation for constructing a pedestrian barrier/barricade at the southwest corner of Olive St. and Bank Row, including all labor, materials, and equipment required for or incidental to the Work, as shown on the plans or as directed by the Engineer.

Under Item 23, pedestrian barrier/barricade will not be measured but will be paid for at the Contract Bid Lump Sum Price.

Item 24 Concrete Curb Barrier in Front of #33 Olive St. The unit price for Item 24 shall constitute full compensation for constructing a concrete curb barrier in front of #33 Olive St., including all labor, materials, and equipment required for or incidental to the Work, as shown on the plans or as directed by the Engineer.

Under Item 24, concrete curb barrier will not be measured but will be paid for at the Contract Bid Lump Sum Price.

Item 25 Detectable Warning Panels. The unit price for Item 25 shall constitute full compensation for installing detectable warning panels as shown on the plans or as directed by the Engineer.

Under Item 25, measurement for detectable warning panels will be a count of the actual number of detectable warning panels installed, including all labor, materials, and equipment required for or incidental to the Work.

Item 26 Double Sided Rectangular Rapid Flashing Beacons (Solar Powered). The unit price for Item 26 shall constitute full compensation for furnishing and installing solar powered double sided rectangular rapid flashing beacons as shown on the plans or as directed by the Engineer.

Under Item 26, measurement for rectangular rapid flashing beacons will be a count of the actual number of rectangular rapid flashing beacons installed, including all labor, materials, and equipment required for or incidental to the Work.

Item 27 4' Deep Precast Concrete Catch Basin w/Frame and Grate (Single Grate) The unit price for Item 27 shall constitute full compensation for the structure, frame and grate, invert, installation, excavation, backfill, dewatering, testing, and all labor, equipment and materials required for or incidental to the Work.

Under Item 27, measurement for constructing precast catch basins will be a count of the number of precast catch basins constructed regardless of depth.

Item 28 10" HDPE Storm Drain Pipe The unit price for Item 28 shall constitute full compensation for furnishing and installing pipe, excavation, removal and disposal of unsuitable material, furnishing and installing suitable refill material, pipe bedding, backfilling, compacting, cutting and plugging existing drains to be abandoned in place, and all appurtenances necessary to make connections to new and existing storm drain infrastructure.

Under Item 28, the quantity of 10" HDPE storm drain pipe shall be measured in linear feet. The amount paid for will be the actual linear feet placed, including all labor, materials, and equipment required.

Item 29 4" HMA Permanent Trench Patch The unit price for Item 29 shall constitute full compensation including the processed gravel and concrete base and furnishing, hauling, placing, spreading, and compacting the gravel road base and bituminous concrete, and all labor, materials, and equipment required.

Under Item 29, the quantity shall be measured in square yards. The amount paid for will be the actual square yards placed, including all labor, materials, and equipment required. The width will be the actual width of repair made.

Item 30 Silt Sack/ Catch Basin Protection The unit price for Item 30 shall constitute full compensation for installation and later removal and disposal of silt sacks/catch basin protection as shown on the plans and areas designated by the Engineer in accordance with the specifications.

Under Item 30, the quantity of silt sacks/catch basin protection installed shall be the total number of silt sacks installed. The price shall include materials, equipment, and labor required for a completed installation and later removal.

Item 31 Loaming. The unit price for Item 31 shall constitute full compensation for placing loam in the areas shown on the plans and to the specifications given, or as directed by the Engineer.

Under Item 31, the quantity shall be measured in cubic yards. The amount paid for will be the actual cubic yards of loam placed, including all labor and equipment required.

Item 32 Seeding. The unit price for Item 32 shall constitute full compensation for placing seed in the areas shown on the plans and to the specifications given, or as directed by the Engineer.

Under Item 32, the quantity shall be measured in square yards. The amount paid for will be the actual square yards of seed placed, including all labor and equipment required.

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

CONSTRUCTION FACILITIES

Summary. Section includes:

- a. Temporary utilities required by the Contractor
- b. Temporary sanitary facilities
- c. First aid station

Quality Assurance. Maintain temporary construction facilities in proper and safe condition throughout the progress of the Work.

Temporary Utilities. Temporary utilities services (Water, Electricity, Telephone, etc) shall be arranged by the Contractor if any of these are required by the Contractor.

Temporary Sanitary and First Aid Facilities. Provide suitably enclosed chemical or self-contained toilets for the use of the labor force employed on the Work. Toilets shall be located near the Work sites and secluded from observation insofar as possible. Toilets shall be serviced weekly, kept clean and supplied throughout the course of the Work.

Contractor shall enforce proper use of sanitary facilities.

Use of the Owner's sanitary facilities by the Contractor is prohibited.

Provide a first aid station at the site.

ITEM 1 SITE PREPARATION AND CLEANUP (Mobilization/Demobilization)

- 1.1 General
- 1.2 Clearing
- 1.3 Grubbing
- 1.4 Disposal
- 1.5 Care of Loam
- 1.6 Work in Improved Property
- 1.7 Relocation of Trees, Shrubs, Hedges, and Fences
- 1.8 Work in Easements
- 1.9 Stone Walls and Fences
- 1.10 Fill
- 1.11 Clean-up
- 1.12 Construction Signs
- 1.13 Sawcutting

1.1 General. The Contractor shall furnish all labor, materials, tools and equipment necessary and shall do all work to prepare the site as indicated on the drawings and as herein specified.

Extreme care shall be taken by the Contractor and his employees not to damage trees, and the Contractor shall be responsible for all damage done.

1.2 Clearing. From areas to be cleared, the Contractor shall cut or otherwise remove all designated trees, saplings, brush, vines, and other vegetable matter such as snags, sawdust, bark, etc., and refuse.

1.3 Grubbing. The area to be grubbed shall be the same as that which is to be cleared. Grubbing shall consist of the complete removal of all tree stumps and all roots larger than 3 in. in diameter to a depth of 6 in. below the ground surface. Such depths shall be measured from the existing ground surface or the proposed finished grade, whichever is the lower.

1.4 Disposal. All material collected by the Contractor in the course of clearing and grubbing shall be hauled away for disposal off the site. Such disposal shall be carried on as promptly as possible after removal of material in the grubbing operations and shall not be left until the final period of cleaning up.

1.5 Care of Loam. Wherever work in easements is to be done, the Contractor shall first scrape all loam to one side so that it will not become mixed with the roadway or other excavation materials. After the construction work is completed, the loam shall be re-spread upon the land. No loam shall be taken away from the easements, and if the existing loam is of an insufficient amount, the Contractor at his own expense, shall furnish and spread loam to a minimum compacted thickness of 6 in.

1.6 Work in Improved Property. Trees, cultivated hedges, lawns, shrubs, and plants which 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 necessary, replanted trees are to be staked and wrapped. If trees, cultivated hedges, lawns, shrubs and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced at the Contractor's expense by items of kind and quality at least equal to the kind and quality existing at the start of the Work.

In all work in improved property, the Contractor shall do such hand work as may be required to prevent damage to buildings or trees.

1.7 Relocation of Trees, Shrubs, Hedges, and Fences. Where trees, shrubs, hedges, and fences interfere with the Work, the trees, shrubs, and hedges will be replanted by the Contractor, as indicated on the plans, or directed by the Engineer. Said trees, shrubs, and hedges will be replanted on improved property. The Contractor shall be responsible for care of said plantings, and responsible for re-establishing growth. If the trees, shrubs, or hedges are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced at the Contractor's expense (see Item 1.6).

In the instance of fences conflicting with the construction work these fences shall be relocated to private property by the Contractor as indicated on the plans, or directed by the Engineer.

Any trees, shrubs, or hedges requiring trimming over City land shall be done by the Contractor as indicated on the plans, or as directed by the Engineer.

1.8 Work in Easements. After the construction work is completed, all easements shall be loamed and seeded as specified under LOAMING AND SEEDING.

1.9 Stone Walls and Fences. Wherever stone walls or fences need to be removed to provide access to the Work or if stone walls or fences are damaged during the progress of the Work, they shall be restored or repaired to as good condition as existed prior to entry, or disposed of if directed by the Engineer.

1.10 Fill. The Contractor shall fill where needed, within the easement, to provide cover as indicated on the drawings.

1.11 Clean-up. During its progress the work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.

Where material or debris have washed or flowed into or been placed in existing water courses, ditches, gutters, drains, pipes, structures, work done under this contract or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc., shall upon completion of the work, be left in a clean and neat condition.

On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted, in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.

The Contractor shall restore or replace, when and as directed, any public or private property damage by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required all necessary highway or driveway work and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The Contractor shall be responsible for replacing or resetting lost or damaged property pins and bounds, whether private or public, by a registered land surveyor.

1.12 Construction Signs. The Contractor shall supply, erect, and properly maintain all temporary advance warning construction signs in all areas to be affected by his operations. Signs shall be placed in locations shown on the plans or as specified and no work will begin until all such signs are in place and their locations approved by the Engineer.

All signs shall conform to the specifications set forth in the Manual on Uniform Traffic Control Devices, latest edition, or to specifications shown in the detail section of the plans.

1.13 Sawcutting. Any sawcutting required for the sidewalk, roadways and driveways shall be performed by the Contractor utilizing a water cooled saw, as indicated on the plans, or as directed by the Engineer.

ITEM 2 UNIFORMED TRAFFIC POLICE

General
Description
Traffic Requirements

General. The Contractor is responsible for furnishing and installing all traffic control devices along with the scheduling of traffic officers, and for providing all documentation.

Traffic Requirements. The Contractor is to reference the Manual of Uniform Traffic Control Devices, U.S Department of Transportation along with adhering to all applicable Greenfield City ordinances that relate to traffic control.

The Contractor is to arrange construction activities so that all streets shall remain open to at least one-way traffic during periods of work and two-way traffic during all other time periods. Provide a traffic control plan to the Engineer for approval showing traffic signs, barrels, cones, traffic officers, including detour signs, meeting the approval of the Engineer, Owner, and local Police Departments in accordance with the Manual of Uniform Traffic Control Devices.

The Contractor shall have no claim of delay if they do not notify the Police Department of their scheduled location in time or arrange for traffic officers. The Contractor is to hand deliver written notices to individual houses affected by driveway and side road closings or detours a minimum of 24 hours in advance.

Uniformed traffic officers shall be required at locations deemed necessary by the Owner, working in conjunction with local Police and Fire Departments, for the protection of the public.

EARTH EXCAVATION, BACKFILL, FILL, AND GRADING

General
Description
Extent of Open Excavation
Separation of Surface Materials
Sheeting and Bracing
Drainage
Trench Excavation
Depth of Trench
Width of Trench
Trench Excavation in Fill
Excavation Near Existing Structures
Protection of Existing Structures
Relocation and Replacement of Existing Structures
Care and Restoration of Property
Unauthorized Excavation
Elimination of Unsuitable Material
Disposal of Surplus Excavated Materials

Dust Control
Bridging Trenches
Backfilling - General
Fill and Backfill Under Structures
Backfilling Around Structures
Backfilling Pipe Trenches
Material for Filling and Embankments
Preparation of Subgrade
Placing and Compacting Embankment Material

General. The Contractor shall make excavation of normal depth in earth for trenches and structures; shall backfill such excavations to the extent necessary; shall furnish the necessary materials and construct embankments and fills and shall make miscellaneous earth excavations and do miscellaneous grading. All such work shall be done as indicated on the drawings and as herein specified.

The program of excavation, dewatering, sheeting, and bracing shall be carried out in such manner as to eliminate all possibility of undermining or disturbing the foundations of existing structures or of work previously completed under this contract.

Description. The Contractor shall make excavations in such manner and to such widths as will give suitable room for building the structures or laying and jointing the piping; shall furnish and place all sheeting, bracing, and supports; shall do all cofferdamming, pumping, and draining; and shall render the bottom of the excavations firm and dry and acceptable in all respects.

In no case, except as provided for in the sections TRENCH EXCAVATION and PREPARATION OF SUBGRADE, shall the earth be plowed, scraped, or dug by machinery so near to the finished subgrade as to result in the disturbance of material below said subgrade, but the last of the material to be excavated shall be removed with pick and shovel just before the placing of the pipe, masonry, or other structure.

All excavation, except as otherwise specified or permitted, shall be made in the open.

Extent of Open Excavation. The length of trench open at any one time will be controlled by the conditions, subject to any limits that may be prescribed by the Engineer.

Separation of Surface Materials. The Contractor shall remove only as much of any existing pavement as is necessary for the prosecution of the work. The pavement cut shall be made with an approved saw, without extra compensation to the Contractor. Where pavement is removed in large pieces, it shall be disposed of before proceeding with the excavation.

Sheeting and Bracing. The Contractor shall furnish, put in place, and maintain such sheeting, bracing, etc., as may be necessary to support the sides of the excavation and to prevent any movement of earth which could in any way diminish the width of the excavation to less than that necessary for proper construction, or could otherwise injure or delay the work, or endanger adjacent structures.

Whenever possible, sheeting shall be driven ahead of the excavation to avoid loss of material from behind the sheeting. If it is necessary to excavate below the sheeting, care shall be taken to avoid trimming behind the face along with the sheeting will be driven. Care shall be taken to

prevent voids outside of the sheeting, but, if voids occur, they shall be filled immediately with sand and compacted.

The Contractor shall leave in place to be embedded in the backfill, or concrete, all sheeting, bracing, etc., which is indicated on the drawings to be so left in place. He also shall leave in place any and all other sheeting, bracing, etc., which the Engineer may direct him in writing to leave in place, at any time during the progress of the work, for the purpose of preventing injury to structures or property.

The Engineer may direct that sheeting and bracing be cut off at any specified elevation.

All sheeting and bracing not to be left in place shall be carefully removed in such manner as not to endanger the construction or other structures. All voids left or caused by the withdrawal of sheeting shall be backfilled immediately using approved materials and compaction methods.

Drainage.

- a. General. To ensure proper conditions at all time during construction, the Contractor shall provide and maintain ample means and device (including spare units kept ready for immediate use in case of breakdowns) with which to intercept and/or remove promptly and dispose properly of all water entering trenches and other excavation. Such excavations shall be kept dry until the structures, pipes, and appurtenances to be built therein have been completed to such extent that they will not be floated or otherwise damaged.

All water pumped or drained from the work shall be disposed of in a suitable manner without undue interference with other work, damage to pavements, other surfaces, or property. Suitable temporary pipes, flumes, or channels shall be provided for water that may flow along or across the site of the work.

- b. Temporary Underdrains. Temporary underdrains, if used, shall be laid in trenches beneath the grade of the structure. Trenches shall be of suitable dimensions to provide room for the chosen size of underdrain and its surrounding gravel.

Underdrain pipe shall be acceptable vitrified clay or concrete pipe of standard thickness. Sewer pipe of the quality known as "seconds" will be acceptable.

Underdrains, if used, shall be laid at an approved distance below the bottom of the normal excavation and with open joints wrapped in cheesecloth, and entirely surrounded by graded gravel, or crushed stone to prevent the admission of sand or other soil into the underdrains. The distance between the bottom of the pipe or structure and the top of the bell of the underdrain pipe shall be at least 3 inches unless otherwise permitted. The space between the underdrain and the pipe or structure shall be filled with screened gravel or crushed stone which shall be rammed if necessary and left with a surface suitable for laying the pipe or building the structure.

- c. Drainage Wellpoint System. If necessary, the Contractor shall dewater the excavations by means of an efficient drainage wellpoint system which will drain the soil and prevent saturated soil from flowing into the excavation. The wellpoints shall be designed especially for this type of service. The pumping unit shall be designed for use with the wellpoints, and shall be capable of maintaining a high vacuum and, of handling large volumes of air and water at the same time.

The installation of the wellpoints and pump shall be done under the supervision of a competent representative of the manufacturer. The Contractor shall do all special work such as surrounding the wellpoints with sand or gravel or other work which is necessary for the wellpoint system to operate for the successful dewatering of the excavations.

Trench Excavation. Where pipe is to be laid in gravel bedding or concrete cradle, the trench may be excavated by machinery to, or to just below, the designated subgrade, provided that the material remaining at the bottom of the trench is no more than slightly disturbed.

Where pipe is to be laid directly on the trench bottom, the lowest part of trenches in earth shall not be excavated to subgrade by machinery, but just before the pipe is to be placed, the last of the material to be excavated shall be removed by means of hand tools to form a flat or shaped bottom, true to grade, so that the pipe will have a uniform and continuous bearing and support on firm and undisturbed material between joint except for limited areas where the use of pipe slings may have disturbed the bottom.

Depth of Trench. Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes, or depths of cover indicated on the drawings and as specified.

Width of Trench. Pipe trenches shall be made as narrow as practicable and shall not be widened by scraping or loosening materials from the sides. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed and consolidated.

Trenches shall be excavated with approximately vertical sides between the elevation of the center of the pipe and an elevation one foot above the top of the pipe.

Trench Excavation in Fill. If pipe is to be laid in embankments or other recently filled material, the material shall first be placed to the top of the fill or to a height of at least one foot above the top of the pipe, whichever is the lesser. Particular care shall be taken to ensure maximum consolidation of material under the pipe location. The pipe trench shall be excavated as though in undisturbed material.

Excavation Near Existing Structures. Attention is directed to the fact that there are pipes, drains, and other utilities in certain locations. Some of these have indicated on the drawings, but no attempt has been made to show all of the services and the completeness of accuracy of the information given is not guaranteed.

As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and the excavation shall be done by means of hand tools. Such manual excavation when incidental to normal excavation shall be included in the work to be done under items involving normal excavation.

Where determination of the exact location of pipe or other underground structure is necessary for doing the work properly, the Contractor may be required to excavate test pits to determine such locations. When such test pits may be properly considered as incidental to other excavation, the Contractor shall receive no additional compensation, the work being understood to be included as part of the excavation. When the Engineer orders test pits beyond the limits of excavation he considers a part of the work, such test pits shall be paid for as specified under MEASUREMENT AND PAYMENT.

Protection of Existing Structures. All existing pipes, poles, wires, fences, curbing, property line markers and other structures which the Engineer decided must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from injury by the Contractor. Should such items be injured, they shall be restored by the Contractor, without compensation, to at least as good condition as that in which they were found immediately before the work was begun.

Relocation and Replacement of Existing Structures. Whenever the Contractor encounters certain existing structures as described below and is so ordered in writing, he shall do the whole or such portions of the work as he may be directed, to change the location of, remove and later restore, replace such structures, or to assist the owner thereof in so doing. For all such work the Contractor shall be paid under such items of work as may be applicable, other as Extra Work.

In removing existing pipes or other structures, the Contractor shall use care to avoid damage to materials, and the Engineer shall include for payment only those new materials which, in his judgment, are necessary to replace those unavoidably damaged.

The structures to which the provisions of the preceding two paragraphs shall apply include pipes, wires and other structures which meets all of the following: (a) are not indicated on the drawings otherwise provided for, (b) encroach upon or are encountered near and substantially parallel to the edge of the excavation, and (c) in the opinion of the Engineer will impede progress to such an extent that satisfactory construction cannot proceed until they have been changed in location, removed (to be later restored), or replaced.

When fences interfere with the Contractor's operations, he shall remove and (unless otherwise specified) later restore them to at least as good condition as that in which they were found immediately before the work was begun, all without additional compensation. The restoration of fences shall be done as promptly as possible and not left until the end of the construction period.

Care and Restoration of Property. The Contractor shall enclose the trunks of trees adjacent to his work and not to be cut, with substantial wooden boxes of such height as may be necessary to protect them from injury from piled material, from equipment, from his operations, or otherwise due to his work. Excavation machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees not to be cut and particularly to overhanging branches and limbs.

Branches, limbs, and roots shall 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 injury to branches, limbs, and trunks or trees, the cut or injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.

Cultivated hedges, shrubs, and plants which might be injured by the Contractor's operations shall be protected by suitable means or shall be dug up and temporarily replanted and maintained. 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 beauty or usefulness, they shall be replaced by items of kinds and quality at least equal to the kinds and quality existing at the start of the work.

On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment the treads or wheels of which are so shaped as to cut otherwise injure such surfaces.

In locations where excavation passes through existing agricultural areas and fields, the cost of repairing the trench surface is to be included in the pipe laying price.

In such areas, the existing loam and surface materials are to be stripped and placed one side prior to excavation. After completion of backfilling, this "saved" surface material is to be returned to the top of the trench. After natural settlement and compaction has taken place, the trench surface is to be harrowed, dragged and mechanically raked as necessary to produce a smooth and level surface. The area is then to be sowed with "orchard grass" or "rye grass" or other such materials to hold the soil and produce a growth similar to that existing prior to pipe laying operations.

This provision for clean-up in agricultural areas applies only to locations where the trench surface is now substantially pasture land or the equivalent thereof. In cases where the trench surface running alongside a road is in scrub growth or natural weed growth, this provision will not apply.

All surfaces which have been injured by the Contractor's operations shall be restored to a condition at least equal to that in which they were found immediately before work was begun. Suitable materials and methods shall be used for such restoration.

The restoration of existing property or structures shall be done as promptly as practicable and shall not be left until the end of the construction period.

Unauthorized Excavation. If the bottom of any excavation is taken out beyond the limits indicated or prescribed, the resulting void shall be backfilled at the Contractor's expense with thoroughly compacted, screened gravel, if the excavation was for a pipeline, or with Class B concrete, if the excavation was for a masonry structure.

Elimination of Unsuitable Material. If material unsuitable for foundation (in the opinion of the Engineer) is found at or below the grade to which excavation would normally be carried in accordance with the drawings and/or specifications, the Contractor shall remove such material to the required width and depth and replace it with thoroughly compacted screened gravel, bank-run gravel, fine aggregate or concrete as directed.

Disposal of Surplus Excavated Materials. No excavated materials shall be removed from the site of the work or disposed of by the Contractor except as directed or approved.

Surplus excavated materials suitable for backfill shall be used to backfill normal excavations in rock or to replace other materials unacceptable for use as backfill; shall be neatly deposited and graded so as to make or widen fills, flatten side slopes, or fill depressions; or shall be neatly deposited for other purposes within a haul of one mile from the point of excavation; all as directed or approved and without additional compensation.

Surplus excavated materials not needed as specified above shall be hauled away and dumped by the Contractor, at his expense, at appropriate locations, and in accordance with arrangements made by him.

Dust Control. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use liquid calcium chloride for more effective dust control, the Contractor shall furnish and spread the material as directed.

Bridging Trenches. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings where requires for the accommodation of travel, and to provide access to private property during construction, and shall remove said structures thereafter.

Backfilling – General. In general, and unless other material is indicated on the drawings or specified, material used for backfilling trenches and excavations around structures shall be suitable material which was removed in the course of making the construction excavations.

Frozen material shall not be placed in the backfill nor shall backfill be placed upon frozen material. Previously frozen material shall be removed or shall be otherwise treated as required, before new backfill is placed.

Wherever a percentage of compaction for backfill is indicated or specified, it shall be the percent of maximum density at optimum moisture as determined by Method D of ASTM Standard Methods of Test for Moisture – Density Relations of Soils Using 10 lbs. Rammer and 18-inch Drop, Designation D1157-70.

Fill and Backfill Under Structures. Unless otherwise indicated or specified, all fill and backfill under structures and pavements adjacent to structures shall be compacted bank-run gravel containing not more than ten percent material passing a 200 sieve. When coarse aggregate and fine aggregate are indicated or specified for use under structures, they shall conform to the requirements for coarse and fine aggregate specified under CONCRETE WORK.

The fill and backfill materials shall be placed in layers not exceeding 6 inches in thickness. Unless otherwise indicated or specified, each layer shall be compacted to 95 percent.

Backfilling Around Structures. The Contractor shall not place backfill against or on structures until they have attained sufficient strength to support the loads (including construction loads) to which they will be subjected, without distortion, cracking, or other damage. As soon as practicable after the structures are structurally adequate and other necessary work has been done, special leakage tests, if required, shall be made. Promptly after the completion of such tests, the backfilling shall be started and then shall proceed until its completion.

The best of the excavated materials shall be used in backfilling within two feet of the structures. Unequal soil pressures shall be avoided by depositing the material evenly around the structures. The material shall be placed and compacted to 90 percent unless otherwise indicated or specified.

Backfilling Pipe Trenches. As soon as practicable after the pipes have been laid and the joints have acquired a suitable degree of hardness, if applicable, or the structures have been build and are structurally adequate to support the loads, including construction loads to which they will be subjected, the backfilling shall be started and thereafter it shall proceed until its completion.

With the exception mentioned below in this paragraph, trenches shall not be backfilled at pipe joints until after that section of the pipeline has successfully passed any specified test required. Should the Contractor wish to minimize the maintenance of lights and barricades and the obstruction of traffic, he may, at his own risk backfill the entire trench, omitting or including backfill at joints as soon as practicable after the joints have acquired a suitable degree of strength. He shall, however, be responsible for removing and later replacing such backfill, at his own expense, should he be ordered to do so in order to locate and repair or replace leaking or defective joints or pipe.

- a. **Materials.** The nature of materials will govern both their acceptability for backfill and the methods best suited for their placement and compaction in the backfill. No stone or rock fragment larger than 3 inches in greatest dimension shall be placed in the backfill nor shall large masses of backfill material be dropped into the trench in such a manner as to endanger the pipeline. If necessary, a timber grillage shall be used to break the fall of material dropped from a height of more than five feet. Pieces of bituminous pavement shall be excluded from the backfill unless their use is expressly permitted, in which case they shall be broken up as directed.
- b. **Zone Around Pipe.** The zone around the pipe shall be backfilled with the materials and to the limits indicated on the drawings. Material shall be compacted to 90 percent by tamping.
- c. **Remainder of Trench.** The remainder of the trench above the zone around the pipe shall be compacted by tamping, puddling, or water-jetting, in accordance with the nature of the material and the compaction requirements. In general, the tamping method will be used by the Contractor to achieve the desired compaction. Water-jetting or puddling may be used only if, in the opinion of the Engineer, it is necessary to employ one of these methods.
- d. **Water-Jetting.** If the backfill is to be compacted by water-jetting, the material shall be placed in the trench and then shall be thoroughly saturated throughout its full depth and at frequent intervals across and along the trench until all slumping ceases. To accomplish this, the Contractor shall furnish one or more jet pipes, each of sufficient length to reach to the specified depth and of sufficient diameter (not less than 1 ¼ inches) to supply an adequate flow of water to compact the material. The jet pipe shall be equipped with a quick-acting valve and be supplied through a fire hose from a hydrant or a pump having adequate pressure and capacity.
- e. **Puddling.** If the backfill is to be compacted by puddling, the material shall be deposited in water of sufficient depth so that the material will be submerged when in place. Dams or dikes constructed in the trench to hold the water used for puddling shall be compacted by tamping as specified below.
- f. **Tamping.** If the material is to be compacted by tamping, or under appropriate circumstances, rolling, the material shall be deposited and spread in uniform, parallel layers not exceeding 8 inches thick before compaction. Before the next layer is placed, each layer shall be tamped as required so as to obtain a thoroughly compacted mass. Care shall be taken that the material close to the bank, as well as in all other portions of the trench, is thoroughly compacted. When the trench width and the depth to which backfill has been placed are sufficient to make it feasible, and it can be done effectively and without damage to the pipe, backfill may, on approval, be compacted by the use of suitable rollers, tractors, or similar powered equipment instead of by tamping. For compaction by tamping (or rolling), the rate at which backfilling material is deposited in the trench shall not exceed that permitted by the facilities for its spreading, leveling and compacting as furnished by the Contractor.

If necessary to ensure proper compaction by tamping (or rolling), the material shall first be wet by sprinkling. However, no compaction by tamping (or rolling) shall be done when the

material is too wet either from rain or too great an application of water to be compacted properly; at such times the work shall be suspended until the previously placed and new materials have dried out sufficiently to permit proper compacting, or such other precautions shall be taken as may be necessary to obtain proper compaction.

- g. Miscellaneous Requirements. Whatever method of compacting backfill is used, care shall be taken that stones and lumps shall not become nested and that all voids between stones shall be completely filled with fine material. Only approved quantities of stones and rock fragments shall be used in the backfill; the Contractor shall, as part of the work done under the items involving earth excavation and rock excavation as appropriate, furnish and place all other necessary backfill material.

All voids left by removal of sheeting shall be completely backfilled with suitable materials, and thoroughly compacted.

Excavated material which is acceptable to the Engineer for surfacing or pavement sub-base shall be placed at the top of the backfill to such depths as may be specified elsewhere or as directed. The surface shall be brought to the required grade and stones raked out and removed.

Material for Filling and Embankments. Approved selected materials available from the excavations and not required for backfill around pipes or against structures, shall be used for filling and building embankments, except as otherwise specified. The Contractor shall be responsible to handle this material, stockpile, and re-handle it as directed; all without additional compensation. Material needed in addition to that available from construction operations shall be obtained from approved gravel banks or other approved deposits.

All material, whether from the excavations or from borrow, shall be made of such nature that after it's been placed and properly compacted, it will make a dense, stable fill. It shall not contain vegetation, masses of roots, individual roots, more than 18 inches long, or more than ½ inch in diameter, stones over 6 inches in diameter, or porous matter. Organic matter shall not exceed minor quantities and shall be well distributed.

Preparation of Subgrade. The Contractor shall remove loam and topsoil, loose vegetable matter, stumps, large roots, etc., from areas upon which embankments will be built or material will be placed for grading. The subgrade shall be shaped as indicated on the drawings and shall be so prepared by forking, furrowing, or plowing that the first layer of the new material placed thereon will be well bonded to it.

Placing and Compacting Embankment Material. After the subgrade has been prepared as hereinbefore specified, the material shall be placed thereon and built up in successive layers until it has reached the required elevation.

Layers shall not exceed 12 inches in thickness before compaction. In embankments at structures, the layers shall have a slight downward slope away from the structure; in other embankments the layers shall have a slight downward slope away from the center. In general, the finer and less pervious materials shall be placed against the structures or in the center, and the coarser and more pervious materials, upon the outer parts of embankments.

Each layer of material shall be compacted by the use of approved rollers or other approved means so as to secure a dense, stable, and thoroughly compacted mass. At such points as cannot be reached by mobile mechanical equipment, the materials shall be thoroughly compacted by the use of suitable power-driven tampers.

Previously placed or new materials shall be moistened by sprinkling, if required, to ensure proper bond and compaction. No compacting shall be done when the material is too wet, from either rain or too great an application of water, to compact it properly; at such times the work shall be suspended until the previously placed and new materials have dried out sufficiently to permit proper compaction, or such other precautions shall be taken as may be necessary to obtain proper compaction.

The portion of embankment constructed below proposed structures shall be compacted to 95 percent. The top two feet of an embankment below a pavement base shall be compacted to 95 percent. All other embankments shall be compacted to 90 percent.

ITEM 4 PROCESSED GRAVEL BASE

- 4.1 General
- 4.2 Processed Gravel
- 4.3 Placement and Compaction

4.1 General. The processed gravel base shall conform to the specifications set forth in the following sub-sections.

4.2 Processed Gravel. Processed gravel shall consist of clean, hard, durable particles or fragments, free from an excess of soft thin elongated, laminated or disintegrated pieces, and shall conform to the following gradation requirements. Crushed rock of comparable size and grading may be used.

<u>Sieve</u>	<u>Percent Passing</u>
2 inch	100%
1 ½ inch	70-100%
¾ inch	50-85%
No. 4	30-60%
No. 200	0-12%

All processed gravel must be approved prior to placement. The Contractor shall deliver suitable samples of processed gravel to the Engineer for testing purposes. At the end of a 48 hour period, the Engineer shall either accept or reject the material. Existing on-site base material must be approved by the Engineer prior to re-use.

4.3 Placement and Compaction. The base course shall be placed to the depths indicated on the drawings and/or as specified by the Engineer or his representatives. The gravel shall be placed in a maximum of 6-inch lifts and shall be thoroughly compacted to not less than 95% of the maximum dry density.

ITEM 5
REMOVAL AND DISPOSAL OF EXISTING SIDEWALKS AND BITUMINOUS ASPHALT

5.1 General. The Contractor shall excavate and dispose of all existing sidewalks, aprons, driveway materials, and bituminous asphalt within the limits of work, as indicated on the drawings and as directed by the Engineer. The existing sidewalk shall be broken up using pneumatic hammers or other approved means, and removed from the site and disposed of in a suitable manner. Care will be taken not to damage or destroy any existing utilities.

5.2 Materials. The sidewalk, apron, and driveway removed and disposed of are of varying materials; concrete, bituminous concrete and combination thereof.

ITEM 6
CURB REMOVED AND STACKED, REMOVED AND DISPOSED

- 6.1 General
- 6.2 Removal
- 6.3 Stacking
- 6.4 Disposal

6.1 General. The Contractor shall remove the present curb, curb corners, and curb inlets of every type and cross section made of granite, bituminous concrete, or concrete, in areas shown on the plans or as directed by the Engineer, and dispose, and/or reset and/or stack them, in an area designated by the Engineer, in accordance with the specifications herein or as directed.

6.2 Removal. A trench of sufficient width and depth shall be excavated so that the present curb, curb corners, and curb inlets can be removed without damage.

6.3 Stacking. The Contractor shall be responsible for removing, handling, and stacking, in an area designated by the Engineer, all curb that is not to be reused.

6.4 Disposal. The Contractor shall be responsible for removing, handling, and disposing of all unusable curb.

ITEMS 7, 8 & 9
ADJUSTMENTS TO EXISTING STRUCTURES

- General
- Drainage Structures Adjusted
- Sewer Manholes Adjusted
- Valve Boxes and Curb Boxes Adjusted

General. The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to adjust existing drainage structures, sewer manholes, valve boxes and curb boxes as indicated on the plans or as directed by the Engineer.

The work shall consist of adjusting line and/or grade of the existing frames or boxes including removal, replacement or addition of brick, mortar, and concrete.

Drainage Structures Adjusted. All work necessary for the adjustment of existing drainage structures shall conform to Item 201 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition.

Sewer Manholes Adjusted. All work necessary for the adjustment of existing sewer manholes shall conform to Item 202 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition.

Valve Boxes and Curb Boxes Adjusted. The existing valve boxes and curb boxes shall be completely removed, if necessary, and shall be reset plumb and centered directly over the operating nut.

Heavy pattern valve box and curb box extensions shall be used when the overlap of the upper section and lower section of the existing valve box or curb box is less than six (6) inches.

Concrete collars, as shown on the standard details shall be installed on all valve boxes and curb boxes located in paved areas.

ITEM 13
FURNISHING AND SETTING GRANITE, PRECAST CONCRETE CURB, OR CAST IN PLACE CONCRETE CURB

General

Excavating Trench

Foundation

Setting Curb

Trench Filling

Concrete Patch

Bituminous Concrete Patch

Pointing

Mortar

Concrete Curb

Precast Concrete Curb

Cast in Place Concrete Curb

Cast in Place Curb Reinforcement

General. The Contractor shall furnish all labor, materials, tools and equipment necessary to install curb as indicated on the plans and as herein specified.

Excavating Trench. The trench for the curb shall be excavated to width of 12 inches. Bituminous and cement concrete surfaces required to be removed adjacent to pavement that is to remain shall be saw-cut to 2-inch minimum depth and removed by hand pneumatic tools. The trench shall be excavated to a depth below the proposed finished grade of the curb equal to the depth of the curbstone plus 6 inches.

Foundation. The foundation for the curb shall be 6 inches deep and consist of approved gravel conforming to the specifications set forth in Item 4, placed on the subgrade and thoroughly compacted.

Setting Curb. Curbing or curb corners shall be set on additional gravel placed on the foundation. All spaces under the curb or curb corners shall be filled with gravel and compacted so that the curb or curb corners will be completely supported throughout their length. The curb or curb corners shall be fitted together as close as possible. No space greater than 3/4" shall show in the joints for the full width and length of the exposed joint. All curbs except corners shall be set with straight alignments and grades and shall, where new curb meets existing curb, match the grade and alignment.

Trench Filling. After the curb or curb corners are set, the space between the curb and the wall of the trench shall be filled with approved gravel and compacted to the proper depth.

Concrete Patch. A concrete patch 4 inches in depth shall be placed to allow for a one inch bituminous concrete patch. Concrete shall be a minimum 3000 psi mix.

Bituminous Concrete Patch. A one inch bituminous concrete patch shall be placed on the concrete and rolled to match the road surface.

Pointing. The joints between curbstones, both front and back, shall be filled with cement mortar and neatly pointed on the top and front exposed portions. After pointing, the curbstones shall be cleaned of all excess mortar that may have been forced out of the joints.

Mortar. Mortar shall conform to the specifications set forth in Section M4.02.15 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition.

Granite Curb. All granite curb shall conform to the specifications set forth in Section M9.04.01 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition, for granite curb Type VA4.

Precast Concrete Curb. All precast concrete curb shall conform to the specifications set forth in Section M4.02.14 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition, for precast units.

Cast in Place Concrete Curb. Cast in place concrete curb shall conform to the specifications set forth in Section 501.63 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition. Cast in place concrete curb shall be used whenever grades, alignments, or placement specifications cannot be met using the other types of curb.

Cast in Place Concrete Curb Reinforcement. Where concrete curbing is to be poured on an existing concrete curb base or concrete base, rodding to the existing concrete is required. The reinforcing shall be #3 bar, nine inches long placed 12 inches on center. The concrete base shall be drilled to a minimum depth of three inches. All bars shall be at least 2" below the top of the proposed curb for the full longitudinal length of the piece. This bar is to be drilled into the existing curb to each side. Drill depth is to be a minimum of 3". This bar is to be cut and overlapped in the center, and wire tied to the other reinforcing bars. Reinforcing bars shall conform to specifications set forth in Section M8 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition.

ITEM 15
1.5” COLD PLANING OF OLIVE STREET

- 15.1 The work consists of removing 1.5” of bituminous concrete by cold planer on Olive Street as shown and specified on the project plans. The cold planer operation shall conform to the specifications set forth in Section 120.66 of the Commonwealth of Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition, as amended and corrected.
- 15.2 The ground up pavement shall be removed and disposed of by the Contractor at the City Poor Farm located off Glenbrook Drive off Leyden Road, Greenfield, MA (an approximate distance of 4.8 miles from the work area).

ITEM 16
TACK COAT

- 16.1 General: The Contractor shall furnish all labor, materials and equipment and shall do all work necessary to apply Asphalt Emulsion “Tack Coat” as directed by the Engineer.
- 16.2 All pavement surfaces shall be tack coated immediately prior to placing each HMA lift. HMA placed over milled surfaces shall be tack coated at an application rate of 0.07 gallon per square yard. HMA placed over smooth pavements (unmilled) shall be tack coated at an application rate of 0.05 gallons per square yard.
- 16.3 Tack coat shall conform to the requirements of M3.11.06 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges 1988 edition, as amended and corrected.
- 16.4 The existing surface shall be cleaned of all foreign matter and loose material and shall be dry before the tack coat is placed.

