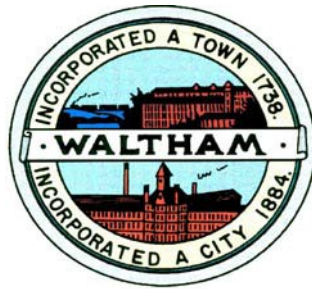


The City of Waltham



**Invites Interested
Parties
To propose the best offer and or bid
For the service or product herewith described:**

RECONSTRUCTION OF CHURCH STREET PARKING LOT

The bid opening : Wednesday November 29, 2017 at 10:00 am

Pre-Bid meeting: Wednesday November 15, 2017 at 10:00 am

(Meet at the Church Street Parking Lot)

Last Day for written questions: 12 noon Monday November 20, 2017

(Via EMAIL ONLY to jjpedulla@city.waltham.am.us)

CITY OF WALTHAM, MASSACHUSETTS

TRAFFIC ENGINEERING

*RECONSTRUCTION OF CHURCH STREET
PARKING LOT
WALTHAM, MASSACHUSETTS*

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CITY OF WALTHAM, MASSACHUSETTS
TRAFFIC ENGINEERING

1 – INVITATION TO BID
FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

SEALED BIDS for RECONSTRUCTION OF CHURCH STREET PARKING LOT will be received by Joseph Pedulla, Chief Procurement Officer, City Hall, 610 Main Street Waltham, Massachusetts until **10:00 AM EDT, Wednesday November 29, 2017** at which time they will be publicly opened and read.

BIDS shall be received only on the Bid forms provided, properly filled out and placed in a sealed envelope addressed to the Purchasing Agent, Waltham, Massachusetts, and endorsed "BID FOR THE RECONSTRUCTION OF THE CHURCH STREET PARKING LOT" along with the bidder's name.

No Bid will be received unless accompanied by cash or treasurer's check issued by a responsible bank or trust company, or a bid bond for the sum of five (5%) percent of the CONTRACTOR'S bid price in favor of the City of Waltham. Should the Bidder selected as the CONTRACTOR on any such work fail to execute the Contract within five days, Sundays and holidays excluded, from the date of mailing a notice to the undersigned at the address given below that the contract is ready for signature, the amount so received as a bid deposit from such bidder through their cash or treasurer's check issued by a responsible Massachusetts bank or trust company, or bid bond shall become and be the property of the said City of Waltham as liquidated damages; provided, that in the case of death, disability or other unforeseen circumstances affecting the bidder, such bid deposit may be returned to them. An award shall then be made to the next lowest responsible and eligible bidder thereon.

The right is reserved by the City of Waltham to reject any or all bids as may be deemed best for the interests of the City and the City of Waltham reserves the right to waive any informalities in the bidding.

The successful bidder will be required to furnish a performance bond and labor and materials payment bond of an approved surety company in an amount not less than the full amount of the Contract.

Specifications and blank Bid forms may be obtained at no charge by visiting the City of Waltham web site at www.city.waltham.ma.us/open-bids.

The successful bidder will be required to furnish a Certificate of Insurance, ***naming the City as Additional Insured, for General Liability and Vehicle Liability in the amount of \$1,000,000 per occurrence and \$1,000,000 in the aggregate and Worker's Compensation Insurance as prescribed by law.***

The successful bidder shall observe faithfully all statutory requirements and local ordinances.

The City of Waltham specifically reserves the right to delete from the Contract any of the items stipulated in the Bid should, in its opinion, such action be necessary. The City of Waltham further reserves the right, should funds be available, to add to the items stipulated in the Bid should, in its opinion, such actions be in the best interest of the City of Waltham.

The responding bidder recognizes receipt of Addenda Number: _____, _____, _____, _____, _____, _____.

Please note that this is a **prevailing wages project**. The prevailing wage schedule is on line at www.city.waltham.ma.us/open-bids . The Contractor is required to submit to the Purchasing Department Office weekly Certified Payrolls and affidavits.

These specifications include a complete set of bid forms which are for the convenience of the bidder and are not to be filled out, executed, or detached from these specifications. Separate copies of the bid forms are furnished for submitting bids.

SECTION 2

CITY OF WALTHAM AND FEDERAL EQUAL OPPORTUNITY AND AFFIRMATIVE ACTION REQUIREMENTS

INCLUDING WAGE RATES (www.city.waltham.ma.us/open-bids)

The City Of Waltham Equal Employment Opportunity and Affirmative Action Policy

The City of Waltham is committed to a policy of equal employment opportunity and to a program of affirmative action in order to fulfill that policy. The City will accordingly recruit and hire into all positions the most qualified persons in light of job-related requirements, and applicants and employees shall be treated in employment matters without regard to unlawful criteria including race, color, religion, ancestry, national origin, sex, sexual orientation, disability, age, positive HIV-related blood test results, status as a disabled or Vietnam Era Veteran, genetic information, or gender identity or expression, as these terms are defined under applicable law, or any other factor or characteristic protected by law.

In addition, The City of Waltham recognizes that discriminatory harassment and sexual harassment are forms of unlawful discrimination, and it is, therefore, the policy of the City of Waltham that discriminatory harassment and sexual harassment will not be tolerated. The City of Waltham also prohibits unlawful harassment on the basis of other characteristics protected by law.

Further, employees and applicants will not be subjected to harassment or retaliation because they have engaged in or may engage in the following: filing a complaint or assisting or participating in an investigation regarding alleged discrimination or harassment as prohibited in the policy statement above; filing a complaint or assisting or participating in an investigation, compliance evaluation, or any other activity related to the administration of the Vietnam Era Veterans' Readjustment Assistance Act of 1974 ("VEVRAA"), Section 503 of the Rehabilitation Act of 1973 ("Rehabilitation Act"), or the Affirmative Action provisions of federal, state or local law; opposing any act or practice made unlawful by VEVRAA requiring equal employment opportunities for individuals with disabilities, disabled veterans, or veterans of the Vietnam Era; or exercising any rights under VEVRAA or the Rehabilitation Act.

Sources: Titles VI and VII of the Civil Rights Act of 1964; the Immigration Reform and Control Act of 1986; Title IX of the Education Amendments of 1972; the Equal Pay Act of 1963; the Age Discrimination in Employment Act of 1967; the Age Discrimination Act of 1975; Sections 503 and 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; Section 402 of the Vietnam-Era Veterans Readjustment Assistance Act of 1974; Executive Order 11246 as amended; The Genetic Information Nondiscrimination Act of 2008 and such other federal, state and local non-discrimination laws as may apply.

SECTION 2-B
COMPLIANCE

Compliance. These documents must be signed and returned with your bid

Compliance

The compliance documents in this section must be completed, signed and returned **with your bid package.**

Purchasing Department

City of Waltham
610 Main Street
Waltham, MA 02452

Failure to submit the completed documents will cause the disqualification of the proposal.

Section Index

Check when Complete

- Non-collusion form and Tax Compliance form..... _____
- Corporation Identification Form..... _____
- Certificate of Vote Authorization..... _____
- Certificate of Insurance (showing all limits of WC &GL)..... _____
- Three (3) References..... _____
- 5% Bid Bond or Certified Check>..... _____
- Debarment Certificate _____
- Prevailing Wage Certificate..... _____
- Right-to-know Law..... _____
- OSHA 10 Certificate for all Assigned Employees (MGL ch30, §39M and Ch 149) _____

Before the commencement of the Job, the contractor must provide to the above office:

- Performance Bond for 100% of the contract value and naming the City of Waltham
(Letter must be included with your response)

Your Company's Name: _____

Service or Product Bid _____

NOTE: Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

NON-COLLUSION FORM AND TAX COMPLIANCE FORM

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. The undersigned certifies that no representations made by any City officials, employees, entity, or group of individuals other than the Purchasing Agent of the City of Waltham was relied upon in the making of this bid

(Signature of person signing bid or proposal) _____
Date

(Name of business)

TAX COMPLIANCE CERTIFICATION

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

Signature of person submitting bid or proposal _____
Date

Name of business

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

CERTIFICATE OF VOTE OF AUTHORIZATION

Date:

I _____, Clerk of _____ hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the _____ day of _____ at which time a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

VOTED: That _____ (*name*) is hereby authorized, directed and empowered for the name and on behalf of this Corporation to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts and other obligations of this Corporation; the execution of any such contract to be valid and binding upon this Corporation for all purposes, and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation.

I further certify that _____ is duly elected/appointed _____ of said corporation

SIGNED:

(Corporate Seal)

Clerk of the Corporation:

Print Name: _____

COMMONWEALTH OF MASSACHUSETTS

County of _____

Date:

Then personally appeared the above named and acknowledged the foregoing instrument to be their free act and deed before me, _____

Notary Public;

My Commission expires: _____

CORPORATION IDENTIFICATION

The bidder for the information of the Awarding Authority furnishes the following information.

If a Corporation:

Incorporated in what state _____

President _____

Treasurer _____

Secretary _____

Federal ID Number _____

If a foreign (out of State) Corporation – Are you registered to do business in Massachusetts?

Yes _____, No _____

If you are selected for this work you are required under M.G.L.ch. 30S, 39L to obtain from the Secretary of State, Foreign Corp. Section, State House, Boston, a certificate stating that you Corporation is registered, and furnish said certificate to the Awarding Authority prior to the award.