ITEMS 17 & 18
BITUMINOUS CONCRETE LEVELING & SURFACE COURSES

General
Gravel
Bituminous Concrete
Clearing and Grubbing
Walk Forms

General. The Contractor shall furnish all labor, materials, tools, and equipment necessary to construct the pavement complete, including subgrade preparations, gravel base, base and surface courses on paved areas as indicated on the drawings and as herein specified.

Prior to any excavation in paved areas, the Contractor shall cut the surface between the existing and proposed pavement with an approved saw. The pavement shall be cut in as straight a line as possible to assure proper bonding between the two surfaces.

Pavement shall be placed so that the whole area will have a true and uniform surface and will conform to the proper grade and cross section.

The paving plant used by the Contractor in preparation of the bituminous concrete shall be acceptable to the Engineer who shall have the right to inspect the plant and making of the material.

All manhole covers, catch basin grates, valve and meter boxes, curbs, walks, and walls shall be adequately protected and left in a clean condition.

Gravel Base. The gravel base shall conform to the specifications set forth in Item 4. The depth of gravel shall be 10" unless otherwise indicated on the plan or specified.

Bituminous Concrete. Bituminous concrete shall conform to the specifications set forth by the applicable subsections of the Commonwealth of Massachusetts, Department of Public Works, Standards Specifications for Highways and Bridges, 1988 Edition. Pavement thickness shall be equal to a 1.5-inch top in all areas, or as directed by the Engineer.

Clearing and Grubbing. Clearing and grubbing shall conform to the specifications set forth in Item 1.

Walk Forms. Side forms and transverse forms for sidewalks shall be clean, smooth, free from warp, of sufficient strength to resist springing out of shape and of a depth to conform to the thickness of the proposed walk. The forms shall be well staked and thoroughly braced and set to the established lines. Forms shall be removed upon completion.

ITEMS 19, 20, 21 & 22 CONCRETE SIDEWALK CONSTRUCTION

General
Excavation to Subgrade
Forms
Adjusting Embedded Items
Placement, Finishing and Contraction Joints
Expansion Joints
Wheelchair Ramps
Colored Concrete
Linseed Anti-Spalling Compound
Joint Sealer
Curing
Welded Wire Fabric
Cure Time at Driveways
Access to Properties

General. The Contractor shall furnish all labor, materials, tools and equipment necessary to construct a reinforced concrete sidewalk as shown on the plans and herein specified.

Excavation to Subgrade. If, upon inspection of the existing gravel base course, the Engineer decided that it is a suitable base, the Contractor shall grade the existing base course to provide for surface drainage. The pitch of the sidewalk shall meet the existing grade or a grade of ¼ inch per foot towards the street. If the existing base is inadequate, the Contractor shall excavate this material to the required depth and place a gravel base at a 6-inch depth under 4-inch sidewalks

and 12-inch depth under 6-inch sidewalks at driveways and 9" of gravel under 6" sidewalks and handicap ramps, and pitch the sidewalk to achieve proper drainage to the street. Gravel shall be placed as specified in Item 3.

Forms. Side forms and transverse forms for sidewalks shall be clean, smooth, free from warp, of sufficient strength to resist springing out of shape, and of a depth to conform to the thickness of the proposed walk. The forms shall be well staked and thoroughly braced and set to the established lines. All forms shall be oiled before placing concrete. Forms shall not be removed for 12 hours after the concrete has been placed, or long if directed.

Adjusting Embedded Items. As necessary to meet the final finished grade as indicated on the drawings, all embedded items (including but not limited to manhole covers and frames, catch basin grates and frames, valve boxes and other construction castings) shall be properly adjusted to their new elevation.

If, in the opinion of the Engineer, the existing water service valve boxes are suitable for use, the valve boxes shall be adjusted to meet proposed grade. If the existing top section cannot be adjusted to meet proposed grade a new top section shall be provided.

Placement and Finishing. The concrete sidewalk slabs shall be placed in alternate slabs 30 feet in length except as otherwise ordered. The slabs for sidewalks shall be separated by transverse preformed expansion joint fillers and sealer ½ inch thickness, as specified. Concrete placement shall comply with the requirements as specified under CONCRETE WORK for mixing and placing concrete and as herein specified. Concrete shall not be placed until forms have been checked for line grade.

Unless otherwise specified, concrete shall be 4000 psi and shall meet MHD Standard Specifications as specified in Section M4.02.00 of the "Standard Specifications for Highways and Bridges," Commonwealth of Massachusetts, Department of Public Works, 1988 Ed. as amended and corrected. Subbase shall be moistened as necessary to provide a uniform damp condition at the time of concrete placement.

Concrete shall be placed in a continuous operation using methods which prevent segregation of mix. If placement is interrupted for more than ¼ hour, the Contractor shall place a construction joint. Construction joints shall be placed at score lines only, using a standard metal key-way section form.

After striking off and consolidating the concrete, the contractor shall smooth the surface by screening and floating. The surface shall then be checked for trueness and troweled to remove irregularities.

After troweling, contraction joints shall be scored and edging done. When excess moisture or surface sheen has disappeared, the surface shall be broomed lightly at right angles to the curb or as directed.

Tooling of edges and contraction joints shall then be repeated to remove broom finish in these areas.

The surface of all concrete sidewalks shall be uniformly scored with contraction joints into block unit of areas not more than 36 square feet as directed. The depth of the scoring shall be 1 inch.

Expansion Joints. The premolded expansion joint filler and sealer shall be as indicated on the drawings or as herein specified.

The premolded joint filler shall be:

Preformed resilient, bituminous-type filler, conforming to ASTM D994-71.

The filler strips shall be the full depth of the indicated ½-inch thick joint.

The Contractor shall provide smooth #5 bar dowels at all expansion joints and install the dowels with expansion caps as detailed at intervals of 18 to 24 inches on center.

The Contractor shall drill holes 18” minimum on center for the sliding end of dowels, in existing abutting stone or masonry to prevent surface differential movement as indicated on the plans or as directed by the Engineer.

The Contractor shall provide premolded joint filler for joints abutting curbs, manholes, hydrants, telephone poles and other fixed objects, unless otherwise indicated or directed.

Expansion joints shall be provided at approximately 30 feet on centers at the nearest even multiple of the scoring interval.

The joint filler shall extend full width and full depth of joint and shall have a cap insert or other suitable device to maintain a full joint width and an open joint of not less than ½ inch or more than 1 inch for the joint sealer. The joint sealer shall be of the polyurethane type (conforming to A.S.T.M. C920 Class 25).

Wheelchair Ramps. Wheelchair ramps shall be built at all corners and crosswalks. Wheelchair ramps shall be built to the specifications set forth in the preceding sub-sections and the concrete shall meet MHD Standard Specifications as specified in Section M4.02.00 of the “Standard Specifications for Highways and Bridges,” Commonwealth of Massachusetts, Department of Public Works, 1988 Ed. as amended and corrected. Curb work shall conform to the specifications set forth in Item 13.

Colored Concrete. Colored concrete shall be brick red in color. The coloring shall be a mineral oxide based water reducing admixture; providing permanent fade resistant, uniform, streak free, integral color. It shall reduce color bleeding, laitance, and efflorescence.

Linseed Anti-Spalling Compound. The Contractor shall coat the freshly poured concrete with linseed anti-spalling compound in front of all gasoline stations. The linseed anti-spalling compound shall conform to the specifications set forth in Section M9.15.0 of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 edition.

Joint Sealer. Joint sealant shall be a multi-component polyurethane type and shall comply with ASTM C920 Class 25. Joint sealants shall be installed according to the manufacturer's recommendations.

Curing. All concrete work shall be kept continuously moist for a period of 120 hours immediately following initial or completion of surface finishing. The temperature of the concrete shall be maintained between 40 degrees F and 90 degrees F during the curing period.

A membrane curing compound shall be applied after finishing work is complete. Two coats shall be applied totaling one gallon per 150 square feet, at right angles, with an approved sprayer.

Welded Wire Fabric. Welded wire fabric shall be six by six inch cold drawn steel welded mesh. All wire shall be ten (10) gauge, unless otherwise noted. Wire fabric shall be embedded in the concrete 1" from the bottom of the slab.

Cure Time at Driveways. A curing time of at least five (5) days must elapse before a sidewalk is opened to heavy truck traffic. All other vehicles may pass over the sidewalk after two (2) days have elapsed. When high early concrete is used cure time may be reduced at the Engineer's discretion.

Access to Properties. Where access to properties is critical ramps shall be placed as directed by the Engineer. Payment for ramps shall be under Item 1 Site Preparation and Clean-up.

**ITEM 26
DOUBLE SIDED RECTANGULAR RAPID FLASHING BEACONS
(SOLAR POWERED)**

General
Specifications

General. The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to install double sided, solar powered rectangular rapid flashing beacons as shown on the contract drawings and as specified here within.

Specifications. The following design specifications shall be met:

- Solar Panel: Must be highly efficient with a minimum 30W panel
- Battery: Must be long lasting 12V rechargeable Lithium-Ion (Li-ion)
- Light Source: 2 SAE W-2 08 DOT compliant strobe fixtures with pedestrian indicator LED on each end
- Flasher: Flash pattern must comply with NFPA 1901
- Audio Source: Piezoelectric buzzer with a frequency of 3900 Hz (+/- 500 Hz) and 95 db sound level
- Activation: ADA pedestrian pushbutton activation with countdown timer
- Construction: Powder coated aluminum housing
- Warranty: Solar Panel – Minimum of 6 Years
Battery – Minimum of 2 years

ITEM 27
PRECAST CONCRETE CATCH BASINS

Summary
References
Submittals
Quality Assurance
Products/Materials
Installation

Summary. Section includes:

- a. Precast concrete catch basins
- b. Cast iron frames and grates

References.

AASHTO – American Association of State Highway and Transportation Officials, Standard Specifications for Highways and Bridges, most recent edition.

ASTM C32 - Standard Specification for Sewer and Manhole Brick (made from clay or shale).

ASTM A48 – Standard Specification for Gray Iron Castings.

ASTM C150 – Standard Specification for Portland Cement.

ASTM C207 – Standard Specification for Hydrated Lime for Masonry Purposes.

ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.

ASTM C443 – Standard Specification for Joints for Circular Concrete Sewer and Culvert Piping Using Rubber Gaskets.

ASTM C923 - Standard Specification for Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes and Laterals.

ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.

Submittals. Submit Shop Drawings, showing details of construction, reinforcing, joints, pipe connections to structures, frames and covers.

Submit weights of frames and covers.

Submit design calculations including verification of adequate anti-flotation features and lateral earth pressures. Calculations shall verify that the catch basin structure has been designed to withstand the burial depth, submergence due to flooding, flotation, and dead and live loads.

Quality Assurance. The quality of materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer, or other representative of the Owner. Such inspection may be made at the place of manufacture, or at the Site after delivery, or at both places, and the materials shall be subject to rejection at any time on account of failure to meet any of the Specification requirements, even though samples may have been accepted as satisfactory at the place of manufacture. Material rejected after delivery to the job shall be marked for identification and shall be removed from the job at once. Materials which

have been damaged after delivery will be rejected, and if already installed, shall be acceptably repaired, if permitted, or removed and replaced, at no additional cost to the Owner.

At the time of inspection, the materials will be carefully examined for compliance with the latest ASTM designation specified and these Specifications, and with the approved manufacturer's drawings. Precast concrete sections will be inspected for general appearance, dimension, "scratch-strength," blisters, cracks, roughness, and soundness. The surface shall be dense and close-textured.

Imperfections in precast concrete sections may be repaired, subject to the approval of the Engineer, after demonstration by the manufacturer that strong and permanent repairs result. Repairs will be carefully inspected before final approval. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at 7 days and 5,000 psi at 28 days, when tested in 3 inch by 6 inch cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs subject to the approval of the Engineer.

Personnel shall have confined space entry training as appropriate for the work to be performed.

Catch basins shall be designed for lateral earth pressures and to resist flotation.

Products/Materials.

PRECAST CONCRETE SECTIONS

Precast concrete barrel sections and transition top sections, shall conform to ASTM C478 and the following requirements:

- a. The wall thickness shall not be less than 5 inches for 48 inch diameter reinforced barrel sections, 6 inches for 60 inch diameter reinforced barrel sections and 7 inches for 72 inch diameter reinforced barrel sections.
- b. Top sections shall be eccentric except that flat top sections shall be used where shallow cover requires a top section less than 4 feet as shown on the Drawings.
- c. Barrel sections shall have tongue and groove joints.
- d. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 3,000 psi and not before 5 days after fabrication and/or repair, whichever is longer.
- e. Precast concrete barrel sections with precast top slabs and precast concrete transition sections shall be designed for a minimum of AASHTO HS20-44 loading plus the weight of the soil above at 120 pcf.
- f. The date of manufacture and the name and trademark of the manufacturer shall be clearly marked on each precast section.
- g. Precast concrete bases shall be monolithically constructed. The thickness of the bottom slab of the precast bases shall not be less than the barrel sections or top slab whichever is greater. Precast concrete bases shall be constructed with a 6 inch extended base, unless otherwise shown on the Drawings.
- h. Knock out panels for piping shall be provided in precast sections at the locations shown on the Drawings. They shall be integrally cast with the section, 2½ inches thick and shall be sized as shown on the Drawings. There shall be no steel reinforcing in knock out panels.

BRICK MASONRY

Bricks shall be good, sound, hard and uniformly burned, regular and uniform in shape and size, of compact texture. Underburned or salmon brick will not be acceptable and only whole brick

shall be used unless otherwise permitted. In case bricks are rejected by the Engineer, they shall be immediately removed from the site of the work and satisfactory bricks substituted, at no additional cost to the Owner.

- a. Bricks for building up and leveling catch basin frames shall conform to ASTM C32 Grade MS.
- b. Poured concrete inverts will not be allowed.

Mortar used in the brickwork shall be composed of one part Type II Portland cement conforming to ASTM C150 to two parts sand to which a small amount of hydrated lime not to exceed 10 lbs. to each bag of cement shall be added.

Sand used shall be washed, cleaned, screened, sharp and well graded as to different sizes and with no grain larger than will pass a No. 4 sieve. Sand shall be free from vegetable matter, loam, organic or other materials of such nature or of such quantity as to render it unsatisfactory.

Hydrated lime shall conform to ASTM C207, Type S.

FRAMES AND GRATES

Frames and grates shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind. Grates and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30B.

Catch basin frames and grates shall be manufactured by LeBaron Foundry; Mechanics Iron Foundry; Neenah Foundry or approved equal.

Frames and grates shall comply with the detail shown on the Drawings.

JOINTING PRECAST CONCRETE SECTIONS

Tongue and groove joints of precast concrete sections shall be sealed with a preformed flexible joint sealant. The preformed flexible joint sealant shall conform to ASTM C990.

FLEXIBLE PIPE-TO-STRUCTURE CONNECTORS

The flexible pipe-to-structure connectors shall be designed to provide a positive seal between the connector and the structure wall and between the connector and the pipe.

The flexible boot shall be manufactured of EPDM synthetic rubber in accordance with ASTM C443 and C923 and shall be 3/8 inch thick or greater.

The external bands shall be made entirely of 304 series non-magnetic stainless steel.

The flexible connectors shall be provided with a wedge-type or toggle-type expander to secure the pipe in the structure opening.

The flexible connectors shall meet the following criteria, in accordance with ASTM C923:

- a. Shall not leak when subjected to a head pressure of 10 psi for 10 minutes.
- b. Shall have the ability to deflect 7 degrees in any direction without leakage under the head pressure conditions described above.
- c. Shall not leak when subject to a load of 150 lbs./in. pipe diameter and the head pressure conditions described above.

NON-SHRINK, WATER-PROOF GROUT

Non-shrink, water-proof grout shall be Hallemite; Waterplug; Embeco; or equal.

Installation. Construct catch basins to the dimensions shown on the Drawings and as specified. Protect all work against flooding and flotation.

Set precast concrete barrel sections so as to be plumb and with sections in true alignment with a ¼ inch maximum tolerance to be allowed.

Install the precast sections in a manner that will result in a watertight joint. Seal the joints of precast concrete barrel sections with the preformed flexible joint sealant used in sufficient quantity to fill 75% of the joint cavity. Fill the outside and inside precast section joints with non-shrink grout and finish flush with the adjoining surfaces. Plug holes in the concrete barrel sections required for handling or other purposes with a non-shrink, water-proof grout or concrete and rubber plugs, and finish flush on the inside.

Backfilling shall be done in a careful manner, bringing the fill up evenly on all sides.

Pipe Connections

- a. Stubs
 1. Connect pipe stubs for future extensions to the structures as shown on the Drawings and close the stub end by a suitable watertight plug.
- b. For pipes with smooth exterior surfaces (PVC, ductile iron, HDPE pressure pipe, steel, etc), use flexible pipe-to-structure connectors.
- c. Where flexible pipe-to-structure connectors cannot be used, such as pipes with rough, irregular or corrugated exterior surfaces (concrete, corrugated metal, HDPE drainage pipe, etc):
 1. After the new pipe has been set in place, completely fill the hole around the new pipe and structure with non-shrink, water-proof grout.
 2. Place a 6 inch thick concrete encasement a total of 12 inches in length around the pipe stub adjacent to the exterior wall of the structure. Concrete shall have a 28 day compressive strength of 3,000 psi.

Brickwork

- a. Mix mortar only in such quantity as may be required for immediate use and use before the initial set has taken place. Do not retain mortar for more than one and one-half hours and constantly work over with a hoe or shovel until used. Anti-freeze mixtures will not be allowed in the mortar. No masonry shall be laid when the outside temperature is below 40°F unless provisions are made to protect the mortar, bricks, and finished work from frost by heating and enclosing the work with tarpaulins or other suitable material. The Engineer's decision as to the adequacy of protection against freezing shall be final.
- b. Set catch basin grates and frames in a full mortar bed and bricks, a maximum of 12 inches thick for conical tops and 6 inches thick for flat top sections, utilized to assure frame and cover are set to the existing grade. Reset the frames and grates to final grade prior to placement of final paving.

CLEANING

Clean new catch basins of silt, debris and foreign matter of any kind, prior to final inspection.

ITEM 28 10" HDPE STORM DRAIN PIPE

General
Installation

General. The contractor shall furnish all labor, materials, and equipment and shall do all work necessary to install dual wall, smooth interior, corrugated polypropylene pipe meeting or exceeding AASHTO MP 21-11. All pipe joints shall be gasketed bell and spigot. Gaskets shall be integral to the spigot and protected from debris during installation. A gasket lubricant shall be applied to the bell and gasket during assembly.

All storm drain pipes and fittings shall conform to the requirements of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1988 Ed., as amended and corrected.

Installation. The Contractor shall be responsible for and pay all costs for the layout of the drain system. The Contractor shall be responsible for verifying in the field all lines, grades, dimensions and conditions affecting the work, and for all correct connections of all parts of the piping and structures in the completed drain.

The Contractor shall be responsible to verify existing invert elevations at the locations where new work shall connect to existing systems. Notify the Engineer in writing of any discrepancies found prior to starting work.

Each pipe shall be inspected prior to installation. Any pipe unit deemed defective, either before or after installation shall be removed and replaced at no additional cost to the Owner.

All pipe and fittings shall be clear of all debris, dirt, etc., prior to installation and shall be kept clean until work is accepted. Pipe and fittings shall be installed accurately to the lines and grades indicated on the drawings or as required by the Engineer. Pipes shall be laid in the dry and with the spigot end pointing in the direction of flow. At all times when pipe installation is not in progress, the open ends of the pipe shall be closed with temporary water tight plugs, or by other suitable means.

In order to insure minimum amount of movement or disturbance, no more than two (2) lengths of pipe may be laid before backfilling to a minimum of twelve (12) inches over the pipe.

The Contractor shall make all connections to the existing facilities as required by the Contract Documents.

- Provide all pipe, fittings, and appurtenances.
- Shall do all excavation and backfill as required.
- Special attention shall be made to protect existing structures.

ITEMS 31 & 32 LOAMING AND SEEDING

Summary
References
Quality Assurance
Submittals
Products/Materials
Preparation
Lawn Areas
Maintenance
Guarantee Period and Final Acceptance

Summary. Section includes:

- a. Restoration of all vegetated areas disturbed during construction including lawn areas
- b. Loam, starter fertilizer, lime, and lawn seed
- c. Mulch

References.

ASTM D5539 – Standard Specification for Seed Starter Mix.

Quality Assurance. Place seed only between the periods from April 15th to June 1st, and from August 15th to October 1st, unless otherwise approved by the Engineer.

Submittals. Submit the following for approval:

- a. Lawn seed mixture including percent by weight of each seed type, and manufacturer/supplier name.
- b. Suitable laboratory analysis of the soil to determine the quantity of fertilizer and lime to be applied.
- c. Lime and starter fertilizer application rates based on laboratory soil tests.

Products/Materials.

Loam

- a. Loam shall consist of fertile, friable, natural topsoil typical of the locality without admixture of subsoil, refuse or other foreign materials and shall be obtained from a well-drained arable site. It shall be such a mixture of sand, silt and clay particles as to exhibit sandy and clayey properties in and about equal proportions. It shall be reasonably free of stumps, roots, heavy or stiff clay, stones larger than 1-inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter. Topsoil as delivered to the site or stockpiled shall have pH between 6.0 and 7.0 and shall contain not less than 5 percent or more than 8 percent organic matter as determined by loss of ignition of moisture-free samples dried at 100 degrees Celsius. The topsoil shall meet the following mechanical analysis:

		PERCENTAGE FINER
1-in	screen	100
opening		
No. 10 mesh		95 to 100
No. 270 mesh		35 to 75
0.002 mm*		5 to 25

* Clay size fraction determined by pipette or hydrometer analysis.

- b. Place a minimum of 4 inches of loam.

Starter Fertilizer

- a. Starter fertilizer shall bear the manufacturer's name and guaranteed statement of analysis, and shall be applied in accordance with the manufacturer's directions.
- b. Starter fertilizer shall be Scott's Starter Fertilizer, or equal, with timed nitrogen release to prevent burning.

Lime

- a. Lime shall be an agricultural type ground limestone.
- b. Lime shall be pelletized type for prolonged time release to soil.

Lawn Seed

- a. Seed shall be of the previous year's crop.
- b. Required ranges:
 - 1. Purity > 90%
 - 2. Germination > 80%
 - 3. Crop < 0.5%
 - 4. Weed < 0.3%
 - 5. Noxious Weed – 0%
 - 6. Inert < 8%
- c. The standard seed mixture shall be applied at a minimum rate of 4 lbs./1,000 sf.
- d. Grass seed shall conform to the following mixture in proportion by weight and weed content and shall pass the minimum percentages of purity and germination as indicated for same.

LAWN AREA SEED MIX	% WEIGHT
“Rebel II” Tall Fescue	70%
“Baron” Kentucky Bluegrass	10%
“Palmer” Perennial Ryegrass	20%

- e. All seed shall comply with State and Federal seed laws.
- f. A sworn certificate indicating each variety of seed, weed content, germination of seed, net weight, date of shipment and manufacturer's name shall accompany each seed shipment. Responsibility for satisfactory results rests entirely on the Contractor.

Mulch

- a. Shall be a specially processed 100 percent Virgin wood fiber mulch containing no growth or germination-inhibiting factors. Wood fiber mulch shall be Second Nature Regenerated wood fiber as by Central Fiber Corporation, Wellsville, KS or equal. It shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material become uniformly suspended to form a homogenous slurry. When sprayed on the ground, the material shall allow absorption and percolation of moisture. Each package of the wood fiber shall be marked by the manufacturer to show the air dry weight content and not contain in excess of 10 percent moisture.

Preparation. The ground surface shall be fine graded and raked to prepare the surface of the loam for lime, fertilizer and seed.

Perform a laboratory soil test on the proposed loam before placing any lime, fertilizer, or seed. This work shall be in accordance with ASTM D5539.

Lawn Areas. Apply fertilizer and lime to the surface of the ground in accordance with the manufacturers' instructions, and based on the results of the certified soils test.

Place the seed using a drop or rotary spreader at the rate recommended by the seed manufacturer for the intended use of the lawn or grass area being restored.

After spreading the seed, lightly rake the surface to work the seed in. The surface shall then be rolled.

Maintenance. Maintain loamed and seeded areas by mulching, covering, netting, watering, cutting, and fencing until an acceptable stand of vegetation is approved by the Engineer.

The dressed and seeded areas shall be sprinkled with water as necessary from time to time. Signs and barricades should be placed to protect the seeded areas. After the grass has started to grow, all areas and parts of areas that fail to show a uniform stand of grass shall be seeded repeatedly until all areas are covered with a satisfactory growth of grass.

Guarantee Period and Final Acceptance. At the end of the guaranteed period, inspection will be made by the Engineer upon written request submitted at least 10 days before the anticipated date. Seeded areas not demonstrating satisfactory stands as outlined above, as determined by the Engineer, shall be renovated, reseeded and maintained meeting all requirements as specified herein.

After all necessary corrective work has been completed, the Engineer shall certify in writing the final acceptance of the seeded areas.

CONCRETE WORK

General

Cement

Admixtures

Water

Fine Aggregate

Coarse Aggregate

Samples of Aggregate

Classes of Concrete

Quality and Proportioning of Concrete

Determining Proportions

Consistency of Concrete

Measuring Materials

Mixing Concrete

Ready-Mixed Concrete

Forms

Embedded Work in Concrete

Placing Concrete

Curing and Protection

Finishing Concrete
Trimming and Repairs
Expansion Joints
Construction Joints
Weep Holes

General. The Contractor shall furnish all necessary materials and build all concrete masonry required under this contract and not otherwise provided for, as indicated on the drawings and as herein specified.

All concrete shall be site-mixed or ready-mixed as produced by a plant acceptable to the Engineer.

Cement. Cement shall be a single brand of approved, American-made Portland Cement conforming to the ASTM Standard Specifications for Portland Cement, Designation C150, for Type II cement, or, with written permission of the Engineer Type III (high-early strength) cement.

When used in the work, cement shall be free from lumps and partially or wholly set cement.

No cement shall be used without prior approval of the Engineer.

If required, the Contractor shall furnish sworn certificate of mill tests of cement, in triplicate, at least seven days before the cement will be used. The Owner reserves the right to make such independent tests as he may deem necessary at any time.

When high early strength concrete is required, it shall be obtained by using Type III or by adding 15% additional Type I or Type II.

Admixtures. The use of admixtures shall meet MHD Standard Specifications as specified in Section M4.02.05 of the "Standard Specifications for Highways and Bridges," Commonwealth of Massachusetts, Department of Public Works, 1988 Ed. as amended and corrected.

Water. For mixing concrete, the Contractor shall use clean water from an approved source.

Fine Aggregate. Fine aggregate shall be clean, sound, sharp, screened, and well-graded sand conforming to the ASTM Standard Specifications for Concrete Aggregates, Designation C33, and the additional requirement that the aggregate shall have not less than 15 percent more than 30 percent, by weight, passing No. 50 sieve.

No fine aggregate shall be used if it contains more than two percent of silt or which shows a color darker than Plate 2 when tested according to the ASTM Standard Method of Test for Organic Impurities in Sands for Concrete, Designation C-40.

The weight average loss when fine aggregate is subjected to five cycles of the soundness test using magnesium sulfate shall not exceed 10 percent.

Coarse Aggregate. Coarse aggregate shall be washed, hard, tough and durable screened gravel or crushed stone conforming to the ASTM Standard Specifications for Concrete Aggregates, Designation C33 and the additional requirements specified herein. Coarse aggregate shall have

not more than five percent by weight of deleterious substances and soft fragments. Unless otherwise approved, aggregate shall be well graded and shall conform to the grading requirements for coarse aggregates for nominal size 1 inch to No. 4.

No coarse aggregate shall be used if it contains more than one percent of silt or which shows a color darker than Plate 1 when tested as above specified for fine aggregate.

The weighted average loss when coarse aggregate is subjected to five cycles of the soundness test using magnesium sulfate shall not exceed 14 percent.

Samples of Aggregate. As required, the Contractor shall submit clearly labeled samples of fine and coarse aggregates to the Engineer. No aggregates shall be delivered and used shall be equal to the approved samples in all respects.

Classes of Concrete. 4000 psi concrete shall be used for all concrete not otherwise specified or noted on the drawings.

Quality and Proportioning of Concrete. Materials for concrete shall be proportioned to produce a thoroughly workable, plastic mixture resulting in a dense watertight concrete. The concrete shall meet MHD Standard Specifications as specified in Section M4.02.00 of the "Standard Specifications for Highways and Bridges," Commonwealth of Massachusetts, Department of Public Works, 1988 Ed. as amended and corrected.

The use of an approved additive other than air-entrained additives shall not affect a change in the maximum water-cement ratio or the minimum cement content. The minimum cement content can be changed only with the prior written approval of the Engineer.

Determining Proportions. The proportions of cement, fine and coarse aggregate and water to be used to obtain the specified concrete shall be determined by trial at the site. Proportions may be varied as approved, and shall be varied as required, provided that, in no case, shall the resulting mix violate the limitations set forth above under the heading "Quality and Proportions of Concrete."

Consistence of Concrete. Concrete shall be of plastic consistency such that it can be work readily into all parts of the forms and around embedded work without segregation of constituent materials or collection of free water on the surface.

Measuring Materials. Cement, fine aggregate, coarse aggregate and water for concrete shall be measure separately and with accuracy. Particular care shall be taken that fractional bags of cement are correctly measured. Aggregates shall be measured by weight or loose in approved boxes, with allowance as directed for bulking of sand. Water shall be measured by volume.

Mixing Concrete. Concrete shall be mixed in an approved batch mixer of suitable capacity except for small quantities, which, by permission, are hand mixed. The volume of the mixed batch shall not exceed the manufacturer's rated capacity of the mixer. Adequate facilities shall be provided for accurate measurement of water and the control of materials entering the drum. The mixer shall revolve at a uniform peripheral speed of above 200 rpm.

The minimum mixing time for each batch (from the time when all solid materials and water are first in the drum) shall be 1-½ minutes for mixers of 1 c.y. capacity or less; for mixers of larger

capacity, the mixing time shall be increased 30 seconds for each additional half cubic yard or fraction thereof. The entire batch shall be discharged before the mixer is recharged.

If the concrete is mixed by hand, it shall be done on a suitable surface. The cement and aggregates shall be mixed dry until an even and uniform color has been attained throughout. The proper quantity of water shall then be added and the whole mass turned with square-edged shovels until it has become intimately mixed.

Ready-Mixed Concrete. The use of ready-mixed concrete will be permitted provided that the Engineer shall have the right to inspect the plant of the manufacturer and the proportioning and mixing of the concrete and shall be given every facility therefore, and that the materials and methods of proportioning, mixing and delivering are satisfactory and generally in accordance with the above specifications. The manufacturer shall furnish, from an Independent testing laboratory and through the Contractor, appropriate certificates of tests, materials, proportions mixing and strengths. Such certificates shall have an effective date not more than six months prior to the time when the concrete will be used and shall be furnished to the Engineer at least seven days before the time of use. No ready-mixed concrete shall be ordered before the Engineer has given his approval thereof.

The quantity of concrete to be mixed or delivered in any one batch shall not exceed the rated capacity of the mixer or agitator as stated on the nameplate for the type of mixing in use.

At the time of delivery of each load of concrete, the Engineer shall be given a slip stating the actual quantity of each ingredient in that load.

Attention is directed to the importance of dispatching trucks from the batching plant so that they shall arrive at the site of the work just before the concrete is required, thus avoiding excessive mixing of concrete while waiting or delays in placing successive layers of concrete in the forms. Concrete shall be discharged into forms within 1 ½ hours after water was first added to the mix, and shall be mixed at least five minutes after all water has been added.

Forms. Forms shall be constructed of sound lumber, plywood or metal and shall conform accurately to the dimensions, shapes and elevations indicated on the drawings. They shall be mortar-tight, rigid and unyielding during the placing and compacting of the concrete. The Contractor shall be entirely responsible for the adequacy. Forms for manhole inverts shall be smooth, carefully built to true size and shape and accurately set.

Suitable molding or bevels shall be placed so as to produce a ¾ inch chamfer on all exposed projecting corners.

Form surfaces to be in contact with concrete shall be oiled, and if reused, shall first be cleaned, repaired and re-oiled.

Forms shall not be removed until the product of the elapsed number of days after placement and the average daily air temperature at the surface of the concrete equal 100 for walls and vertical surfaces and 500 for slabs.

Embedded Work in Concrete. All embedded work shall be accurately built into or encased in the masonry by the Contractor as directed and all necessary precautions shall be taken to prevent such work from being displaced or deformed.

Placing Concrete. No concrete shall be placed on frozen subgrade or in water. Forms and excavations shall be free from water and all dirt, debris and other foreign matter when concrete is placed.

If chutes are used for conveying concrete, they shall be of metal or shall be metal lined.

Concrete shall be deposited in suitable layers, one layer quickly following another until the placement has been completed. While being deposited, the concrete shall be thoroughly compacted by rodding and spading or by mechanical vibration. If mechanical vibration is used, the concrete consistency as measured by slump shall not exceed 3 inches. Vibration shall be done by experienced operators under close supervision and the duration shall be held at the minimum necessary to produce thorough compaction without segregation. Hand spading shall always be used adjacent to forms to produce a smooth, dense surface. The concrete shall be thoroughly and carefully rodded about embedded materials.

Curing and Protection. Water shall not be permitted to rise on concrete within 24 hours after it is placed, nor shall running water be allowed to flow over complete concrete within four days after it has been placed.

For at least seven days after having been placed, all concrete shall be so protected that the temperature at the surface will not fall below 50 degrees F. The methods of protecting the concrete shall be as specified and shall be subject to approval.

Finishing Concrete. Manhole tables and all surfaces shaped without forms and over which liquids will flow shall be smoothly finished by means of a steel trowel without the use of additional cement or sprinkling with water. Troweling shall not be started until all water has disappeared from the surface. Over troweling shall be avoided.

Trimming and Repairs. It is expected that forms, concrete and workmanship shall be such that the quantity of trimming and repair work is kept to a minimum.

Defective concrete shall be cut normal to the surface until sound concrete is reached, but not less than one inch deep; the remaining concrete shall be thoroughly roughened and cleaned. Concrete around the cavity or the form-tie recess shall be thoroughly wetted and promptly painted with a 1/16-inch brush coat of neat cement mixed to the consistency of thick lead paint. The hole shall then be filled with mortar mixed in the proportions of one part cement and 1 ½ parts sand, both being from the same sources as in the apparent concrete.

Expansion Joints. Performed expansion joints shall be ½" bituminous impregnated expansion joint filler, type conforming to ASTM D994, or approved equal place where shown on the plans. The joint filler material shall be placed according to the manufacturer's recommendations. The joint filler material shall be placed such that its top surface is one inch below the top surface of the new concrete.

Joint sealant shall be a multi-component polyurethane type and shall comply with ASTM C920, Class 25. Joint sealants shall be installed according to the manufacturer's recommendations. The Contractor shall supply smooth #35 bar dowels at all expansion joints and install the dowels, with expansion caps, 18" on center. Dowels shall be a minimum of 14" long. Depth of the dowels not shown of the plans or specified shall be as directed by the Engineer.

Expansion joints for retaining walls shall be placed 90' on center maximum, intermediate construction joints shall be placed 30' on center maximum.

Construction Joints. All construction joints in retaining walls shall be provided with a keyway and a waterstop. Keyway shall be as indicated on the plans or as specified by the Engineer.

The waterstop material shall be a minimum of 5" wide and of type, size and configuration approved by the Engineer. All waterstop material shall be installed in accordance with manufacturer's instructions and special care shall be taken in jointing the material. Waterstop shall be a diaphragm type of multirib design thermo-plastic material unless otherwise specified.

Concrete in structures shall be placed in such a manner that all construction joints shall be exactly horizontal or vertical, as the case may be, and that they shall be straight and as inconspicuous as possible.

When construction joints are definitely shown on the plans, all concrete between consecutive joints shall be placed in a continuous operation.

In order to allow for shrinkage, concrete shall not be placed against the second side of the construction joints for at least 12 hours after that on the first side has been placed.

Weep Holes. Weep holes shall be provided through all structures as indicated on the plans and as directed. Ends of weep holes that are to be covered by filling material shall be protected by ¼" mesh galvanized wire screen 23 gauge and not less than one (1) cubic yard of crushed stone.

Pipe for weep holes shall be 4" PVC pipe SDR 35 or approved equal, and shall have a minimum pitch of 1/8" per foot.

CLOSEOUT

Summary. Section includes:

- a. Documentation required for the transfer of the completed Work to the Owner
- b. Final Cleaning

Submittals.

- a. Evidence of payment and release of liens
- b. List of Subcontractors

Project Closeout Documents. Provide evidence of payment and release of liens.

Provide list of Subcontractors including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

Final Payment. Refer to Section 1.36 of the General Conditions, for procedures relating to final inspection and payment.

The Contract shall be considered complete and final payment made, only when:

- a. All provisions of the Contract Documents have been strictly adhered to.
- b. The project and premises have been left in good order, including removal of all temporary construction, Contractor-owned and extraneous materials.

Cleaning. Remove and entirely dispose of material or debris that has washed, flowed or has been placed in existing watercourses, ditches, gutters, drains, pipe, or structures, for work done under the Contract work limits. Leave ditches, channels, drains, pipes, structures, and watercourses in a clean and neat condition upon completion of the Work.

Restore or replace any public or private property damaged or removed during the course of the Work. Property shall be returned to a condition at least equal to that existing immediately prior to the beginning of operations. Complete all highway or driveway, walk, and landscaping work using suitable materials, equipment and methods. Perform restoration of existing property, signs or structures promptly as work progresses; do not leave restoration work until the end of the Contract Time.

APPENDIX A
FEDERAL CLAUSES AND FORMS

Bid/Procurement Protest Policy

The City of Greenfield will make every effort to issue requests for proposals (RFPs) and invitations for bids (IFBs) and to make awards relative to those procurements in a manner that will not spark a protest. If, however, a proposer or bidder, herein after called the “Protester”, wishes to protest either the solicitation or the award of the procurement, the Protester may file a protest as described below.