If a Partnership: (Name all partners)

Name of partner _____

Residence _____

Name of partner _____

Residence _____

If an Individual:

Name _____

Residence _____

If an Individual doing business under a firm's name:

Name of Firm _____

Name of Individual _____

Business Address _____

Residence _____

Date _____

Name of Bidder _____

Signature _____

Title _____

Business Address (POST OFFICE BOX NUMBER NOT ACCEPTABLE)

City

State

Telephone Number

Today's Date

PROVIDE THREE (3) SERVICE APPROPRIATE REFERENCES

1. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

2. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

3. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package will be cause for the disqualification of your company.

**WEEKLY PAYROLL RECORDS REPORT &
STATEMENT OF COMPLIANCE**

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided, A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit, on a weekly basis, a copy of his or her weekly payroll records to the awarding authority. For every week in which an apprentice is employed, a photocopy of the apprentice's identification card must be attached to the payroll report. Once collected, the awarding authority is also required to preserve those reports for three years.

In addition, each such contractor, subcontractor, or public body shall furnish to the awarding authority directly, within fifteen days after completion of its portion of the work, a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 200_____

I _____, _____
(Name of signatory party) (Title)

I do hereby state that I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____, Title _____

Print _____

RIGHT TO KNOW LAW

Any vendor who receives an order or orders resulting from this invitation agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to M.G.L. c. 111F, §§8,9 and 10 and the regulations contained in 441 CMR 21.06 when deliveries are made. The vendor agrees to deliver all containers properly labeled pursuant to M.G.L. c. 111F §7 and regulations contained in 441 CMR 21.05. Failure to furnish MSDS and/or labels on each container may result in civil or criminal penalties, including bid debarment and action to prevent the vendor from selling said substances, or mixtures containing said substances within the Commonwealth. All vendors furnishing substances or mixtures subject to Chapter 111F or M.G.L. are cautioned to obtain and read the laws, rules and regulations referenced above. Copies may be obtained from the State House Bookstore, Secretary of State, State House, Room 117, Boston, MA (617) 727-2834.

Authorized Signature Indicating Compliance with the Right-to-know laws:

Signature

Date

Print Name

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

DEBARMENT CERTIFICATION

In connection with this bid and all procurement transactions, by signature thereon, the respondent certifies that neither the company nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts, procurement or non procurement programs from the Commonwealth of Massachusetts, the US Federal Government and /or the City of Waltham. "Principals" means officers, directors, owners, partners and persons having primary interest, management or supervisory responsibilities with the business entity. Vendors shall provide immediate written notification to the Purchasing Agent of the City of Waltham at any time during the period of the contract of prior to the contract award if the vendor learns of any changed condition with regards to the debarment of the company or its officers. This certification is a material representation of fact upon which reliance will be placed when making the business award. If at any time it is determined that the vendor knowingly misrepresented this certification, in addition to other legal remedies available to the city of Waltham, the contract will be cancelled and the award revoked.

Company Name _____

Address _____

City _____, State _____, Zip Code _____

Phone Number (____) _____

E-Mail Address _____

Signed by Authorized Company Representative:

Print name _____,

Date _____

10 HOURS OSHA TRAINING CONFIRMATION

**Chapter 306 of the Acts of 2004
CONSTRUCTION PROJECTS**

AN ACT RELATIVE TO THE HEALTH AND SAFETY ON PUBLIC

The undersigned hereby certifies that all employees to be employed at a worksite for construction, reconstruction, alteration, remodeling, repair, installation, demolition, maintenance or repair of any public work or any public building estimated to cost more than \$10,000.00 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 payroll report for each employee and will comply with all laws and regulations applicable to awards of subcontracts subject to section 44F.

Company Name: _____

Address: _____

Signature: _____

Title: _____

Print Name _____

Date _____

See Chapter 306 of the Acts of 2004

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package will be cause for the disqualification of your company.

3 - BID FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

TO: Mr. Joseph Pedulla, Chief Procurement Officer
CITY OF WALTHAM, MASSACHUSETTS

The undersigned, as bidder, hereby declares that they have carefully examined the specifications and provisions attached hereto, and that they propose and agree, if this Bid is accepted, that they will contract with the CITY OF WALTHAM in the form prescribed for the RECONSTRUCTION OF CHURCH STREET PARKING LOT as herein specified and will provide therefore all necessary materials, labor, machinery and equipment, and will perform all the work in the manner prescribed and according to the requirements of the OWNER.

Accompanying this Bid is cash or a treasurer's check payable to the City of Waltham, or a Bid bond in the amount of five percent of the CONTRACTOR'S Bid price

If this Bid shall be accepted and the undersigned shall fail to execute the required contract, in accordance with the terms herein set forth, within five days from the date of mailing a notice to the undersigned at the address given below that the contract is ready for signature, the City of Waltham may, at its option, determine that this Bid shall be null and void, and the aforesaid cash or checks shall become the property of the City of Waltham; otherwise the said cash or checks shall be returned to the undersigned.

103.000	6 EACH	TREE REMOVED (DIAMETER UNDER 24 INCHES) PER EACH	Unit Price	Extended Price
105.000	6 EACH	STUMP REMOVED PER EACH	Unit Price	Extended Price
120.100	160 CY	UNCLASSIFIED EXCAVATION PER CY	Unit Price	Extended Price
127.000	150 SY	CEMENT CONCRETE EXCAVATION PER SY	Unit Price	Extended Price
151.900	30 TN	CRUSHER RUN PERTON	Unit Price	Extended Price
220.000	3 EA	DRAINAGE STRUCTURE ADJUSTED PER EACH	Unit Price	Extended Price
358.100	1 EA.	SIDEWALK GATE BOX ADJUSTED PER EACH	Unit Price	Extended Price

440.000	200 LB	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL _____ PER LB	Unit Price	Extended Price
460.100	200 TN	CLASS I BIT. FOR SIDEWALKS, DRIVES AND TRENCH PATCH _____ PER TON	Unit Price	Extended Price
580.000	400 LF	CURB REMOVED AND RESET _____ PER LINEAR FOOT	Unit Price	Extended Price
701.050	370 SY	4" CEMENT CONCRETE SIDEWALK FIBER MESH REINFORCED _____ PER SQUARE YARD	Unit Price	Extended Price
701.150	25 SY	6" CEMENT CONCRETE DRIVEWAY FIBER MESH REINFORCED _____ PER SQUARE YARD	Unit Price	Extended Price
864.040	1 EACH	PAVEMENT HANDICAP 36 IN. LEGENDS R EFLECTORIZED WHITE THERMOPLASTIC _____ PER EACH	Unit Price	Extended Price
868.040	425 LF	4" WHITE REFLECTIVE THERMOPLASTIC LINE _____ PER LINEAR FOOT	Unit Price	Extended Price
804.100	300 LF	1" ELECTRICAL CONDUIT, PVC, SCHEDULE 80	Unit Price	Extended Price
	2 EACH	REMOVAL OF LIGHT FIXTURES AND PRE-CAST SUB BASES _____ PER EACH	Unit Price	Extended Price
	6 EACH	PROCURE AND INSTALL LIGHTING FIXTURES, PRE-CAST SUB BASE AND WIRING CONDUIT _____ PER EACH	Unit Price	Extended Price
	2 EACH	12" X 24" HAND HOLES _____ PER EACH	Unit Price	Extended Price

	4 EACH	INSTALLATION OF 10 FOOT SIGN ANCHOR ONLY _____ PER EACH	Unit Price	Extended Price
	1 EACH	REMOVAL OF LARGE PARKING LOT SIGN AND POST _____ PER EACH	Unit Price	Extended Price
	1 EACH	MANUFACTOR & INSTALLATION OF PARKING LOT SIGN PK-1 AND CONCRETE BASE _____ PER EACH	Unit Price	Extended Price
	2 SY	INSTALLATION OF PAY STATION 8" CONCRETE PAD _____ PER SQUARE YARD	Unit Price	Extended Price
	10 EACH	REMOVAL OF PARKING METER POST AND CONCRETE BASE _____ PER EACH	Unit Price	Extended Price
	4 CY	MULCH 3" PINE BLEND _____ PER CUBIC YARD	Unit Price	Extended Price
		ALLOWANCE FOR UNEXPECTED CONDITIONS (<u>USED AT THE SOLE DISCRETION OF THE CITY</u>) _____	Unit Price \$10,000	Extended Price \$10,000
999.001	AL	TRAFFIC POLICE – ALLOWANCE	Unit Price \$2,000	Extended Price \$2,000
Total Bid price			\$ _____	

It is understood and agreed that the quantities set forth in the Bid are provided for bid comparison only and the actual quantity of work to be done may vary, as determined by the OWNER. The CONTRACTOR agrees that they shall neither have nor assert any claim for or be entitled to any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

The time for completion of work under this contract shall **be 120 days from the date of the Notice to Proceed.**

The City of Waltham, at its sole option, may elect to extend the contract period for an additional year.

All unit prices quoted herein shall be firm for the duration of this Contract, regardless of any changes in the cost of materials and labor, with the exception of hot mix asphalt (HMA) mixtures, diesel fuel and gasoline, and Portland cement concrete mixtures. For monthly price adjustments for these items, refer to Mass Highway documents 00811, 00812 and 00814 respectively. Copies of these documents are included in section 8.

In accordance with Massachusetts General Laws, the undersigned certifies that the bidder has filed all state tax returns and paid all state taxes required by law.