Protests Prior to Award of Contract

Any Protester that desires to protest any aspect of the contents of a CITY OF GREENFIELD procurement solicitation (RFP, IFB) must file a written statement of protest with the CITY OF GREENFIELD, hereinafter referred to as the “Administrator”, within fifteen (15) business days prior to the deadline date specified for submitting a response to the procurement. The written protest should be as specific as possible in describing the Protester’s objection to the procurement solicitation and include any supporting documentation. In this written protest, the Protester may request a hearing with the Administrator. The Administrator will schedule any requested hearing to be held within ten (10) business days of receipt of the written protest. The Administrator will issue a response in writing, within five (5) business days of receipt of the protest or following a hearing on the protest. If a protest has been filed in accordance with the procedure specified hereinabove, the CITY OF GREENFIELD will not make a procurement award pending a resolution of the outstanding protest, unless, in the sole judgment of the Administrator:

- the items to be procured are urgently required
- delivery or performance will be unduly delayed by the CITY OF GREENFIELD’s failure to make the award as scheduled
- the failure to make the procurement award will cause undue harm to the CITY OF GREENFIELD or interfere with the CITY OF GREENFIELD’s fulfilling its responsibilities or obligations.

The protest will be considered outstanding until the Administrator has issued his response to the protest. Protests received following the solicitation response due date will be considered only if they concern an issue, procedure, or other matter that could not have reasonably been protested by a proposer prior to the solicitation response due date; however, no protests about the solicitation will be entertained after ten (10) business days following the solicitation response due date. Any protest may be withdrawn, in writing, prior to issuance of the Administrator’s response.

Protests Subsequent to Award of Contract

Proposers may file a protest about the procurement subsequent to the award of the contract. Such protests may not pertain solely to the solicitation, except if the provisions of Item 5 above apply. Protestors of the procurement contract award must file a written statement of protest with the Administrator within five (5) business days following receipt of the notice of the award. The written protest should be as specific as possible in describing the Protester’s objection to the procurement contract award to a competing proposer. In this written protest, the Protester may request a hearing with the Administrator. The Administrator will schedule any requested hearing to be held within five (5) business days of receipt of the written protest. The Administrator will issue a response in writing, within five (5) business days of receipt of the protest or following a hearing on the protest. Depending on the timing of the protest relative to the commencement of work activities under the awarded contract, the Administrator may or may not suspend the awarded contract while the protest is outstanding. The contract award will not be suspended if, in the sole judgment of the Administrator, the contract must be enforced because:

- the items to be procured are urgently required
- delivery or performance will be unduly delayed by the CITY OF GREENFIELD’s failure to make the award as scheduled

- the failure to make the procurement award will cause undue harm to the CITY OF GREENFIELD or interfere with the CITY OF GREENFIELD s fulfilling its responsibilities or obligations.

The protest will be considered outstanding until the Administrator has issued his response to the protest.

Further Right of Appeal

Proposers protesting procurements supported with funds from the Federal Transit Administration (FTA) may, pursuant to FTA Circular 4220.1D and any applicable Federal Law, file a protest with the FTA after exhausting the following of CITY OF GREENFIELD protest procedures.

Judicial Remedies

The CITY OF GREENFIELD recognized that, under certain circumstance, the Protester may be entitled to seek the following judicial remedies:

- An action for monetary damages, where and if applicable, in the Court of Massachusetts
- An action for injunctive relief, as well as money damages, where and if applicable, in the Courts of Massachusetts
- Actions within the Federal Courts as a result of the pursuit of the remedies referred to in “Further Right of Appeal” hereinabove, as well as actions for money damages and/or injunctive relief, where and if applicable.

Notices

In each case where notice is required herein to be given to a Protester, the CITY OF GREENFIELD will cause similar notice to be given to each other respondent to the procurement solicitation.

Required Federal Clauses

CERTIFICATION OF ELIGIBILITY

_____ hereby certifies that it
(Name of Consultant)

is not included on the U.S. Comptroller General's Debarred Bidders List.

Signature: _____

Firm: _____

The Proposer certifies to the best of its knowledge and belief that it and its principals

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this transaction by any Federal department or agency.
- B. Have not, within a three-year period preceding the date of this Proposal, been convicted of or had a civil judgment rendered against it for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction, violation of Federal or State anti-trust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, or receiving stolen property.
- C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in Paragraph B of this Certification.
- D. Have not, within a three-year period preceding the date of this Proposal, had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the Proposer is unable to certify to any of the statements in this certification, such Proposer shall include an explanation in such regard with its Proposal.

(Check One)

I DO CERTIFY

I DO NOT CERTIFY

Date: _____ Printed Name: _____

Signature: _____

Title: _____

Required Federal Clauses

NO GOVERNMENT OBLIGATION TO THIRD PARTIES

- (1) The Purchaser and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
- (2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

Signed _____

Date _____

**PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS
AND RELATED ACTS**

**31 U.S.C. 3801 et seq.
49 CFR Part 31 18 U.S.C. 1001
49 U.S.C. 5307**

- (1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § § 3801 et seq . and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
- (2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.
- (3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

Signed _____

Date _____

Required Federal Clauses

ACCESS TO RECORDS AND REPORTS

49 U.S.C. 5325

18 CFR 18.36 (i)

49 CFR 633.17

The following access to records requirements apply to this Contract:

1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C. F. R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C. F. R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.
2. Where the Purchaser is a State and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 633.17, Contractor agrees to provide the Purchaser, the FTA Administrator or his authorized representatives, including any PMO Contractor, access to the Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311. By definition, a major capital project excludes contracts of less than the simplified acquisition threshold currently set at \$100,000.
3. Where the Purchaser enters into a negotiated contract for other than a small purchase or under the simplified acquisition threshold and is an institution of higher education, a hospital or other non-profit organization and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 19.48, Contractor agrees to provide the Purchaser, FTA Administrator, the Comptroller General of the United States or any of their duly authorized representatives with access to any books, documents, papers and record of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
4. Where any Purchaser which is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined at 49 U.S.C. 5302(a)1) through other than competitive bidding, the Contractor shall make available records related to the contract to the Purchaser, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
5. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
6. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
7. FTA does not require the inclusion of these requirements in subcontracts.

Signed _____

Date _____

Required Federal Clauses

Requirements for Access to Records and Reports by Types of Contract

Contract Characteristics	Operational Service Contract	Turnkey	Construction	Architectural Engineering	Acquisition of Rolling Stock	Professional Services
<u>I State Grantees</u> a. Contracts below SAT (\$100,000) b. Contracts above \$100,000/Capital Projects	None None unless ¹ non-competitive award	Those imposed on state pass thru to Contractor	None Yes, if non-competitive award or if funded thru ² 5307/5309/5311	None None unless non-competitive award	None None unless non-competitive award	None None unless non-competitive award
<u>II Non State Grantees</u> a. Contracts below SAT (\$100,000) b. Contracts above \$100,000/Capital Projects	Yes ³ Yes ³	Those imposed on non-state Grantee pass thru to Contractor	Yes Yes	Yes Yes	Yes Yes	Yes Yes

FEDERAL CHANGES

49 CFR Part 18

Federal Changes - Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

Signed _____

Date _____

Required Federal Clauses

INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

FTA Circular 4220.1E

Incorporation of Federal Transit Administration (FTA) Terms - The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1E are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any CITY OF GREENFIELD requests which would cause CITY OF GREENFIELD to be in violation of the FTA terms and conditions.

Signed _____

Date _____

ENERGY CONSERVATION REQUIREMENTS

42 U.S.C. 6321 et seq.

49 CFR Part 18

Energy Conservation - The contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

Signed _____

Date _____

Required Federal Clauses

TERMINATION

49 U.S.C.Part 18

FTA Circular 4220.1E

Applicability to Contracts

All contracts (with the exception of contracts with nonprofit organizations and institutions of higher education,) in excess of \$10,000 shall contain suitable provisions for termination by the CITY OF GREENFIELD including the manner by which it will be effected and the basis for settlement. (For contracts with nonprofit organizations and institutions of higher education the threshold is \$100,000.) In addition, such contracts shall describe conditions under which the contract may be terminated for default as well as conditions where the contract may be terminated because of circumstances beyond the control of the contractor.

Flow Down

The termination requirements flow down to all contracts in excess of \$10,000, with the exception of contracts with nonprofit organizations and institutions of higher learning.

- a. **Termination for Convenience (General Provision)** The CITY OF GREENFIELD may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in their best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to CITY OF GREENFIELD to be paid the Contractor. If the Contractor has any property in its possession belonging to the CITY OF GREENFIELD, the Contractor will account for the same, and dispose of it in the manner the CITY OF GREENFIELD directs.
- b. **Termination for Default [Breach or Cause] (General Provision)** If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the CITY OF GREENFIELD may terminate this contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Contractor is in default. The contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.
- c. **Opportunity to Cure (General Provision)** The CITY OF GREENFIELD in its sole discretion may, in the case of a termination for breach or default, allow the Contractor 30 days in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions
- d. **Waiver of Remedies for any Breach.** In the event that CITY OF GREENFIELD elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Contract, such waiver by CITY OF GREENFIELD shall not limit CITY OF GREENFIELD's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Contract.
- e. **Termination for Convenience (Professional or Transit Service Contracts)** The CITY OF GREENFIELD, by written notice, may terminate this contract, in whole or in part, when it is in their best interest. If this contract is terminated, the Recipient shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

f. Termination for Default (Supplies and Service) If the Contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension or if the Contractor fails to comply with any other provisions of this contract, the CITY OF GREENFIELD may terminate this contract for default. The CITY OF GREENFIELD shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract.

g. Termination for Default (Transportation Services) If the Contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract or any extension or if the Contractor fails to comply with any other provisions of this contract, the CITY OF GREENFIELD may terminate this contract for default. The CITY OF GREENFIELD shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of default. The Contractor will only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract.

h. Termination for Default (Construction) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provisions of this contract, the CITY OF GREENFIELD may terminate this contract for default. The CITY OF GREENFIELD shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. In this event, the Recipient may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Recipient resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Recipient in completing the work.

i. Termination for Convenience or Default (Architect and Engineering) The CITY OF GREENFIELD may terminate this contract in whole or in part, for the Recipient's convenience or because of the failure of the Contractor to fulfill the contract obligations. The CITY OF GREENFIELD shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the Contracting Officer all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.

j. Termination for Convenience of Default (Cost-Type Contracts) The CITY OF GREENFIELD may terminate this contract, or any portion of it, by serving a notice or termination on the Contractor. The notice shall state whether the termination is for convenience of the CITY OF GREENFIELD or for the default of the Contractor. If the termination is for default, the notice shall state the manner in which the contractor has failed to perform the requirements of the contract. The Contractor shall account for any property in its possession paid for from funds received from the CITY OF GREENFIELD, or property supplied to the Contractor by the CITY OF GREENFIELD. If the termination is for default, the CITY OF GREENFIELD may fix the fee, if the contract provides for a fee, to be paid the contractor in proportion to the value, if any, of work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the CITY OF GREENFIELD and the parties shall negotiate the termination settlement to be paid the Contractor.

Signed _____

Date _____

Required Federal Clauses

GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

49 CFR Part 29

Executive Order 12549

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by **CITY OF GREENFIELD**. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to **CITY OF GREENFIELD**, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Signed _____

Date _____

Required Federal Clauses

DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

Davis-Bacon and Copeland Anti-Kickback Acts

(1) **Minimum wages** - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount

designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(v)(A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(2) **Withholding** – The CITY OF GREENFIELD shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the CITY OF GREENFIELD may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the CITY OF GREENFIELD for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is

responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) **Apprentices and trainees** - (i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the

journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) **Compliance with Copeland Act requirements** - The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) **Contract termination: debarment** - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) **Compliance with Davis-Bacon and Related Act requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) **Disputes concerning labor standards** - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) **Certification of eligibility** - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

Signed _____

Date _____

Required Federal Clauses

CIVIL RIGHTS REQUIREMENTS

29 U.S.C. § 623, 42 U.S.C. § 2000

42 U.S.C. § 6102, 42 U.S.C. § 12112

42 U.S.C. § 12132, 49 U.S.C. § 5332

29 CFR Part 1630, 41 CFR Parts 60 et seq.

The following requirements apply to the underlying contract:

(1) Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(2) Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying contract:

(a) Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(b) Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(c) Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

Signed _____

Date _____

Required Federal Clauses
Buy America Requirements

**49 U.S.C. 5323(j)
49 CFR Part 661**

Applicability to Contracts

The Buy America requirements apply to the following types of contracts: Construction Contracts and Acquisition of Goods or Rolling Stock (valued at more than \$100,000).

Flow Down

The Buy America requirements flow down from FTA recipients and subrecipients to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are in compliance. The \$100,000 threshold applies only to the grantee contract, subcontracts under that amount are subject to Buy America.

Mandatory Clause/Language

The Buy America regulation, at 49 CFR 661.13, requires notification of the Buy America requirements in FTA-funded contracts, but does not specify the language to be used. The following language has been developed by FTA.

Buy America - The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include final assembly in the United States for 15 passenger vans and 15 passenger wagons produced by Chrysler Corporation, and microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 CFR Part 661.5.

Date _____

Signature _____

Company Name _____

Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Certification requirement for procurement of buses, other rolling stock and associated equipment.

Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C).

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations at 49 C.F.R. Part 661.11.

Date _____

Signature _____

Company Name _____

Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11, but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Required Federal Clauses

Breaches and Dispute Resolution

49 CFR Part 18
FTA Circular 4220.1E

Applicability to Contracts

All contracts in excess of \$100,000 shall contain provisions or conditions which will allow for administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. This may include provisions for bonding, penalties for late or inadequate performance, retained earnings, liquidated damages or other appropriate measures.

Flow Down

The Breaches and Dispute Resolutions requirements flow down to all tiers.

Model Clauses/Language

FTA does not prescribe the form or content of such provisions. What provisions are developed will depend on the circumstances and the type of contract. Recipients should consult legal counsel in developing appropriate clauses. The following clauses are examples of provisions from various FTA third party contracts.

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of (Recipient)'s [title of employee]. This decision shall be final and conclusive unless within [ten (10)] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the [title of employee]. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the [title of employee] shall be binding upon the Contractor and the Contractor shall abide by the decision.

Performance During Dispute - Unless otherwise directed by (Recipient), Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the (Recipient) and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the (Recipient) is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the (Recipient), (Architect) or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

Required Federal Clauses

Lobbying

31 U.S.C. 1352

49 CFR Part 19

49 CFR Part 20

Applicability to Contracts

The Lobbying requirements apply to Construction/Architectural and Engineering/Acquisition of Rolling Stock/Professional Service Contract/Operational Service Contract/Turnkey contracts.

Applicability to Micro-Purchases

Micro-purchases are defined as those purchases under \$2,500. These requirements do not apply to micro-purchases.

Flow Down

The Lobbying requirements mandate the maximum flow down, pursuant to Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352(b)(5) and 49 C.F.R. Part 19, Appendix A, Section 7.

Mandatory Clause/Language

- Clause and specific language therein are mandated by 49 CFR Part 19, Appendix A.

Modifications have been made to the Clause pursuant to Section 10 of the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, *et seq.*]

- Lobbying Certification and Disclosure of Lobbying Activities for third party contractors are mandated by 31 U.S.C. 1352(b)(5), as amended by Section 10 of the Lobbying Disclosure Act of 1995, and DOT implementing regulation, "New Restrictions on Lobbying," at 49 CFR § 20.110(d)
- Language in Lobbying Certification is mandated by 49 CFR Part 19, Appendix A, Section 7, which provides that contractors file the certification required by 49 CFR Part 20, Appendix A.

Modifications have been made to the Lobbying Certification pursuant to Section 10 of the Lobbying Disclosure Act of 1995.

- Use of "Disclosure of Lobbying Activities," Standard Form-LLL set forth in Appendix B of 49 CFR Part 20, as amended by "Government wide Guidance For New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96) is mandated by 49 CFR Part 20, Appendix A.

Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, *et seq.*] - Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or

employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*.)]
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, *apply* to this certification and disclosure, if any.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

Required Federal Clauses
Clean Water Requirements
33 U.S.C. 1251

Applicability to Contracts

The Clean Water requirements apply to each contract and subcontract which exceeds \$100,000.

Flow Down

The Clean Water requirements flow down to FTA recipients and subrecipients at every tier.

Model Clause/Language

While no mandatory clause is contained in the Federal Water Pollution Control Act, as amended, the following language developed by FTA contains all the mandatory requirements.

Clean Water - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 *et seq*. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

CLEAN AIR
42 U.S.C. 7401 et seq
40 CFR 15.61
49 CFR Part 18

Applicability to Contracts

The Clean Air requirements apply to all contracts exceeding \$100,000, including indefinite quantities where the amount is expected to exceed \$100,000 in any year.

Flow Down

The Clean Air requirements flow down to all subcontracts which exceed \$100,000.

Model Clauses/Language

No specific language is required. FTA has proposed the following language.

Clean Air - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq*. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

Required Federal Clauses

Contract Work Hours and Safety Standards Act

Background and Application

The Contract Work Hours and Safety Standards Act is codified at 40 USC 3701, et seq. The Act applies to grantee contracts and subcontracts “financed at least in part by loans or grants from ... the [Federal] Government.” 40 USC 3701(b)(1)(B)(iii) and (b)(2), 29 CFR 5.2(h), 49 CFR 18.36(i)(6). Although the original Act required its application in any construction contract over \$2,000 or non-construction contract to which the Act applied over \$2,500 (and language to that effect is still found in 49 CFR 18.36(i)(6)), the Act no longer applies to any “contract in an amount that is not greater than \$100,000.” 40 USC 3701(b)(3)(A)(iii).

The Act applies to construction contracts and, in very limited circumstances, non-construction projects that employ “laborers or mechanics on a public work.” These non-construction applications do not generally apply to transit procurements because transit procurements (to include rail cars and buses) are deemed “commercial items.” 40 USC 3707, 41 USC 403 (12). A grantee that contemplates entering into a contract to procure a developmental or unique item should consult counsel to determine if the Act applies to that procurement and that additional language required by 29 CFR 5.5(c) must be added to the basic clause below.

The clause language is drawn directly from 29 CFR 5.5(b) and any deviation from the model clause below should be coordinated with counsel to ensure the Act’s requirements are satisfied.

Clause Language

Contract Work Hours and Safety Standards

1. **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
3. **Withholding for unpaid wages and liquidated damages** - The (write in the name of the grantee) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
4. **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

Required Federal Clauses
Bonding Requirements

Applicability to Contracts

For those construction or facility improvement contracts or subcontracts exceeding \$100,000, FTA may accept the bonding policy and requirements of the recipient, provided that they meet the minimum requirements for construction contracts as follows:

- a. A bid guarantee from each bidder equivalent to five (5) percent of the bid price. The "bid guarantees" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.
- b. A performance bond on the part to the Contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
- c. A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment, as required by law, of all persons supplying labor and material in the execution of the work provided for in the contract. Payment bond amounts required from Contractors are as follows:
 1. 50% of the contract price if the contract price is not more than \$1 million;
 2. 40% of the contract price if the contract price is more than \$1 million but not more than \$5 million;
or
 3. \$2.5 million if the contract price is more than \$5 million.
- d. A cash deposit, certified check or other negotiable instrument may be accepted by a grantee in lieu of performance and payment bonds, provided the grantee has established a procedure to assure that the interest of FTA is adequately protected. An irrevocable letter of credit would also satisfy the requirement for a bond.

Flow Down

Bonding requirements flow down to the first tier contractors.

Model Clauses/Language

FTA does not prescribe specific wording to be included in third party contracts. FTA has prepared sample clauses as follows:

Bid Bond Requirements (Construction)

a. Bid Security

A Bid Bond must be issued by a fully qualified surety company acceptable to (Recipient) and listed as a company currently authorized under 31 CFR, Part 223 as possessing a Certificate of Authority as described thereunder.

b. Rights Reserved

In submitting this Bid, it is understood and agreed by bidder that the right is reserved by (Recipient) to reject any and all bids, or part of any bid, and it is agreed that the Bid may not be withdrawn for a period of [ninety (90)] days subsequent to the opening of bids, without the written consent of (Recipient).

It is also understood and agreed that if the undersigned bidder should withdraw any part or all of his bid within [ninety (90)] days after the bid opening without the written consent of (Recipient), shall refuse or be unable to enter into this Contract, as provided above, or refuse or be unable to furnish adequate and acceptable Performance Bonds and Labor and Material Payments Bonds, as provided above, or refuse or be unable to furnish adequate and acceptable insurance, as provided above, he shall forfeit his bid security to the extent of (Recipient's) damages occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security therefor.

It is further understood and agreed that to the extent the defaulting bidder's Bid Bond, Certified Check, Cashier's Check, Treasurer's Check, and/or Official Bank Check (excluding any income generated thereby which has been retained by (Recipient) as provided in [Item x "Bid Security" of the Instructions to Bidders]) shall prove inadequate to fully recompense (Recipient) for the damages occasioned by default, then the undersigned bidder agrees to indemnify (Recipient) and pay over to (Recipient) the difference between the bid security and (Recipient's) total damages, so as to make (Recipient) whole.

The undersigned understands that any material alteration of any of the above or any of the material contained on this form, other than that requested, will render the bid unresponsive.

Performance and Payment Bonding Requirements (Construction)

The Contractor shall be required to obtain performance and payment bonds as follows:

a. Performance bonds

1. The penal amount of performance bonds shall be 100 percent of the original contract price, unless the (Recipient) determines that a lesser amount would be adequate for the protection of the (Recipient).
2. The (Recipient) may require additional performance bond protection when a contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price. The (Recipient) may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

b. Payment bonds

1. The penal amount of the payment bonds shall equal:
 - i. Fifty percent of the contract price if the contract price is not more than \$1 million.
 - ii. Forty percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or
 - iii. Two and one half million if the contract price is more than \$5 million.
2. If the original contract price is \$5 million or less, the (Recipient) may require additional protection as required by subparagraph 1 if the contract price is increased.

Performance and Payment Bonding Requirements (Non-Construction)

The Contractor may be required to obtain performance and payment bonds when necessary to protect the (Recipient's) interest.

a. The following situations may warrant a performance bond:

1. (Recipient) property or funds are to be provided to the contractor for use in performing the contract or as partial compensation (as in retention of salvaged material).
2. A contractor sells assets to or merges with another concern, and the (Recipient), after recognizing the latter concern as the successor in interest, desires assurance that it is financially capable.
3. Substantial progress payments are made before delivery of end items starts.
4. Contracts are for dismantling, demolition, or removal of improvements.

b. When it is determined that a performance bond is required, the Contractor shall be required to obtain performance bonds as follows:

1. The penal amount of performance bonds shall be 100 percent of the original contract price, unless the (Recipient) determines that a lesser amount would be adequate for the protection of the (Recipient).
2. The (Recipient) may require additional performance bond protection when a contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract

price. The (Recipient) may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

- c. A payment bond is required only when a performance bond is required, and if the use of payment bond is in the (Recipient's) interest.
- d. When it is determined that a payment bond is required, the Contractor shall be required to obtain payment bonds as follows:
 - 1. The penal amount of payment bonds shall equal:
 - i. Fifty percent of the contract price if the contract price is not more than \$1 million;
 - ii. Forty percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or
 - iii. Two and one half million if the contract price is increased.

Advance Payment Bonding Requirements

The Contractor may be required to obtain an advance payment bond if the contract contains an advance payment provision and a performance bond is not furnished. The (recipient) shall determine the amount of the advance payment bond necessary to protect the (Recipient).

Patent Infringement Bonding Requirements (Patent Indemnity)

The Contractor may be required to obtain a patent indemnity bond if a performance bond is not furnished and the financial responsibility of the Contractor is unknown or doubtful. The (recipient) shall determine the amount of the patent indemnity to protect the (Recipient).

Warranty of the Work and Maintenance Bonds

- 1. The Contractor warrants to (Recipient), the Architect and/or Engineer that all materials and equipment furnished under this Contract will be of highest quality and new unless otherwise specified by (Recipient), free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards shall be considered defective. If required by the [Project Manager], the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
- 2. The Work furnished must be of first quality and the workmanship must be the best obtainable in the various trades. The Work must be of safe, substantial and durable construction in all respects. The Contractor hereby guarantees the Work against defective materials or faulty workmanship for a minimum period of one (1) year after Final Payment by (Recipient) and shall replace or repair any defective materials or equipment or faulty workmanship during the period of the guarantee at no cost to (Recipient). As additional security for these guarantees, the Contractor shall, prior to the release of Final Payment [as provided in Item X below], furnish separate Maintenance (or Guarantee) Bonds in form acceptable to (Recipient) written by the same corporate surety that provides the Performance Bond and Labor and Material Payment Bond for this Contract. These bonds shall secure the Contractor's obligation to replace or repair defective materials and faulty workmanship for a minimum period of one (1) year after Final Payment and shall be written in an amount equal to ONE HUNDRED PERCENT (100%) of the CONTRACT SUM, as adjusted (if at all).

Required Federal Clauses
Seismic Safety Requirements

42 U.S.C. 7701 et seq. 49
CFR Part 41

Applicability to Contracts

The Seismic Safety requirements apply only to contracts for the construction of new buildings or additions to existing buildings.

Applicability to Micro-Purchases

Micro-purchases are defined as those purchases under \$2,500. These requirements do not apply to micro-purchases.

Flow Down

The Seismic Safety requirements flow down from FTA recipients and subrecipients to first tier contractors to assure compliance, with the applicable building standards for Seismic Safety, including the work performed by all subcontractors.

Model Clauses/Language

The regulations do not provide suggested language for third-party contract clauses. The following language has been developed by FTA.

Seismic Safety - The contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

APPENDIX C

DBE CLAUSES

DBE UTILIZATION FORM

The undersigned Proposer has satisfied the requirements of the RFP specification in the following manner (please check the appropriate space):

_____ The Proposer is committed to a minimum of _____% DBE utilization on this contract.

_____ The Proposer (if unable to meet the DBE goal of _____ %) is committed to a minimum of _____% DBE utilization on this contract and submits documentation demonstrating good faith efforts.

PROPOSER'S NAME: _____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

DBE PARTICIPATION SCHEDULE

The Proposer shall complete the following information for all DBE's participating in the contract that comprises the DBE Utilization percent stated above. The Proposer shall also furnish the name and telephone number of the appropriate contact person should the CITY OF GREENFIELD have any questions in relation to the information furnished herein.

DBE IDENTIFICATION AND INFORMATION FORM

Name Address	Contact Name and Telephone Number	Participation \$ Of Total Contract Value	Description of Work To Be Performed	Category (Indicate MBE or WBE)

PRIME COMPANY NAME: _____

NAME OF CONTACT PERSON: _____

TELEPHONE NUMBER: _____

DBE LETTER OF INTENT

**CITY OF GREENFIELD
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
(To be supplied if using DBE subcontractors)
LETTER OF INTENT**

To: _____ (Name of Prime Contractor)

The undersigned intends to perform work in connection with this project as (check one):

- an individual DBE a partnership a joint venture

The Disadvantaged Business Enterprise status of the undersigned is confirmed

- (a) On the most recent reference list of Disadvantaged Business Enterprises published by Massachusetts Supplier Diversity Office dated _____, or
- (b) On the attached Disadvantaged Business Enterprise Identification Statement

The undersigned is prepared to perform the following work in connection with the above project, (Specify in detail particular work items or parts thereof to be performed):

The proposer/bidder is committed to utilizing the above named DBE firm for the work described above. The estimated dollar amount if this work is \$ _____.

You have projected the following commencement date for such work and the undersigned is projecting completion of such work as follows:

<u>Items</u>	<u>Projected Commencement Date</u>	<u>Projected Completion Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

The above work will not be sublet to a non- Disadvantaged Business Enterprise at any tier. The undersigned will enter a formal agreement for the above work conditioned upon an execution of a contract with CITY OF GREENFIELD.

Date _____
Name of Disadvantaged Business Enterprise _____

(Proposer shall submit letter of intent for each DBE subcontractor.)

DBE CLAUSES

STATE OF _____ Date: _____
COUNTY OF _____ S.S.

The undersigned being duly sworn, deposes and says that he/she is the

(Sole owner, partner, president, treasurer or other duly authorized official of a corporation)

of _____ (Name
of DBE)

certifies that since the date of its certification by

(SOMWBA or out-of-state certification agency)

the certification has not been revoked nor has it expired nor has there been any change in
the minority status of

(Name of DBE)

(Signature and Title of Person Making Affidavit)

Sworn to before me this _____ day of _____, 20____

Notary Public: _____

My commission expires: _____

NOTE: The Proposer must attach the DBE's most recent certification letter or document to this affidavit.

APPENDIX B
MASSACHUSETTS WAGE RATES



**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS**

Prevailing Wage Rates

**As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H**

CHARLES D. BAKER
Governor

ROSALIN ACOSTA
Secretary

KARYN E. POLITO
Lt. Governor

WILLIAM D MCKINNEY
Director

Awarding Authority: City of Greenfield
Contract Number: DPW 19-28 **City/Town:** GREENFIELD
Description of Work: Replacement of existing concrete/asphalt sidewalk with new concrete sidewalk and granite curbing; installation of ADA ramps, RRFBs and one catch basin; and a 1.5" mill and HMA overlay of Olive St.
Job Location: Olive St., Bank Row and Hope St.

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.25	\$11.91	\$12.70	\$0.00	\$57.86
	06/01/2019	\$34.25	\$11.91	\$12.70	\$0.00	\$58.86
	08/01/2019	\$34.25	\$12.41	\$12.70	\$0.00	\$59.36
	12/01/2019	\$34.25	\$12.41	\$13.72	\$0.00	\$60.38
	06/01/2020	\$35.15	\$12.41	\$13.72	\$0.00	\$61.28
	08/01/2020	\$35.15	\$12.91	\$13.72	\$0.00	\$61.78
	12/01/2020	\$35.15	\$12.91	\$14.82	\$0.00	\$62.88
	06/01/2021	\$35.95	\$12.91	\$14.82	\$0.00	\$63.68
	08/01/2021	\$35.95	\$13.41	\$14.82	\$0.00	\$64.18
	12/01/2021	\$35.95	\$13.41	\$16.01	\$0.00	\$65.37
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.32	\$11.91	\$12.70	\$0.00	\$57.93
	06/01/2019	\$34.32	\$11.91	\$12.70	\$0.00	\$58.93
	08/01/2019	\$34.32	\$12.41	\$12.70	\$0.00	\$59.43
	12/01/2019	\$34.32	\$12.41	\$13.72	\$0.00	\$60.45
	06/01/2020	\$35.22	\$12.41	\$13.72	\$0.00	\$61.35
	08/01/2020	\$35.22	\$12.91	\$13.72	\$0.00	\$61.85
	12/01/2020	\$35.22	\$12.91	\$14.82	\$0.00	\$62.95
	06/01/2021	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	08/01/2021	\$36.02	\$13.41	\$14.82	\$0.00	\$64.25
	12/01/2021	\$36.02	\$13.41	\$16.01	\$0.00	\$65.44
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.44	\$11.91	\$12.70	\$0.00	\$58.05
	06/01/2019	\$34.44	\$11.91	\$12.70	\$0.00	\$59.05
	08/01/2019	\$34.44	\$12.41	\$12.70	\$0.00	\$59.55
	12/01/2019	\$34.44	\$12.41	\$13.72	\$0.00	\$60.57
	06/01/2020	\$35.34	\$12.41	\$13.72	\$0.00	\$61.47
	08/01/2020	\$35.34	\$12.91	\$13.72	\$0.00	\$61.97
	12/01/2020	\$35.34	\$12.91	\$14.82	\$0.00	\$63.07
	06/01/2021	\$36.14	\$12.91	\$14.82	\$0.00	\$63.87
	08/01/2021	\$36.14	\$13.41	\$14.82	\$0.00	\$64.37
	12/01/2021	\$36.14	\$13.41	\$16.01	\$0.00	\$65.56
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.75	\$7.85	\$13.91	\$0.00	\$53.51
	06/03/2019	\$32.56	\$7.85	\$13.91	\$0.00	\$54.32
	12/02/2019	\$33.37	\$7.85	\$13.91	\$0.00	\$55.13
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.75	\$7.85	\$11.89	\$0.00	\$51.49
	06/01/2019	\$32.54	\$7.85	\$11.89	\$0.00	\$52.28
	12/01/2019	\$33.33	\$7.85	\$11.89	\$0.00	\$53.07
	06/01/2020	\$34.14	\$7.85	\$11.89	\$0.00	\$53.88
	12/01/2020	\$34.95	\$7.85	\$11.89	\$0.00	\$54.69
	06/01/2021	\$35.79	\$7.85	\$11.89	\$0.00	\$55.53
	12/01/2021	\$36.62	\$7.85	\$11.89	\$0.00	\$56.36
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	12/01/2018	\$31.86	\$12.50	\$8.00	\$0.00	\$52.36
	06/01/2019	\$32.76	\$12.50	\$8.00	\$0.00	\$53.26
	12/01/2019	\$33.66	\$12.50	\$8.00	\$0.00	\$54.16
	06/01/2020	\$34.56	\$12.50	\$8.00	\$0.00	\$55.06
	12/01/2020	\$35.46	\$12.50	\$8.00	\$0.00	\$55.96
ASPHALT RAKER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.79	\$11.44	\$13.81	\$0.00	\$60.04
	06/01/2019	\$35.30	\$11.44	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.90	\$11.44	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.79	\$11.44	\$13.81	\$0.00	\$60.04
	06/01/2019	\$35.30	\$11.44	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.90	\$11.44	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
BATCH/CEMENT PLANT - ON SITE <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.75	\$7.85	\$13.91	\$0.00	\$53.51
	06/03/2019	\$32.56	\$7.85	\$13.91	\$0.00	\$54.32
	12/02/2019	\$33.37	\$7.85	\$13.91	\$0.00	\$55.13
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.75	\$7.85	\$11.89	\$0.00	\$51.49
	06/01/2019	\$32.54	\$7.85	\$11.89	\$0.00	\$52.28
	12/01/2019	\$33.33	\$7.85	\$11.89	\$0.00	\$53.07
	06/01/2020	\$34.14	\$7.85	\$11.89	\$0.00	\$53.88
	12/01/2020	\$34.95	\$7.85	\$11.89	\$0.00	\$54.69
	06/01/2021	\$35.79	\$7.85	\$11.89	\$0.00	\$55.53
12/01/2021	\$36.62	\$7.85	\$11.89	\$0.00	\$56.36	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2019	\$44.71	\$7.07	\$17.72	\$0.00	\$69.50
	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
2	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
3	70	\$31.30	\$7.07	\$12.40	\$0.00	\$50.77
4	75	\$33.53	\$7.07	\$13.30	\$0.00	\$53.90
5	80	\$35.77	\$7.07	\$14.18	\$0.00	\$57.02
6	85	\$38.00	\$7.07	\$15.07	\$0.00	\$60.14
7	90	\$40.24	\$7.07	\$15.95	\$0.00	\$63.26
8	95	\$42.47	\$7.07	\$16.84	\$0.00	\$66.38

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2019	\$41.96	\$10.75	\$18.77	\$0.00	\$71.48
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	08/01/2019	\$43.31	\$10.75	\$18.91	\$0.00	\$72.97
	02/01/2020	\$43.86	\$10.75	\$18.91	\$0.00	\$73.52
	08/01/2020	\$45.21	\$10.75	\$19.06	\$0.00	\$75.02
	02/01/2021	\$45.76	\$10.75	\$19.06	\$0.00	\$75.57
	08/01/2021	\$47.16	\$10.75	\$19.22	\$0.00	\$77.13
	02/01/2022	\$47.69	\$10.75	\$19.22	\$0.00	\$77.66

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$38.60	\$7.85	\$15.55	\$0.00	\$62.00
	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS LOCAL 108 - HAMPDEN HAMPSHIRE FRANKLIN</i>	03/04/2019	\$38.64	\$8.26	\$15.00	\$0.00	\$61.90

Apprentice - CARPENTER - Local 108 Hampden Hampshire Franklin

Effective Date - 03/04/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.32	\$8.26	\$1.22	\$0.00	\$28.80
2	60	\$23.18	\$8.26	\$1.22	\$0.00	\$32.66
3	70	\$27.05	\$8.26	\$11.34	\$0.00	\$46.65
4	75	\$28.98	\$8.26	\$11.34	\$0.00	\$48.58
5	80	\$30.91	\$8.26	\$12.56	\$0.00	\$51.73
6	80	\$30.91	\$8.26	\$12.56	\$0.00	\$51.73
7	90	\$34.78	\$8.26	\$13.78	\$0.00	\$56.82
8	90	\$34.78	\$8.26	\$13.78	\$0.00	\$56.82

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$25.93/ 3&4 \$30.77/ 5&6 \$46.41/ 7&8 \$51.29

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS LOCAL 108 - HAMPDEN HAMPSHIRE FRANKLIN</i>	10/01/2018	\$22.71	\$7.07	\$7.86	\$0.00	\$37.64
	04/01/2019	\$23.10	\$7.07	\$7.86	\$0.00	\$38.03
	10/01/2019	\$23.49	\$7.07	\$7.86	\$0.00	\$38.42

All Aspects of New Wood Frame Work

Apprentice - CARPENTER (Wood Frame) - 108 Hampden Hampshire

Effective Date - 10/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$13.63	\$7.07	\$0.00	\$0.00	\$20.70
2	60	\$13.63	\$7.07	\$0.00	\$0.00	\$20.70
3	65	\$14.76	\$7.07	\$7.86	\$0.00	\$29.69
4	70	\$15.90	\$7.07	\$7.86	\$0.00	\$30.83
5	75	\$17.03	\$7.07	\$7.86	\$0.00	\$31.96
6	80	\$18.17	\$7.07	\$7.86	\$0.00	\$33.10
7	85	\$19.30	\$7.07	\$7.86	\$0.00	\$34.23
8	90	\$20.44	\$7.07	\$7.86	\$0.00	\$35.37

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$13.86	\$7.07	\$0.00	\$0.00	\$20.93
2	60	\$13.86	\$7.07	\$0.00	\$0.00	\$20.93
3	65	\$15.02	\$7.07	\$7.86	\$0.00	\$29.95
4	70	\$16.17	\$7.07	\$7.86	\$0.00	\$31.10
5	75	\$17.33	\$7.07	\$7.86	\$0.00	\$32.26
6	80	\$18.48	\$7.07	\$7.86	\$0.00	\$33.41
7	85	\$19.64	\$7.07	\$7.86	\$0.00	\$34.57
8	90	\$20.79	\$7.07	\$7.86	\$0.00	\$35.72

Notes:
 % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$17.29/ 3&4 \$24.31/ 5&6 \$30.83/ 7&8 \$33.10

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2019	\$40.46	\$12.45	\$17.64	\$0.30	\$70.85
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	07/01/2019	\$41.03	\$12.45	\$17.64	\$0.30	\$71.42
	01/01/2020	\$42.51	\$12.45	\$17.64	\$0.30	\$72.90

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CEMENT MASONRY/PLASTERING - Springfield/Pittsfield

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.23	\$12.45	\$15.41	\$0.00	\$48.09
2	60	\$24.28	\$12.45	\$17.64	\$0.30	\$54.67
3	65	\$26.30	\$12.45	\$17.64	\$0.30	\$56.69
4	70	\$28.32	\$12.45	\$17.64	\$0.30	\$58.71
5	75	\$30.35	\$12.45	\$17.64	\$0.30	\$60.74
6	80	\$32.37	\$12.45	\$17.64	\$0.30	\$62.76
7	90	\$36.41	\$12.45	\$17.64	\$0.30	\$66.80

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.52	\$12.45	\$15.41	\$0.00	\$48.38
2	60	\$24.62	\$12.45	\$17.64	\$0.30	\$55.01
3	65	\$26.67	\$12.45	\$17.64	\$0.30	\$57.06
4	70	\$28.72	\$12.45	\$17.64	\$0.30	\$59.11
5	75	\$30.77	\$12.45	\$17.64	\$0.30	\$61.16
6	80	\$32.82	\$12.45	\$17.64	\$0.30	\$63.21
7	90	\$36.93	\$12.45	\$17.64	\$0.30	\$67.32

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
LABORERS - ZONE 3 (BUILDING & SITE)	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63

For apprentice rates see "Apprentice- LABORER"

COMPRESSOR OPERATOR	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
OPERATING ENGINEERS LOCAL 98	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CRANE OPERATOR	12/01/2018	\$38.29	\$11.44	\$13.81	\$0.00	\$63.54
OPERATING ENGINEERS LOCAL 98	06/01/2019	\$38.80	\$11.44	\$14.08	\$0.00	\$64.32
	12/01/2019	\$39.40	\$11.44	\$14.35	\$0.00	\$65.19

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE)	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
PAINTERS LOCAL 35 - ZONE 3	07/01/2019	\$51.46	\$8.15	\$20.85	\$0.00	\$80.46
	01/01/2020	\$42.56	\$8.15	\$20.85	\$0.00	\$71.56
	07/01/2020	\$53.66	\$8.15	\$20.85	\$0.00	\$82.66
	01/01/2021	\$54.76	\$8.15	\$20.85	\$0.00	\$83.76

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.73	\$8.15	\$0.00	\$0.00	\$33.88
2	55	\$28.30	\$8.15	\$5.64	\$0.00	\$42.09
3	60	\$30.88	\$8.15	\$6.15	\$0.00	\$45.18
4	65	\$33.45	\$8.15	\$6.66	\$0.00	\$48.26
5	70	\$36.02	\$8.15	\$17.78	\$0.00	\$61.95
6	75	\$38.60	\$8.15	\$18.29	\$0.00	\$65.04
7	80	\$41.17	\$8.15	\$18.80	\$0.00	\$68.12
8	90	\$46.31	\$8.15	\$19.83	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2018	\$38.80	\$7.85	\$15.35	\$0.00	\$62.00
	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2018	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2018	\$39.55	\$7.85	\$15.35	\$0.00	\$62.75
	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75

For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2018	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2018	\$39.55	\$7.85	\$15.35	\$0.00	\$62.75
	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2018	\$38.80	\$7.85	\$15.35	\$0.00	\$62.00
	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2018	\$65.20	\$9.90	\$21.15	\$0.00	\$96.25
	08/01/2019	\$68.52	\$9.90	\$21.15	\$0.00	\$99.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2018	\$69.86	\$9.90	\$21.15	\$0.00	\$100.91
	08/01/2019	\$73.41	\$9.90	\$21.15	\$0.00	\$104.46
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
ELECTRICIAN (Including Core Drilling) <i>ELECTRICIANS LOCAL 7</i>	12/30/2018	\$41.91	\$10.50	\$12.06	\$0.00	\$64.47
	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

Apprentice - ELECTRICIAN - Local 7

Effective Date - 12/30/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.76	\$5.70	\$0.50	\$0.00	\$22.96
2	45	\$18.86	\$5.70	\$0.57	\$0.00	\$25.13
3	50	\$20.96	\$10.50	\$6.93	\$0.00	\$38.39
4	55	\$23.05	\$10.50	\$6.99	\$0.00	\$40.54
5	65	\$27.24	\$10.50	\$8.12	\$0.00	\$45.86
6	70	\$29.34	\$10.50	\$9.18	\$0.00	\$49.02

Effective Date - 06/30/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.06	\$5.85	\$0.51	\$0.00	\$23.42
2	45	\$19.20	\$5.85	\$0.58	\$0.00	\$25.63
3	50	\$21.33	\$10.75	\$6.94	\$0.00	\$39.02
4	55	\$23.46	\$10.75	\$7.00	\$0.00	\$41.21
5	65	\$27.73	\$10.75	\$8.13	\$0.00	\$46.61
6	70	\$29.86	\$10.75	\$9.20	\$0.00	\$49.81

Notes:

Steps 1-2 are 1000 hrs; Steps 3-6 are 1500 hrs.