In accordance with Massachusetts General Laws, the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

BIDDING COMPANY: _____

AUTHORIZED SIGNATURE: _____

PRINT NAME: _____

BUSINESS ADDRESS: _____

TELEPHONE NUMBER: _____

EMAIL ADDRESS: _____, DATE: _____

PROOF OF CONTRACTOR'S RESPONSIBILITY

Before a contract will be awarded to any Bidder, they will be required to furnish evidence satisfactory to the OWNER that they have all of the following qualifications:

- A.** Ability, equipment, organization, and financial resources sufficient to enable them to construct and complete the work successfully within the time required.

- B.** Experience during the past three years in the successful construction of similar engineering projects, the magnitude of which shall be not less than one-half the work herein specified. In this connection, the attention of the Bidder is directed to the Bidder's experience form attached, that shall be used in determining the responsibility of the Bidder. The OWNER may require additional information whenever, in their judgment, such information is necessary to determine the responsibility of the Bidder.

An experienced Bidder shall be construed to mean that the Bidder has a minimum of three individuals within their organization that have the experience to supervise a job of this nature and magnitude. Their experience shall include previous work of a nature similar to the work prescribed in this contract.

In the event the Bidder fails, refuses, or neglects to submit any required information within the reasonable time stated in any request or fails to qualify as a responsible Bidder, their Bid guaranty shall be forfeited to the use of the OWNER, not as a penalty, but as liquidated damages.

The determination of whether a Bidder is responsible shall rest solely with the OWNER.

CITY OF WALTHAM, MASSACHUSETTS
TRAFFIC ENGINEERING

4 - CONTRACT
FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

CLAUSE 1. This agreement is made this _____ day of _____ in the year Two Thousand Seventeen by and between the City of Waltham, party of the first part, hereinafter called the CITY, by its MAYOR, and party of the second part, hereinafter called the CONTRACTOR.

CLAUSE 2. Witnesseth, that the parties to this agreement, each in consideration of the agreement on the part of the others herein contained, do hereby agree, the City of Waltham for itself, and said CONTRACTOR for their heirs, executors, administrators 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 (except as otherwise specified) and deliver in and about the project and to do and perform all work in RECONSTRUCTION OF CHURCH STREET PARKING LOT and in strict conformity with the provisions of this contract and of the INVITATION TO BID, Bid and specifications hereto annexed. The said specifications and INVITATION TO BID are hereby made a part of this contract as fully and to the same effect as if the same had been set forth at length and incorporated in the contracts.

CLAUSE 3. In consideration of the foregoing promises the CITY 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 but not included in the items herein mentioned, and for any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for well and faithfully completing the work, and the whole thereof, as herein provided, such prices as are set forth in the accompanying bid.

CLAUSE 4: The time for completion of the parking lot under this contract shall **be 120 days from the date of the Notice to Proceed.** Work hours will be Monday – Friday 8:00 AM – 5:00 PM.

It is understood and agreed that the quantities set forth in the Bid are approximate and the actual quantity of work to be done may be more or less, as determined by the OWNER. The CONTRACTOR agrees that they shall neither have nor assert any claim for or be entitled to any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

CITY OF WALTHAM, MASSACHUSETTS
TRAFFIC ENGINEERING

5A - PAYMENT BOND
FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

KNOW ALL MEN BY THESE PRESENT, THAT

_____ AS PRINCIPAL AND
_____ AS SURETY

are held and firmly bound unto the CITY OF WALTHAM and to such persons, firms, and corporations, who may furnish materials for or perform labor on the work, construction or improvements contemplated in the Contract hereinafter mentioned, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract,

IN THE SUM OF _____ DOLLARS (\$ _____)

(lawful money of the United States of America) for the payment whereof the CONTRACTOR and the Surety of Sureties bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden

heirs, executors, administrators and assigns, shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in RECONSTRUCTION OF CHURCH STREET PARKING LOT and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor performed in such work, whether by subcontractors or otherwise, then this obligation shall be void; otherwise to remain in full force and effect,

PROVIDED, HOWEVER, that (except as to the OWNER) no suit, action or proceeding by reason of any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Contract falls due,

AND PROVIDED, that any alterations that may be made in the terms of the Contract or in the work to be done under it, or any assignment, transfer or subletting of any part of the work, or the giving by the OWNER of any extension of

time for the performance of the Contract, or any other forbearance on the part of either the OWNER or the CONTRACTOR to the other, shall not in any way release the CONTRACTOR and the Surety or Sureties, or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such altercations, assignment, transfer, subletting, extension or forbearance being hereby waived.

This Bond is made for the use and benefit of all persons, firms, and corporations who may furnish materials, or perform any labor for or on account of said work, construction or improvements, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, and they and each of them are hereby made obliges hereunder the same as if their own proper names were written herein as such, and they and each of them may sue hereon in their own names for their own use and benefit.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such changes, extension or time, alteration or addition to the terms of the Contract or to the work, or to the Specifications.

IN WITNESS WHEREOF, said CONTRACTOR and Surety have hereunto set their respective names

this _____ day of _____, 20_____.

WITNESSES:

NAME _____ BY _____
CONTRACTOR (SEAL)
SIGNATURE AND TITLE

ADDRESS _____ BY _____
SURETY (SEAL)

NAME _____ BY _____
SIGNATURE AND TITLE

ADDRESS _____ BY _____
ATTORNEY-IN-FACT

POWER OF ATTORNEY: Attorneys-in-fact who sign contract bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

5B - PERFORMANCE
BOND FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

KNOW ALL MEN BY THESE PRESENT, THAT _____

_____ AS PRINCIPAL AND

_____ AS SURETY

are held and firmly bound unto the CITY OF WALTHAM and to such persons, firms, and corporations, who furnish materials for or perform labor on the work, construction or improvements contemplated in the Contract hereinafter mentioned, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract

IN THE SUM OF _____ DOLLARS (\$ _____)

(lawful money of the United States of America) for the payment whereof the CONTRACTOR and the Surety or Sureties bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden

heirs, executors, administrators and assigns, shall faithfully perform the Contract for RECONSTRUCTION OF CHURCH STREET PARKING LOT on their part and during the life of any guaranty or warranty, including warranty for defective materials and workmanship required under this Contract, and satisfy all claims and demands incurred for the same; and shall fully indemnify and save harmless the OWNER from all costs and damage that it may suffer by reason of failure so to do, and shall fully reimburse and repay the OWNER all outlay and expense that the OWNER may incur in making good any such default, and shall promptly make payment to all persons supplying labor or materials for use in the prosecution of the work provided for in said Contract; and shall indemnify and save harmless the said OWNER, its officers and agents from any and all suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect,

PROVIDED, HOWEVER, that (except as to the OWNER) no suit, action or proceeding by reason of any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Contract falls due,

AND PROVIDED, that any alterations that may be made in the terms of the Contract or in the work to be done under it, or any assignment, transfer or subletting of any part of the work, or the giving by the OWNER of any extension of time for the performance of the Contract, or any other forbearance on the part of either the OWNER or the CONTRACTOR to the other, shall not in any way release the CONTRACTOR and the Surety or Sureties, or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignment, transfer, subletting, extension or forbearance being hereby waived.

This bond is made for the use and benefit of all persons, firms and corporations who may furnish materials, or perform any labor for or on account of said work, construction or improvements, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, and they and each of them are hereby made obliges hereunder the same as if their own proper names were written herein as such, and they and each of them may sue hereon in their own names for their own use and benefit.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such changes, extension of time, alteration or addition to the terms of the Contract or to the work, or to the Specifications.

IN WITNESS WHEREOF, said CONTRACTOR and Surety have hereunto set their respective names

this _____ day of _____, 20_____.

WITNESSES:

NAME _____ BY _____
SIGNATURE AND TITLE
ADDRESS _____

BY _____
SURETY (SEAL)
NAME _____ BY _____
SIGNATURE AND TITLE

ADDRESS _____ BY _____
ATTORNEY-IN-FACT

POWER OF ATTORNEY: Attorneys-in-fact who sign contract bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

**CITY OF WALTHAM, MASSACHUSETTS
TRAFFIC ENGINEERING**

**6 - SPECIFICATIONS
FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS**

1) GENERAL PROVISIONS

(a) The attention of the CONTRACTOR is called to the provisions of MGL Chapter 149, §6: that in the employment of mechanics, teamsters and laborers, preference shall first be given to citizens of the Commonwealth of Massachusetts who have served in the Armed Forces of the United States in time of war and have been honorably discharged therefrom, or released from active duty therein, and who are qualified to perform the work, to which the employment relates, and secondly, to citizens of the Commonwealth of Massachusetts generally and if they cannot be obtained in sufficient numbers, then to citizens of the United States: that no laborer, workman or mechanic working within the Commonwealth of Massachusetts in the employ of the CONTRACTOR, subcontractor or other person doing or contracting to do the whole or any part of the work contemplated by this agreement shall be requested to work more than eight hours in any one day, or shall be requested or required to work more than forty hours any one week, except in cases of extraordinary emergency, and that the CONTRACTOR will in all things, observe and comply with any and all other provisions of law relative to agreements or contracts for the performance of public work.

(b) The CONTRACTOR shall do all the work and furnish all the labor, materials, implements, tools, machinery and applications, except as herein otherwise specified, necessary or proper for performing and completing the work required by this contract in the manner herein specified.

(c) All the work, labor and materials to be done and furnished under this contract shall be done and furnished strictly pursuant to and in accordance with the directions of the OWNER as given from time to time during the progress of the work under the terms of this contract.

(d) The CONTRACTOR shall complete the entire work in accordance with the specifications for the work and to the satisfaction of the OWNER.

(e) The INVITATION TO BID and the BID submitted by the CONTRACTOR shall be made parts of this contract.

(f) The CONTRACTOR, during the progress of the work, shall take every precaution to ensure the absolute safety of the public from injury.

(g) The CONTRACTOR agrees to give their personal attention to the work or, during their absence, agrees to delegate their authority to a duly authorized agent who shall represent them in the decision of all matters relative to the construction of the work. The CONTRACTOR is to be responsible for any damage to property resulting from their operation.

(h) The attention of the CONTRACTOR is also called to the provisions relative to directing or requiring employees to lodge, board or trade at any particular place or with any particular person or persons and the CONTRACTOR agrees to be governed by such provisions.

(i) The CONTRACTOR shall keep themselves fully informed as to all laws, bylaws, ordinances, regulations, orders, decrees and wage rates, and shall protect and indemnify the CITY and all its officers, agents and servants against any claim or liability arising from, or based on, the violation of any such all laws, bylaws, ordinances, regulations, orders, decrees and wage rates, whether by themselves or their employees or subcontractors.

(j) The CONTRACTOR agrees to take out and maintain at his own expense insurance against damage arising from injury to his employees, in accordance with MGL Chapter 152 and amendments thereof.

2) DEFINITIONS

(a) "ENGINEER," "CITY ENGINEER," "CITY" or "OWNER" shall mean the CITY OF WALTHAM, acting directly or through properly authorized agents; such agents acting within the scope of the particular duties entrusted to them.

(b) The word "CONTRACTOR" shall mean the party or parties contracting to perform the work covered by this contract or their legal representative successors or assigns.

3) EXAMINATION OF THE SITE

Before submitting their BID, the CONTRACTOR shall visit the site, examine its condition and thoroughly acquaint themselves with the obstacles and advantages of performing the work. They shall also study the plans and specifications explanatory of the work and compare the same with the information gathered by the examination of the site.

4) SITE CONDITIONS

It is expressly understood and agreed that the CITY does not warrant or guarantee that the materials encountered during construction will be the same as the information given on the drawings. The results and descriptions are for the information of the CONTRACTOR, but are not guaranteed. The CONTRACTOR must satisfy themselves regarding the character and quantities of the various materials and work to be done. It is further understood and agreed that the Bidder or CONTRACTOR will not use any of the information obtained in such examination in any manner as a basis or ground of claim or demand of any nature against the CITY arising from or by reason of any variance that may exist between the samples examined and described and the actual materials or structures encountered during the construction work.

5) ESTIMATED QUANTITIES

Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents, including the BID, they are given for use in comparing Bids. The right is especially reserved to increase or diminish them as may be deemed reasonably necessary or desirable by the OWNER to complete the work contemplated by this CONTRACT, and such increase or reduction shall in no way invalidate this CONTRACT, nor shall any such increase or diminution give cause for claims or liability for damage. CONTRACTOR shall order materials based on actual field measurements and not quantities estimated in the Bid. The City of Waltham will not be responsible for overstocked materials.

6) ITEMS NOT LISTED IN THE BID

The lump sum and unit price items listed in the Bid form are intended to cover all items of work to be done and materials and work to be furnished to fully complete the work in accordance with the Contract Documents. Appurtenant items of work as shown on the Drawings or as specified or as required, and parts of the work, materials, and equipment not listed separately and not shown or specified to complete the work under the item or not shown in the Bid shall be considered as incidental to the applicable item and included in the cost of payment under the various applicable Bid items of work, and no separate payment will be made for such items. It shall be the responsibility of the CONTRACTOR to verify any missing or incomplete data.

7) BALANCED BIDDING

Bids should be made on each separate item of work shown in the BID with reasonable relation to the probable cost of doing the work included in such items, and the right is reserved to reject wholly any Bid where an item or items thereof are obviously unbalanced or appear to the CITY to be so unbalanced as to affect or to be liable to affect adversely any interests of the CITY. **The attention of the Bidder is called to the fact that unbalancing of Bids may adversely affect the CONTRACTOR if certain portions of the work are increased or decreased as provided in the paragraph 5).**

8) DISCREPANCIES, ERRORS AND OMISSIONS

Drawings and specifications are intended to be explanatory of each other, but should any discrepancy appear or any misunderstanding arise as to the import of anything contained in either, the interpretation and decision of the OWNER shall be final and binding on both parties to this contract. Any correction of error or omissions in drawings and specifications may be made by the OWNER when such correction is necessary for the proper fulfillment of their intention as construed by them. Where said correction of errors or omissions, except as provided in the next two paragraphs below, adds to the amount of work to be done by the CONTRACTOR, compensation for said additional work shall be made under the provision for "Claims for Additional Work," except where the additional work may be classed under some item of work for that a unit price is included in the BID.

The fact that specific mention of a fixture, or any part of the work, is omitted in the specifications, whether intentionally or otherwise, when the same is clearly shown or indicated on the drawings, or is usually and customarily required to complete such work as is specified herein, will not entitle the CONTRACTOR to consideration in the matter of any claim for extra compensation. The said fixtures or work, or both, must be installed or done the same as if called for by both the drawings and the specifications.

Work indicated on the drawings and not mentioned in the specifications or vice versa, and all work and material usual and necessary to make the work complete in all its parts, whether or not indicated on the drawings or mentioned in the specifications shall be furnished and executed the same as if called for by both the drawings and specifications.

9) CLAIMS FOR ADDITIONAL WORK

The CONTRACTOR shall make no claim for additional work or materials unless the same shall be performed or furnished in pursuance of an order from the OWNER and unless the same shall be specifically authorized in writing, signed by the MAYOR. Notice of all claims for additional work and material shall be made to the OWNER in writing ten days from the beginning of such work or the furnishing of such materials.

10) SUBCONTRACTS

No work may be sublet or subcontracted without prior written approval of the OWNER.

11) OWNER TO BE REFEREE

To minimize disputes and litigation, it is further agreed by and between the parties to this contract that the OWNER shall decide all questions arising during the progress of the work and their decisions shall be final and binding upon the parties to this contract.

12) JURISDICTIONAL DISPUTES

It shall be the responsibility of the CONTRACTOR to see that the proper trades perform their respective work.

13) COMPLETION OF THE WORK

(a) The CONTRACTOR agrees to complete the work hereunder required in every particular in a prompt and diligent manner and to the satisfaction of the OWNER in accordance with the plans, specifications and this contract within the period of the time stated in the BID.

(b) The City of Waltham shall have the right to extend the time for completion of said work but such time shall not be extended except upon application in writing by the CONTRACTOR and good cause shown.

(c) The time shall be extended if delay is caused by a strike or boycott for which the CONTRACTOR is in no way responsible and which the CONTRACTOR cannot reasonably avoid.

(d) Neither an extension of time, for any reason beyond that fixed herein for the completion of the work nor the doing and acceptance of any part of the work called for by this contract, shall be deemed to be a waiver by the CITY OF WALTHAM of the right to abrogate this contract for abandonment or delay in the manner provided for in paragraph 14) of this contract.

14) ABANDONMENT OF THE WORK

The CONTRACTOR further agrees that if the work to be done under this contract shall be abandoned, or if the work shall not be fully completed on the day herein specified, or if this contract shall be assigned by the CONTRACTOR otherwise than as herein specified, or if at any time the OWNER shall be of the opinion and shall certify in writing to the MAYOR, that the work is unnecessarily or unreasonably delayed, or that the CONTRACTOR is willfully violating any of the conditions or agreements of this contract, or is not executing said contract in good faith, or is not making such progress in the execution of the contract as to indicate its completion within the required time, the MAYOR shall have the power and the right to notify the CONTRACTOR to discontinue said work or such part thereof as the MAYOR may designate, and the MAYOR shall thereupon have the power and the right to notify the CONTRACTOR to discontinue said work or such part thereof as the MAYOR may designate; and the MAYOR shall thereupon have the power by contract or otherwise as they may determine, to employ such persons and obtain such appliances and tools as they may deem necessary to work at, and be used to complete the work herein described or such part thereof as they may deem necessary and to use such implements and materials of every description as may be found upon the premises both such as enter into the completed work and such as are necessarily used in and about the same in the course of construction, and to procure other materials and implements to the CONTRACTOR; and the expense so charged shall be deducted and paid by the MAYOR out of such money as may be deemed either due at any time thereafter become due to the CONTRACTOR under this contract or any part thereof, and in case such expense is less than the sum that would have been payable under this contract if the same had been completed by the CONTRACTOR, then the CONTRACTOR shall be entitled to receive the difference and in case such

expense exceeded the sum which would have been payable under this contract if the same had been completed by the CONTRACTOR, then the CONTRACTOR shall pay the amount of such excess to the CITY OF WALTHAM.