Apprentice to Journeyworker Ratio:2:3****

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2019	\$53.11	\$15.58	\$17.51	\$0.00	\$86.20
	01/01/2020	\$54.85	\$15.73	\$18.41	\$0.00	\$88.99
	01/01/2021	\$56.69	\$15.88	\$19.31	\$0.00	\$91.88
	01/01/2022	\$58.62	\$16.03	\$20.21	\$0.00	\$94.86

Apprentice - ELEVATOR CONSTRUCTOR - Local 41

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.56	\$15.58	\$0.00	\$0.00	\$42.14
2	55	\$29.21	\$15.58	\$17.51	\$0.00	\$62.30
3	65	\$34.52	\$15.58	\$17.51	\$0.00	\$67.61
4	70	\$37.18	\$15.58	\$17.51	\$0.00	\$70.27
5	80	\$42.49	\$15.58	\$17.51	\$0.00	\$75.58

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.43	\$15.73	\$0.00	\$0.00	\$43.16
2	55	\$30.17	\$15.73	\$18.41	\$0.00	\$64.31
3	65	\$35.65	\$15.73	\$18.41	\$0.00	\$69.79
4	70	\$38.40	\$15.73	\$18.41	\$0.00	\$72.54
5	80	\$43.88	\$15.73	\$18.41	\$0.00	\$78.02

Notes:

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2019	\$37.18	\$15.58	\$17.51	\$0.00	\$70.27
	01/01/2020	\$38.40	\$15.73	\$18.41	\$0.00	\$72.54
	01/01/2021	\$39.68	\$15.88	\$19.31	\$0.00	\$74.87
	01/01/2022	\$41.03	\$16.03	\$20.21	\$0.00	\$77.27

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
	12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$18.84	\$4.80	\$4.10	\$0.00	\$27.74
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$21.33	\$4.80	\$4.10	\$0.00	\$30.23
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$22.33	\$4.80	\$4.10	\$0.00	\$31.23

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 7</i>	12/30/2018	\$41.91	\$10.50	\$12.06	\$0.00	\$64.47
	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 7</i>	12/30/2018	\$41.91	\$10.50	\$12.06	\$0.00	\$64.47
	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16

Apprentice - OPERATING ENGINEERS - Local 98 Class 3

Effective Date - 12/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.56	\$11.44	\$13.81	\$0.00	\$45.81
2	70	\$23.98	\$11.44	\$13.81	\$0.00	\$49.23
3	80	\$27.41	\$11.44	\$13.81	\$0.00	\$52.66
4	90	\$30.83	\$11.44	\$13.81	\$0.00	\$56.08

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.86	\$11.44	\$14.08	\$0.00	\$46.38
2	70	\$24.34	\$11.44	\$14.08	\$0.00	\$49.86
3	80	\$27.82	\$11.44	\$14.08	\$0.00	\$53.34
4	90	\$31.29	\$11.44	\$14.08	\$0.00	\$56.81

Notes:

Steps 1-2 are 1000 hrs.; Steps 3-4 are 2000 hrs.

Apprentice to Journeyworker Ratio:1:6

FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$22.50	\$7.85	\$11.89	\$0.00	\$42.24
	06/01/2019	\$22.50	\$7.85	\$11.89	\$0.00	\$42.24
	12/01/2019	\$23.50	\$7.85	\$11.89	\$0.00	\$43.24
	06/01/2020	\$23.50	\$7.85	\$11.89	\$0.00	\$43.24
	12/01/2020	\$24.50	\$7.85	\$11.89	\$0.00	\$44.24
	06/01/2021	\$24.50	\$7.85	\$11.89	\$0.00	\$44.24
	12/01/2021	\$24.50	\$7.85	\$11.89	\$0.00	\$44.24
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE III</i>	03/01/2016	\$32.60	\$8.55	\$14.42	\$0.00	\$55.57

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone III

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.30	\$8.55	\$1.20	\$0.00	\$26.05
2	55	\$17.93	\$8.55	\$1.20	\$0.00	\$27.68
3	60	\$19.56	\$8.55	\$10.82	\$0.00	\$38.93
4	65	\$21.19	\$8.55	\$10.82	\$0.00	\$40.56
5	70	\$22.82	\$8.55	\$12.02	\$0.00	\$43.39
6	75	\$24.45	\$8.55	\$12.02	\$0.00	\$45.02
7	80	\$26.08	\$8.55	\$13.22	\$0.00	\$47.85
8	85	\$27.71	\$8.55	\$13.22	\$0.00	\$49.48

Notes: Steps are 750 hrs.
 % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$24.42/ 3&4 \$28.84/ 5&6 \$43.39/ 7&8 \$47.85

Apprentice to Journeyworker Ratio:1:1

FORK LIFT <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.48	\$11.44	\$13.81	\$0.00	\$59.73
	06/01/2019	\$34.99	\$11.44	\$14.08	\$0.00	\$60.51
	12/01/2019	\$35.59	\$11.44	\$14.35	\$0.00	\$61.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATORS/LIGHTING PLANTS <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$31.03	\$11.44	\$13.81	\$0.00	\$56.28
	06/01/2019	\$31.54	\$11.44	\$14.08	\$0.00	\$57.06
	12/01/2019	\$32.14	\$11.44	\$14.35	\$0.00	\$57.93
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 1333</i>	06/01/2018	\$37.18	\$10.40	\$9.35	\$0.00	\$56.93
	06/01/2019	\$38.18	\$10.60	\$9.90	\$0.00	\$58.68
	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 1333

Effective Date - 06/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.59	\$10.40	\$1.60	\$0.00	\$30.59
2	56	\$20.91	\$10.40	\$1.60	\$0.00	\$32.91
3	63	\$23.24	\$10.40	\$2.10	\$0.00	\$35.74
4	69	\$25.56	\$10.40	\$2.10	\$0.00	\$38.06
5	75	\$27.89	\$10.40	\$2.60	\$0.00	\$40.89
6	81	\$30.21	\$10.40	\$2.60	\$0.00	\$43.21
7	88	\$32.53	\$10.40	\$9.35	\$0.00	\$52.28
8	94	\$34.86	\$10.40	\$9.35	\$0.00	\$54.61

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.09	\$10.60	\$1.80	\$0.00	\$31.49
2	56	\$21.48	\$10.60	\$1.80	\$0.00	\$33.88
3	63	\$23.86	\$10.60	\$2.40	\$0.00	\$36.86
4	69	\$26.25	\$10.60	\$2.40	\$0.00	\$39.25
5	75	\$28.64	\$10.60	\$2.90	\$0.00	\$42.14
6	81	\$31.02	\$10.60	\$2.90	\$0.00	\$44.52
7	88	\$33.41	\$10.60	\$9.90	\$0.00	\$53.91
8	94	\$35.79	\$10.60	\$9.90	\$0.00	\$56.29

Notes:

Apprentice to Journeyworker Ratio:1:3

GRADER/TRENCHING MACHINE/DERRICK <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.79	\$11.44	\$13.81	\$0.00	\$60.04
	06/01/2019	\$35.30	\$11.44	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.90	\$11.44	\$14.35	\$0.00	\$61.69

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2019	\$34.74	\$10.64	\$16.22	\$1.77	\$63.37
	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 7</i>	12/30/2018	\$41.91	\$10.50	\$12.06	\$0.00	\$64.47
	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2019	\$34.74	\$10.64	\$16.22	\$1.77	\$63.37
	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2019	\$40.21	\$8.75	\$16.35	\$0.00	\$65.31
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC MECHANIC <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2019	\$40.21	\$8.75	\$16.35	\$0.00	\$65.31
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.75	\$7.85	\$11.89	\$0.00	\$51.49
	06/01/2019	\$32.54	\$7.85	\$11.89	\$0.00	\$52.28
	12/01/2019	\$33.33	\$7.85	\$11.89	\$0.00	\$53.07
	06/01/2020	\$34.14	\$7.85	\$11.89	\$0.00	\$53.88
	12/01/2020	\$34.95	\$7.85	\$11.89	\$0.00	\$54.69
	06/01/2021	\$35.79	\$7.85	\$11.89	\$0.00	\$55.53
	12/01/2021	\$36.62	\$7.85	\$11.89	\$0.00	\$56.36
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	09/01/2018	\$37.67	\$12.50	\$15.60	\$0.00	\$65.77
	09/01/2019	\$39.67	\$12.50	\$15.60	\$0.00	\$67.77

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Springfield

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.84	\$12.50	\$11.40	\$0.00	\$42.74
2	60	\$22.60	\$12.50	\$12.24	\$0.00	\$47.34
3	70	\$26.37	\$12.50	\$13.08	\$0.00	\$51.95
4	80	\$30.14	\$12.50	\$13.92	\$0.00	\$56.56

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.84	\$12.50	\$11.40	\$0.00	\$43.74
2	60	\$23.80	\$12.50	\$12.24	\$0.00	\$48.54
3	70	\$27.77	\$12.50	\$13.08	\$0.00	\$53.35
4	80	\$31.74	\$12.50	\$13.92	\$0.00	\$58.16

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (SPRINGFIELD AREA)</i>	03/16/2019	\$34.56	\$8.00	\$20.40	\$0.00	\$62.96
	09/16/2019	\$35.46	\$8.00	\$20.40	\$0.00	\$63.86
	03/16/2020	\$36.31	\$8.00	\$20.40	\$0.00	\$64.71
	09/16/2020	\$37.21	\$8.00	\$20.40	\$0.00	\$65.61
	03/16/2021	\$38.06	\$8.00	\$20.40	\$0.00	\$66.46

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Springfield

Effective Date - 03/16/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.74	\$8.00	\$20.40	\$0.00	\$49.14
2	70	\$24.19	\$8.00	\$20.40	\$0.00	\$52.59
3	75	\$25.92	\$8.00	\$20.40	\$0.00	\$54.32
4	80	\$27.65	\$8.00	\$20.40	\$0.00	\$56.05
5	85	\$29.38	\$8.00	\$20.40	\$0.00	\$57.78
6	90	\$31.10	\$8.00	\$20.40	\$0.00	\$59.50

Effective Date - 09/16/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.28	\$8.00	\$20.40	\$0.00	\$49.68
2	70	\$24.82	\$8.00	\$20.40	\$0.00	\$53.22
3	75	\$26.60	\$8.00	\$20.40	\$0.00	\$55.00
4	80	\$28.37	\$8.00	\$20.40	\$0.00	\$56.77
5	85	\$30.14	\$8.00	\$20.40	\$0.00	\$58.54
6	90	\$31.91	\$8.00	\$20.40	\$0.00	\$60.31

Notes:

Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 3 (BUILDING & SITE)	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
LABORER LABORERS - ZONE 3 (BUILDING & SITE)	12/03/2018	\$31.00	\$7.85	\$13.91	\$0.00	\$52.76
	06/03/2019	\$31.81	\$7.85	\$13.91	\$0.00	\$53.57
	12/02/2019	\$32.62	\$7.85	\$13.91	\$0.00	\$54.38

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 3 Building & Site

Effective Date - 12/03/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$18.60	\$7.85	\$13.91	\$0.00	\$40.36
2	70	\$21.70	\$7.85	\$13.91	\$0.00	\$43.46
3	80	\$24.80	\$7.85	\$13.91	\$0.00	\$46.56
4	90	\$27.90	\$7.85	\$13.91	\$0.00	\$49.66

Effective Date - 06/03/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.09	\$7.85	\$13.91	\$0.00	\$40.85
2	70	\$22.27	\$7.85	\$13.91	\$0.00	\$44.03
3	80	\$25.45	\$7.85	\$13.91	\$0.00	\$47.21
4	90	\$28.63	\$7.85	\$13.91	\$0.00	\$50.39

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY)	12/01/2018	\$31.00	\$7.85	\$11.89	\$0.00	\$50.74
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2019	\$31.79	\$7.85	\$11.89	\$0.00	\$51.53
	12/01/2019	\$32.58	\$7.85	\$11.89	\$0.00	\$52.32
	06/01/2020	\$33.39	\$7.85	\$11.89	\$0.00	\$53.13
	12/01/2020	\$34.20	\$7.85	\$11.89	\$0.00	\$53.94
	06/01/2021	\$35.04	\$7.85	\$11.89	\$0.00	\$54.78
	12/01/2021	\$35.87	\$7.85	\$11.89	\$0.00	\$55.61

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER (Heavy & Highway) - Zone 3

Effective Date - 12/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$18.60	\$7.85	\$11.89	\$0.00	\$38.34
2	70	\$21.70	\$7.85	\$11.89	\$0.00	\$41.44
3	80	\$24.80	\$7.85	\$11.89	\$0.00	\$44.54
4	90	\$27.90	\$7.85	\$11.89	\$0.00	\$47.64

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.07	\$7.85	\$11.89	\$0.00	\$38.81
2	70	\$22.25	\$7.85	\$11.89	\$0.00	\$41.99
3	80	\$25.43	\$7.85	\$11.89	\$0.00	\$45.17
4	90	\$28.61	\$7.85	\$11.89	\$0.00	\$48.35

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER
LABORERS - ZONE 3 (BUILDING & SITE)

12/03/2018	\$31.00	\$7.85	\$13.91	\$0.00	\$52.76
06/03/2019	\$31.81	\$7.85	\$13.91	\$0.00	\$53.57
12/02/2019	\$32.62	\$7.85	\$13.91	\$0.00	\$54.38

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER
LABORERS - ZONE 3 (BUILDING & SITE)

12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER
LABORERS - ZONE 3 (BUILDING & SITE)

12/01/2018	\$31.10	\$7.85	\$13.91	\$0.00	\$52.86
06/01/2019	\$31.91	\$7.85	\$13.91	\$0.00	\$53.67
12/01/2019	\$32.72	\$7.85	\$13.91	\$0.00	\$54.48

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER
LABORERS - ZONE 3 (BUILDING & SITE)

12/03/2018	\$32.00	\$7.85	\$13.91	\$0.00	\$53.76
06/03/2019	\$32.81	\$7.85	\$13.91	\$0.00	\$54.57
12/02/2019	\$33.62	\$7.85	\$13.91	\$0.00	\$55.38

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER (HEAVY & HIGHWAY)
LABORERS - ZONE 3 (HEAVY & HIGHWAY)

12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

LABORER: MULTI-TRADE TENDER
LABORERS - ZONE 3 (BUILDING & SITE)

12/03/2018	\$31.00	\$7.85	\$13.91	\$0.00	\$52.76
06/03/2019	\$31.81	\$7.85	\$13.91	\$0.00	\$53.57
12/02/2019	\$32.62	\$7.85	\$13.91	\$0.00	\$54.38

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.00	\$7.85	\$13.91	\$0.00	\$52.76
	06/03/2019	\$31.81	\$7.85	\$13.91	\$0.00	\$53.57
	12/02/2019	\$32.62	\$7.85	\$13.91	\$0.00	\$54.38
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
	12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	02/01/2019	\$34.67	\$10.75	\$18.26	\$0.00	\$63.68
	08/01/2019	\$35.67	\$10.75	\$18.37	\$0.00	\$64.79
	02/01/2020	\$36.17	\$10.75	\$18.37	\$0.00	\$65.29
	08/01/2020	\$37.17	\$10.75	\$18.49	\$0.00	\$66.41
	02/01/2021	\$37.67	\$10.75	\$18.49	\$0.00	\$66.91
	08/01/2021	\$38.67	\$10.75	\$18.62	\$0.00	\$68.04
	02/01/2022	\$39.12	\$10.75	\$18.62	\$0.00	\$68.49

Apprentice - MARBLE-TILE FINISHER-Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.34	\$10.75	\$18.26	\$0.00	\$46.35
2	60	\$20.80	\$10.75	\$18.26	\$0.00	\$49.81
3	70	\$24.27	\$10.75	\$18.26	\$0.00	\$53.28
4	80	\$27.74	\$10.75	\$18.26	\$0.00	\$56.75
5	90	\$31.20	\$10.75	\$18.26	\$0.00	\$60.21

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.84	\$10.75	\$18.37	\$0.00	\$46.96
2	60	\$21.40	\$10.75	\$18.37	\$0.00	\$50.52
3	70	\$24.97	\$10.75	\$18.37	\$0.00	\$54.09
4	80	\$28.54	\$10.75	\$18.37	\$0.00	\$57.66
5	90	\$32.10	\$10.75	\$18.37	\$0.00	\$61.22

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE MASON/TILE LAYER(SP/PT)SeeBrick BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE						
See "BRICK/STONE/ARTIFICIAL MASONRY(INCL.MASONRY WATERPROOFING)						
MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 98	12/01/2018	\$34.79	\$11.44	\$13.81	\$0.00	\$60.04
	06/01/2019	\$35.30	\$11.44	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.90	\$11.44	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANIC/WELDER/BOOM TRUCK OPERATING ENGINEERS LOCAL 98	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 3) MILLWRIGHTS LOCAL 1121 - Zone 3	10/01/2018	\$36.29	\$9.90	\$18.50	\$0.00	\$64.69
	04/01/2019	\$37.11	\$9.90	\$18.50	\$0.00	\$65.51

Apprentice - MILLWRIGHT - Local 1121 Zone 3

Effective Date - 10/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$19.96	\$9.90	\$5.31	\$0.00	\$35.17
2	65	\$23.59	\$9.90	\$15.13	\$0.00	\$48.62
3	75	\$27.22	\$9.90	\$16.10	\$0.00	\$53.22
4	85	\$30.85	\$9.90	\$17.06	\$0.00	\$57.81

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.41	\$9.90	\$5.31	\$0.00	\$35.62
2	65	\$24.12	\$9.90	\$15.13	\$0.00	\$49.15
3	75	\$27.83	\$9.90	\$16.10	\$0.00	\$53.83
4	85	\$31.54	\$9.90	\$17.06	\$0.00	\$58.50

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER LABORERS - ZONE 3 (BUILDING & SITE)	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
OILER OPERATING ENGINEERS LOCAL 98	12/01/2018	\$29.95	\$11.44	\$13.81	\$0.00	\$55.20
	06/01/2019	\$30.46	\$11.44	\$14.08	\$0.00	\$55.98
	12/01/2019	\$31.06	\$11.44	\$14.35	\$0.00	\$56.85
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS VI OPERATING ENGINEERS LOCAL 98	12/01/2018	\$27.97	\$11.44	\$13.81	\$0.00	\$53.22
	06/01/2019	\$28.48	\$11.44	\$14.08	\$0.00	\$54.00
	12/01/2019	\$29.08	\$11.44	\$14.35	\$0.00	\$54.87
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 3</i>	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
	07/01/2019	\$51.46	\$8.15	\$20.85	\$0.00	\$80.46
	01/01/2020	\$52.56	\$8.15	\$20.85	\$0.00	\$81.56
	07/01/2020	\$53.66	\$8.15	\$20.85	\$0.00	\$82.66
	01/01/2021	\$54.76	\$8.15	\$20.85	\$0.00	\$83.76

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.73	\$8.15	\$0.00	\$0.00	\$33.88
2	55	\$28.30	\$8.15	\$5.64	\$0.00	\$42.09
3	60	\$30.88	\$8.15	\$6.15	\$0.00	\$45.18
4	65	\$33.45	\$8.15	\$6.66	\$0.00	\$48.26
5	70	\$36.02	\$8.15	\$17.78	\$0.00	\$61.95
6	75	\$38.60	\$8.15	\$18.29	\$0.00	\$65.04
7	80	\$41.17	\$8.15	\$18.80	\$0.00	\$68.12
8	90	\$46.31	\$8.15	\$19.83	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SIGN, PICTORIAL & DISPLAY) <i>PAINTERS LOCAL 35 - ZONE 3</i>	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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Apprentice - PAINTER SIGN - Local 35 Zone 3

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2019	\$33.73	\$8.15	\$16.95	\$0.00	\$58.83
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	07/01/2019	\$34.83	\$8.15	\$16.95	\$0.00	\$59.93
	01/01/2020	\$35.93	\$8.15	\$16.95	\$0.00	\$61.03
	07/01/2020	\$37.03	\$8.15	\$16.95	\$0.00	\$62.13
	01/01/2021	\$38.13	\$8.15	\$16.95	\$0.00	\$63.23

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - New

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.87	\$8.15	\$0.00	\$0.00	\$25.02
2	55	\$18.55	\$8.15	\$3.49	\$0.00	\$30.19
3	60	\$20.24	\$8.15	\$3.81	\$0.00	\$32.20
4	65	\$21.92	\$8.15	\$4.13	\$0.00	\$34.20
5	70	\$23.61	\$8.15	\$15.05	\$0.00	\$46.81
6	75	\$25.30	\$8.15	\$15.36	\$0.00	\$48.81
7	80	\$26.98	\$8.15	\$15.68	\$0.00	\$50.81
8	90	\$30.36	\$8.15	\$16.32	\$0.00	\$54.83

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.42	\$8.15	\$0.00	\$0.00	\$25.57
2	55	\$19.16	\$8.15	\$3.49	\$0.00	\$30.80
3	60	\$20.90	\$8.15	\$3.81	\$0.00	\$32.86
4	65	\$22.64	\$8.15	\$4.13	\$0.00	\$34.92
5	70	\$24.38	\$8.15	\$15.05	\$0.00	\$47.58
6	75	\$26.12	\$8.15	\$15.36	\$0.00	\$49.63
7	80	\$27.86	\$8.15	\$15.68	\$0.00	\$51.69
8	90	\$31.35	\$8.15	\$16.32	\$0.00	\$55.82

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2019	\$31.05	\$8.15	\$16.95	\$0.00	\$56.15
PAINTERS LOCAL 35 - ZONE 3	07/01/2019	\$32.15	\$8.15	\$16.95	\$0.00	\$57.25
	01/01/2020	\$33.25	\$8.15	\$16.95	\$0.00	\$58.35
	07/01/2020	\$34.35	\$8.15	\$16.95	\$0.00	\$59.45
	01/01/2021	\$35.45	\$8.15	\$16.95	\$0.00	\$60.55

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - Repaint

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.53	\$8.15	\$0.00	\$0.00	\$23.68
2	55	\$17.08	\$8.15	\$3.49	\$0.00	\$28.72
3	60	\$18.63	\$8.15	\$3.81	\$0.00	\$30.59
4	65	\$20.18	\$8.15	\$4.13	\$0.00	\$32.46
5	70	\$21.74	\$8.15	\$15.05	\$0.00	\$44.94
6	75	\$23.29	\$8.15	\$15.36	\$0.00	\$46.80
7	80	\$24.84	\$8.15	\$15.68	\$0.00	\$48.67
8	90	\$27.95	\$8.15	\$16.32	\$0.00	\$52.42

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.08	\$8.15	\$0.00	\$0.00	\$24.23
2	55	\$17.68	\$8.15	\$3.49	\$0.00	\$29.32
3	60	\$19.29	\$8.15	\$3.81	\$0.00	\$31.25
4	65	\$20.90	\$8.15	\$4.13	\$0.00	\$33.18
5	70	\$22.51	\$8.15	\$15.05	\$0.00	\$45.71
6	75	\$24.11	\$8.15	\$15.36	\$0.00	\$47.62
7	80	\$25.72	\$8.15	\$15.68	\$0.00	\$49.55
8	90	\$28.94	\$8.15	\$16.32	\$0.00	\$53.41

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2019	\$32.33	\$8.15	\$16.95	\$0.00	\$57.43
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	07/01/2019	\$34.43	\$8.15	\$16.95	\$0.00	\$59.53
	01/01/2020	\$34.53	\$8.15	\$16.95	\$0.00	\$59.63
	07/01/2020	\$35.63	\$8.15	\$16.95	\$0.00	\$60.73
	01/01/2021	\$36.73	\$8.15	\$16.95	\$0.00	\$61.83

Apprentice - PAINTER - Local 35 Zone 3 - BRUSH NEW

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.17	\$8.15	\$0.00	\$0.00	\$24.32
2	55	\$17.78	\$8.15	\$3.49	\$0.00	\$29.42
3	60	\$19.40	\$8.15	\$3.81	\$0.00	\$31.36
4	65	\$21.01	\$8.15	\$4.13	\$0.00	\$33.29
5	70	\$22.63	\$8.15	\$15.05	\$0.00	\$45.83
6	75	\$24.25	\$8.15	\$15.36	\$0.00	\$47.76
7	80	\$25.86	\$8.15	\$15.68	\$0.00	\$49.69
8	90	\$29.10	\$8.15	\$16.32	\$0.00	\$53.57

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.22	\$8.15	\$0.00	\$0.00	\$25.37
2	55	\$18.94	\$8.15	\$3.49	\$0.00	\$30.58
3	60	\$20.66	\$8.15	\$3.81	\$0.00	\$32.62
4	65	\$22.38	\$8.15	\$4.13	\$0.00	\$34.66
5	70	\$24.10	\$8.15	\$15.05	\$0.00	\$47.30
6	75	\$25.82	\$8.15	\$15.36	\$0.00	\$49.33
7	80	\$27.54	\$8.15	\$15.68	\$0.00	\$51.37
8	90	\$30.99	\$8.15	\$16.32	\$0.00	\$55.46

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2019	\$29.65	\$8.15	\$16.95	\$0.00	\$54.75
PAINTERS LOCAL 35 - ZONE 3	07/01/2019	\$30.81	\$8.15	\$16.95	\$0.00	\$55.91
	01/01/2020	\$31.85	\$8.15	\$16.95	\$0.00	\$56.95
	07/01/2020	\$32.95	\$8.15	\$16.95	\$0.00	\$58.05
	01/01/2021	\$34.05	\$8.15	\$16.95	\$0.00	\$59.15

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - BRUSH REPAINT

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$14.83	\$8.15	\$0.00	\$0.00	\$22.98
2	55	\$16.31	\$8.15	\$3.49	\$0.00	\$27.95
3	60	\$17.79	\$8.15	\$3.81	\$0.00	\$29.75
4	65	\$19.27	\$8.15	\$4.13	\$0.00	\$31.55
5	70	\$20.76	\$8.15	\$15.05	\$0.00	\$43.96
6	75	\$22.24	\$8.15	\$15.36	\$0.00	\$45.75
7	80	\$23.72	\$8.15	\$15.68	\$0.00	\$47.55
8	90	\$26.69	\$8.15	\$16.32	\$0.00	\$51.16

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.41	\$8.15	\$0.00	\$0.00	\$23.56
2	55	\$16.95	\$8.15	\$3.49	\$0.00	\$28.59
3	60	\$18.49	\$8.15	\$3.81	\$0.00	\$30.45
4	65	\$20.03	\$8.15	\$4.13	\$0.00	\$32.31
5	70	\$21.57	\$8.15	\$15.05	\$0.00	\$44.77
6	75	\$23.11	\$8.15	\$15.36	\$0.00	\$46.62
7	80	\$24.65	\$8.15	\$15.68	\$0.00	\$48.48
8	90	\$27.73	\$8.15	\$16.32	\$0.00	\$52.20

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/01/2018	\$31.00	\$7.85	\$11.89	\$0.00	\$50.74
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2019	\$31.79	\$7.85	\$11.89	\$0.00	\$51.53
	12/01/2019	\$32.58	\$7.85	\$11.89	\$0.00	\$52.32
	06/01/2020	\$33.39	\$7.85	\$11.89	\$0.00	\$53.13
	12/01/2020	\$34.20	\$7.85	\$11.89	\$0.00	\$53.94
	06/01/2021	\$35.04	\$7.85	\$11.89	\$0.00	\$54.78
	12/01/2021	\$35.87	\$7.85	\$11.89	\$0.00	\$55.61

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

PANEL & PICKUP TRUCKS DRIVER	12/01/2018	\$33.08	\$11.91	\$12.70	\$0.00	\$57.69
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	06/01/2019	\$34.08	\$11.91	\$12.70	\$0.00	\$58.69
	08/01/2019	\$34.08	\$12.41	\$12.70	\$0.00	\$59.19
	12/01/2019	\$34.08	\$12.41	\$13.72	\$0.00	\$60.21
	06/01/2020	\$34.98	\$12.41	\$13.72	\$0.00	\$61.11
	08/01/2020	\$34.98	\$12.91	\$13.72	\$0.00	\$61.61
	12/01/2020	\$34.98	\$12.91	\$14.82	\$0.00	\$62.71
	06/01/2021	\$35.78	\$12.91	\$14.82	\$0.00	\$63.51
	08/01/2021	\$35.78	\$13.41	\$14.82	\$0.00	\$64.01
	12/01/2021	\$35.78	\$13.41	\$16.01	\$0.00	\$65.20

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2018	\$41.57	\$9.90	\$21.15	\$0.00	\$72.62
PILE DRIVER LOCAL 56 (ZONE 3)	08/01/2019	\$43.79	\$9.90	\$21.15	\$0.00	\$74.84
For apprentice rates see "Apprentice- PILE DRIVER"						
PILE DRIVER	08/01/2018	\$41.57	\$9.90	\$21.15	\$0.00	\$72.62
PILE DRIVER LOCAL 56 (ZONE 3)	08/01/2019	\$43.79	\$9.90	\$21.15	\$0.00	\$74.84

Apprentice - PILE DRIVER - Local 56 Zone 3

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: Apprentice wages shall be no less than the following Steps;
 (Same as set in Zone 1)
 1\$54.34/2\$58.99/3\$63.65/4\$65.98/5\$68.31/6\$68.31/7\$72.96/8\$72.96

Apprentice to Journeyworker Ratio:1:5

PIPELAYER	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
LABORERS - ZONE 3 (BUILDING & SITE)	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
	12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER	03/17/2019	\$40.21	\$8.75	\$16.35	\$0.00	\$65.31
PLUMBERS & PIPEFITTERS LOCAL 104						

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PLUMBER/PIPEFITTER - Local 104

Effective Date - 03/17/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.09	\$8.75	\$9.60	\$0.00	\$36.44
2	50	\$20.11	\$8.75	\$9.60	\$0.00	\$38.46
3	55	\$22.12	\$8.75	\$9.60	\$0.00	\$40.47
4	60	\$24.13	\$8.75	\$9.60	\$0.00	\$42.48
5	65	\$26.14	\$8.75	\$9.60	\$0.00	\$44.49
6	70	\$28.15	\$8.75	\$9.60	\$0.00	\$46.50
7	75	\$30.16	\$8.75	\$9.60	\$0.00	\$48.51
8	80	\$32.17	\$8.75	\$9.60	\$0.00	\$50.52
9	80	\$32.17	\$8.75	\$16.35	\$0.00	\$57.27
10	80	\$32.17	\$8.75	\$16.35	\$0.00	\$57.27

Notes: **1:1,2:5,3:9,4:12

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2019	\$40.21	\$8.75	\$16.35	\$0.00	\$65.31
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
	12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$32.00	\$7.85	\$13.91	\$0.00	\$53.76
	06/03/2019	\$32.81	\$7.85	\$13.91	\$0.00	\$54.57
	12/02/2019	\$33.62	\$7.85	\$13.91	\$0.00	\$55.38
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$32.00	\$7.85	\$11.89	\$0.00	\$51.74
	06/01/2019	\$32.79	\$7.85	\$11.89	\$0.00	\$52.53
	12/01/2019	\$33.58	\$7.85	\$11.89	\$0.00	\$53.32
	06/01/2020	\$34.39	\$7.85	\$11.89	\$0.00	\$54.13
	12/01/2020	\$35.20	\$7.85	\$11.89	\$0.00	\$54.94
	06/01/2021	\$36.04	\$7.85	\$11.89	\$0.00	\$55.78
	12/01/2021	\$36.87	\$7.85	\$11.89	\$0.00	\$56.61
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.79	\$11.44	\$13.81	\$0.00	\$60.04
	06/01/2019	\$35.30	\$11.44	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.90	\$11.44	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 404</i>	05/01/2016	\$21.01	\$10.23	\$9.40	\$0.00	\$40.64
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
ROLLER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$33.65	\$11.44	\$13.81	\$0.00	\$58.90
	06/01/2019	\$34.16	\$11.44	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.76	\$11.44	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Coal tar pitch) <i>ROOFERS LOCAL 248</i>	07/16/2018	\$32.31	\$10.00	\$15.10	\$0.00	\$57.41
	07/16/2019	\$33.96	\$10.00	\$15.20	\$0.00	\$59.16
For apprentice rates see "Apprentice- ROOFER"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) <i>ROOFERS LOCAL 248</i>	07/16/2018	\$31.81	\$10.00	\$14.60	\$0.00	\$56.41
	07/16/2019	\$33.46	\$10.00	\$14.70	\$0.00	\$58.16

Apprentice - ROOFER - Local 248

Effective Date - 07/16/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.09	\$10.00	\$0.00	\$0.00	\$29.09
2	65	\$20.68	\$10.00	\$14.60	\$0.00	\$45.28
3	70	\$22.27	\$10.00	\$14.60	\$0.00	\$46.87
4	75	\$23.86	\$10.00	\$14.60	\$0.00	\$48.46
5	80	\$25.45	\$10.00	\$14.60	\$0.00	\$50.05
6	85	\$27.04	\$10.00	\$14.60	\$0.00	\$51.64
7	90	\$28.63	\$10.00	\$14.60	\$0.00	\$53.23
8	95	\$30.22	\$10.00	\$14.60	\$0.00	\$54.82

Notes:

Steps are 750 hrs.Roofing(Tear Off)1:1; Same as above

Apprentice to Journeyworker Ratio:1:3

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 248</i>	07/16/2018	\$32.31	\$10.00	\$15.10	\$0.00	\$57.41
	07/16/2019	\$33.96	\$10.00	\$15.20	\$0.00	\$59.16
For apprentice rates see "Apprentice- ROOFER"						
SCRAPER <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$34.26	\$11.44	\$13.81	\$0.00	\$59.51
	06/01/2019	\$34.77	\$11.44	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.37	\$11.44	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$33.65	\$11.44	\$13.81	\$0.00	\$58.90
	06/01/2019	\$34.16	\$11.44	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.76	\$11.44	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SELF-PROPELLED POWER BROOM <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$31.03	\$11.44	\$13.81	\$0.00	\$56.28
	06/01/2019	\$31.54	\$11.44	\$14.08	\$0.00	\$57.06
	12/01/2019	\$32.14	\$11.44	\$14.35	\$0.00	\$57.93
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2019	\$34.74	\$10.64	\$16.22	\$1.77	\$63.37
	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62