15) PAYMENT TO THE CONTRACTOR

The OWNER shall, from time to time, certify as to the work done to date and the value thereof, and payment shall be made to the CONTRACTOR on a unit price basis for the work completed to date. The CITY OF WALTHAM shall retain five percent of such value and pay to the CONTRACTOR the balance, after deduction therefrom all previous payments and all sums to be kept or retained under the provisions of previous payments and all sums to be kept or retained under the provisions of this contract. It is further agreed that the sum as herein provided will be paid by the CITY OF WALTHAM and shall be received by the CONTRACTOR as full compensation for furnishing and installing material and executing all the work contemplated by the CONTRACTOR, also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties that may be encountered in the prosecution of the same or from hindrance or delay from any cause whatsoever in the progress of the work and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of said work as herein specified and for well and faithfully completing the whole in the manner and in accordance with the plans and specifications and requirements of the OWNER. Ninety five percent of such sum shall be paid by the CITY OF WALTHAM to the CONTRACTOR, it being understood that the final payment be made within sixty days after this contract is completely finished provided that the OWNER shall certify in writing that all the work has been done to their satisfaction, and provided further that nothing herein contained shall be construed to effect the right of the MAYOR hereby reserved, to reject the whole or any portion of the aforesaid work should the certificate be found or known to be inconsistent with the terms of this agreement, or otherwise improperly given and provided further that if at any time there shall be any claim of the sort mentioned in paragraph 16) or paragraph 32) of this contract to the MAYOR, the CITY OF WALTHAM shall have the right to retain out of the payment an amount sufficient to pay such claim until the same shall be satisfied or canceled.

16) UNPAID CLAIMS

The CONTRACTOR further agrees that they will pay all bills for labor and materials contracted for by them on account of the work herein contemplated and that they will furnish the MAYOR upon request with evidence satisfactory that all persons who have done work or furnished material under this contract and all claims of private corporations or individuals for damages of any kind, caused by the construction of said work, have been fully paid or satisfactorily secured. The MAYOR shall cause to be retained, out of such amount due the CONTRACTOR, sums sufficient to cover any such unpaid claims.

17) PERMITS

The CONTRACTOR shall obtain all necessary permits for the execution of this contract, including a street opening permit, obtained at no charge from the Consolidated Public Works Department (781) 314-3800. The City shall wave all City required permitting fees

18) PROSECUTION AND PROGRESS

The CONTRACTOR shall commence work within fifteen days after the mailing of the executed CONTRACT unless otherwise ordered in writing by the OWNER, and the CONTRACTOR shall thereafter prosecute the work at such places and in such order as the OWNER may from time to time prescribe.

Should the prosecution of the work for any reason be discontinued, the CONTRACTOR shall notify the OWNER at least twenty-four hours prior to resumption of operations.

19) SCHEDULE

Within fifteen days after the mailing of the executed CONTRACT, a meeting shall be held between the OWNER and the CONTRACTOR who is awarded the Bid. At this meeting, a schedule of the work to be done shall be set up by the OWNER and the CONTRACTOR. Time schedules for various phases of construction will be determined and compiled in a manner that is satisfactory to both the CONTRACTOR and the OWNER.

20) LINES AND GRADES

The OWNER will establish sufficient points to fix the location, alignment and elevation of the work. The CONTRACTOR will furnish the layout of all parts of the work from the points furnished and shall maintain all such points, lines and grades at no additional cost to the CITY. Finished surfaces, in all cases, shall conform as near as practical to the lines and grades given. The CONTRACTOR shall supply appropriate survey equipment for use by the OWNER to permit the OWNER to check lines and grades.

21) PROPERTY BOUNDS

The CONTRACTOR shall exercise due care when working around all street and property bounds (whether granite, concrete, iron pins, wooden stakes, spikes or nails) that are to remain. Should any damage to a bound result from the actions of the CONTRACTOR, the bound shall be replaced and/or realigned by the CONTRACTOR with the assistance of a Professional Land Surveyor, as required by the OWNER, at no cost to the CITY. In the event of changes in grade and the bound is not to be replaced, the CITY will provide a frame and cover to be installed by the CONTRACTOR as incidental to the work with no additional cost to the CITY.

22) NOTICE TO UTILITY COMPANIES

The CONTRACTOR shall comply with MGL Chapter 82, §40. Written notice shall be given by the CONTRACTOR to all public service corporations or municipal and State officials owning or having charge of publicly or privately owned utilities at least one week in advance of commencement of operations that will affect such utilities. These shall include, but not be limited to gas, electricity, water and sewer, fire alarm, cable television or telephone services within the limits of the contract. The CONTRACTOR shall, at the same time, file a copy of such notice with the OWNER.

23) SIGNS

When signs are removed for purposes of construction they shall be replaced in a timely manner as required by the OWNER. Stop signs, Do Not Enter signs, one-way signs and any other signs that would leave hazardous conditions if removed shall be maintained unless appropriate safety precautions have been taken as approved by the OWNER.

24) PROTECTION OF UTILITY SERVICES AND MAINS

The CONTRACTOR shall make his own investigation and take due caution to assure that no damage to existing structures, mains, drainage lines, conduit, or other utilities will occur as a result of his operations. The CONTRACTOR shall notify Mass. DIG SAFE (888) 344-7233 and procure a DIG SAFE number at each location prior to disturbing ground in any way.

25) UTILITY COORDINATION

The CONTRACTOR shall be responsible for coordinating all efforts of the respective utility companies for any relocation or work efforts. Utilities include:

NSTAR	800 Boylston Street	Boston, MA 02199-8003	John Zappi	(339) 987-7768
National Grid	160 Newton Street	Waltham, MA 02452	Kevin Souza	(781) 398-7301
Verizon	480 Rear Arsenal Street	Watertown, MA 02472	Ed McCarthy	(617) 673-9060
Comcast	55 Concord Street	North Reading, MA 01864	Bob Hagwood	(508) 208-0646
RCN	201 University Ave	Westwood, MA 02090	Maintenance	(877) 726-7000
Street Dept.	165 Lexington Street	Waltham, MA 02452	Bernie McDonald	(781) 314-3851
Water & Sewer	169 Lexington Street	Waltham, MA 02452	Jerry Shaughnessy	(781) 314-3836

26) ACCESS TO AREA MERCHANTS, BUSINESSES, HOUSES AND GARAGES

The CONTRACTOR shall adjust and provide a suitable vehicle and pedestrian access to all area merchants, businesses, houses and garages at all times as necessary and to the satisfaction of the ENGINEER.

27) MATERIALS

Slips for materials purchased to be used on the work shall be submitted to the OWNER prior to installation of the materials. All slips shall clearly show the type and/or class of the material and the quantity purchased. The Vendor's name shall be shown on all slips.

28) MATERIALS REMOVED AND STACKED

Unless otherwise specified, all materials to be removed and stacked shall remain the property of the City of Waltham. The CONTRACTOR shall carefully remove, transport and stack any of these materials at an area within the City of Waltham, designated by the OWNER. If the City does not want any of these materials, they shall become the property of the CONTRACTOR and shall be removed from the project site and properly disposed of at no additional cost to the CITY.

29) INVOICING

The contractor shall submit a separate invoice for each street and it shall include the total cost of improving said street/sidewalk including all equipment, labor, materials, police details, other safeguards as required and all else incidental thereto.

30) DISPOSAL OF SURPLUS MATERIAL

All existing and other materials not required or needed for use on the project, and not required to be removed and stacked, shall become the property of the CONTRACTOR and shall be immediately removed from the site during the construction period and legally disposed of.

31) PROTECTION OF CATCH BASINS AND WATER RESOURCES

The CONTRACTOR shall take great care to prevent excavated material and pavement from entering catch basins and manholes. In the event such material enters these structures, it shall be immediately removed. Silt fabric shall be installed between the grate and cover of catch basins and removed as soon as protection is no longer required.

32) DAMAGES

(a) On any and all areas where work of any description whatsoever is performed, the CONTRACTOR shall be held strictly responsible for all damage in the execution of this contract and the restoration to the original condition of all driveways, walks, lawns, gardens, shrubbery, buildings, stone bounds, walls, ornamentals, utilities, etc., located within the locus of this contract and all to the satisfaction of the OWNER.

(b) The CONTRACTOR further agrees that they will be responsible for any damage to any person or property resulting from defects or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance, and that they will indemnify and save harmless the CITY OF WALTHAM from all suits or actions of every name and description brought for or on account of injuries or damages received by any person or persons from the CONTRACTOR, their servants or agents, in the construction of said work or in consequence of any negligence regarding the same, or improper materials used in its construction, or by or on account or any act or omission of the CONTRACTOR or their agents.

(c) The CONTRACTOR further agrees that so much of the money due to them under this contract or agreements, as shall be considered necessary by the MAYOR, may be retained by the CITY OF WALTHAM until such suits or claims for damages as aforesaid shall have been settled and evidence to that effect furnished to the satisfaction of the MAYOR.

33) REPAIRS AND REPLACEMENTS

(a) If at any time during the period of one year from the date of final completion of the work contemplated in this contract, as determined by the OWNER, any part of such shall, in the opinion of the OWNER require replacing or repairing, or damage to other property of the CITY is caused owing to any defect in the work, the OWNER may notify the CONTRACTOR in person or by mail to make the required repairs or replacements and repair such damage.

(b) If the CONTRACTOR shall neglect to make such repairs or replacements to the satisfaction of the OWNER within ten days from the date of giving or mailing such notice, then the OWNER may employ other persons to make the same.

(c) The CONTRACTOR agrees, upon demand, to pay the CITY all amounts that it expends for such repairs or replacements.

34) PUBLIC SAFETY AND CONVENIENCE

The CONTRACTOR shall provide necessary access for fire apparatus and other emergency vehicles through work zones to abutting properties at all times.

At the end of each working day, trenches shall be backfilled to grade, or covered with secured steel plates. Each edge of the plates shall either be beveled and lay flat, or protected by a bituminous ramp at a slope of two feet horizontally and one inch vertically. Any temporary patching material may be used to construct the ramps. The cost of patching materials, maintenance and removal will be considered incidental to items in the contract and there will be no separate payment.

Sweeping and cleaning shall be performed at the end of each day, and throughout the day when conditions warrant. Sweeping and cleaning shall be considered incidental to the work being performed. When requested by the OWNER, calcium chloride shall be applied to unpaved surfaces as specified under ITEM 440.000 of the Technical Provisions.

Sweeping and cleaning of surfaces beyond the limits of the project required to clean up material caused by spillage or vehicle tracking during the various phases of the work shall be considered as incidental to the work being performed under the Contract and there will be no additional compensation.

35) SAFETY SIGNAGE

Unless otherwise indicated, the CONTRACTOR shall provide safety signage, lighted drums and barricades for detours, road closings, parking restrictions, etc. at their expense. Sign materials, legends and mounts shall be approved by the OWNER prior to installation.

36) TRAFFIC POLICE

When, in the opinion of the OWNER, Police Officers are necessary for the directing of traffic, their services shall be paid for by the CONTRACTOR and the CONTRACTOR shall be reimbursed as specified under ITEM 999.001 of the Technical Provisions. To arrange for traffic Police, telephone (781) 314-3604.

CITY OF WALTHAM, MASSACHUSETTS

7 - TECHNICAL PROVISIONS
FOR
RECONSTRUCTION OF CHURCH STREET
PARKING LOT
IN WALTHAM, MASSACHUSETTS

CLEARING AND GRUBBING

General

This work shall consist of clearing, grubbing, cutting, removal and disposal of all vegetation and debris from areas either within or outside of the Right-of-Way as shown on the plans or designated by the Engineer.

The work shall also include the preservation from injury or defacement of all vegetation and objects designated by the Engineer to remain.

The burning of trees, brush, stumps, etc., will not be permitted. The Contractor shall provide other satisfactory methods of disposal without additional compensation.

Quality of Work

Quality of work must conform to all accepted tree trimming practices. All trimming and pruning shall conform to recognize tree surgery practices, and particular note should be made that painting with an approved tree dressing or paint, will be required on all cuts 2 inches or over in diameter.

The dressing or paint shall be applied no later than two days after the cuts are made.

Recognized tree surgery practices include among others, the fact that all limbs and branches which require removal and all stubs regardless of age must be cut flush either to a union with the next larger sound limb or branch or flush to the trunk of the tree.

The cutting shall be performed by experienced woodsmen. Trained tree climbers are required for pruning of tall growth. Care shall be exercised by the Contractor to prevent injury to trees and shrubs designed to be preserved. Any injury to limbs, bark or roots of such plants shall be repaired by the Contractor, as directed, or the plants replaced without additional compensation for such repair or replacement.

Disposal of Trees

All trees to be cleared shall become the property of the Contractor, and the satisfactory disposal of the wood in such trees outside the Right-of Way shall become their responsibility.

The tress, including cuttings and slash shall be disposed after cutting as soon as practicable and in such a manner as not to distract from the appearance of the roadside.

If the existing ground in the area is disturbed by any of the work or equipment, the Contractor shall rough-grade and loam and seed if necessary the disturbed areas, if so directed, without additional compensation.

Payment Items

103.000	Tree removed (diameter under 24 Inches)	Each
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DISPOSAL OF STUMPS AND BRUSH

General

Disposal of Stumps and Brush

After removal, all stumps including the major root system shall be disposed by the Contractor at their own responsibility outside the layout where the material will not cause obstructions to streams and will not detract from the appearance of the roadside.

Disposal of Dutch Elm Diseased Wood

Dutch Elm diseased wood shall be disposed of in accordance with the provisions of General Law, Chapter 87, Section 5 and Chapter 132, Sections 8 and 11, as amended; and in accordance with any additional local regulations.

Where the work includes the removal of elm trees or the limbs of elm trees, such trees or limbs thereof shall be disposed of immediately after cutting or removal and in such a manner as to prevent the spread of Dutch elm disease. This shall be accomplished by covering them with earth to a depth of at least 6-inches in areas outside the highway location where the Contractor has arranged for disposal.

Where the work includes the removal and disposal of stumps of elm trees, such stumps shall be completely disposed of immediately after cutting in the manner specified above.

Method of Measurement

Only such trees as have a shortest diameter of at least 9-inches and less than 24-inches shall be included in the item of Trees Removed (Diameter Under 24-Inches). Only such trees as have a shortest diameter of 24- inches or more shall be included in the item of Trees Removed (Diameter 24 Inches and Over).

The item of Stumps Removed shall include the removal and satisfactory disposal of all tree stumps which remain in their original position and 9 –inches or more in shortest diameter at the cutoff point, where the trees have been previously removed by others. A stump shall not be construed as a tree under these specifications unless the trunk extends over 6-feet above the average ground.

Trees or stumps to be removed which have the shortest diameter specified for payment will be measured in place by the following procedure.

Where the tree consists of a single trunk extending more than a 3-foot vertical height above the average natural ground line, the shortest diameter shall be measured at the 3-foot level above the average elevation of the original ground.

Any tree whose main trunk separates into multiple trunks or which has limbs or branches growing out from the main trunk below the 3-foot level defined hereinbefore shall have its shortest diameter measure at the lowest point on the main trunk where multiple growths or branching out begins.

Measurement for payment under the respective items shall be such that any individual growth to be classed as a tree stump shall be measured in a manner to limit payment to one single tree or stump at each particular location of the individual growth. When multiple trunks with a common root system are separated at ground level each separate trunk shall be considered as an individual growth under these specifications.

The quantity of trees or stumps to be paid for will be the number actually removed by the Contractor in the completed and accepted work as determine by count.

The removal of trees, including the stumps thereof and required spray material will be paid for at the contract unit price each for the particular kind of work involved, as defined hereinbefore when a quantity is given in the Proposal under their respective items, otherwise this work will be paid for at the contract unit price for excavation or at the contract unit price per acre of Clearing and Grubbing or Selected Clearing and Thinning, whichever is applicable. The contract unit price shall include the cost of all arrangements and methods required to protect from harm all existing overhead or underground installations. The contract unit price for the respective items shall not include any tees or stumps removed from the area paid for under the item of Clearing and Grubbing or Selected Clearing and Thinning.

Only such trees or stumps as have a shortest diameter of 9-inches and over, measured as stipulated in Sub-section 101.80 shall be included for payment.

Payment Items

105.000

Stump Removed

Each

UNCLASSIFIED EXCAVATION

General

This work shall consist of the necessary excavation and removal of various materials as shown on the contract drawings or as required by the OWNER. All work shall be done by the CONTRACTOR. All excavated material shall be disposed of in a proper manner. All material shall be cleaned up by the CONTRACTOR as the work progresses. No material or waste shall be left on the street overnight and no driveways or sidewalks shall be left in a rough or unsafe condition unless lighted and guarded by the CONTRACTOR at their expense. Where abutting lawns are cut, the CONTRACTOR must properly adjust and reseed the lawn to the new grade. Where abutting surfaces of blacktop or other material are disturbed beyond the limit of adjustment, the CONTRACTOR shall replace same at their own expense.

Excavation shall include the removal and disposal of bituminous, earth, curbing, signposts, and/or any incidental items as indicated on the contract drawings or as required by the OWNER. Items and/or materials that are classified for payment under some other unit item within this contract shall not be considered as part of ITEM 120.100.

The edges of existing concrete surfaces that are to receive new replacement materials shall be saw-cut along even lines and shall be cut back to obtain clean, sound vertical edges of the abutting material.

The edges of bituminous concrete shall be saw-cut or cut with pneumatic tools along even lines and shall be cut back to obtain clean, sound vertical edges of the abutting material. All edges shall be coated with an approved bituminous material for proper bonding of new pavement construction with the existing pavements. All preparation of edges of existing pavements shall be provided as specified herein and shall be subject to approval by the OWNER.

The City of Waltham, at its own discretion, may retain the right to the excavated gravel and the OWNER may select a site for said gravel to be placed. On-site gravel, if requested by the OWNER, shall be saved for re-use on the job. The gravel shall be excavated separately from the bituminous, stored (if required) and/or relocated on the site or at a site within the city selected by the OWNER, at no additional cost to the City of Waltham. All work shall be done by the CONTRACTOR.

If requested by the OWNER, any suitable excess material (as determined by the OWNER) excavated from the site shall be re-used to fill areas below subgrade. This shall be done at no extra cost to the City.

All saw-cutting of materials shall be done at no extra cost and shall be considered as incidental to the item unless there is a separate and/or specific pay item listed for saw-cutting in the Contract.

CONTRACTOR shall avoid damage to trees that have parts of their root system in the roadway, sidewalk or planting areas that are selected for excavation. Said excavation shall be accomplished as carefully as possible or as required by the OWNER.

NOTE: Material excavated during reclamation or cold planing operations is not included in this item.

Measurement

Measurement for unclassified excavation shall be the number of cubic yards of material removed and legally disposed of. This quantity shall be based on the OWNER'S field measurements and/or office calculations.