Apprentice - SHEET METAL WORKER - Local 63

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$15.63	\$6.21	\$4.67	\$0.00	\$26.51
2	50	\$17.37	\$6.55	\$5.19	\$0.00	\$29.11
3	55	\$19.11	\$6.88	\$9.33	\$1.06	\$36.38
4	60	\$20.84	\$7.22	\$9.33	\$1.12	\$38.51
5	65	\$22.58	\$7.55	\$9.33	\$1.18	\$40.64
6	70	\$24.32	\$7.88	\$9.33	\$1.25	\$42.78
7	75	\$26.06	\$8.22	\$9.33	\$1.31	\$44.92
8	80	\$27.79	\$9.30	\$15.18	\$1.57	\$53.84
9	85	\$29.53	\$9.64	\$15.18	\$1.63	\$55.98
10	90	\$31.27	\$9.98	\$15.18	\$1.69	\$58.12

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$16.08	\$6.21	\$4.67	\$0.00	\$26.96
2	50	\$17.87	\$6.55	\$5.19	\$0.00	\$29.61
3	55	\$19.66	\$6.88	\$9.33	\$1.08	\$36.95
4	60	\$21.44	\$7.22	\$9.33	\$1.14	\$39.13
5	65	\$23.23	\$7.55	\$9.33	\$1.20	\$41.31
6	70	\$25.02	\$7.88	\$9.33	\$1.27	\$43.50
7	75	\$26.81	\$8.22	\$9.33	\$1.33	\$45.69
8	80	\$28.59	\$9.30	\$15.18	\$1.59	\$54.66
9	85	\$30.38	\$9.64	\$15.18	\$1.66	\$56.86
10	90	\$32.17	\$9.98	\$15.18	\$1.72	\$59.05

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.54	\$11.91	\$12.70	\$0.00	\$58.15
	06/01/2019	\$34.54	\$11.91	\$12.70	\$0.00	\$59.15
	08/01/2019	\$34.54	\$12.41	\$12.70	\$0.00	\$59.65
	12/01/2019	\$34.54	\$12.41	\$13.72	\$0.00	\$60.67
	06/01/2020	\$35.44	\$12.41	\$13.72	\$0.00	\$61.57
	08/01/2020	\$35.44	\$12.91	\$13.72	\$0.00	\$62.07
	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.83	\$11.91	\$12.70	\$0.00	\$58.44
	06/01/2019	\$34.83	\$11.91	\$12.70	\$0.00	\$59.44
	08/01/2019	\$34.83	\$12.41	\$12.70	\$0.00	\$59.94
	12/01/2019	\$34.83	\$12.41	\$13.72	\$0.00	\$60.96
	06/01/2020	\$35.73	\$12.41	\$13.72	\$0.00	\$61.86
	08/01/2020	\$35.73	\$12.91	\$13.72	\$0.00	\$62.36
	12/01/2020	\$35.73	\$12.91	\$14.82	\$0.00	\$63.46
	06/01/2021	\$36.53	\$12.91	\$14.82	\$0.00	\$64.26
	08/01/2021	\$36.53	\$13.41	\$14.82	\$0.00	\$64.76
	12/01/2021	\$36.53	\$13.41	\$16.01	\$0.00	\$65.95
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i>	01/01/2019	\$41.51	\$10.02	\$13.08	\$0.00	\$64.61

Apprentice - SPRINKLER FITTER - Local 669

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.68	\$7.75	\$0.00	\$0.00	\$26.43
2	50	\$20.76	\$7.75	\$0.00	\$0.00	\$28.51
3	55	\$22.83	\$10.02	\$7.25	\$0.00	\$40.10
4	60	\$24.91	\$10.02	\$7.25	\$0.00	\$42.18
5	65	\$26.98	\$10.02	\$7.50	\$0.00	\$44.50
6	70	\$29.06	\$10.02	\$7.50	\$0.00	\$46.58
7	75	\$31.13	\$10.02	\$7.50	\$0.00	\$48.65
8	80	\$33.21	\$10.02	\$7.50	\$0.00	\$50.73
9	85	\$35.28	\$10.02	\$7.50	\$0.00	\$52.80
10	90	\$37.36	\$10.02	\$7.50	\$0.00	\$54.88

Notes:

Apprentice to Journeyworker Ratio:1:1

TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 7</i>	12/30/2018	\$41.91	\$10.50	\$12.06	\$0.00	\$64.47
	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 7

Effective Date - 12/30/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.76	\$5.70	\$0.50	\$0.00	\$22.96
2	45	\$18.86	\$5.70	\$0.57	\$0.00	\$25.13
3	50	\$20.96	\$10.50	\$6.93	\$0.00	\$38.39
4	55	\$23.05	\$10.50	\$6.99	\$0.00	\$40.54
5	65	\$27.24	\$10.50	\$8.12	\$0.00	\$45.86
6	70	\$29.34	\$10.50	\$9.18	\$0.00	\$49.02

Effective Date - 06/30/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.06	\$5.85	\$0.51	\$0.00	\$23.42
2	45	\$19.20	\$5.85	\$0.58	\$0.00	\$25.63
3	50	\$21.33	\$10.75	\$6.94	\$0.00	\$39.02
4	55	\$23.46	\$10.75	\$7.00	\$0.00	\$41.21
5	65	\$27.73	\$10.75	\$8.13	\$0.00	\$46.61
6	70	\$29.86	\$10.75	\$9.20	\$0.00	\$49.81

Notes:

Steps are 800 hours

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2019	\$52.49	\$10.75	\$20.66	\$0.00	\$83.90
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	08/01/2019	\$53.84	\$10.75	\$20.80	\$0.00	\$85.39
	02/01/2020	\$54.48	\$10.75	\$20.80	\$0.00	\$86.03
	08/01/2020	\$55.83	\$10.75	\$20.95	\$0.00	\$87.53
	02/01/2021	\$56.47	\$10.75	\$20.95	\$0.00	\$88.17
	08/01/2021	\$57.87	\$10.75	\$21.11	\$0.00	\$89.73
	02/01/2022	\$58.46	\$10.75	\$21.11	\$0.00	\$90.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER-Local 3 Marble/Tile (Spr/Ptt)

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.25	\$10.75	\$20.66	\$0.00	\$57.66
2	60	\$31.49	\$10.75	\$20.66	\$0.00	\$62.90
3	70	\$36.74	\$10.75	\$20.66	\$0.00	\$68.15
4	80	\$41.99	\$10.75	\$20.66	\$0.00	\$73.40
5	90	\$47.24	\$10.75	\$20.66	\$0.00	\$78.65

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.92	\$10.75	\$20.80	\$0.00	\$58.47
2	60	\$32.30	\$10.75	\$20.80	\$0.00	\$63.85
3	70	\$37.69	\$10.75	\$20.80	\$0.00	\$69.24
4	80	\$43.07	\$10.75	\$20.80	\$0.00	\$74.62
5	90	\$48.46	\$10.75	\$20.80	\$0.00	\$80.01

Notes:

Apprentice to Journeyworker Ratio:1:5

TERRAZZO MECHANIC	02/01/2019	\$53.57	\$10.75	\$20.66	\$0.00	\$84.98
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	08/01/2019	\$54.92	\$10.75	\$20.80	\$0.00	\$86.47
	02/01/2020	\$55.55	\$10.75	\$20.80	\$0.00	\$87.10
	08/01/2020	\$56.90	\$10.75	\$20.95	\$0.00	\$88.60
	02/01/2021	\$57.54	\$10.75	\$20.95	\$0.00	\$89.24
	08/01/2021	\$58.94	\$10.75	\$21.11	\$0.00	\$90.80
	02/01/2022	\$59.51	\$10.75	\$21.11	\$0.00	\$91.37

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO MECH - Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.79	\$10.75	\$20.66	\$0.00	\$58.20
2	60	\$32.14	\$10.75	\$20.66	\$0.00	\$63.55
3	70	\$37.50	\$10.75	\$20.66	\$0.00	\$68.91
4	80	\$42.86	\$10.75	\$20.66	\$0.00	\$74.27
5	90	\$48.21	\$10.75	\$20.66	\$0.00	\$79.62

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.46	\$10.75	\$20.80	\$0.00	\$59.01
2	60	\$32.95	\$10.75	\$20.80	\$0.00	\$64.50
3	70	\$38.44	\$10.75	\$20.80	\$0.00	\$69.99
4	80	\$43.94	\$10.75	\$20.80	\$0.00	\$75.49
5	90	\$49.43	\$10.75	\$20.80	\$0.00	\$80.98

Notes:

Apprentice to Journeyworker Ratio:1:5

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$40.00	\$7.85	\$15.55	\$0.00	\$63.40
	06/01/2019	\$41.00	\$7.85	\$15.55	\$0.00	\$64.40
	12/01/2019	\$42.00	\$7.85	\$15.55	\$0.00	\$65.40
	06/01/2020	\$42.99	\$7.85	\$15.55	\$0.00	\$66.39
	12/01/2020	\$43.97	\$7.85	\$15.55	\$0.00	\$67.37
	06/01/2021	\$44.99	\$7.85	\$15.55	\$0.00	\$68.39
	12/01/2021	\$46.00	\$7.85	\$15.55	\$0.00	\$69.40

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$38.72	\$7.85	\$15.55	\$0.00	\$62.12
	06/01/2019	\$39.72	\$7.85	\$15.55	\$0.00	\$63.12
	12/01/2019	\$40.72	\$7.85	\$15.55	\$0.00	\$64.12
	06/01/2020	\$41.71	\$7.85	\$15.55	\$0.00	\$65.11
	12/01/2020	\$42.69	\$7.85	\$15.55	\$0.00	\$66.09
	06/01/2021	\$43.71	\$7.85	\$15.55	\$0.00	\$67.11
	12/01/2021	\$44.72	\$7.85	\$15.55	\$0.00	\$68.12

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$38.60	\$7.85	\$15.55	\$0.00	\$62.00
	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2018	\$33.65	\$11.44	\$13.81	\$0.00	\$58.90
	06/01/2019	\$34.16	\$11.44	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.76	\$11.44	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$34.12	\$11.91	\$12.70	\$0.00	\$58.73
	06/01/2019	\$35.12	\$11.91	\$12.70	\$0.00	\$59.73
	08/01/2019	\$35.12	\$12.41	\$12.70	\$0.00	\$60.23
	12/01/2019	\$35.12	\$12.41	\$13.72	\$0.00	\$61.25
	06/01/2020	\$36.02	\$12.41	\$13.72	\$0.00	\$62.15
	08/01/2020	\$36.02	\$12.91	\$13.72	\$0.00	\$62.65
	12/01/2020	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	06/01/2021	\$36.82	\$12.91	\$14.82	\$0.00	\$64.55
	08/01/2021	\$36.82	\$13.41	\$14.82	\$0.00	\$65.05
12/01/2021	\$36.82	\$13.41	\$16.01	\$0.00	\$66.24	
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2018	\$50.88	\$7.85	\$15.95	\$0.00	\$74.68
	06/01/2019	\$51.88	\$7.85	\$15.95	\$0.00	\$75.68
	12/01/2019	\$52.88	\$7.85	\$15.95	\$0.00	\$76.68
	06/01/2020	\$53.87	\$7.85	\$15.95	\$0.00	\$77.67
	12/01/2020	\$54.85	\$7.85	\$15.95	\$0.00	\$78.65
	06/01/2021	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2021	\$56.88	\$7.85	\$15.95	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2018	\$52.88	\$7.85	\$15.95	\$0.00	\$76.68
	06/01/2019	\$53.88	\$7.85	\$15.95	\$0.00	\$77.68
	12/01/2019	\$54.88	\$7.85	\$15.95	\$0.00	\$78.68
	06/01/2020	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2020	\$56.85	\$7.85	\$15.95	\$0.00	\$80.65
	06/01/2021	\$57.87	\$7.85	\$15.95	\$0.00	\$81.67
12/01/2021	\$58.88	\$7.85	\$15.95	\$0.00	\$82.68	
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2018	\$42.95	\$7.85	\$15.95	\$0.00	\$66.75
	06/01/2019	\$43.95	\$7.85	\$15.95	\$0.00	\$67.75
	12/01/2019	\$44.95	\$7.85	\$15.95	\$0.00	\$68.75
	06/01/2020	\$45.94	\$7.85	\$15.95	\$0.00	\$69.74
	12/01/2020	\$46.92	\$7.85	\$15.95	\$0.00	\$70.72
	06/01/2021	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2021	\$48.95	\$7.85	\$15.95	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2018	\$44.95	\$7.85	\$15.95	\$0.00	\$68.75
	06/01/2019	\$45.95	\$7.85	\$15.95	\$0.00	\$69.75
	12/01/2019	\$46.95	\$7.85	\$15.95	\$0.00	\$70.75
	06/01/2020	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2020	\$48.92	\$7.85	\$15.95	\$0.00	\$72.72
	06/01/2021	\$49.94	\$7.85	\$15.95	\$0.00	\$73.74
12/01/2021	\$50.95	\$7.85	\$15.95	\$0.00	\$74.75	
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2018	\$33.54	\$11.91	\$12.70	\$0.00	\$58.15
	06/01/2019	\$34.54	\$11.91	\$12.70	\$0.00	\$59.15
	08/01/2019	\$34.54	\$12.41	\$12.70	\$0.00	\$59.65
	12/01/2019	\$34.54	\$12.41	\$13.72	\$0.00	\$60.67
	06/01/2020	\$35.44	\$12.41	\$13.72	\$0.00	\$61.57
	08/01/2020	\$35.44	\$12.91	\$13.72	\$0.00	\$62.07
	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
WAGON DRILL OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/03/2018	\$31.25	\$7.85	\$13.91	\$0.00	\$53.01
	06/03/2019	\$32.06	\$7.85	\$13.91	\$0.00	\$53.82
	12/02/2019	\$32.87	\$7.85	\$13.91	\$0.00	\$54.63
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2018	\$31.25	\$7.85	\$11.89	\$0.00	\$50.99
	06/01/2019	\$32.04	\$7.85	\$11.89	\$0.00	\$51.78
	12/01/2019	\$32.83	\$7.85	\$11.89	\$0.00	\$52.57
	06/01/2020	\$33.64	\$7.85	\$11.89	\$0.00	\$53.38
	12/01/2020	\$34.45	\$7.85	\$11.89	\$0.00	\$54.19
	06/01/2021	\$35.29	\$7.85	\$11.89	\$0.00	\$55.03
	12/01/2021	\$36.12	\$7.85	\$11.89	\$0.00	\$55.86
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WATER METER INSTALLER <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2019	\$40.21	\$8.75	\$16.35	\$0.00	\$65.31
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - West						
EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$42.26	\$8.00	\$12.50	\$0.00	\$62.76
	09/01/2019	\$44.67	\$8.00	\$12.55	\$0.00	\$65.22
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$28.17	\$8.00	\$5.41	\$0.00	\$41.58
	09/01/2019	\$30.58	\$8.00	\$5.48	\$0.00	\$44.06
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN / TRUCK DRIVER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$37.56	\$8.00	\$10.89	\$0.00	\$56.45
	09/01/2019	\$39.97	\$8.00	\$10.96	\$0.00	\$58.93
For apprentice rates see "Apprentice- LINEMAN"						
HEAVY EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$44.60	\$8.00	\$13.15	\$0.00	\$65.75
	09/01/2019	\$47.01	\$8.00	\$13.22	\$0.00	\$68.23
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$49.30	\$8.00	\$15.48	\$0.00	\$72.78
	09/01/2019	\$51.71	\$8.00	\$15.55	\$0.00	\$75.26

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LINEMAN (Outside Electrical) - West Local 42

Effective Date - 09/02/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$29.58	\$8.00	\$3.39	\$0.00	\$40.97
2	65	\$32.05	\$8.00	\$3.46	\$0.00	\$43.51
3	70	\$34.51	\$8.00	\$3.54	\$0.00	\$46.05
4	75	\$36.98	\$8.00	\$5.11	\$0.00	\$50.09
5	80	\$39.44	\$8.00	\$5.18	\$0.00	\$52.62
6	85	\$41.91	\$8.00	\$5.26	\$0.00	\$55.17
7	90	\$44.37	\$8.00	\$7.33	\$0.00	\$59.70

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$31.03	\$8.00	\$3.43	\$0.00	\$42.46
2	65	\$33.61	\$8.00	\$3.51	\$0.00	\$45.12
3	70	\$36.20	\$8.00	\$3.59	\$0.00	\$47.79
4	75	\$38.78	\$8.00	\$5.16	\$0.00	\$51.94
5	80	\$41.37	\$8.00	\$5.24	\$0.00	\$54.61
6	85	\$43.95	\$8.00	\$5.32	\$0.00	\$57.27
7	90	\$46.54	\$8.00	\$7.40	\$0.00	\$61.94

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TRACTOR-TRAILER DRIVER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/02/2018	\$42.26	\$8.00	\$12.50	\$0.00	\$62.76
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$44.67	\$8.00	\$12.55	\$0.00	\$65.22
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	01/31/2016	\$18.51	\$3.55	\$0.00	\$0.00	\$22.06
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	01/31/2016	\$16.32	\$3.55	\$0.00	\$0.00	\$19.87

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.

Additional Apprentices Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentices ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

APPENDIX C
FEDERAL WAGE RATES AND FORMS

General Decision Number: MA190010 02/22/2019 MA10

Superseded General Decision Number: MA20180015

State: Massachusetts

Construction Types: Heavy (Heavy and Marine)

Counties: Berkshire, Franklin, Hampden and Hampshire Counties in Massachusetts.

HEAVY CONSTRUCTION PROJECTS; AND MARINE CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	02/22/2019

BOIL0029-001 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 42.42	24.92

* BRMA0001-005 02/01/2019

SPRINGFIELD CHAPTER

Rates Fringes

BRICKLAYER

BRICKLAYERS; CEMENT
MASONS; STONE MASONS;
MARBLE, TILE & TERRAZO.....\$ 41.96 29.80

* BRMA0001-007 02/01/2019

SPRINGFIELD/PITTSFIELD CHAPTER
BERKSHIRE COUNTY

Rates Fringes

BRICKLAYER

BRICKLAYERS; CEMENT
MASONS; STONE MASONS;
MARBLE, TILE & TERRAZZO.....\$ 41.96 29.80

CARP0056-004 08/01/2015

Rates Fringes

DIVER TENDER.....\$ 42.04 29.73
DIVER.....\$ 58.86 29.73

CARP0056-009 08/01/2015

Rates Fringes

PILEDRIVERMAN.....\$ 42.04 29.73

CARP0107-007 09/01/2017

FRANKLIN COUNTY (Erving, Orange, North Orange, and Warwick)

Rates Fringes

CARPENTER.....\$ 39.28 27.90

CARP0108-008 09/04/2017

BERKSHIRE

Rates Fringes

CARPENTER.....\$ 35.56 23.76

CARP0108-010 09/04/2017

HAMPDEN; HAMPSHIRE; AND FRANKLIN (Remainder of County)

	Rates	Fringes
CARPENTER.....	\$ 35.56	23.76

CARP1121-001 10/01/2017		

	Rates	Fringes
MILLWRIGHT.....	\$ 39.52	30.85

ELEC0007-002 12/30/2018		

HAMPDEN (Except Chester & Holyoke); HAMPSHIRE (Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN.....	\$ 41.91	23.16

ELEC0007-003 12/30/2018		

BERKSHIRE; FRANKLIN; HAMPDEN (Chester, Holyoke); HAMPSHIRE (Except Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN.....	\$ 41.91	23.16

ENGI0098-007 12/01/2016		

	Rates	Fringes
Power equipment operators:		
Group 1.....	\$ 33.68	23.96+A
Group 2.....	\$ 33.37	23.96+A
Group 3.....	\$ 33.15	23.96+A
Group 4.....	\$ 32.54	23.96+A
Group 5.....	\$ 29.92	23.96+A
Group 6.....	\$ 28.80	23.96+A
Group 7.....	\$ 26.86	23.96+A
Group 8.....	\$ 305.95	23.96+A
Group 9.....	\$ 230.69	23.96+A
Group 10.....	\$ 35.17	23.96+A
Group 11.....	\$ 38.18	23.96+A
Group 12.....	\$ 39.68	23.96+A
Group 13.....	\$ 40.68	23.96+A
Group 14.....	\$ 41.68	23.96+A
Group 15.....	\$ 43.18	23.96+A

HAZARDOUS WASTE PREMIUM \$2.00

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:

Group 8 and Group 9 are per day wages.

A. Paid Holidays: New year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1: Shovels; crawlers and truck cranes including all tower; self-propelled hydraulic cranes 10 tons and over; draglines; clam shells; cableways; shaft hoists; mucking machines derricks; backhoes; bulldozers; gradalls; elevating graders; pile drivers; concrete pavers; trenching machines; front end loaders- 5 1/2 cu yds and over; dual drum paver; automatic grader-excavator(C.M.I. or equal); scrapers towing pan or wagon; tandem dozers or push cats(2 units in tandem); shotcrete machine; tunnel boring machine; combination backhoe/loader 3/4 cu yd hoe or over; jet engine dryer; tree shredder; post hole digger; post hole hammer; post extractor; truck mounted concrete pump with boom; roto-mill; Grader; Horizontal Drilling Machine; John Henry Rock Drill and similar equipment.

Group 2: Rotary drill with mounted compressor; compressor house (3 to 6 compressors); rock and earth boring machines (excluding McCarthy and similar drills); front end loaders 4 cu yds to 5 1/2 cu yds); forklifts-7 ft lift and over 3 ton capacity; scraper 21 yds and over (struck load); sonic hammer console; reclaimers road planer/milling machine; cal tracks; ballast regulators; rail anchor machines; switch tampers, asphalt pavers; mechanic; welder and transfer machine.

Group 3: Combination backhoe/loader up to 3/4 cu yd; scrapers up to 21 cu yd (struck load, self propelled or tractor drawn); tireman; front end loaders up to 4 yds; well drillers; engineer or fireman on high pressure boiler; self-loading batch plant; well point operators electric pumps used in well point system; pumps, 16 inches and over (total discharge); compressor, one or two 900 cu ft and over; powered grease truck; tunnel locomotives and dingys; grout pumps; hydraulic jacks; boom truck; hydraulic cranes- up to 10 ton.

Group 4: Asphalt rollers; self-powered rollers and compactors; tractor without blade drawing sheepsfoot roller; rubber tire roller; vibratory roller or other type of compactors including machines for pulverizing and aerating soil; york rake.

Group 5: Hoists; conveyors; power pavement breakers; self-powered concrete pavement finishing machines; two bag mixers with skip; McCarthy and similar drills; batch plants (not self loading); bulk cement plants; self-propelled material spreaders; three or more 10 KW light plants; 30 KW or more generators; power broom.

Group 6: Compressor (one or two) 315 cu ft to 900 cu ft; pumps 4 inches to 16 inches (total discharge).

Group 7: Compressors up to 315 cu ft; small mixers with skip; pumps up to 4 inches; power heaters; oiler; A-frame

trucks; forklifts-up to 7 ft. lift and up to 3 ton capacity; hydro broom; stud welder.

Group 8: Truck crane crews

Group 9: Oiler

Group 10: Master Mechanic

Group 11: Boom lengths over 150 feet including jib

Group 12: Boom lengths over 200 feet including jib

Group 13: Boom lengths over 250 feet including jib

Group 14: Boom lengths over 300 feet including jib

Group 15: Boom lengths over 350 feet including jib

IRON0007-014 09/16/2017

BERKSHIRE (Becket, East Otis, Hinsdale, Monterey, New Marlboro, North Otis, Otis, Peru, Sandisfield, Savoy, Sheffield, Washington, Windsor); FRANKLIN; HAMPDEN; HAMPSHIRE

	Rates	Fringes
IRONWORKER.....	\$ 32.49	28.67

IRON0012-003 07/01/2018

BERKSHIRE (Lee)

	Rates	Fringes
IRONWORKER.....	\$ 31.00	24.43

IRON0012-004 07/01/2018

BERKSHIRE (Remainder of County)

	Rates	Fringes
Ironworkers:		
Sheeter.....	\$ 31.25	24.43
Structural, Ornamental, Reinforcing, Fence Erector, Machinery Mover, Rigger, Rodman, Stone Derrickman.....	\$ 31.00	24.43

LABO0022-002 06/01/2018

FRANKLIN (Orange, Warwick)

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 33.25	22.92
GROUP 2.....	\$ 33.50	22.92

GROUP 3.....	\$ 34.00	22.92
GROUP 4.....	\$ 34.25	22.92
GROUP 5.....	\$ 34.00	22.92
GROUP 6.....	\$ 34.25	22.92

LABORERS CLASSIFICATIONS

GROUP 1: Laborers; carpenter tenders; cement finisher tenders, plasterer tenders

GROUP 2: Asphalt raker; fence and guard rail erector; laser beam operator; mason tender; pipelayer; pneumatic drill operator; pneumatic tool operator; wagon drill operator; jackhammer operator, pavement breaker, carbide core drilling machine, chain saw operator, barco type jumping tampers, concrete pump, motorized mortar miner, ride-on motorized buggy

GROUP 3: Air track operator; block paver; rammer; curb setter, hydraulic and similar self-powered drills

GROUP 4: Blaster; powderman

GROUP 5: Precast floor and roof, plank erector

GROUP 6: Asbestos Abatement, Toxic and Hazardous waste laborers

LABO0473-005 06/01/2018

FRANKLIN (Except Orange and Warrick); HAMPDEN and HAMPSHIRE COUNTIES (with the exception of Chesterfield, Cummington, Goshen, Middlefield, Plainfield, and Worthington)

Rates Fringes

Laborers:

Group 1.....	\$ 31.00	20.18
Group 2.....	\$ 31.25	20.18
Group 3.....	\$ 31.75	20.18
Group 4.....	\$ 32.00	20.18
Group 5.....	\$ 21.50	20.18
Group 6.....	\$ 31.00	20.18

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders, laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors, laser beam operator, mason tender, pipelayer, pneumatic drill operator, pneumatic tool operator, wagon drill

operator

Group 3: Air track operator, block pavers, rammers, curb
setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste
laborers

LABO0473-006 06/01/2018

BERKSHIRE; HAMPSHIRE COUNTIES (the towns of Chesterfield,
Cummington, Goshen, Middlefield, Plainfield, and Worthington
only)

Rates Fringes

Laborers:

Group 1.....	\$ 27.58	22.29
Group 2.....	\$ 27.83	22.29
Group 3.....	\$ 28.33	22.29
Group 4.....	\$ 28.58	22.29
Group 5.....	\$ 21.50	22.29
Group 6.....	\$ 28.58	22.29

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders,
laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors,
laser beam operator, mason tender, pipelayer, pneumatic
drill operator, pneumatic tool operator, wagon drill
operator

Group 3: Air track operator, block pavers, rammers, curb
setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste
laborers

LABO1421-002 06/01/2018

Rates Fringes

Laborers:

Group 1.....	\$ 38.15	24.10
Group 2.....	\$ 38.90	24.10
Group 3.....	\$ 39.15	24.10
Group 4.....	\$ 34.15	24.10
Group 5.....	\$ 37.25	24.10
Group 6.....	\$ 38.15	24.10

Group 1: Adzeman, Wrecking Laborer.

Group 2: Burners, Jackhammers.

Group 3: Small Backhoes, Loaders on tracks, Bobcat Type Loaders, Hydraulic "Brock" Type Hammer Operators, Concrete Cutting Saws.

Group 4: Yardman (Salvage Yard Only).

Group 5: Yardman, Burners, Sawyers.

Group 6: Asbestos, Lead Paint, Toxic and Hazardous Waste.

PAIN0035-010 01/01/2019

Rates Fringes

PAINTER

NEW CONSTRUCTION:

Brush, Taper.....	\$ 32.33	26.35
Spray, Sandblast.....	\$ 33.73	26.35

REPAINT:

Bridge.....	\$ 50.36	30.25
Brush, Taper.....	\$ 29.65	26.35
Spray, Sandblast.....	\$ 31.05	26.35

PLUM0004-003 09/01/2018

FRANKLIN (Orange)

Rates Fringes

Plumber and Steamfitter.....	\$ 44.26	25.91
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PLUM0104-004 09/17/2018

BERKSHIRE (Becket, Otis, Sandisfield); FRANKLIN (Except Monroe, Rowe, and the Western part of Charlemont); HAMPDEN; HAMPSHIRE

Rates Fringes

Plumbers and Pipefitters.....	\$ 40.11	25.25+a
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FOOTNOTE:

A. Two paid holidays, Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer

PLUM0104-009 09/17/2018

BERKSHIRE (Except Otis, Becket, Sandisfield); FRANKLIN (Monroe, Rowe and the Western part of Charlemont)

	Rates	Fringes
Plumber and Steamfitter.....	\$ 39.69	25.25+a

FOOTNOTE FOR PLUMBERS & STEAMFITTERS:

A. Paid holidays: Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer.

TEAM0379-001 06/01/2018

	Rates	Fringes
Truck drivers:		
Group 1.....	\$ 33.08	24.6125+A+B
Group 2.....	\$ 33.25	24.6125+A+B
Group 3.....	\$ 33.32	24.6125+A+B
Group 4.....	\$ 33.44	24.6125+A+B
Group 5.....	\$ 33.54	24.6125+A+B
Group 6.....	\$ 33.83	24.6125+A+B
Group 7.....	\$ 34.12	24.6125+A+B

POWER TRUCKS \$.25 DIFFERENTIAL BY AXLE
TUNNEL WORK (UNDERGROUND ONLY) \$.40 DIFFERENTIAL BY AXLE
HAZARDOUS MATERIALS (IN HOT ZONE ONLY) \$2.00 PREMIUM

TRUCK DRIVERS CLASSIFICATIONS

- Group 1: Station wagons; panel trucks; and pickup trucks
- Group 2: Two axle equipment; & forklift operator
- Group 3: Three axle equipment and tireman
- Group 4: Four and Five Axle equipment
- Group 5: Specialized earth moving equipment under 35 tons other than conventional type trucks; low bed; vachual; mechanics, paving restoration equipment
- Group 6: Specialized earth moving equipment over 35 tons
- Group 7: Trailers for earth moving equipment (double hookup)

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day

B. PAID VACATION: Employees with 4 months to 1 year of service receive 1/2 day's pay per month; 1 week vacation for 1 - 5 years of service; 2 weeks vacation for 5 - 10 years of service; and 3 weeks vacation for more than 10 years of service

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local),

a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

**Department of Labor
Wage and Hour Division**

INSTRUCTIONS FOR COMPLETING PAYROLL FORM, WH-347

General: The use of the WH-347 payroll form is not mandatory. This form has been made available for the convenience of contractors and subcontractors required by their Federal or Federally-aided construction-type contracts and subcontractors to submit weekly payrolls. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 CFR, Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

This form meets needs resulting from the amendment of Davis-Bacon Act to include fringe benefits provisions. Under this amended law, the contractor is required to pay not less than fringe benefits as predetermined by the Department of Labor, in addition to payment of not less than the predetermined rates. The contractor's obligation to pay fringe benefits may be met either by payment of the fringes to the various plans, funds or programs or by making these payments to the employees as cash in lieu of fringes.

This payroll provides for the contractor's showing on the face of the payroll all monies to the employees, whether as basic rates or as cash in lieu of fringes and provides for the contractor's representation in the statement of compliance on the rear of the payroll that he is paying to other fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions concerning the preparation of the payroll follow:

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Column 1 - Name, Address, and Social Security number of Employee: The employee's full name must be shown on each weekly payroll submitted. The employee's address must also be shown on the payroll covering the first week in which the employee works on the project. The address need not be shown on subsequent weekly payrolls unless his address changes. Although not required by Regulations, Parts 3 and 5, space is available in the name and address section so that Social Security numbers may be listed.

Column 2 - Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List classification descriptive of work actually performed by employees. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, see Contracting Officer or Agency representative. Employee may be shown as having worked in more than one classification provided accurate breakdown or hours so worked is maintained and shown on submitted payroll by use of separate entries.

Column 4 - Hours worked: On all contracts subject to the Contract Work Hours Standard Act enter as overtime hours worked in excess of 8 hours per day and 40 hours a week.

Column 5 - Total: Self-explanatory

Column 6 - Rate of Pay, including Fringe Benefits: In straight time box, list actual hourly rate paid the employee for straight time worked plus in cash in lieu of fringes paid the employee. When recording the straight time hourly rate, any cash paid in lieu of fringes may be shown separately from the basic rate, thus \$3.25/.40. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. In overtime box shown overtime hourly rate paid, plus any cash in lieu of fringes paid the employee. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962. In addition to paying no less than the predetermined rate for the classification which the employee works, the contractor shall pay to approved plans, funds or programs or shall pay as cash in lieu of fringes amounts predetermined as fringe benefits in the wage decision made part of the contract. See "FRINGE BENEFITS" below.

FRINGE BENEFITS - Contractors who pay all required fringe benefits: A contractor who pays fringe benefits to

approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of labor shall continue to show on the face of the payroll the basic cash hourly rate and overtime rate paid to his employees just as he has always done. Such a contractor shall check paragraph 4(a) of the statement on the reverse of the payroll to indicate that he is also paying to approved plans, funds or programs not less than the amount predetermined as fringe benefits for each craft. Any exceptions shall be noted in section 4(c).

Contractors who pay no fringe benefits: A contractor who pays no fringe benefits shall pay to the employee, and insert in the straight time hourly rate column of the payroll, an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringes at the straight time rate. In addition, the contractor shall check paragraph 4(b) of the statement on the reverse of the payroll to indicate that he is paying fringe benefits in cash directly to his employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employee as cash in lieu of fringes and the hourly amount paid to plans, funds, or programs as fringes. The contractor shall pay, and shall show that he is paying to each such employee for all hours (unless otherwise provided by applicable determination) worked on Federal or Federally assisted project an amount not less than the predetermined rate plus cash in lieu of fringes as shown in Section 4(c). The rate paid and amount of cash paid in lieu of fringe benefits per hour should be entered in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of the employees' weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus \$63.00/\$120.00.

Column 8 - Deductions: Five columns are provided for showing deductions made. If more than five deduction should be involved, use first 4 columns; show the balance deductions under "Other" column; show actual total under "Total Deductions" column: and in the attachment to the payroll describe the deduction contained in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 CFR, Part 3. If the employee worked on other jobs in addition to this project, show actual deductions from his weekly gross wage, but indicate that deductions are based on his gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory

Totals - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

Statement Required by Regulations, Parts 3 and 5: While this form need not be notarized, the statement on the back of the payroll is subject to the penalties provided by 18 USV 1001, namely, possible imprisonment of 5 years or \$10,000.00 fine or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Space has been provided between item (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See paragraph entitled "FRINGE BENEFITS" above for instructions concerning filling out paragraph 4 of the statement.

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)



Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

OMB No.: 1235-0008
Expires: 04/30/2021

NAME OF CONTRACTOR <input type="checkbox"/> OR SUBCONTRACTOR <input type="checkbox"/>				ADDRESS				OMB No.: 1235-0008 Expires: 04/30/2021											
PAYROLL NO.		FOR WEEK ENDING			PROJECT AND LOCATION				PROJECT OR CONTRACT NO.										
(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT OR ST.	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS		
			O										/						
			S																
			O										/						
			S																
			O										/						
			S																
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

EMPLOYEE RIGHTS

UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

City of Greenfield
Engineering Superintendent
189 Wells Street
413-772-1528 x6104

or contact the U.S. Department of Labor's Wage and Hour Division.



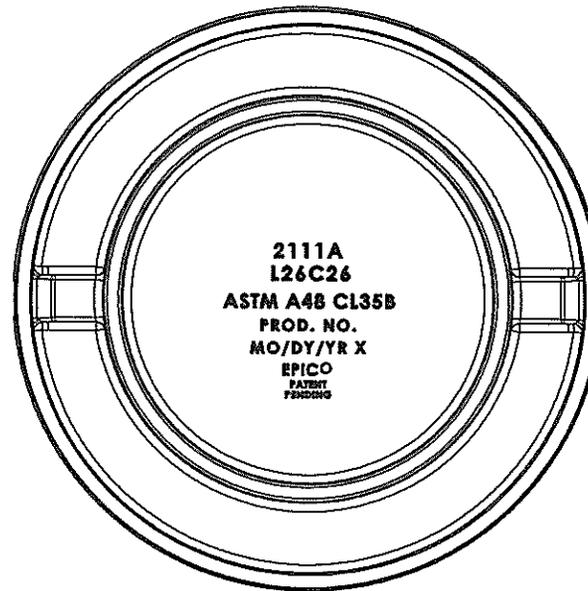
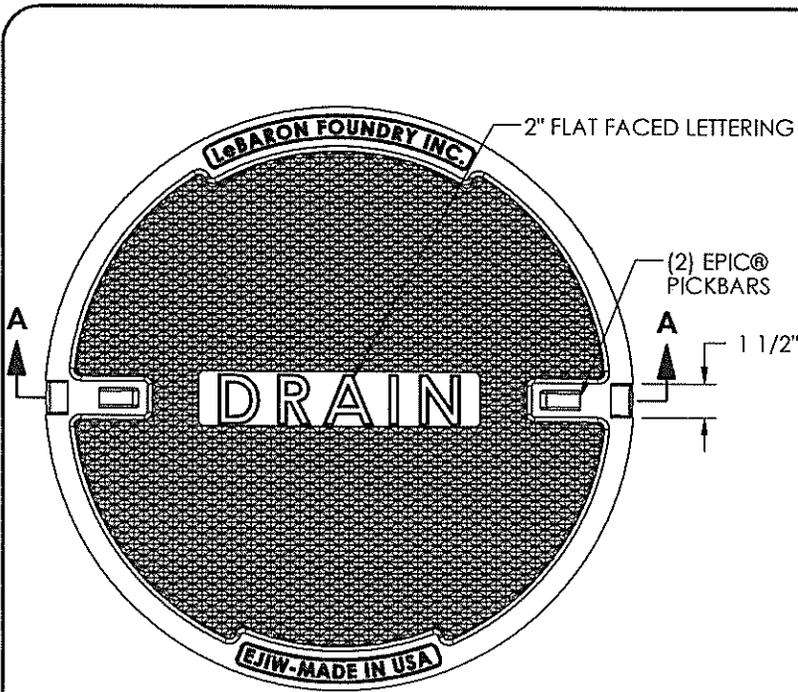
WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

1-866-487-9243
TTY: 1-877-889-5627
www.dol.gov/whd

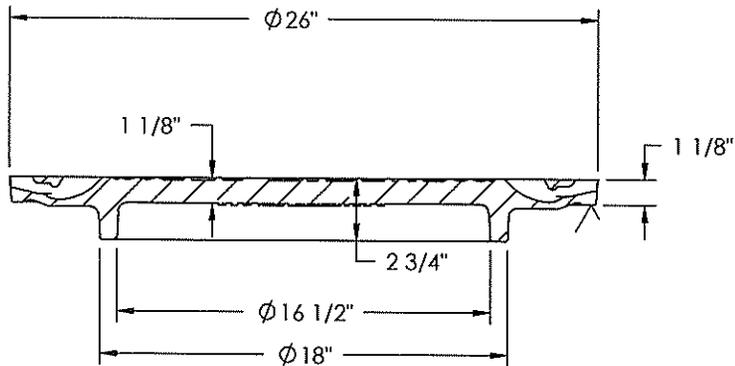


WH1521 REV 10/15

APPENDIX D
DETAIL SHEETS FOR CASTINGS



BOTTOM VIEW



SECTION A-A

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EJIW EAST JORDAN
IRON WORKS EST. 1883

800-626-4653

www.ejiw.com

MADE IN USA

PRODUCT NUMBER

00211125

CATALOG NUMBER

2111A

COVER

LOAD RATING

HEAVY DUTY

COATING

UNDIPPED

SPECIFICATION

GRAY IRON

ASTM A48 CL35B

OPEN AREA

N/A

√ DESIGNATES
MACHINED SURFACE

DRAWN

JIJ

DATE

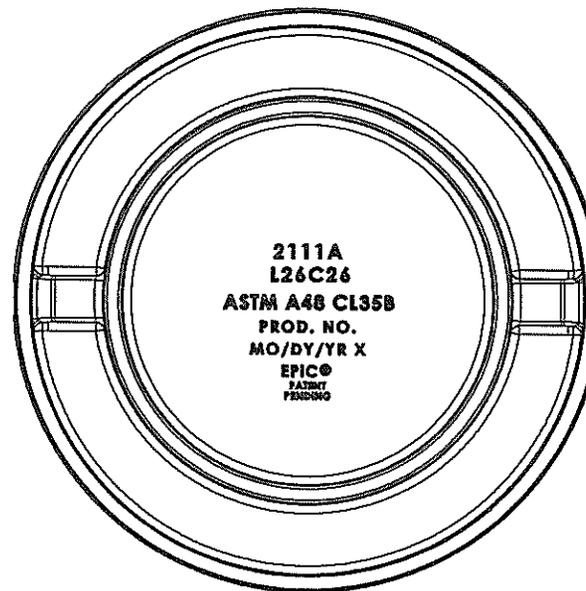
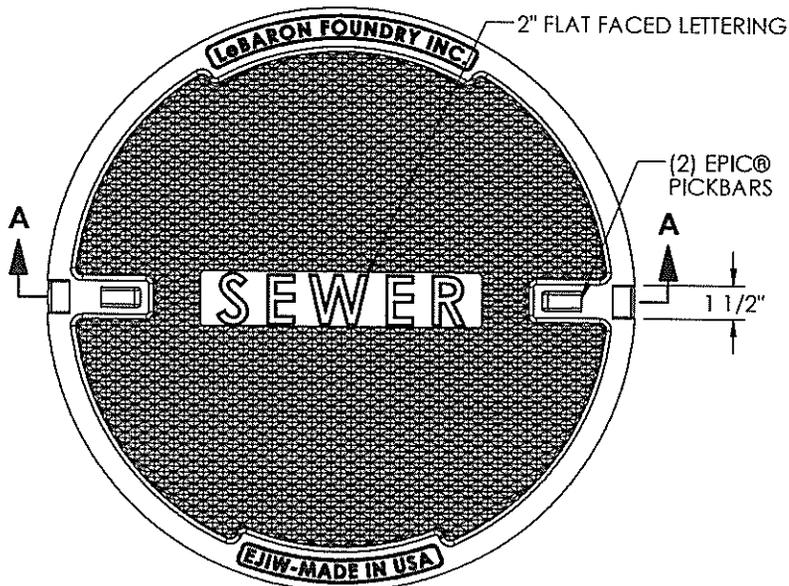
07/22/08

LAST REVISED

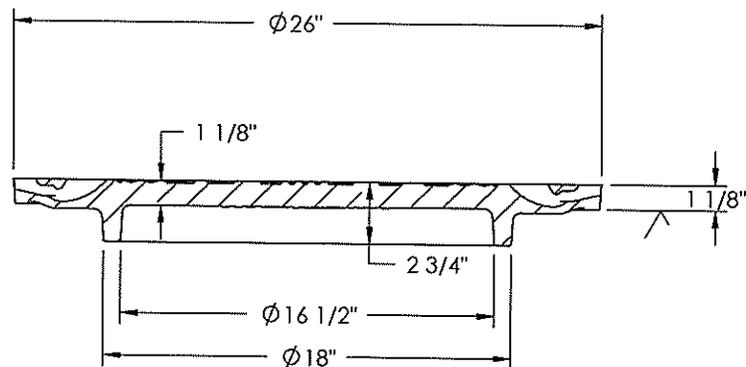
JIJ

DATE

11/17/09



BOTTOM VIEW



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EJIW EAST JORDAN
IRON WORKS EST. 1883

800-626-4653

www.ejiw.com

MADE IN USA

PRODUCT NUMBER

00211123

CATALOG NUMBER

2111A

COVER

LOAD RATING

HEAVY DUTY

COATING

UNDIPPED

SPECIFICATION

GRAY IRON

ASTM A48 CL35B

OPEN AREA

N/A

√ DESIGNATES
MACHINED SURFACE

DRAWN

JIJ

DATE

07/22/08

LAST REVISED

JIJ

DATE

07/22/08

EJIW EAST JORDAN
IRON WORKS EST.1883

800-626-4653

www.ejiw.com

MADE IN USA

PRODUCT NUMBER

00226611

CATALOG NUMBER

2266Z

FRAME

LOAD RATING

HEAVY DUTY

COATING

UNDIPPED

SPECIFICATION

FRAME-GRAY IRON
ASTM A48 CL35B

OPEN AREA
N/A

√ DESIGNATES
MACHINED SURFACE

DRAWN

DEW

DATE

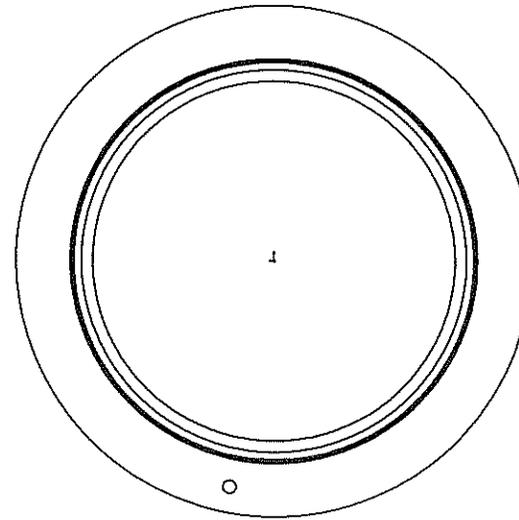
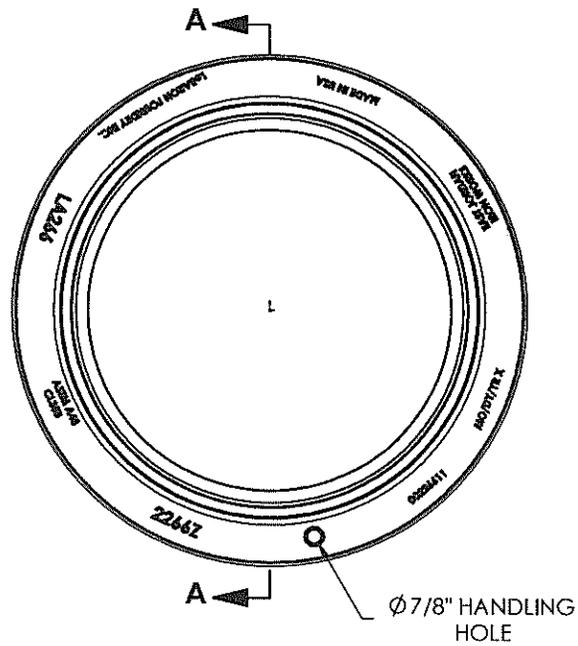
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LAST REVISED

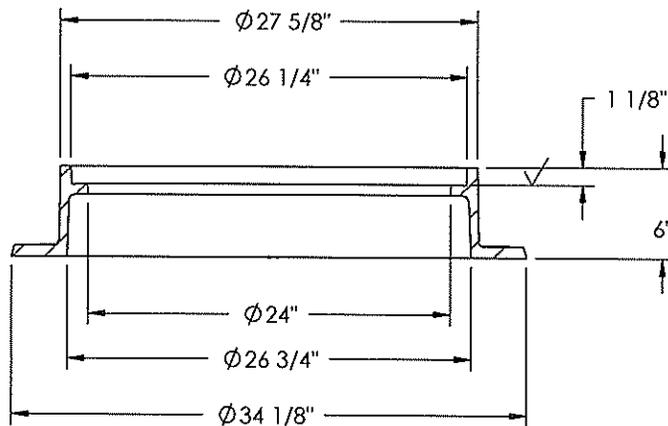
DEW

DATE

9/1/2009

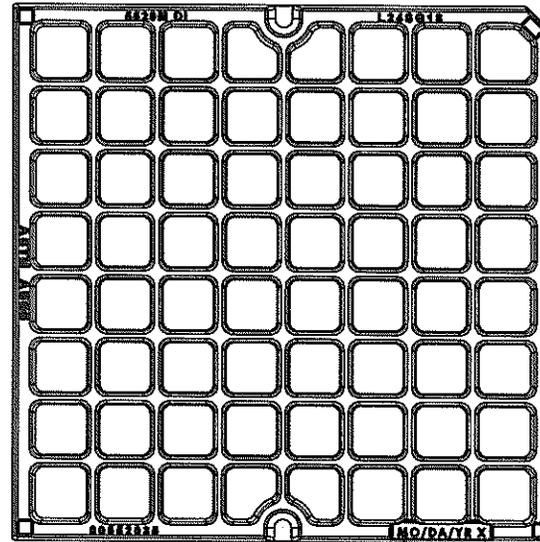
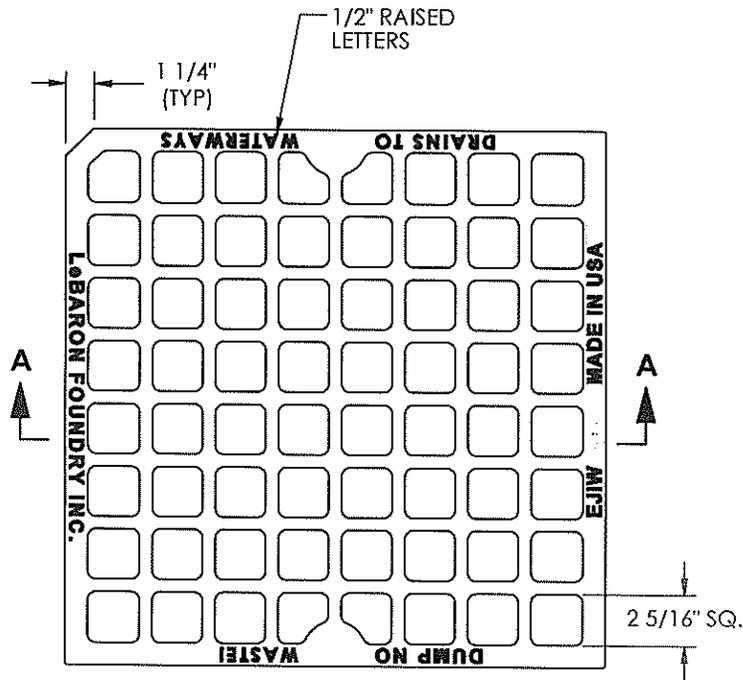


BOTTOM VIEW



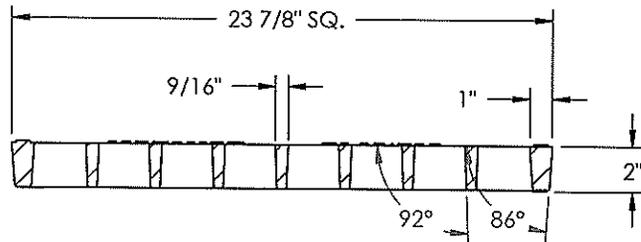
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3/8" ENGRAVED
LETTERS

BOTTOM VIEW



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EJIW EAST JORDAN

800-626-4653

www.ejiw.com

MADE IN USA

PRODUCT NUMBER

00552035

CATALOG NUMBER

5520M DI

GRATE

LOAD RATING

HEAVY DUTY

COATING

UNDIPPED

SPECIFICATION

**GRATE - DUCTILE IRON
ASTM A536**

OPEN AREA

309

DESIGNATES
MACHINED SURFACE

DRAWN

TWR

DATE

4/10/2008

LAST REVISED

ALP

DATE

1/22/2009

REFERENCE INFORMATION

00552035.1C

00552035.1D

APPENDIX E
CONTRACT DRAWINGS

Drawing name: P:\Project\G1933 Greenfield_Town of Oliver STDwg\Concepts\G1933-CONCZ_9-7-18_REV.1.dwg Dec 19, 2018 - 10:28am



OLIVE STREET IMPROVEMENTS

PREPARED FOR:

TOWN OF GREENFIELD

14 COURT SQUARE
GREENFIELD, MA 01301

PREPARED BY:

SVE

Engineering
Planning
Landscape Architecture
Surveying

SVE Associates
P.O. Box 1818
439 West River Road
Brattleboro, VT 05302
T 413.774.6698
F 413.773.0875
www.sveassoc.com

NO.	REVISION	DATE	DWN	CHK
1	REVISED DUE TO PARKING GARAGE IMPROVEMENTS	14 - DEC - 18	MJS	AW



Anthony Wonseski, Jr. 12.20.18
ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

GENERAL

- 1. APPROVAL OF THESE PLANS BY THE CITY/TOWN ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT/A NOTICE TO PROCEED HAS BEEN ISSUED.
2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY/TOWN OF GREENFIELD DOES NOT AUTHORIZE THE SUBDIVIDER, OWNER AND CONTRACTOR TO VIOLATE ANY FEDERAL, STATE OR LOCAL LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION.
4. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES.
5. PUBLIC IMPROVEMENT SUBJECT TO DESTRUCTION OR DAMAGE IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.
6. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY/TOWN OF GREENFIELD AND SVE ASSOCIATES.
7. DEVIATIONS FROM THESE PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY/TOWN ENGINEER AND SVE ASSOCIATES.
8. CONTRACTOR SHALL BE AWARE THAT THE UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED ON AVAILABLE INFORMATION. OTHER UNKNOWN UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLAN.
9. THE CONTRACTOR IS EXPECTED TO BE AWARE OF AND COMPLY WITH ALL PERMITS AND PERMIT CONDITIONS ASSOCIATED WITH THE PROJECT.
10. ALL TRENCHING, EXCAVATION, SHEETING, SHORING, ETC. SHALL COMPLY WITH THE MOST CURRENT OSHA REGULATIONS.
11. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF ALL PIPES AND STRUCTURES PRIOR TO START OF CONSTRUCTION.
12. IN CASE OF CONFLICTS BETWEEN SPECIFICATION, THE MOST STRINGENT INTERPRETATION OF THE PLANS, SPECIFICATIONS, LOCAL OR STATE REGULATION, OR PERMIT CONDITIONS SHALL APPLY.
13. CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT. LAYOUT SHALL BE PERFORMED BY A LICENSED SURVEYOR OR LICENSED ENGINEER.
14. CONTRACTOR SHALL PROVIDE A FULL SET OF AS-BUILT DRAWING TO THE OWNER WITH SWING THE COORDINATES, LOCATING ALL VALVES, FITTINGS, CORPORATIONS, STRUCTURES, PIPES, ETC.
15. ALL SURFACES SHALL BE GRADED TO DRAIN.
16. THE CONTRACTOR SHALL RESTORE ALL DISTURBED SURFACES TO THEIR ORIGINAL CONDITION OR BETTER AND EXISTING PIPES AND STRUCTURES SHALL BE CLEANED. ALL SIGNS SHALL BE REPLACED. ALL DAMAGED VEGETATION REPLACED.

EROSION AND SEDIMENT CONTROL

- 1. PROVIDE GRAVEL BAG CHEVRONS IMMEDIATELY UPSTREAM OF DRAINAGE INLETS AS INDICATED ON DETAILS.
2. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
4. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL (0.2" OR GREATER).
5. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
6. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE GREENFIELD CONSERVATION COMMISSION.
7. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE CITY/TOWN ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
9. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
10. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
11. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
12. DISCHARGING SEDIMENT-LADEN WATER INTO ANY RECEIVING WATER OR STORM DRAIN WITHOUT FILTRATION OR EQUIVALENT TREATMENT IS PROHIBITED.
13. THE DISCHARGER SHALL AMEND THE SWPPP WHENEVER THERE IS A CHANGE IN CONSTRUCTION OR OPERATIONS, WHICH MAY AFFECT THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS, GROUNDWATER, OR A MUNICIPAL STORM DRAIN SYSTEM.
14. SEDIMENT CONTROL BMP'S ARE REQUIRED AT APPROPRIATE LOCATIONS ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL INLETS TO THE STORM DRAIN SYSTEM AT ALL TIMES.
15. THE OUTLETS OF ALL SEDIMENT BASINS, TRAPS, AND LOCATIONS OF ARTIFICIALLY CONCENTRATED FLOW SHALL BE PROVIDED WITH OUTLET PROTECTION TO PREVENT EROSION AND SCOUR.
16. INSPECTIONS BY THE CONTRACTOR SHALL BE PERFORMED BEFORE AND AFTER STORM EVENTS AND ONCE EACH 24-HOUR PERIOD DURING EXTENDED STORM EVENTS TO IDENTIFY BMP EFFECTIVENESS AND IMPLEMENT REPAIRS OR DESIGN CHANGES AS SOON AS FEASIBLE, DEPENDING ON FIELD CONDITIONS, EQUIPMENT, MATERIALS, AND WORKERS MUST BE AVAILABLE FOR RAPID RESPONSE TO FAILURES AND EMERGENCIES.
17. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE SWPPP AT THE CONSTRUCTION SITE.
18. A CONCRETE WASHOUT SHALL BE INSTALLED FOR ALL PROJECTS THAT PROPOSE CONCRETE TO BE MIXED ON SITE OR DELIVERED FROM A BATCH PLANT. THE CONCRETE WASHOUT SHALL BE LOCATED A MINIMUM OF 50' FROM ANY DRAINAGE INFRASTRUCTURE OR NATURAL DRAINAGE FEATURES OR WATER BODIES AND INCORPORATE AN IMPERMEABLE LINER (6 MIL MIN) TO CONTAIN THE REQUIRED VOLUME. ALL DRIED CONCRETE WASTE SHALL BE BROKEN INTO MANAGEABLE PIECES AND DISPOSED OF IN A PROPER MANNER.

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY/TOWN OF GREENFIELD.

DIG SAFE

OTHER UNKNOWN UTILITIES MAY LIKELY BE PRESENT THAT ARE NOT SHOWN ON THE PLAN. THE CONTRACTOR SHALL CONTACT (1-888-DIG-SAFE) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION

STANDARD SPECIFICATIONS

- 1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (2006 EDITION)
2. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS (2003 EDITION).
3. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, MASSACHUSETTS HIGHWAY DEPARTMENT (CURRENT EDITION).
4. STANDARD SPECIFICATIONS FOR CITY / TOWN OF GREENFIELD.

BENCHMARK DATA

(#) BENCHMARK(S) EXIST ON THE SITE; THEY ARE BASED ON ASSUMED DATA.

BENCHMARK #1
LOCATION DESCRIPTION: THE TOP OF THE SPINDLE OF THE FIRE HYDRANT ON OLIVE STREET, IN FRONT OF KAREN'S DANCE STUDIO
POINT DESCRIPTION: SPINDLE
ELEVATION: 213.22

TOPOGRAPHY SOURCE

TOPOGRAPHIC INFORMATION BASED ON TOPOGRAPHIC SURVEY CONDUCTED BY SVE ASSOCIATES IN SEPTEMBER & OCTOBER 2017.

BOUNDARY INFORMATION BASED ON DRAWING BY BERKSHIRE DESIGN GROUP, INC. ENTITLED "PLAN OF LAND IN GREENFIELD, MA PREPARED FOR THE TOWN OF GREENFIELD" DATED APRIL 27, 2009

FLOOD PLAIN INFORMATION

PROPERTY AS SHOWN LIES WITHIN FLOOD INSURANCE RATE MAP REFERENCED DIRECTLY BELOW AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA):

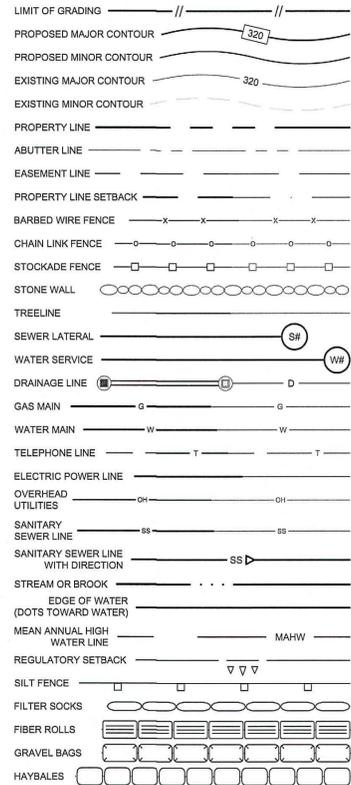
NUMBER 250118 0008 B, DATED 07/02/1980.

THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE "C."

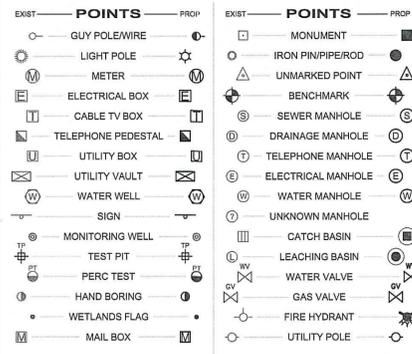
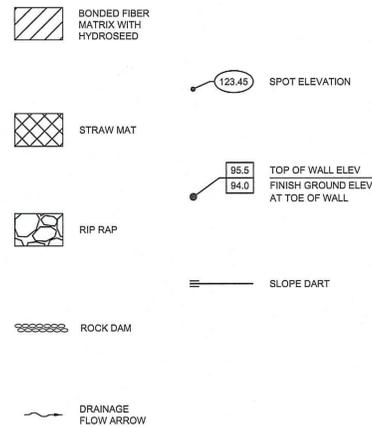
SECTIONS



LINE TYPES



MISCELLANEOUS



ABBREVIATIONS

- IP IRON PIPE / PIN
GMON GRANITE MONUMENT
CMON CONCRETE MONUMENT
M/B MASSACHUSETTS HIGHWAY BOUND
DH DRILL HOLE
P.I.L. PIN IN LEAD
PCB PROPOSED CATCH BASIN
PLB PROPOSED LEACHING BASIN
PDMH PROPOSED DRAINAGE MANHOLE
PSMH PROPOSED SANITARY SEWER MANHOLE
PTMH PROPOSED TELECOMM MANHOLE
PEMH PROPOSED ELECTRIC MANHOLE
WM WATER MAIN
GAS GAS MAIN / LINE
SS SANITARY SEWER
STM STORM / DRAINAGE SEWER
OHD OVERHEAD
UGD UNDERGROUND
CB EXISTING CATCH BASIN
LB EXISTING LEACHING BASIN
DMH EXISTING DRAINAGE MANHOLE
SMH EXISTING SEWER MANHOLE
TMH EXISTING TELECOMM MANHOLE
EMH EXISTING ELECTRIC MANHOLE
MH UNKNOWN MANHOLE
INV / IE INVERT / INVERT ELEVATION
TG TOP OF GRATE ELEVATION
RIM STRUCTURE RIM ELEVATION
FL FLOW LINE ELEVATION
HDPE HIGH DENSITY POLYETHYLENE PIPE
RCP REINFORCED CONCRETE PIPE
PVC POLYVINYL CHLORIDE PIPE
CMP CORRUGATED METAL PIPE
ACOMP ASPHALT COATED CORRUGATED METAL PIPE
VC VITREOUS CLAY PIPE
AC ASBESTOS CONCRETE PIPE (TRANSITE)
DI DUCTILE IRON PIPE
PROP PROPOSED
EXIST EXISTING
CONC CONCRETE
RET RETAINING
ROW RIGHT-OF-WAY
CL CENTERLINE
EL ELEVATION
EOP / EP EDGE OF PAVEMENT
BB BITUMINOUS BERM CURBING
GC GRANITE CURBING
CC CONCRETE CURBING
TYP TYPICAL
N/F NOW OR FORMERLY
WF WOOD FRAME
TBM TEMPORARY BENCHMARK
BM BENCHMARK
PL PROPERTY LINE
EASE EASEMENT / EASEMENT LINE
SETB PROPERTY / LOT LINE SETBACK LINE
WET WETLAND
B/W BORDERING VEGETATED WETLAND
RA RIVER FRONT RESOURCE AREA
EOW EDGE OF WATER
EOWET EDGE OF WETLANDS
MAHW MEAN ANNUAL HIGH WATER
WETSET WETLAND SETBACK LINE
PT PERCOLATION TEST SITE
TP SOIL TEST PIT
BOR BORING
MW MONITOR WELL
SF SILTFENCE
CHLF CHAIN LINK FENCE
STOCK STOCKADE FENCE
BWF BARBED WIRE FENCE
STWL STONE WALL

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EXISTING CONDITIONS PLAN 2 SHEET 03
STREET IMPROVEMENT PLAN 1 SHEET 04
STREET IMPROVEMENT PLAN 2 SHEET 05
PROPOSED GRADING PLAN SHEET 06
PROPOSED GRADING PLAN SHEET 07
PROPOSED UTILITY / EROSION CONTROL PLAN SHEET 08
PROPOSED UTILITY / EROSION CONTROL PLAN SHEET 09
DETAILS SHEET 10



Anthony Wonsesk Jr. DATE 12.20.18
R.C.E. NUMBER: 46615

Table with columns: NO., DATE, REVISION, CHK, DWN, M/S, AW. Row 1: REVISED DUE TO PARKING GARAGE IMPROVEMENTS 14 - DEC - 18

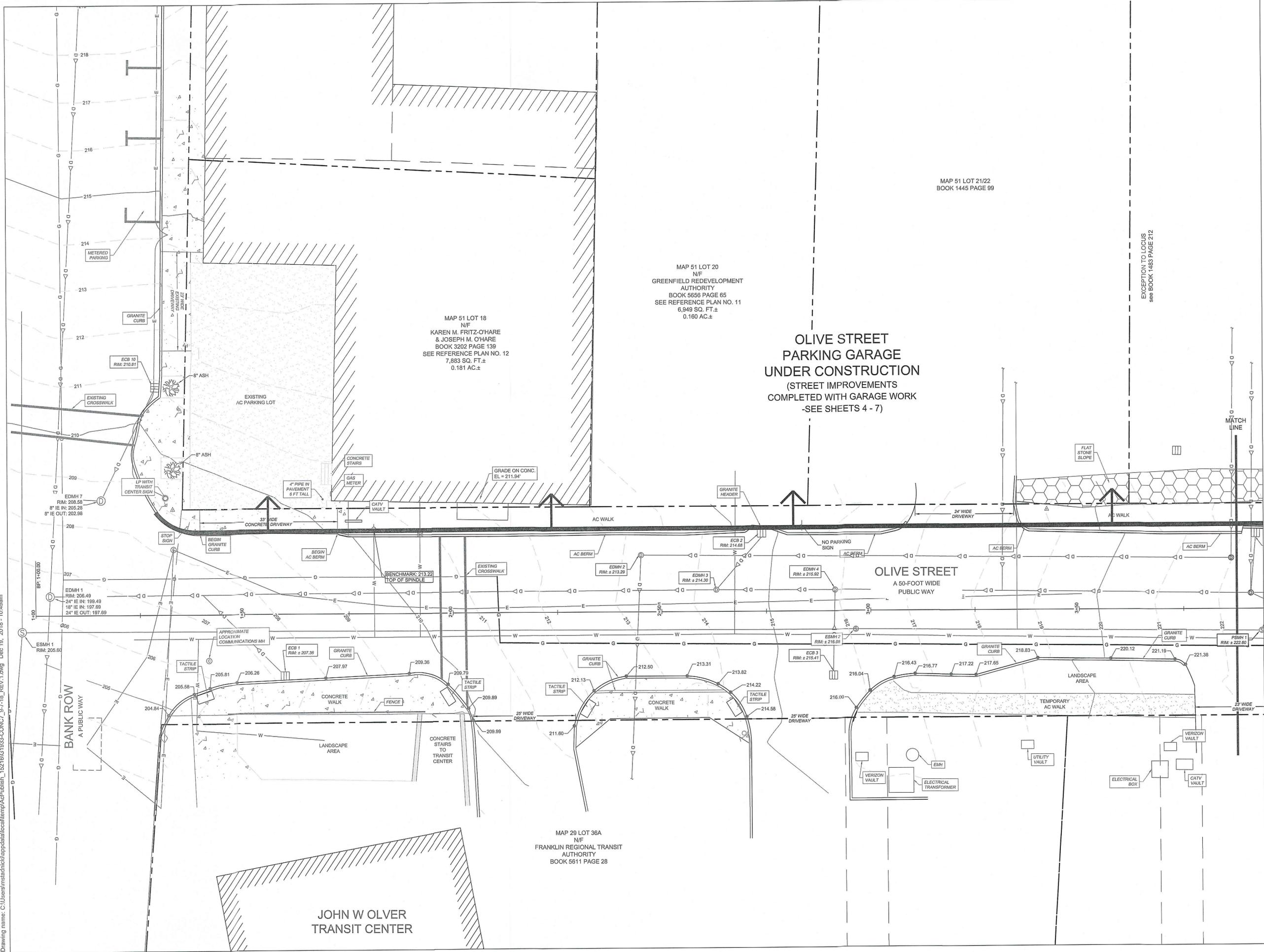


SVE Associates
P.O. Box 1818
439 West River Road
Brattleboro, VT 05302
T 413.774.6698
F 413.773.0875
www.sveassoc.com

STANDARD NOTES, LEGEND, & TABLE OF CONTENTS
OLIVE STREET IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301

DESIGN: AW SHEET 1/10
DRAWN: KAF
CHECKED: AW

Drawing name: C:\Users\instadick\appdata\local\temp\AcPublish_152161G1933-CONC7_9-7-18_REV1.dwg Dec 19, 2018 - 10:48am



ANTHONY WONSESKI, JR. DATE 12-20-18
R.C.E. NUMBER: 48615

MAP 51 LOT 20
N/F
GREENFIELD REDEVELOPMENT
AUTHORITY
BOOK 5656 PAGE 65
SEE REFERENCE PLAN NO. 11
6,949 SQ. FT.±
0.160 AC.±

MAP 51 LOT 18
N/F
KAREN M. FRITZ-O'HARE
& JOSEPH M. O'HARE
BOOK 3202 PAGE 139
SEE REFERENCE PLAN NO. 12
7,883 SQ. FT.±
0.181 AC.±

**OLIVE STREET
PARKING GARAGE
UNDER CONSTRUCTION**
(STREET IMPROVEMENTS
COMPLETED WITH GARAGE WORK
-SEE SHEETS 4 - 7)

MAP 51 LOT 21/22
BOOK 1445 PAGE 99

EXCEPTION TO LOCUS
see BOOK 1483 PAGE 212

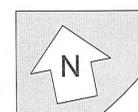
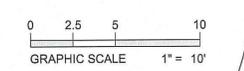
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1	REVISED DUE TO PARKING GARAGE IMPROVEMENTS	14 - DEC - 18	MJS	AW

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**EXISTING
CONDITIONS
STA 1+00 - STA 3+75**
OLIVE STREET
IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301



PROJ. #
G1933
DATE:
10-SEP-18

DESIGN: AW
DRAWN: KAF
CHECKED: AW
SHEET
2 / 10

MAP 51 LOT 2
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

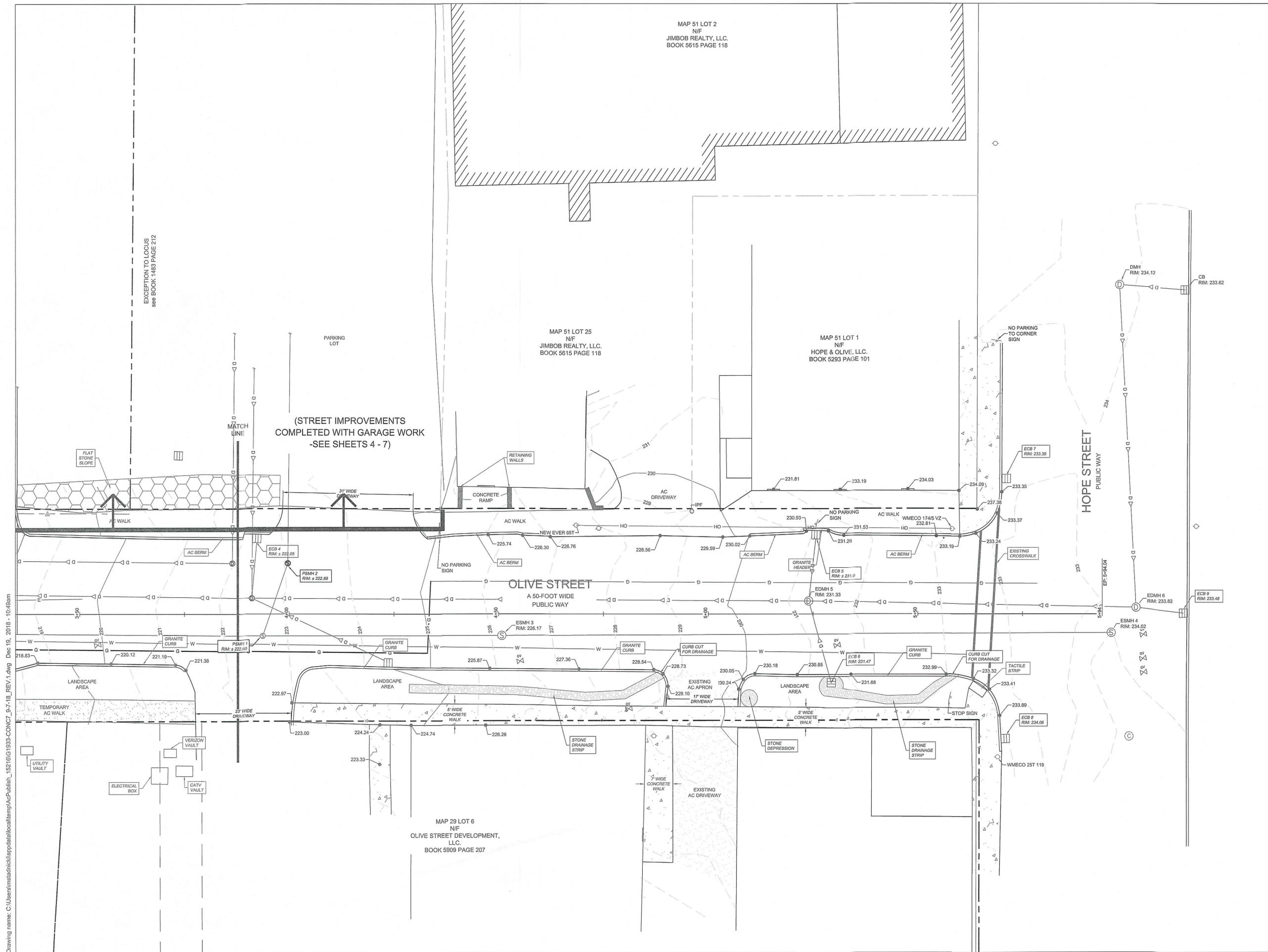
MAP 51 LOT 25
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

MAP 51 LOT 1
N/F
HOPE & OLIVE, LLC.
BOOK 5293 PAGE 101

MAP 29 LOT 6
N/F
OLIVE STREET DEVELOPMENT,
LLC.
BOOK 5909 PAGE 207

EXCEPTION TO LOG IS
SEE BOOK 1483 PAGE 212

(STREET IMPROVEMENTS
COMPLETED WITH GARAGE WORK
-SEE SHEETS 4 - 7)



Anthony Wonseski Jr. 12-20-18
ANTHONY WONSESKI JR. DATE
R.C.E. NUMBER: 46615

NO.	REVISION	DATE	DWGN	CHK
1	REVISED DUE TO PARKING GARAGE IMPROVEMENTS	14-DEC-18	MJS	AW

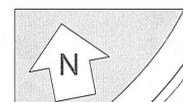
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**EXISTING
CONDITIONS
STA 3+75 - STA 5+94**
OLIVE STREET
IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301

0 2.5 5 10
GRAPHIC SCALE 1" = 10'



PROJ. #
G1933
DATE:
10-SEP-18
DESIGN: AW
DRAWN: KAF
CHECKED: AW
SHEET
3 / 10

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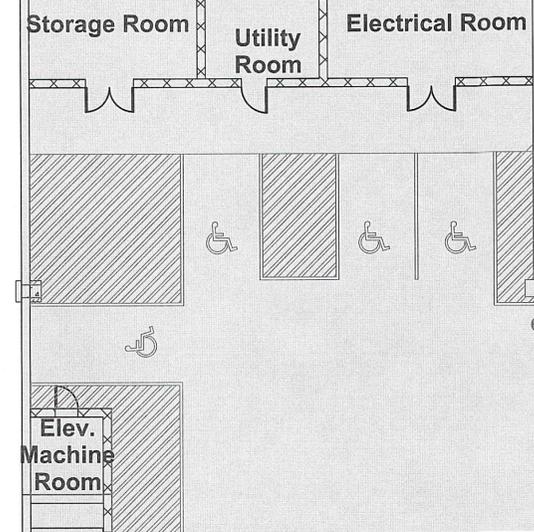
CONSTRUCTION NOTES

- 1 PROPOSED CONCRETE SIDEWALK
- 2 PROPOSED TACTILE STRIP
- 3 PROPOSED PEDESTRIAN RAMP
- 4 PROPOSED GRANITE CURB (TYP)
- 5 PROPOSED PEDESTRIAN BARRIER (SEE DETAIL ON SHEET 12)
- 6 MATCH EXISTING CONDITIONS
- 7 TRANSITION FROM 6" CURB REVEAL TO 0" CURB REVEAL
- 8 UTILITY POLES (TYP)
- 9 AC APRON (TYP)
- 10 PROPOSED CROSSWALK PAVEMENT MARKING
- 11 VEGETATED STRIP
- 12 EXISTING GRANITE CURB TO REMAIN IN PLACE
- 13 CONCRETE APRON
- 14 PROPOSED DECORATIVE STREET LAMP

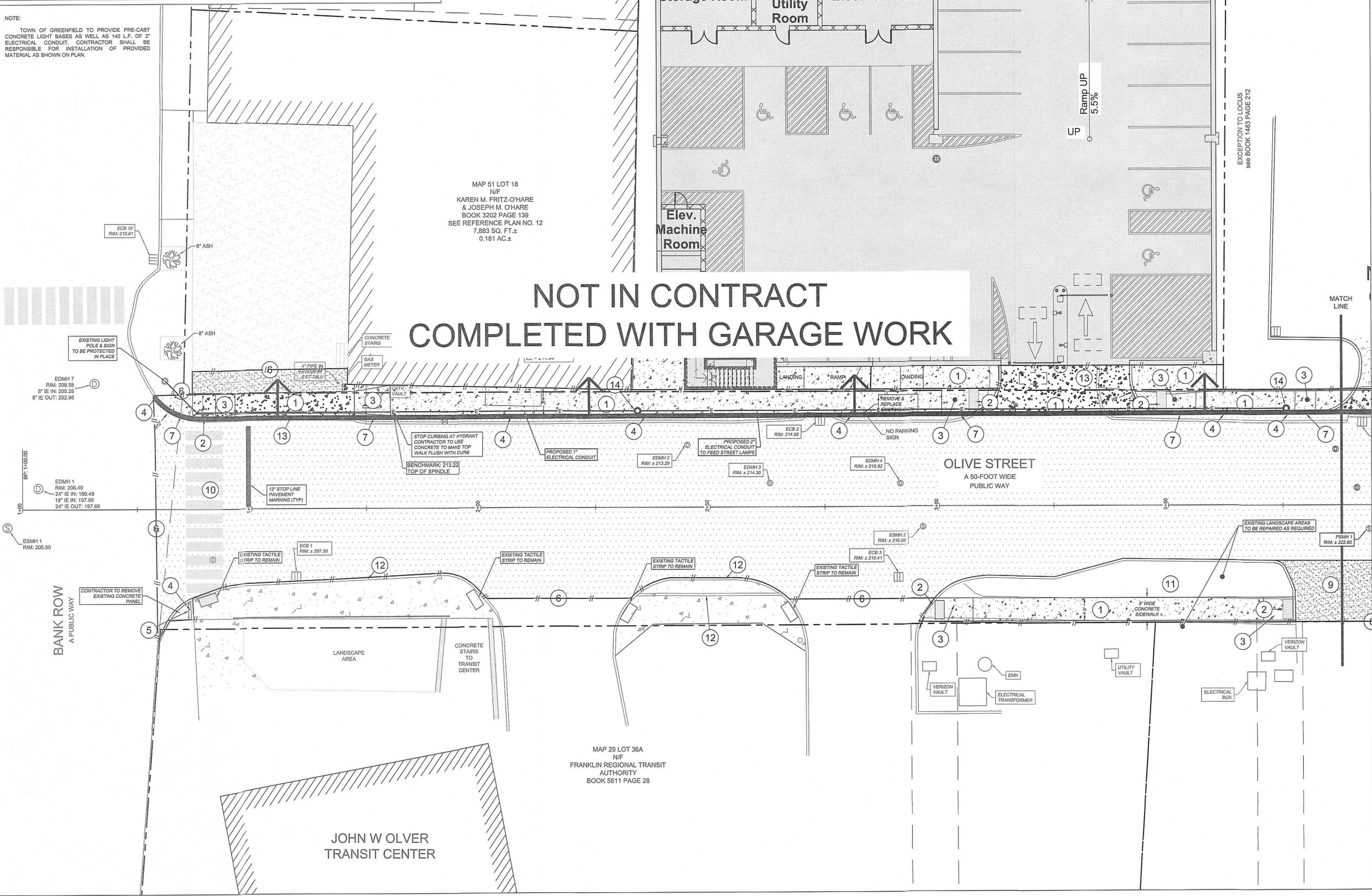
- 4" CONCRETE (4000 PSI)
6" PROCESSED GRAVEL
- 6" CONCRETE (4000 PSI)
9" PROCESSED GRAVEL
- 1" AC FINISH
2" AC BINDER
12" GRAVEL BASE
- 1.5" MILLING &
1.5" AC OVERLAY

NOTE:
TOWN OF GREENFIELD TO PROVIDE PRE-CAST CONCRETE LIGHT BASES AS WELL AS 140 LF. OF 2" ELECTRICAL CONDUIT. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PROVIDED MATERIAL AS SHOWN ON PLAN.