Failure to allow ample time for the OWNER to make the required measurements will forfeit the CONTRACTOR'S right of claim to any excavation other than that allowed by the OWNER.

Payment

Payment for unclassified excavation shall be made for the number of cubic yards of material removed and disposed of as determined above at the contract unit Bid price for ITEM 120.100 as set forth in the Bid. Unless it is classified for payment under some other unit item within this contract, saw-cutting of pavements shall be considered as incidental to the work and shall be included within the unit price for unclassified excavation.

Payment Items

120.100	Unclassified Excavation	Cubic Yards
127.000	Concrete Excavation	Square Yards

CONCRETE SIDEWALK EXCAVATION

General

This work shall consist of all necessary excavation and disposal of existing concrete surfaces as shown on the Contract Drawings or as specified by the OWNER. All work shall be done by the CONTRACTOR and the material shall be cleaned up as the work progresses. No material or waste shall be left on the street overnight and no driveway or sidewalk shall be left in an unsafe condition unless lighted and guarded by the CONTRACTOR at their expense. Where abutting surfaces of concrete or material are disturbed beyond the limits of adjustment or beyond the limits of contract, the CONTRACTOR shall replace the same at their own expense. If reinforced concrete walks and/or drives are encountered during removal, they shall be included as part of this item. The edges of existing concrete surfaces that are to receive new replacement materials shall be saw-cut along even lines and shall be cut back to obtain clean, sound vertical edges of the abutting material.

All saw-cutting of concrete shall be done at no extra cost and shall be considered as incidental to the work within this item unless there is a separate and/or specific pay item listed for saw-cutting elsewhere in this contract.

Measurement

Measurement shall be the number of square yards removed and disposed, regardless of the depth of concrete excavated, in a manner satisfactory to the OWNER. This quantity shall be measured in the field by the OWNER.

Failure to allow ample time for the OWNER to make the required measurements will forfeit the CONTRACTOR'S right-of-claim to any concrete excavation other than that allowed by the OWNER.

Payment

Payment shall be made for the number of square yards of concrete removed, regardless of depth, based on the OWNER'S field measurements. Payment shall be at the Contract unit price for ITEM 127.000 as set forth in the Bid. Saw-cutting shall be considered as incidental to the work within this item. No separate payment shall be made for saw-cutting concrete unless otherwise specified elsewhere within this contract.

Payment Items

127.000	Concrete Sidewalk Excavation	Square Yards
120.100	Unclassified Excavation	Cubic Yards

CRUSHER RUN

General

This work shall consist of the furnishing and placing of a one-inch leveling layer of crusher run as required by the OWNER. Depth of crusher run shall be measured after compaction. Crusher run may also be provided as a base for granite curb if required by the OWNER.

Measurement

All crusher run used will be paid for on the basis of weight and shall be measured by tickets delivered with each load. The tickets shall clearly show the total, tare, and net weights. Loads represented by tickets not showing the weights as specified above will not be accepted for payment. Only crusher run placed at the required depth and within the limits specified will be accepted for payment.

Payment

Payment for crusher run shall be made for the number of tons as determined above at the contract unit price for ITEM 151.900 as set forth in the Bid. Said price and payment shall be full compensation for furnishing and placing of crusher run, and for furnishing all tools, labor, equipment and all else incidental thereto. Fine grading and compaction of crusher run shall be paid for under the applicable item of finish material (bituminous or cement concrete).

Payment Item

151.900

Crusher Run

Tons

DRAINAGE STRUCTURE ADJUSTED

General

This work shall consist of adjusting OWNER'S existing frames and grates or covers of manholes and catch basins to newly proposed line and/or grade changes. **This item shall not apply to any new castings installed under item 222.010 or castings for new structures.** When the line and/or grade of an existing structure require a change of more than one foot vertically and/or horizontally, the structure shall be remodeled under ITEM 220.500.

Method

Frames shall be set in full mortar beds true to the lines and grades established by the OWNER. All voids beneath the bottom flange shall be entirely filled to make a water-tight fit. A ring of mortar at least one inch thick shall be placed around the outside of the bottom flange and shall extend to the outer edge of the masonry structure.

After frames have been set and mortared, a cement concrete collar shall be constructed to the dimensions shown on the detail plans of the contract drawings. Cement concrete shall be 3000 psi with ¾ inch stone. All work shall be done under the direction of the OWNER.

Payment

Measurement for drainage structures adjusted shall be made based on a complete and accepted unit as determined from actual count by the OWNER.

Payment shall be made for each completed unit as determined above at the contract unit price for ITEM 220.000 as set forth in the Bid. Said price and payment shall be full compensation for all work including labor, materials, tools, equipment, mortar, brick, gravel, collars and all else necessary for final and satisfactory completion of the work within this item.

Payment Items

220.000	Drainage Structure Adjusted	Each
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ADJUSTMENT OF GATE BOXES

General

This work shall consist of raising the OWNER'S existing water gate and water service gate boxes to newly proposed grades. Prior to adjustment of the gate boxes, the vertical alignment of the box over the center of the gate shall be checked. If needed, the gate box shall be re-aligned over the top of the gate before it is adjusted. Gravel base around the gate boxes shall be thoroughly compacted. For gate boxes in the traveled roadway, the excavated area shall be refilled with gravel, compacted, and set in a cement concrete collar as shown on the detail section of the contract drawings. The final elevations of the structures shall be determined in the field by the OWNER at the time of construction. All work shall be done under the direction of the OWNER. After the boxes are adjusted, they shall be air blown to remove all debris from the inside.

If, during the course of the work, a defective gate box is encountered, the CONTRACTOR shall remove it as required by the OWNER. A new gate box and/or sleeve shall be furnished and installed by the CONTRACTOR. This shall not include any gate boxes and/or sleeves damaged by the CONTRACTOR. Any damage as a result of the CONTRACTOR'S negligence shall be repaired or replaced by them at no cost to the City. Furnishing, installation and adjustment to final grade of any new gate boxes and/or sleeves shall be included as part of ITEMS 357 and shall not be considered as part of ITEMS 358.100 or 358.200.

Measurement

Measurement for gate boxes adjusted shall be for the number of units completed and accepted as determined from actual count by the OWNER.

Payment

Payment for gate boxes adjusted shall be made based on the number of completed units as determined above at the contract unit prices for ITEMS 358.100 & 358.200 as set forth in the Bid. Said price and payment shall be full compensation for all work in adjusting gate boxes and/or sleeves including all tools, labor, equipment, cement concrete collars, gravel, compaction, and all else incidental to satisfactorily complete the work within this item. Not included for payment within this item shall be the furnishing, installation, and final adjustment to grade of any new gate boxes and/or sleeves that are required. They shall be measured and paid for under ITEMS 357.

Payment Items

358.100	Adjustment of Gate Boxes (Sidewalk)	Each
358.200	Adjustment of Gate Boxes (Roadway)	Each

CALCIUM CHLORIDE FOR DUST CONTROL

General

This work shall consist of furnishing and applying approved dust control material to the surface of the sub grade or elsewhere as required by the OWNER.

Materials

Calcium Chloride shall conform to the requirements of AASHO M144, Type I or Type II.

Application

Calcium Chloride shall be uniformly applied at the rate of three-quarters pounds per square yard or as required by the OWNER.

Measurement

Calcium Chloride will be measured by the pound and the quantity to be paid for shall be the actual weight of the material furnished and applied in place.

Payment

Payment shall be made for the amount of Calcium Chloride furnished and placed as determined above at the Contract price for ITEM 440.000 as set forth in the Bid.

Payment Item

440.000

Calcium Chloride

Pounds

CLASS I BITUMINOUS CONCRETE (ASPHALT)

General

This work shall consist of fine grading and compaction of gravel base material and/or crusher run base material prior to placing mix, and furnishing, spreading and compacting bituminous concrete base courses and wearing surfaces in accordance with the details shown on the Contract Drawings, as specified in these Specifications, or as required by the OWNER.

Materials

Class I bituminous concrete pavement, Type I-1, shall conform to the requirements of Section 560.00 of the current Edition of the "Standard Specifications for Highways and Bridges," Commonwealth of Massachusetts, Department of Public Works, including any addenda or amendments thereto. The City of Waltham has the option of requesting a modified state top when deemed necessary.

Bituminous concrete shall be spread at a temperature of not less than 225 degrees Fahrenheit and all initial rolling or tamping shall be performed when the temperature of the mixture is such that the sum of the air temperature plus the temperature of the mixture is between 300 and 375 degrees Fahrenheit. All mixtures shall be placed only when the atmospheric temperature is above 40 degrees Fahrenheit.

Bituminous concrete for wearing surfaces and base courses shall be spread in individual layers and compacted to the required lines, grades and cross section.

Rolling shall commence at the lower edges and shall progress toward the highest portion. Under no circumstances shall the center be rolled first. Each completed surface shall be thoroughly compacted, smooth and free from ruts, humps, depressions, or irregularities.

Where new bituminous meets existing bituminous surfaces, an emulsifying agent shall be applied to seal the joint. A sand overcoat shall then be applied over the emulsifying agent.

Measurement

All bituminous used for roadway and sidewalk bases and surfaces will be paid for on the basis of weight and shall be measured by tickets delivered with each load. The tickets shall be signed by a certified weigher and shall be countersigned by the OWNER. The tickets shall clearly show the total, tare, and net weights. Loads represented by tickets not showing the weights as specified above will not be accepted for payment. Only bituminous concrete placed at the required depth and within the limits specified by the OWNER will be accepted for payment.