MAP 51 LOT 18
N/F
KAREN M. FRITZ-O'HARE
& JOSEPH M. O'HARE
BOOK 3202 PAGE 139
SEE REFERENCE PLAN NO. 12
7,883 SQ. FT. ±
0.181 AC. ±



NOT IN CONTRACT
COMPLETED WITH GARAGE WORK



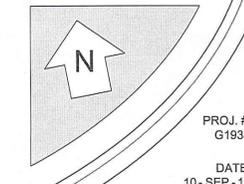
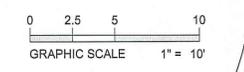
Anthony Wonseski, Jr. 12.20.18
ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

NO.	REVISION	DATE	BY	CHK
1	REVISED DUE TO PARKING IMPROVEMENTS	14 - DEC - 18	MJS	AW

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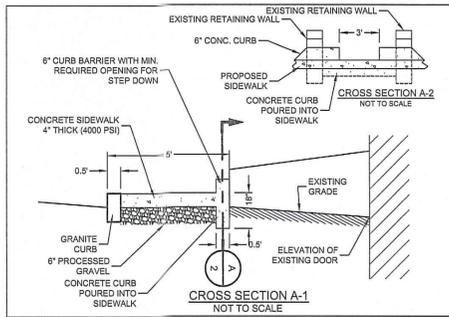
STREET IMPROVEMENT
STA 1+00 - STA 3+75
OLIVE STREET IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301



PROJ. #
G1933
DATE:
10 - SEP - 18
DESIGN: AW
DRAWN: KAF
CHECKED: AW
SHEET
4 / 10

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MAP 51 LOT 2
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

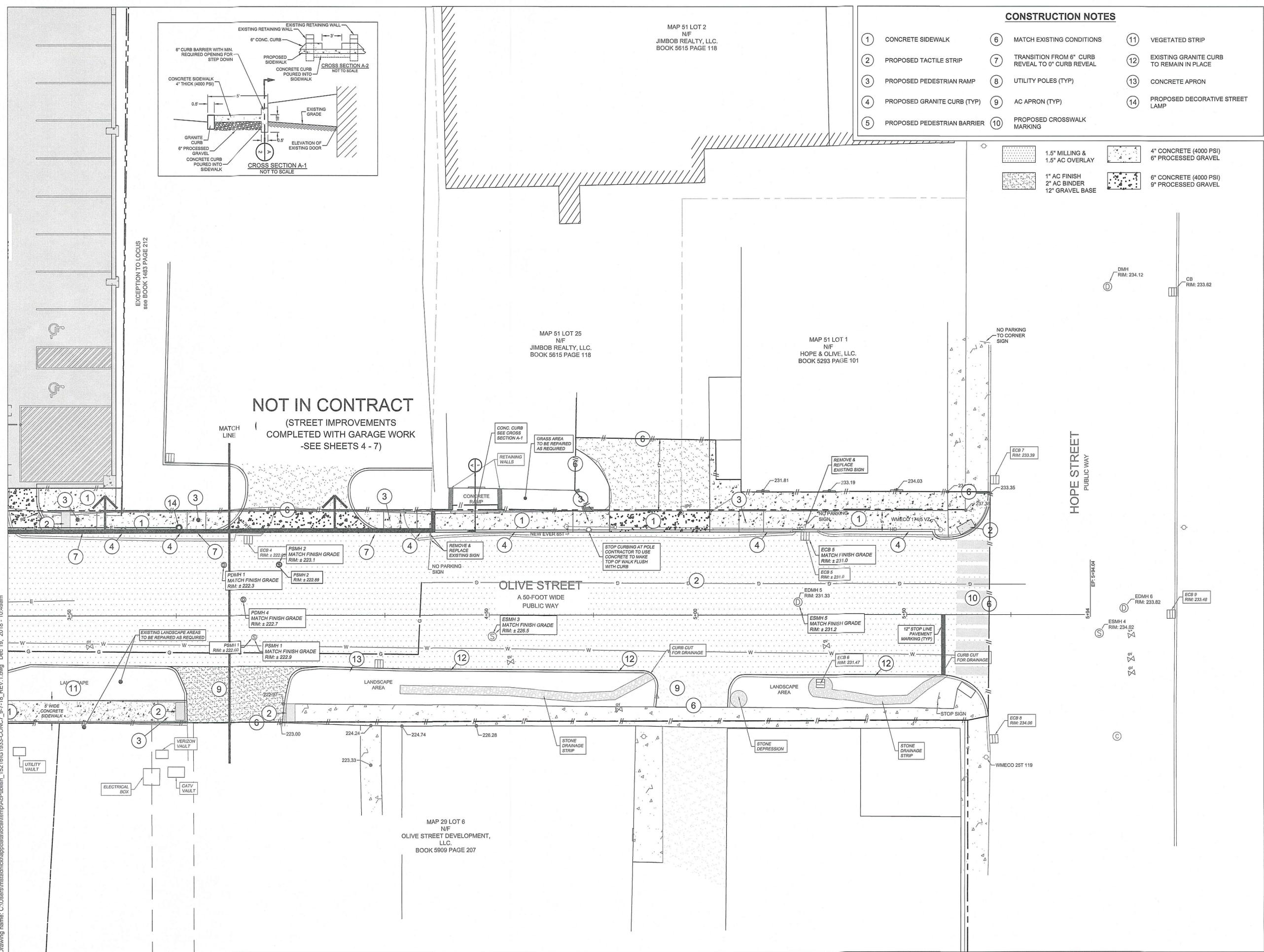
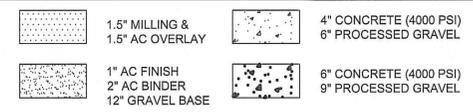
MAP 51 LOT 25
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

MAP 51 LOT 1
N/F
HOPE & OLIVE, LLC.
BOOK 5293 PAGE 101

NOT IN CONTRACT
(STREET IMPROVEMENTS
COMPLETED WITH GARAGE WORK
-SEE SHEETS 4 - 7)

CONSTRUCTION NOTES

- | | | |
|-------------------------------|--|---|
| 1 CONCRETE SIDEWALK | 6 MATCH EXISTING CONDITIONS | 11 VEGETATED STRIP |
| 2 PROPOSED TACTILE STRIP | 7 TRANSITION FROM 6" CURB REVEAL TO 0" CURB REVEAL | 12 EXISTING GRANITE CURB TO REMAIN IN PLACE |
| 3 PROPOSED PEDESTRIAN RAMP | 8 UTILITY POLES (TYP) | 13 CONCRETE APRON |
| 4 PROPOSED GRANITE CURB (TYP) | 9 AC APRON (TYP) | 14 PROPOSED DECORATIVE STREET LAMP |
| 5 PROPOSED PEDESTRIAN BARRIER | 10 PROPOSED CROSSWALK MARKING | |



Anthony Wonseski Jr. 12.20.18
ANTHONY WONSESKI JR. DATE
R.C.E. NUMBER 46615

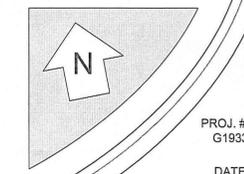
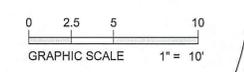
NO.	REVISION	DATE	DWGN	CHK
1	REVISED DUE TO PARKING GARAGE IMPROVEMENTS	14 - DEC - 18	MJS	AW

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STREET IMPROVEMENT
STA 3+75 - STA 5+94
OLIVE STREET IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301



PROJ. #
G1933
DATE:
10 - SEP - 18
DESIGN: AW
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CHECKED: AW
SHEET
5 / 10



Anthony Woneski, Jr. 12.20.18
 ANTHONY WONESKI, JR. DATE
 R.C.E. NUMBER: 46615

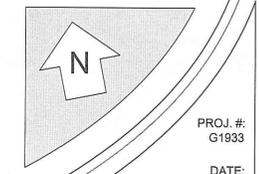
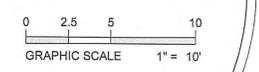
NO.	REVISION	DATE	DWN	CHK
1	REVISED DUE TO PARKING GARAGE IMPROVEMENTS	14 - DEC - 18	MJS	AW

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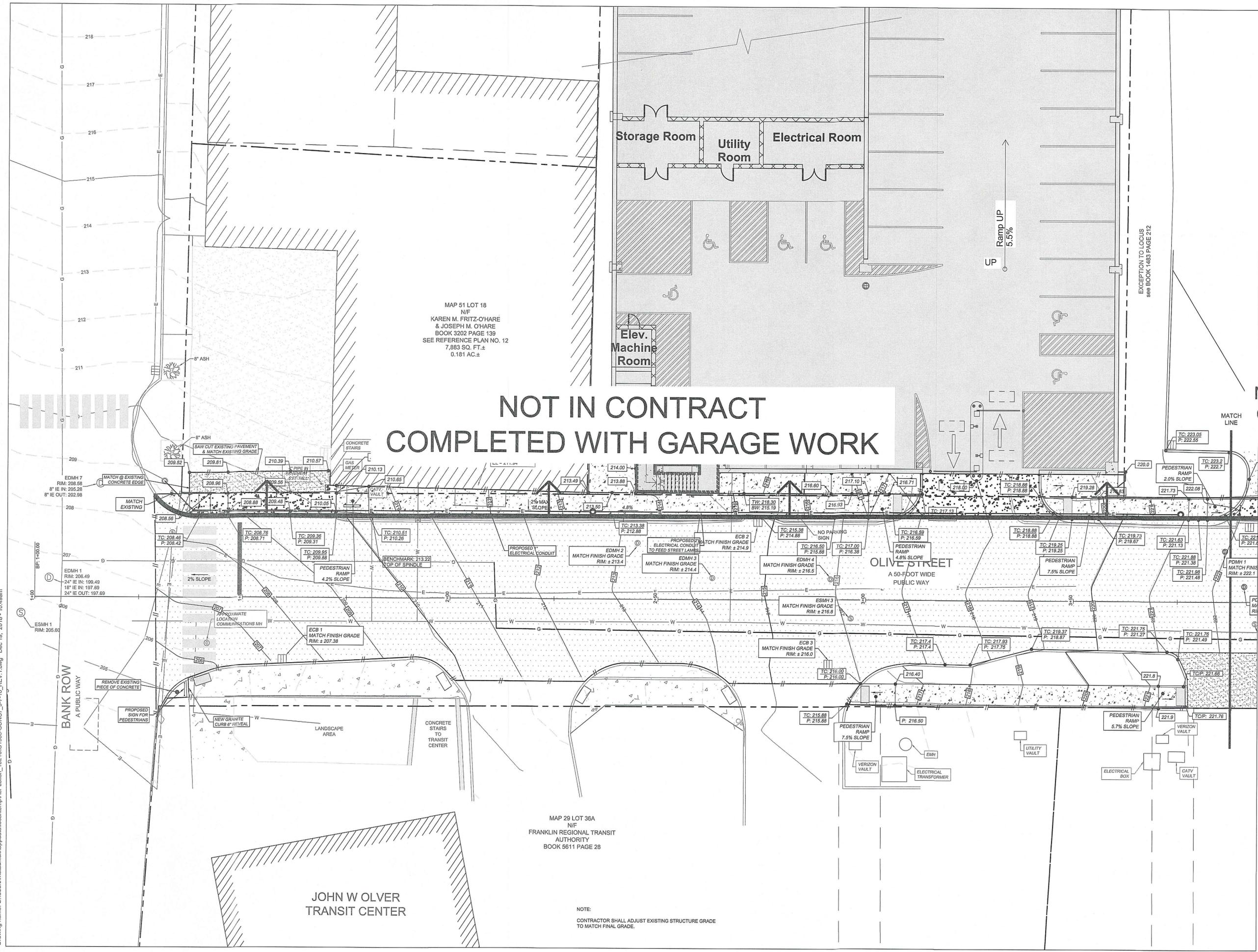
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**GRADING PLAN
 STA 1+00 - STA 3+75**

OLIVE STREET
 IMPROVEMENTS
 TOWN OF GREENFIELD
 14 COURT SQUARE
 GREENFIELD, MA 01301



PROJ. #: G1933
 DATE: 10 - SEP - 18
 DESIGN: AW
 DRAWN: KAF
 CHECKED: AW
 SHEET 6/10



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Anthony Wonseski, Jr. 12.26.18

ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

NO.	REVISION	DATE	DWN	CHK
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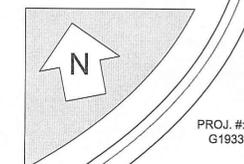
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EROSION CONTROL PLAN
STA 1+00 - STA 3+75
OLIVE STREET
IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301

0 2.5 5 10
GRAPHIC SCALE 1" = 10'

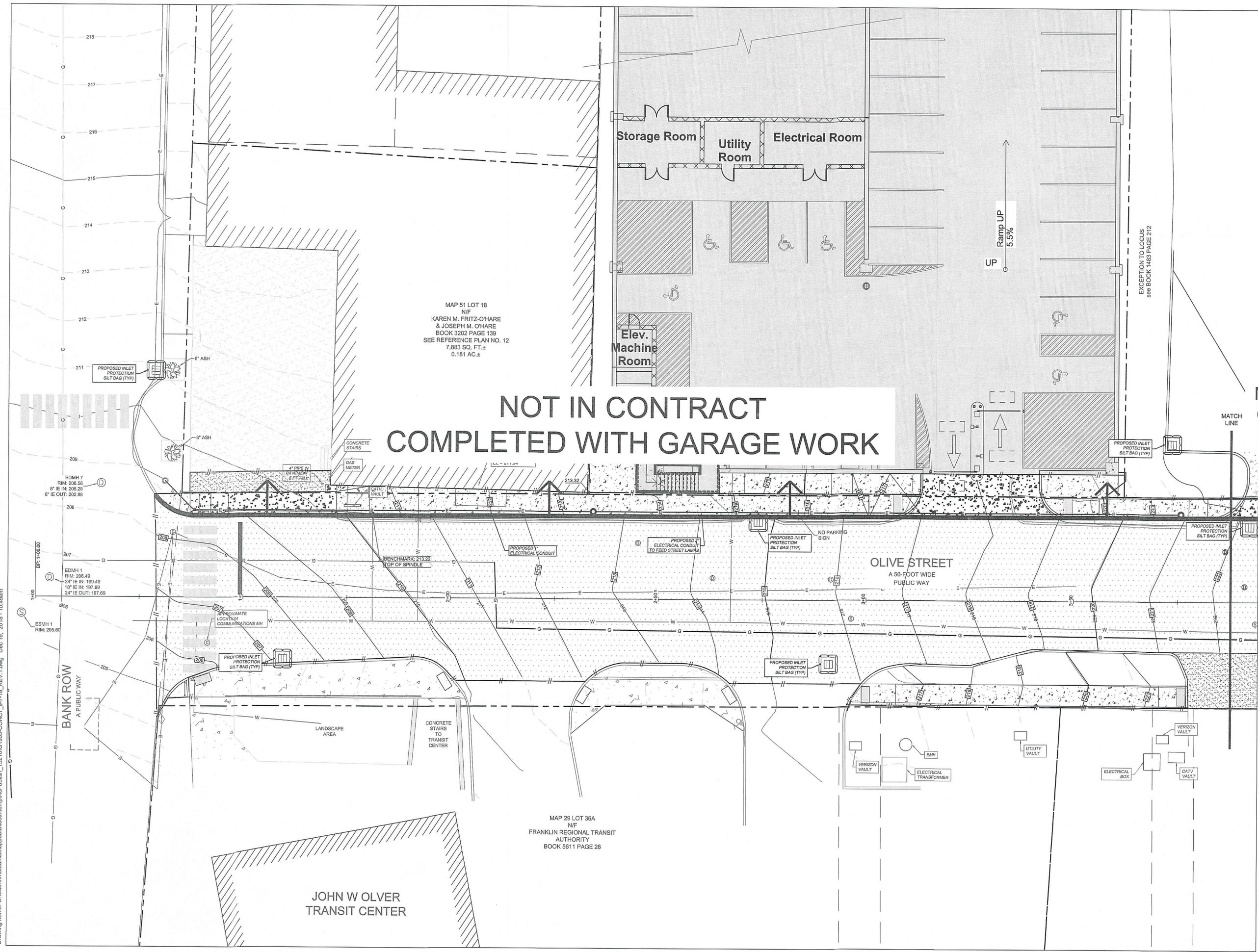


PROJ. #
G1933

DATE:
10 - SEP - 18

DESIGN: AW
DRAWN: KAF
CHECKED: AW

SHEET
8 / 10



MAP 51 LOT 18
N/F
KAREN M. FRITZ-O'HARE
& JOSEPH M. O'HARE
BOOK 3202 PAGE 139
7,883 SQ. FT.±
0.181 AC.±

NOT IN CONTRACT COMPLETED WITH GARAGE WORK

MAP 29 LOT 36A
N/F
FRANKLIN REGIONAL TRANSIT
AUTHORITY
BOOK 5611 PAGE 28

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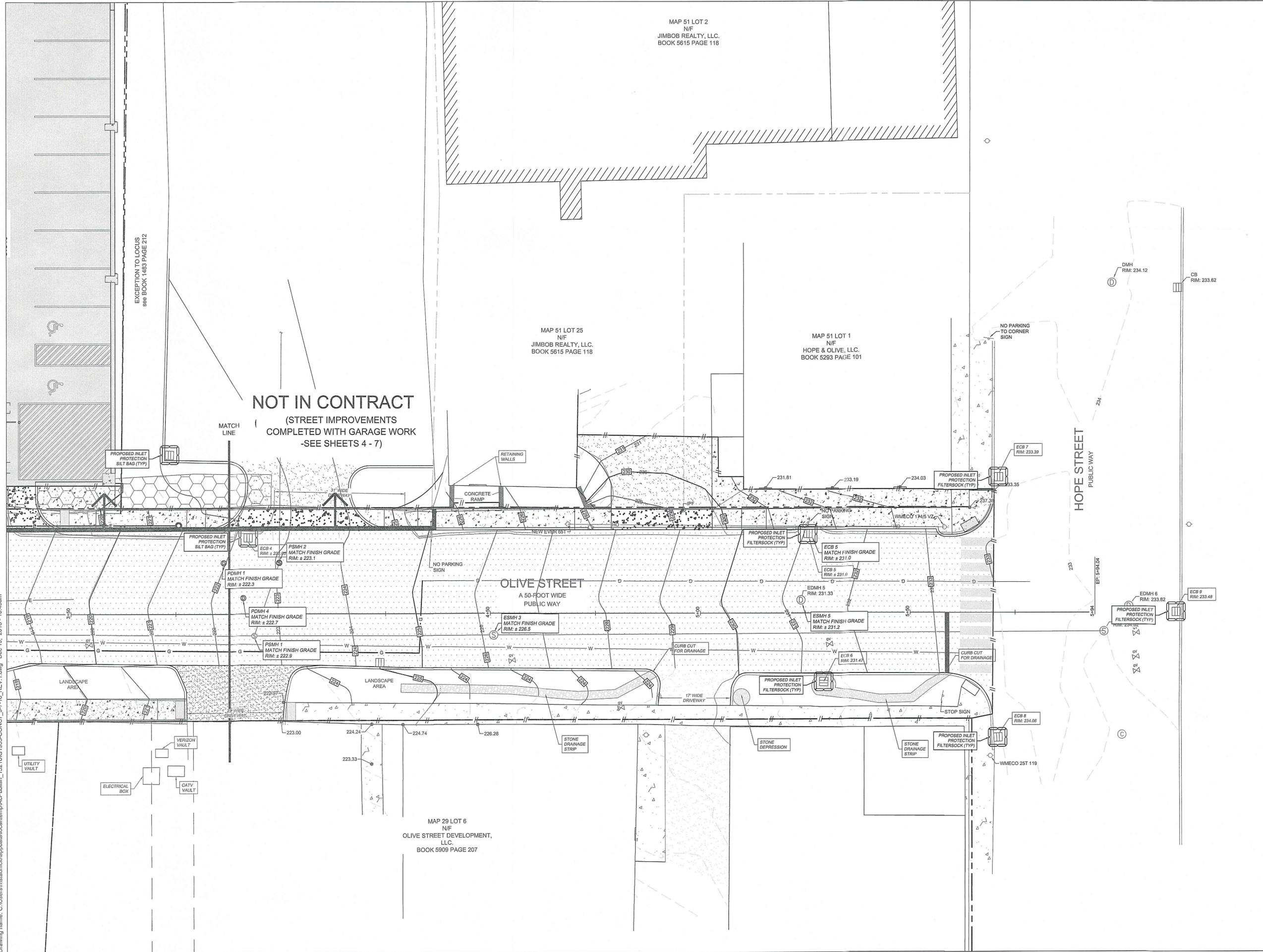
MAP 51 LOT 2
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

MAP 51 LOT 25
N/F
JIMBOB REALTY, LLC.
BOOK 5615 PAGE 118

MAP 51 LOT 1
N/F
HOPE & OLIVE, LLC.
BOOK 5293 PAGE 101

MAP 29 LOT 6
N/F
OLIVE STREET DEVELOPMENT,
LLC.
BOOK 5909 PAGE 207

NOT IN CONTRACT
(STREET IMPROVEMENTS
COMPLETED WITH GARAGE WORK
-SEE SHEETS 4 - 7)



EXCEPTION TO LOCUS
see BOOK 1483 PAGE 212

MATCH LINE

RETAINING WALLS

CONCRETE RAMP

OLIVE STREET
A 50-FOOT WIDE
PUBLIC WAY

HOPE STREET
PUBLIC WAY

NO PARKING
TO CORNER
SIGN

NO PARKING
SIGN

NO PARKING
SIGN

CURB CUT
FOR DRAINAGE

CURB CUT
FOR DRAINAGE

STONE DRAINAGE
STRIP

STONE DEPRESSION

STONE DRAINAGE
STRIP

PROPOSED INLET
PROTECTION
FILTERSOCK (TYP)

PROPOSED INLET
PROTECTION
FILTERSOCK (TYP)

PROPOSED INLET
PROTECTION
FILTERSOCK (TYP)

ELECTRICAL BOX

VERIZON VAULT

CATY VAULT

UTILITY VAULT



Anthony Wonseski, Jr. 12-20-18
ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

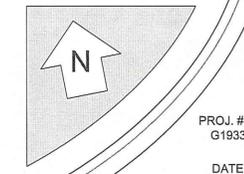
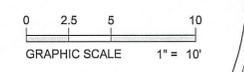
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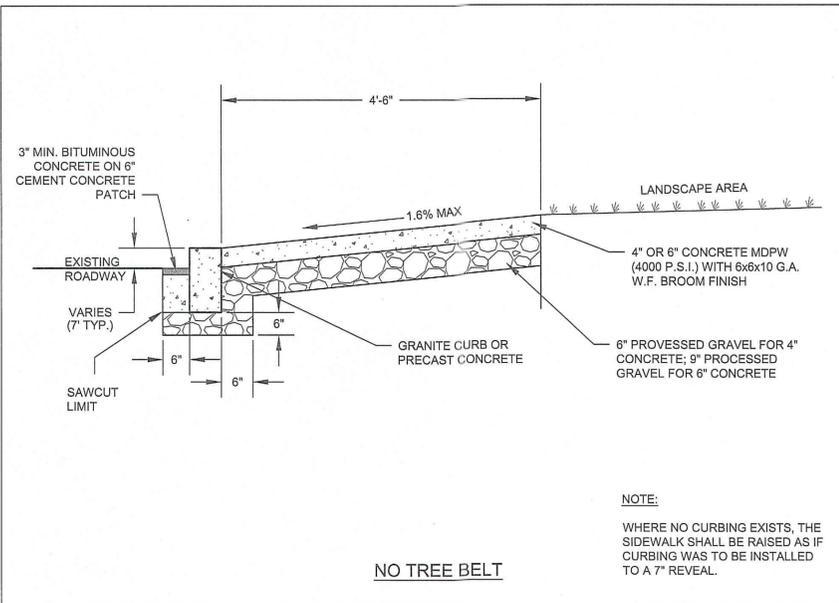
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**EROSION CONTROL
PLAN**
STA 3+75 - 5+94
OLIVE STREET
IMPROVEMENTS
TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301

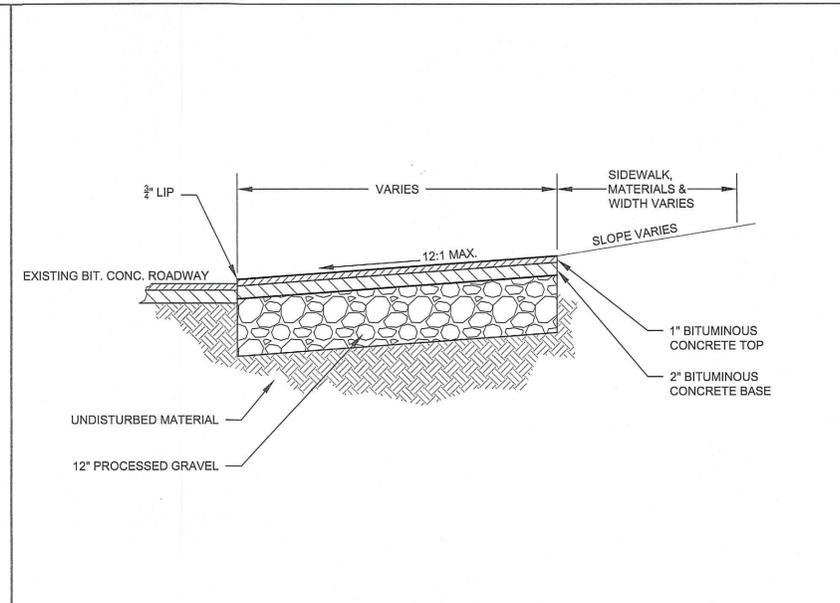


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DATE:
10 - SEP - 18
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DRAWN: KAF
CHECKED: AW
SHEET
9 / 10

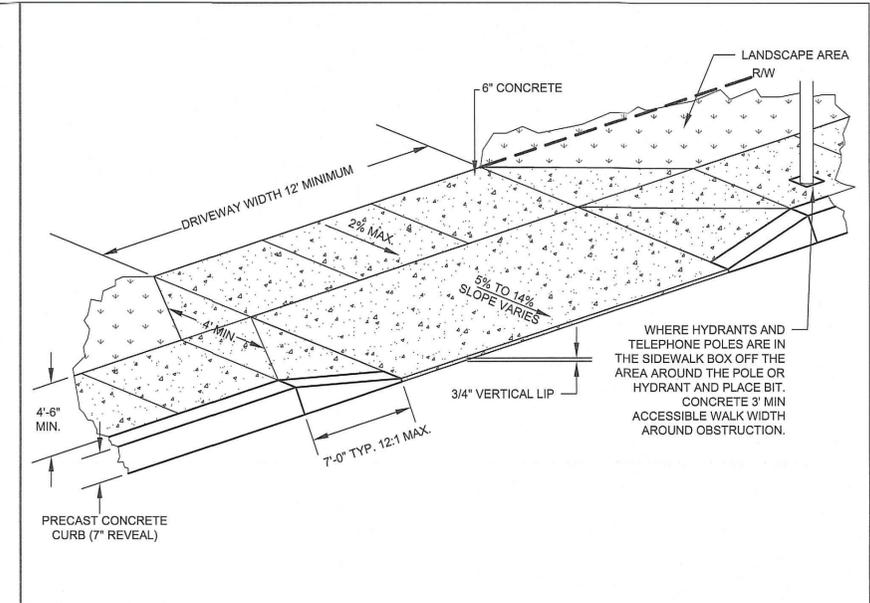
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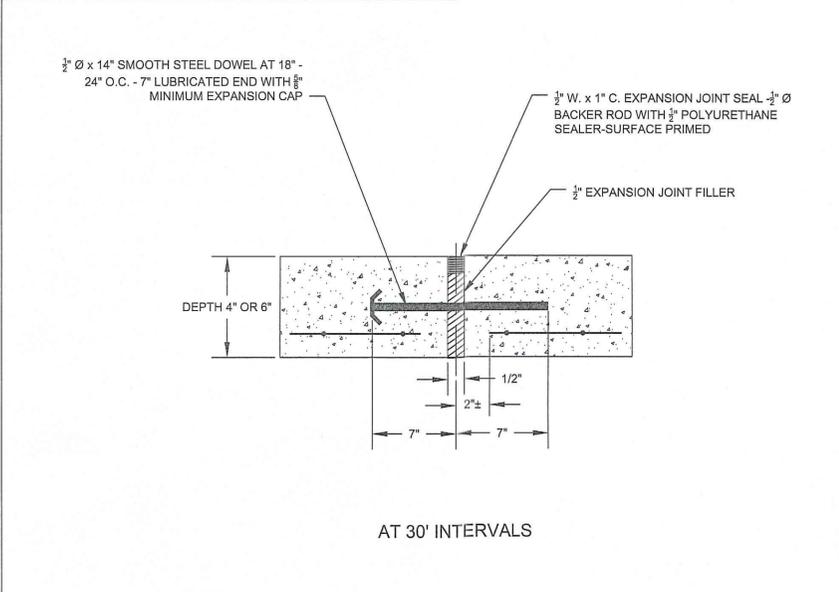
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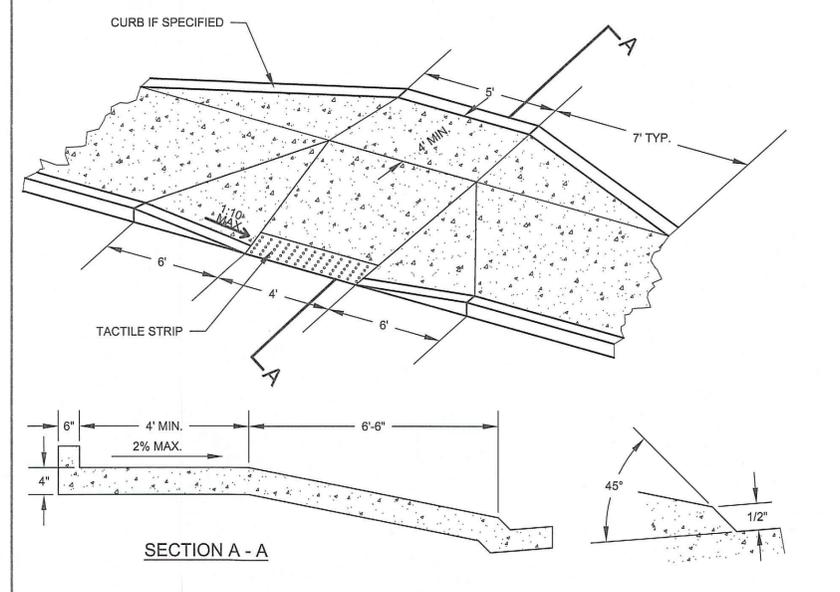
TYPICAL BIT. CONCRETE DRIVE NOT TO SCALE



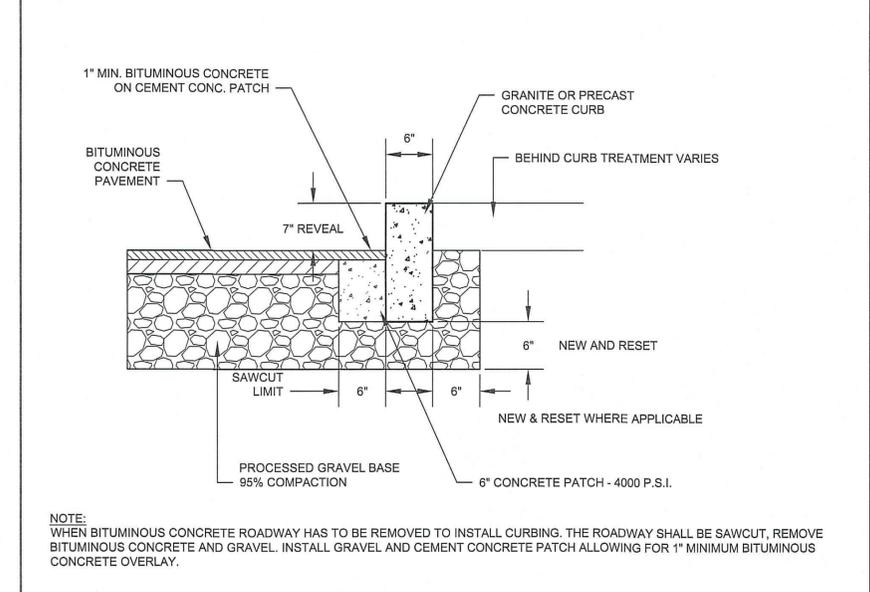
TYPICAL DRIVE - NO TREE BELT NOT TO SCALE



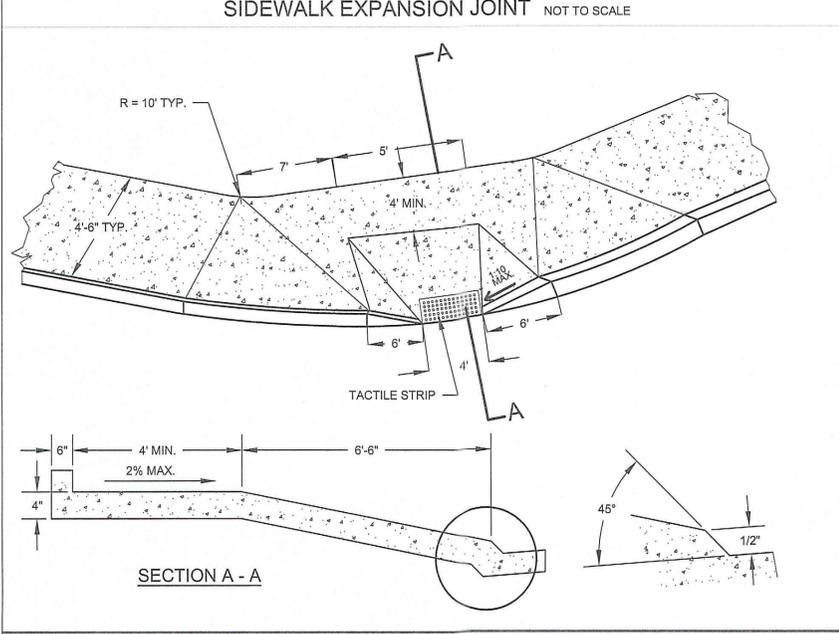
SIDEWALK EXPANSION JOINT NOT TO SCALE



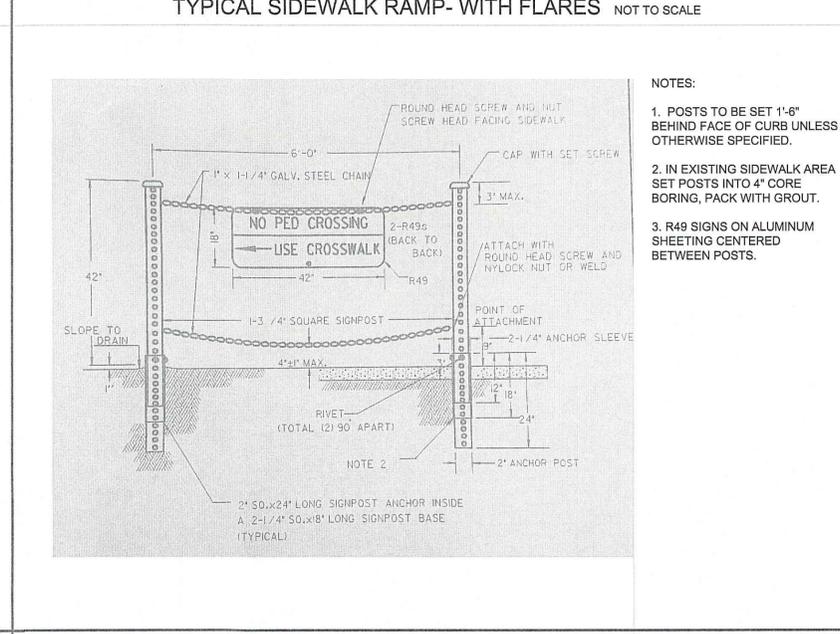
TYPICAL SIDEWALK RAMP - WITH FLARES NOT TO SCALE



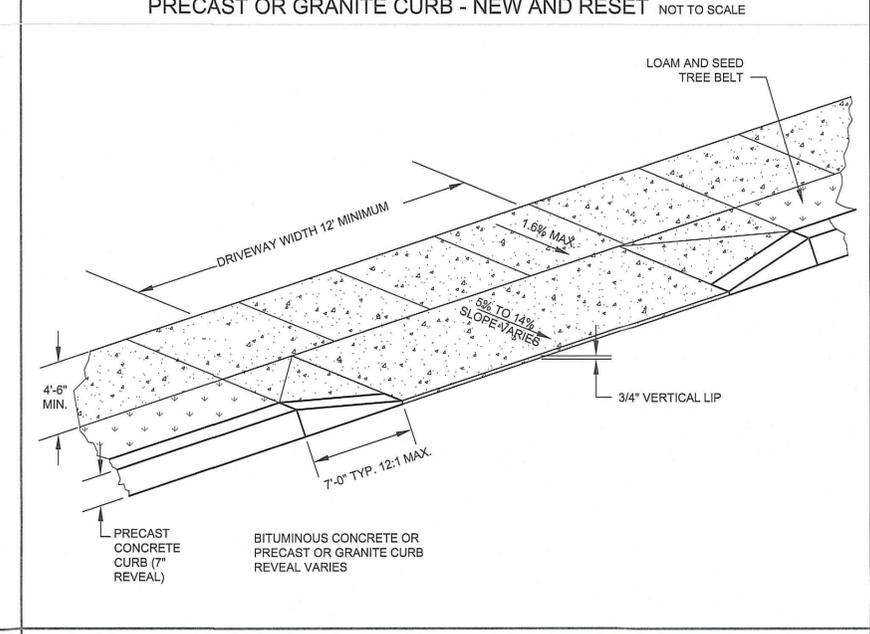
PRECAST OR GRANITE CURB - NEW AND RESET NOT TO SCALE



TYPICAL SIDEWALK RAMP - STREET CORNER NOT TO SCALE



PEDESTRIAN BARRICADE DETAIL NOT TO SCALE



TYPICAL DRIVE - WITH TREE BELT NOT TO SCALE



Anthony Wonseski Jr. 12.20.18
ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

NO.	REVISION	DATE	DWN	CHK	AW
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DETAILS

OLIVE STREET
IMPROVEMENTS

TOWN OF GREENFIELD
14 COURT SQUARE
GREENFIELD, MA 01301

SCALE OF DETAILS:
AS NOTED

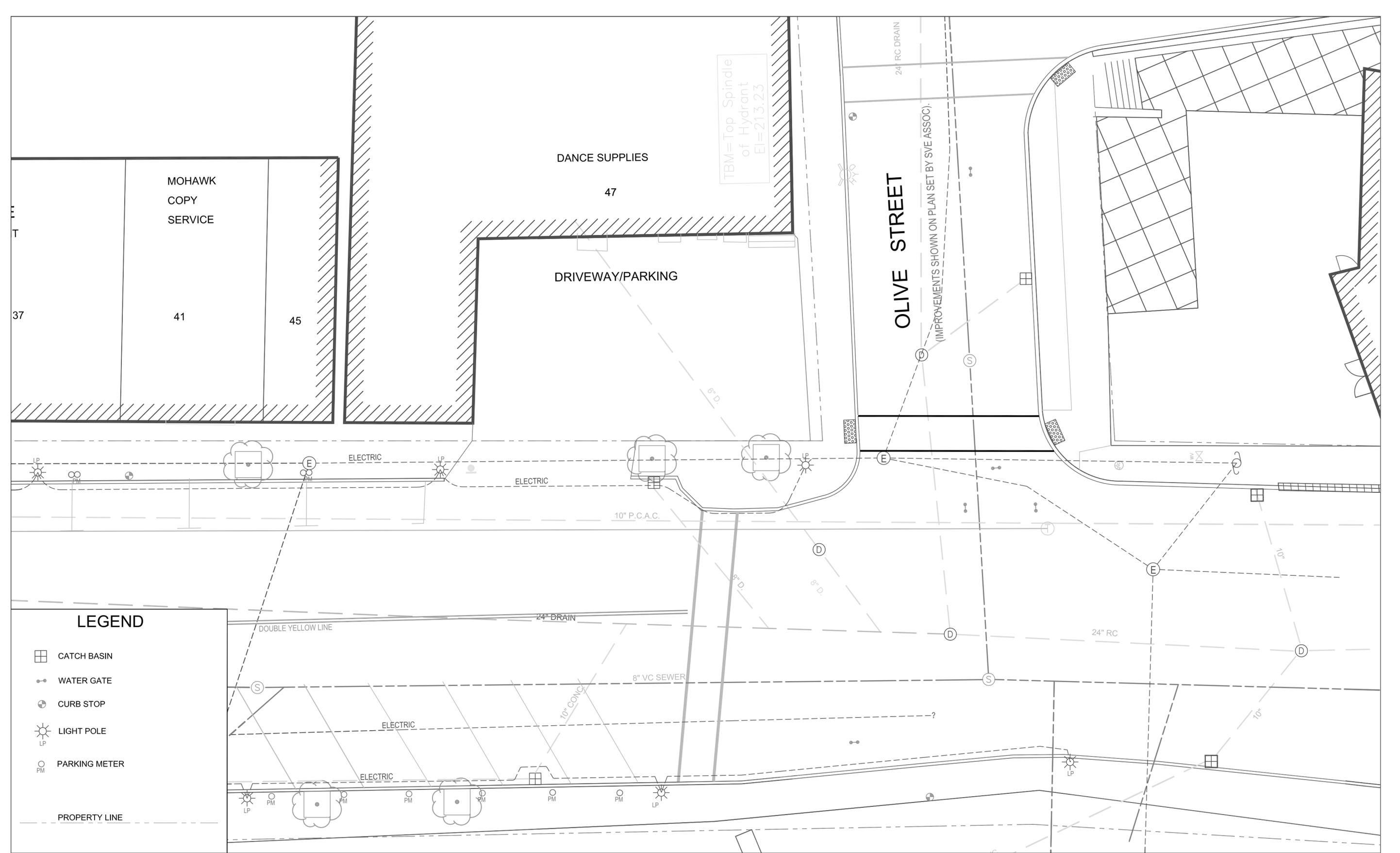
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G1933

DATE:
10 - SEP - 18

DESIGN: AW
DRAWN: KAF
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SHEET
10 / 10

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TBM=Top Spindle
of Hydrant
EI=213.23

OLIVE STREET
(IMPROVEMENTS SHOWN ON PLAN SET BY SVE ASSOC.)

LEGEND

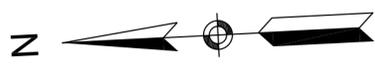
-  CATCH BASIN
-  WATER GATE
-  CURB STOP
-  LIGHT POLE
-  PARKING METER
-  PROPERTY LINE

**BANK ROW
AT OLIVE ST
NEW ADA RAMPS/CROSSWALK
EXISTING CONDITIONS**

Designed by: RN
Drawn by: RN
Date: 03-13-2019

C1
SHEET 1 OF 4

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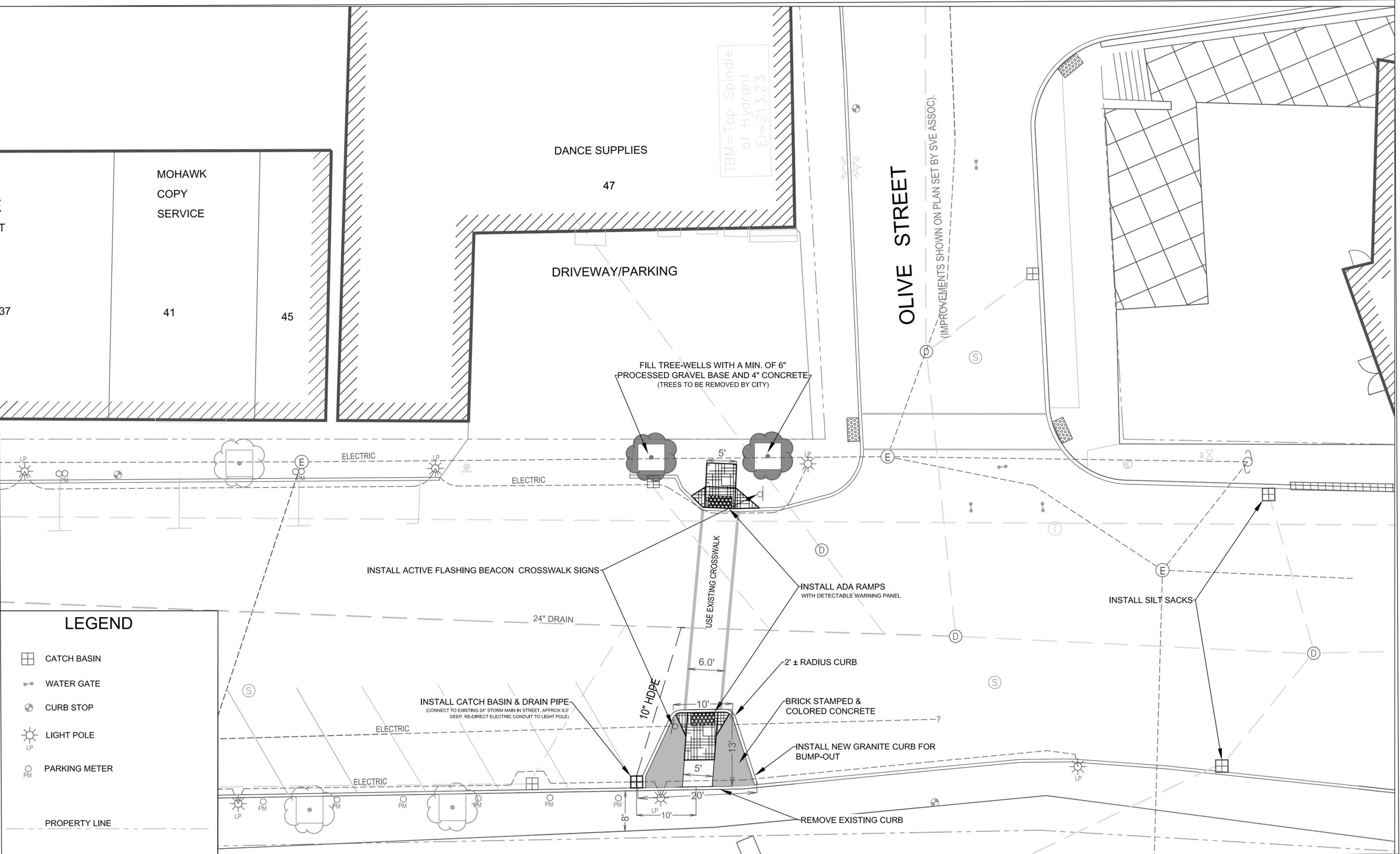
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REV #	COMMENTS	DATE

**Greenfield Department of
Public Works
Engineering**

189 Wells Street
Greenfield, MA 01301
Phone:(413)772-1528





LEGEND

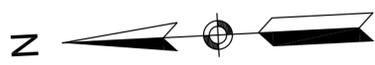
-  CATCH BASIN
-  WATER GATE
-  CURB STOP
-  LIGHT POLE
-  PARKING METER
-  PROPERTY LINE

**BANK ROW
AT OLIVE ST
NEW ADA RAMPS/CROSSWALK
PROPOSED CONSTRUCTION**

Designed by: RN
 Drawn by: RN
 Date: 03-13-2019

C2
SHEET 2 OF 4

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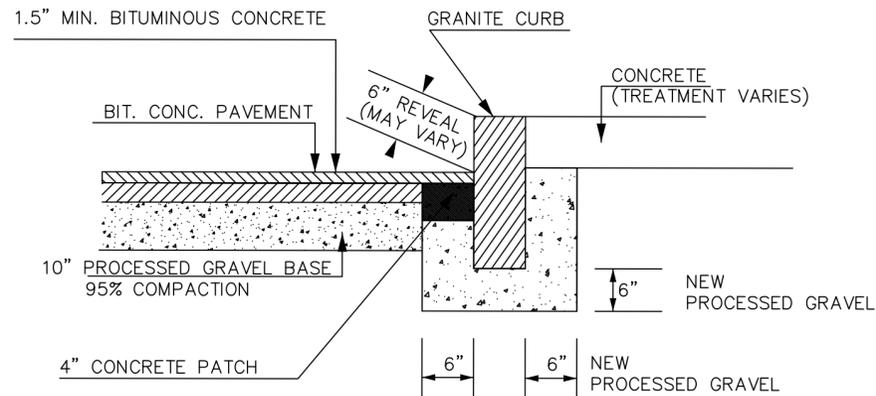
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REV #	COMMENTS	DATE

**Greenfield Department of
Public Works
Engineering**

189 Wells Street
Greenfield, MA 01301
Phone:(413)772-1528

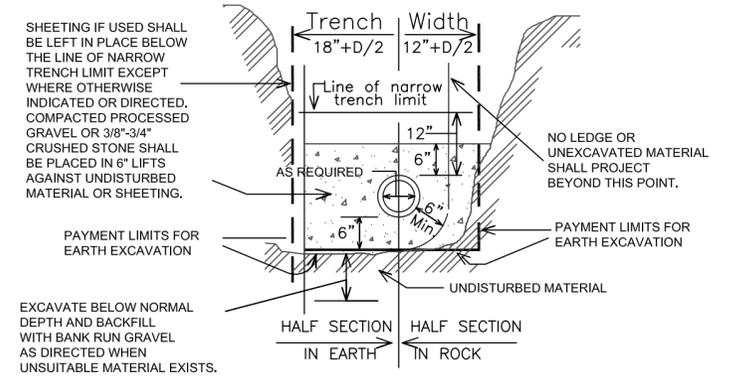




GRANITE & CONCRETE CURB DETAIL NEW & RESET
NOT TO SCALE

ONLY WHEN BITUMINOUS CONCRETE ROADWAY HAS TO BE REMOVED TO INSTALL CURBING. THE ROADWAY SHALL BE SAWCUT. REMOVE BITUMINOUS CONCRETE AND GRAVEL. INSTALL GRAVEL AND CEMENT CONCRETE ALLOWING FOR 1.5" MINIMUM BITUMINOUS CONCRETE PATCH.

- * 6" GRAVEL, CONCRETE AND SAWCUT FOR NEW OR RESET.
- * SLOTTED CURB SHALL HAVE 1' SEPERATION BETWEEN CURB SECTIONS



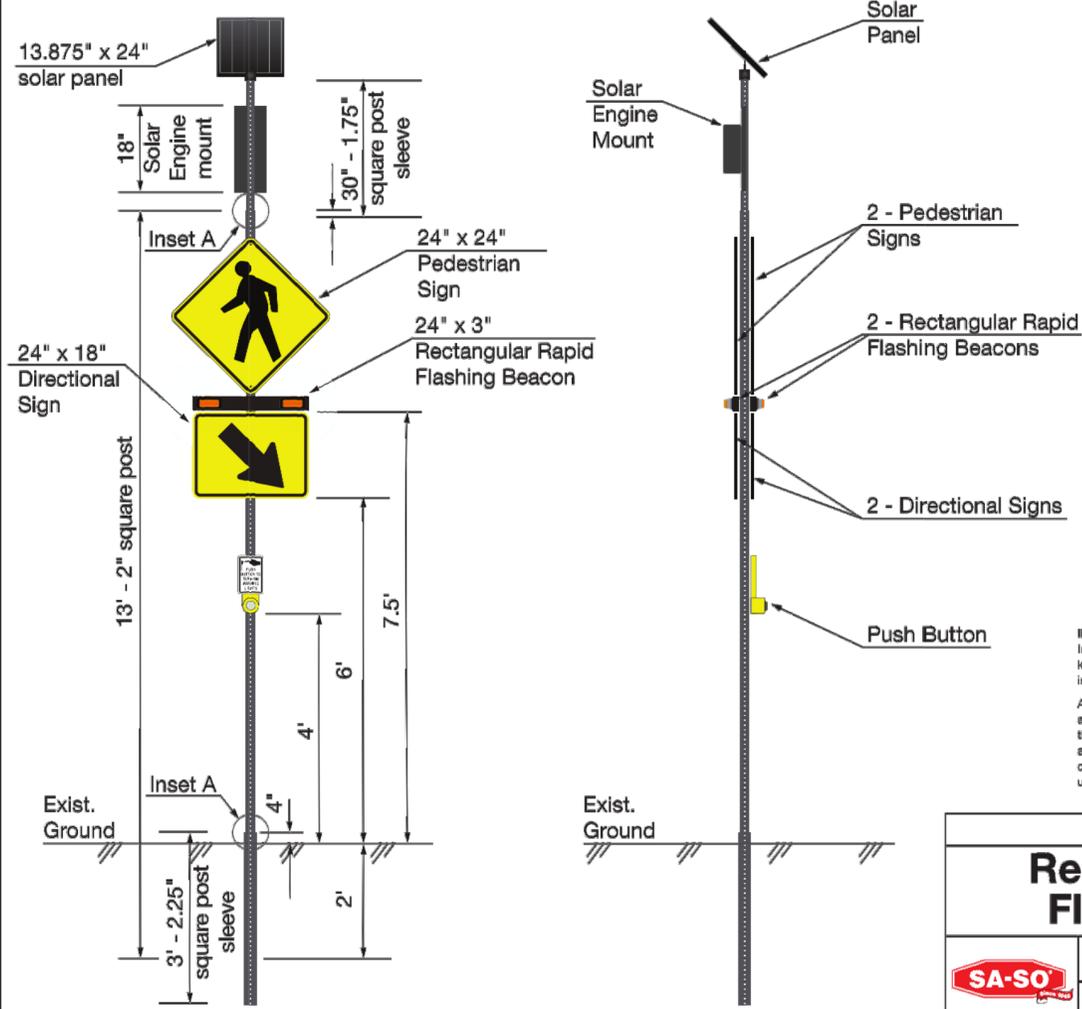
EXCAVATE BELOW NORMAL DEPTH AND BACKFILL WITH BANK RUN GRAVEL AS DIRECTED WHEN UNSUITABLE MATERIAL EXISTS.

1. Pipe shall be 10" minimum, Concrete Class III, SDR 35 PVC, HDPE, or other material as approved by the Greenfield Department of Public Works. All joints to be rubber gasket "O" ring types.
2. Pipe shall be to proper line and grade with a minimum of three (3) feet of cover. Minimum grade shall be 0.5 ft/100 ft unless otherwise approved by the City Engineer.
3. All pipe not laid by the Greenfield Department of Public Works shall be inspected by the Engineering Division of said D.P.W. prior to burial.

DRAIN PIPE TRENCH SECTION

TRENCH MAY BE EXCAVATED WIDER THAN PAYMENT LIMITS ABOVE THE "LINE OF NARROW TRENCH LIMIT"

Rectangular Rapid Flashing Beacon
Double Sided Application

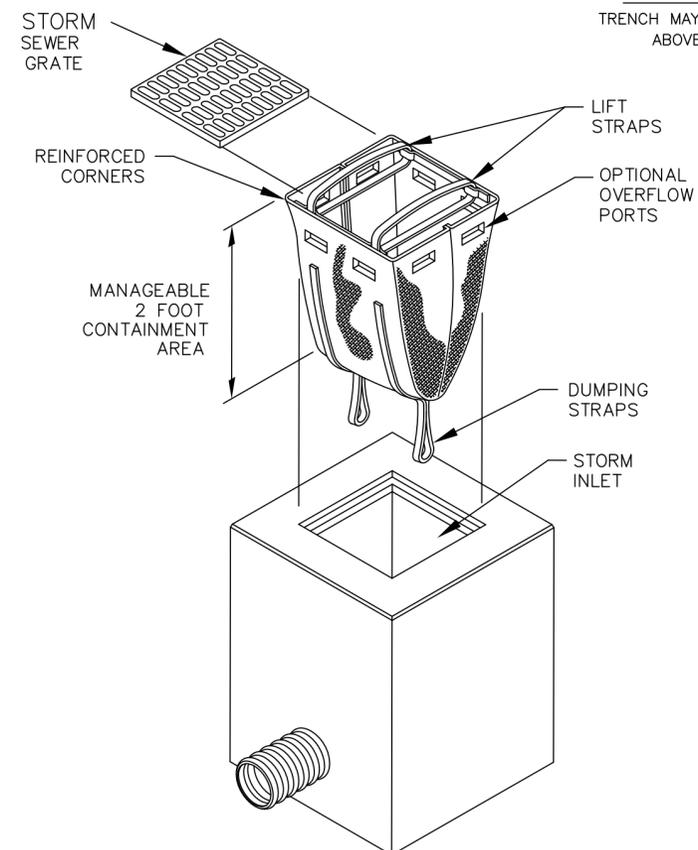


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ACP International and SA-SO also trust that the above technical data and product information is based on thorough and accurate testing of the product, but are not liable for any loss or damage to the product (or any other product, employee, or building from which the product might come into direct or indirect contact) resulting from an intentional or unintentional mishandling of the product.

Dimension Plan		
Rectangular Rapid Flashing Beacon		
Drawn By:	Approved By:	Date:
J.Y. Rollins	M. Prince	05/11/15

ACP International/SA-SO/Marketing Work/Marketing Projects 2/technical drawings/rectangular rapid flashing beacon/rffb.plan.al



SILT SACK/CATCH BASIN PROTECTION
NO SCALE

BANK ROW
AT OLIVE ST
NEW ADA RAMPS/CROSSWALK
DETAILS

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DETAILS NOT TO SCALE

REV #	COMMENTS	DATE

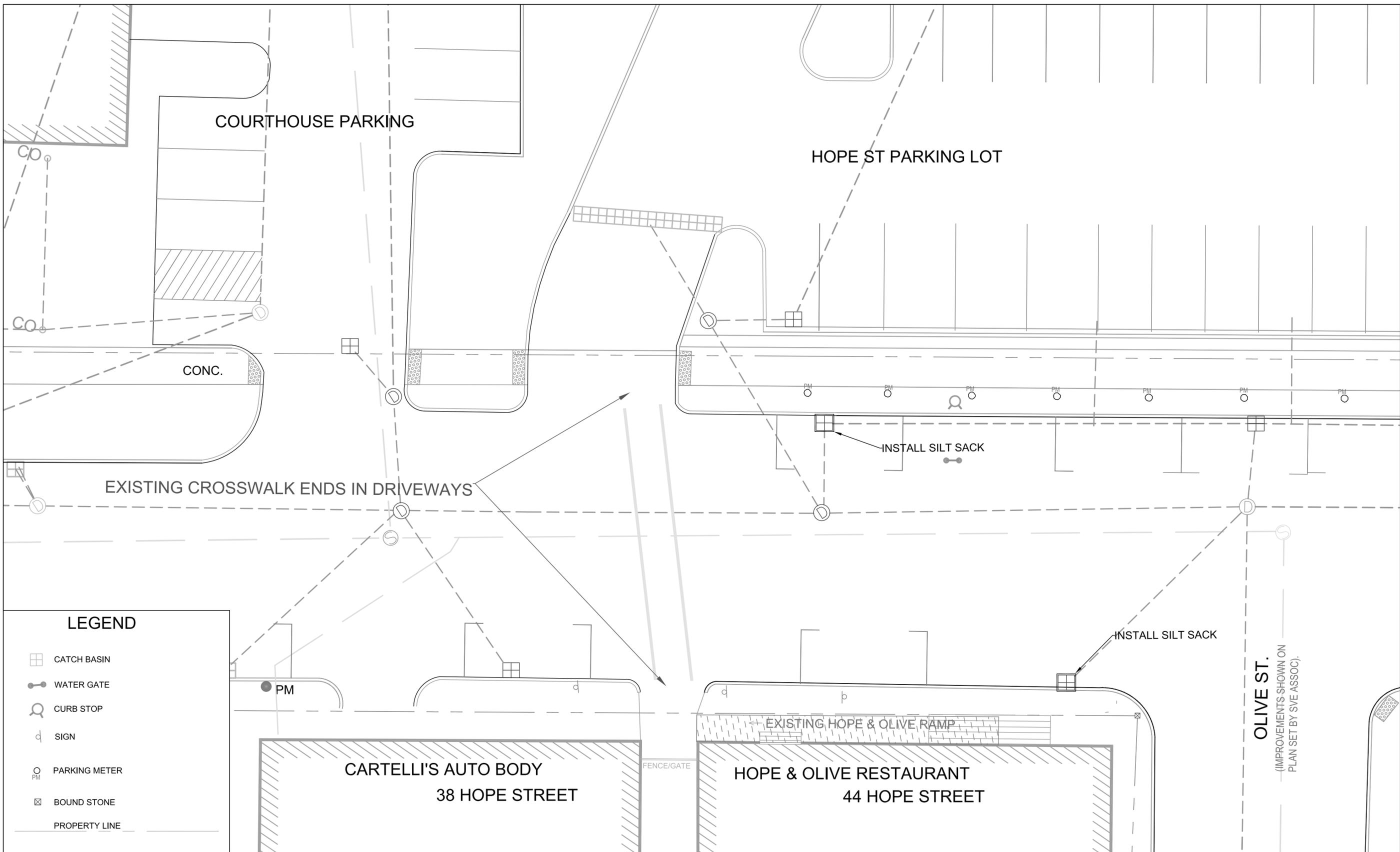
Greenfield Department of
Public Works
Engineering

189 Wells Street
Greenfield, MA 01301
Phone:(413)772-1528



Designed by: RN
Drawn by: RN
Date: 03-13-2019

D2
SHEET 4 OF 4



LEGEND

-  CATCH BASIN
-  WATER GATE
-  CURB STOP
-  SIGN
-  PARKING METER
-  BOUND STONE
-  PROPERTY LINE

HOPE STREET

NEW ADA COMPLIANT CROSSWALK

EXISTING CONDITIONS

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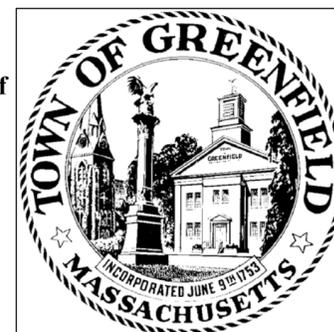


Scale 1:10

REV #	COMMENTS	DATE

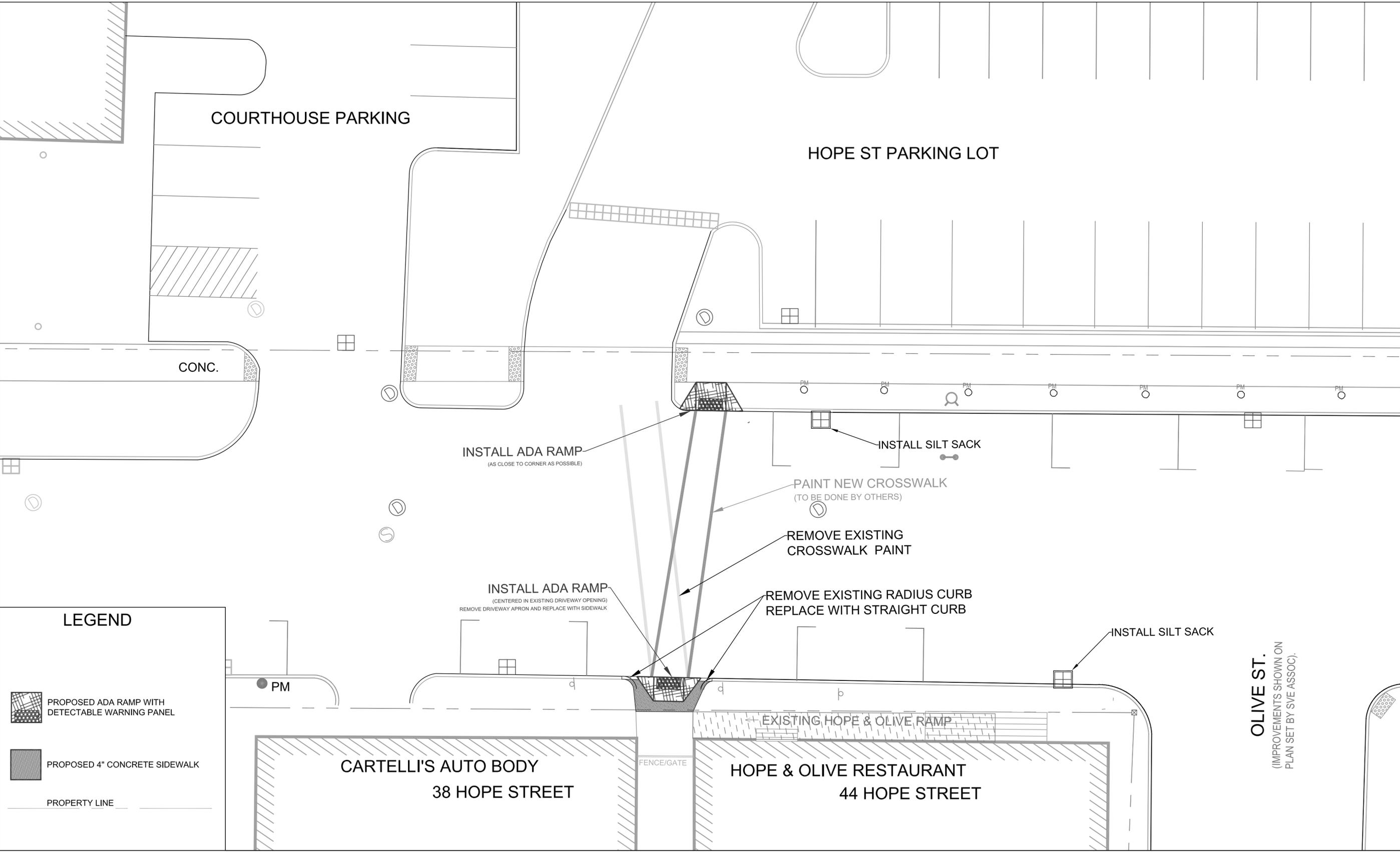
**Greenfield Department of
Public Works
Engineering**

189 Wells Street
Greenfield, MA 01301
Phone:(413)772-1528



Designed by: RN
Drawn by: RN
Date: 02-01-2019

C1
SHEET 1 OF 3



LEGEND

- PROPOSED ADA RAMP WITH DETECTABLE WARNING PANEL
- PROPOSED 4" CONCRETE SIDEWALK
- PROPERTY LINE

HOPE STREET

ADA COMPLIANT CROSSWALK
PROPOSED CONSTRUCTION

Designed by: RN	C2 SHEET 2 OF 3
Drawn by: RN	
Date: 02-01-2019	

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N

Scale 1:10

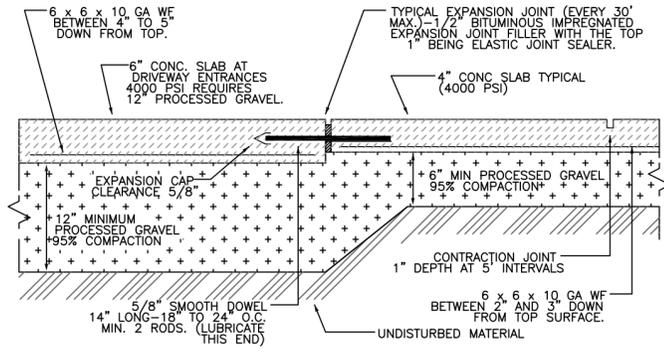
REV #	COMMENTS	DATE

**Greenfield Department of
Public Works
Engineering**

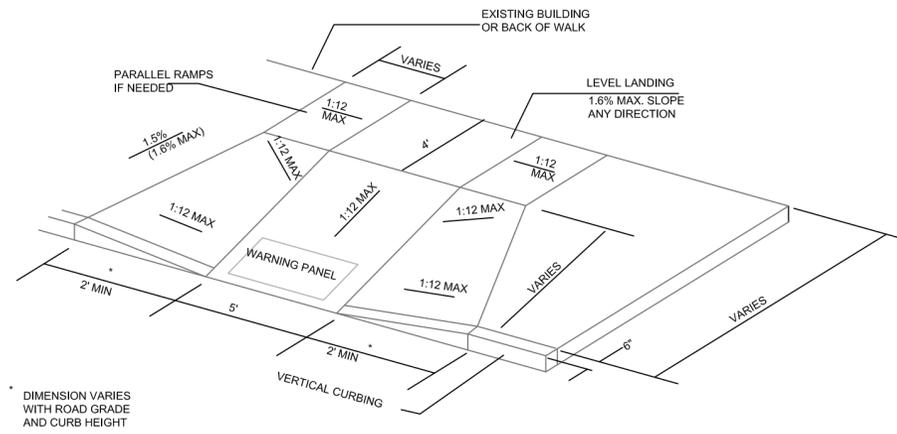
189 Wells Street
Greenfield, MA 01301
Phone: (413) 772-1528

TOWN OF GREENFIELD
MASSACHUSETTS
(INCORPORATED JUNE 9th 1753)

OLIVE ST.
(IMPROVEMENTS SHOWN ON
PLAN SET BY SVE ASSOC.)



TYPICAL SIDEWALK DETAIL

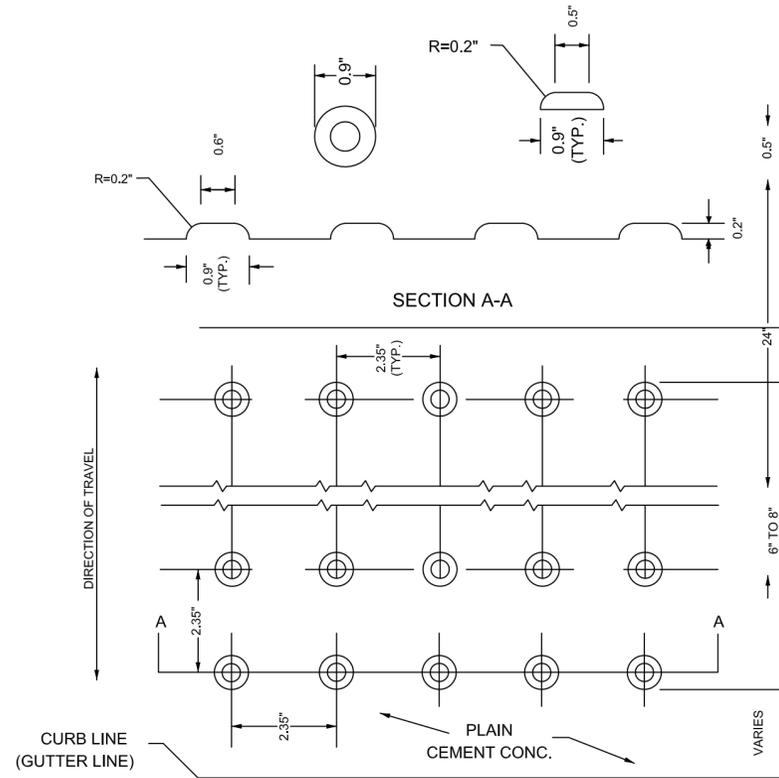


HANDICAP RAMP WITH FLARES

FOR SIDEWALKS LESS THAN 11.5' WIDE

NOTES

1. ALL THE FORM WORK, STEEL REPLACEMENT, CONCRETE MIX AND CONCRETE TESTS, CONCRETE REPLACEMENT AND CURBING SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE TOWN ENGINEER OR HIS/HER REPRESENTATIVE.
2. EXPANSION JOINTS SHALL BE INSTALLED AS SHOWN AT INTERVALS NOT TO EXCEED 30 FEET AND WHERE THE PROPOSED CONCRETE WORK ABUTS ANY RIGID SURFACES. EXPANSION JOINT MATERIAL SHALL BE BITUMINOUS PREFORMED EXPANSION JOINT FILLER (CONFORMING TO ASTM D994-71) SET 1" BELOW THE SURFACE WITH JOINT SEALING COMPOUND OF THE POLYURETHANE TYPE (CONFORMING TO ASTM CLASS 25 SUCH AS SIKAFLEX 1A OR SONNEBORN NP1) SEALING THE TOP 1".
3. ALL SIDEWALKS ARE TO BE PITCHED AT A SLOPE OF 1.6% MAX. TOWARDS THE STREET AND POSITIVELY DRAIN TO THE TOP OF THE CURB.
4. BROOM FINISH ALL WALKS UNLESS OTHERWISE DIRECTED.
5. 6" CONCRETE SIDEWALKS AND HANDICAP RAMPS REQUIRES 9" OF PROCESSED GRAVEL.
6. 6" CONCRETE WALKS AT DRIVEWAY ENTRANCE REQUIRES 12" OF PROCESSED GRAVEL.
7. 4" CONCRETE SIDEWALKS REQUIRE A 6" PROCESSED GRAVEL BASE.
8. ALL SIDEWALKS PLACED ABUTTING A WALL REQUIRE A EXPANSION FELT.



NOTE:
A 24 INCH WIDTH OF TRUNCATED DOME IS REQUIRED ON ALL WHEELCHAIR

HOPE STREET

NEW ADA COMPLIANT CROSSWALK

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Designed by: RN
Drawn by: RN
Date: 02-01-2019

D1
SHEET 3 OF 3

REV #	COMMENTS	DATE

Greenfield Department of Public Works Engineering

189 Wells Street
Greenfield, MA 01301
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