Payment

Payment for bituminous concrete shall be made for the number of tons as determined above at the Contract unit price for ITEMS 460.000, 460.100 and 460.300 as set forth in the Bid. Said price and payment shall be full compensation for all fine grading and compaction, for furnishing, spreading and compacting bituminous concrete, emulsifying and sanding of all joints, and for furnishing all tools, labor, materials, equipment, and all else incidental thereto.

Payment Items

460.000	Class I Bituminous Concrete Type I-1 (Roadway)	Tons
460.100	Class I Bituminous Concrete Type I-1 (Sidewalks, Drives, Permanent Patching & Adjustment. Areas)	Tons
460.300	Class I Bituminous Concrete Type I-1 (Roadway) Night Work	Tons

CURB REMOVED AND RESET

General

This work shall consist of removing existing curb and/or curb corners and resetting them to grade in the same location in accordance with these specifications, as shown on the Contract Drawings, and/or as required by the OWNER. The CONTRACTOR assumes full responsibility for any damages incurred in the removal and resetting processes or any damages incurred while executing said work.

Methods

Unless otherwise required by the OWNER, curb shall be set to the lines and grades shown on the plans and fitted together as closely as possible. Crusher run shall be added and hand tamped to fill any voids between the undisturbed earth and the bottom of the curb so the curb is supported along two points of its entire length. The center and both ends of each curb length shall be left open for cement concrete. On the day of the curb installation, 6" x 6" beds of cement concrete shall be poured front and back, and the concrete shall flow under the curb. Care shall be taken not to affect the line and/or grade of the curb. Joints between curbstones shall be filled with mortar and exposed surfaces shall be neatly pointed.

Measurement

Payment for granite curb removed and reset shall be the number of linear feet of curb actually removed and reset as measured and accepted by the OWNER. The quantity of curved granite curb and granite curb corners removed and reset shall be measured along the outer radius.

Payment

Payment for curb and/or curb corners removed and reset shall be made for the number of linear feet of curb and/or curb corners actually removed and reset as determined above at the Contract unit prices for ITEM 580.000 as set forth in the Bid. Said price and payment shall be full compensation for furnishing all labor, tools, equipment, excavation, gravel borrow, backfill, and all else incidental thereto.

Payment Item

580.000	Curb Removed and Reset	Linear Foot
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CEMENT CONCRETE SIDEWALKS

General

This work shall consist of fine grading and compaction of gravel and/or crusher run and the furnishing and placing of cement concrete for sidewalks, driveways and aprons in accordance with these Specifications and/or as required by the OWNER. Depths of concrete shall be 4 inches (reinforced) in sidewalks and 6 inches (reinforced) in driveways, aprons and rounding's and as required by the OWNER.

Materials

7% ($\pm 1\frac{1}{2}\%$) air-entrained cement concrete (4,000 psi, 3/4" stone), borrow, and pre-formed joint fillers shall conform to the requirements of SECTION 701 of the "Standard Specifications for Highways and Bridges," Commonwealth of Massachusetts, Department of Public Works, 1988 Edition, including any addenda or amendments thereto, unless otherwise specified by the OWNER.

All concrete shall contain a fibrous concrete reinforcement of 100% virgin polypropylene fibrillated fibers of multi-design gradation as manufactured by Fibermesh, Synthetic Industries, 4019 Industry Drive, Chattanooga, Tennessee 37416 or an approved equal.

Wheelchair ramps shall include a prefabricated truncated dome modular system manufactured from high strength polymer concrete. Each accessible ramp shall have one panel 24 inches deep by 60 inches wide. The color of the panels shall be gray. The physical properties of the concrete panels shall meet the following requirements.

PROPERTY	VALUE
Water Absorption – ASTM D570	$\leq 0.35\%$
Slip Resistance – ASTM C1028	≥ 0.80
Abrasive Wear – ASTM D2486	BYK Gardner Tester $\leq 0.03/1,000$
Accelerated Weathering – ASTM G26	$\geq 2,000$ hours no fading
Chemical Stain Resistance – ASTM D543	no discoloration
Gardener Impact – ASTM D5420	≥ 450 in. lbf/in.
Compressive Strength – ASTM D695	$\geq 18,000$ psi

Tactile warning panels shall be installed in accordance with the manufacturer's recommendations and tamped into the fresh concrete and made flush with the surrounding surfaces. Concrete masonry blocks may be needed to insure continuous contact with the panel's underside with the concrete. Panels shall be protected from damage and concrete and asphalt spatter. Surfaces shall be cleaned as recommended by the manufacturer.

The concrete of the surrounding ramp shall be finished true and smooth to the required dimensions and slope before the tactile warning panel is installed. The panel shall be placed true and square to the curb line.

Methods

Methods shall conform to the aforesaid, unless otherwise required by the OWNER. All transverse joints shall be formed with a 1/2" wide by 1" deep jointing tool such as the Marshall Town No. 836 jointing tool or the equivalent. All transverse joints shall be measured and divided equally and separately between the expansion joint distances. Continuous concrete blocks shall be no longer than 30 feet.

Concrete shall have a broom finish. A colored curing agent or retardant approved by the OWNER shall be applied to the finished concrete if requested by the OWNER. Otherwise, the curing method shall be as prescribed in Section 476.71A of the Mass. Standard Specifications.

The CONTRACTOR shall be responsible for the guarding of the wet concrete until it has sufficiently set up in place. The CONTRACTOR shall assume responsibility for replacing any concrete that is damaged due to cracking or vandalism. Replacement of concrete including saw cutting, removal and disposal of rejected concrete shall be done at the CONTRACTOR'S expense with no additional cost to the City. The CONTRACTOR maintains responsibility for the concrete for one year after the completion of the entire contract as noted in the Specifications of these documents (Section 6 Paragraph 8)

Measurement

Measurement for concrete sidewalks, drives and aprons shall be the number of square yards furnished, placed and accepted based on the OWNER'S field measurements or office calculations. Only cement concrete placed at the required depths and within the limits specified by the OWNER shall be accepted for payment.

Payment

Payment for cement concrete sidewalks, drives and aprons shall be made for the number of square yards furnished, placed and accepted as determined above at the Contract unit prices for ITEMS 701.050 & 701.150 as set forth in the Bid. Said price and payment shall be full compensation for all fine- grading and compacting, for all necessary form work and materials including tactile warning strips and forming of tree wells for future plantings, for furnishing and placing of cement concrete and additives, including fibrous reinforcement and heating charges, for furnishing and applying all curing and/or retarding agents, and for furnishing all tools, equipment, labor, materials, and all else incidental thereto.

Payment Items

701.050	Cement Concrete Sidewalks (4" Fibrous Reinforced)	Square Yards
701.150	Cement Concrete Drives, Aprons and Ramps (6" Fibrous Reinforced)	Square Yards

THERMOPLASTIC

General

The work to be done under these items shall conform to the relevant provisions of Section 860 of the 1988 MDPW Standard Specifications for Highways and Bridges, and the following:

Methods

The layout of all necessary field controls by the CONTRACTOR of the several types of traffic line systems shall be approved by the OWNER. The width and spacing of stop lines and crosswalks shall be as indicated on the plans.

Measurement

Measurement for pavement arrows, legends, crosswalks, stop lines, chevrons and/or gore lines shall be for the actual square foot of area of material furnished and installed by the CONTRACTOR and accepted by the OWNER. Measurement for other thermoplastic lines shall be for the actual linear foot of material furnished and installed by the CONTRACTOR and accepted by the OWNER. All measurement shall be done in the field by the OWNER.

Payment

Payment for arrows, legends, crosswalks, stop lines, chevrons and/or gore lines shall be for the actual square foot area as determined above at the contract unit prices for ITEMS 864.040 and 865.100 as set forth in the Bid. Payment for other thermoplastic markings shall be for the actual linear foot measurement as determined above at the contract unit prices for ITEMS 868.040 and 868.020 as set forth in the Bid. Said price and payment shall be full compensation for furnishing and placing of all materials, all tools, labor, equipment and all else incidental to the completion of the work within these items. All work is subject to final approval and acceptance by the OWNER.

Payment Items

864.040	Pavement Handicap 36 in. Legends Reflectorized Thermoplastic	Each
868.040	4" Reflectorized Thermoplastic Line	Linear Foot

MISCELLANEOUS SPECIFICATIONS

Lighting

See attached specification and drawing supplied by manufacturer. Contractor to install 12 foot decorative lighting fixtures and supply conduit, wiring, pre-cast sub-base, two (2) 12" x 24" Hand holds and labor. Fixtures can be procured from Specline, Mark Forent, 508-362-5337 Permits and inspections are required. City permitting fees will be waived per wires department.

6 - Total Lights

2 - 12" x 24" Hand Holes

All existing light poles and fixtures being removed are property of the city of Waltham and need to be delivered to wires department located at 155 rear Lexington Street. Coordinate with wires inspector before dropping off.

PVC conduit shall be 1 inch trade size schedule 80

Conductors shall be a minimum size of # 8awg, consisting of a hot, neutral and equipment ground.

All trenches shall be 24 inch deep and are subject to inspection before being backfilled, clean fill and magnetic tape shall be installed.

Concrete Pad for Pay-By-Space Machine

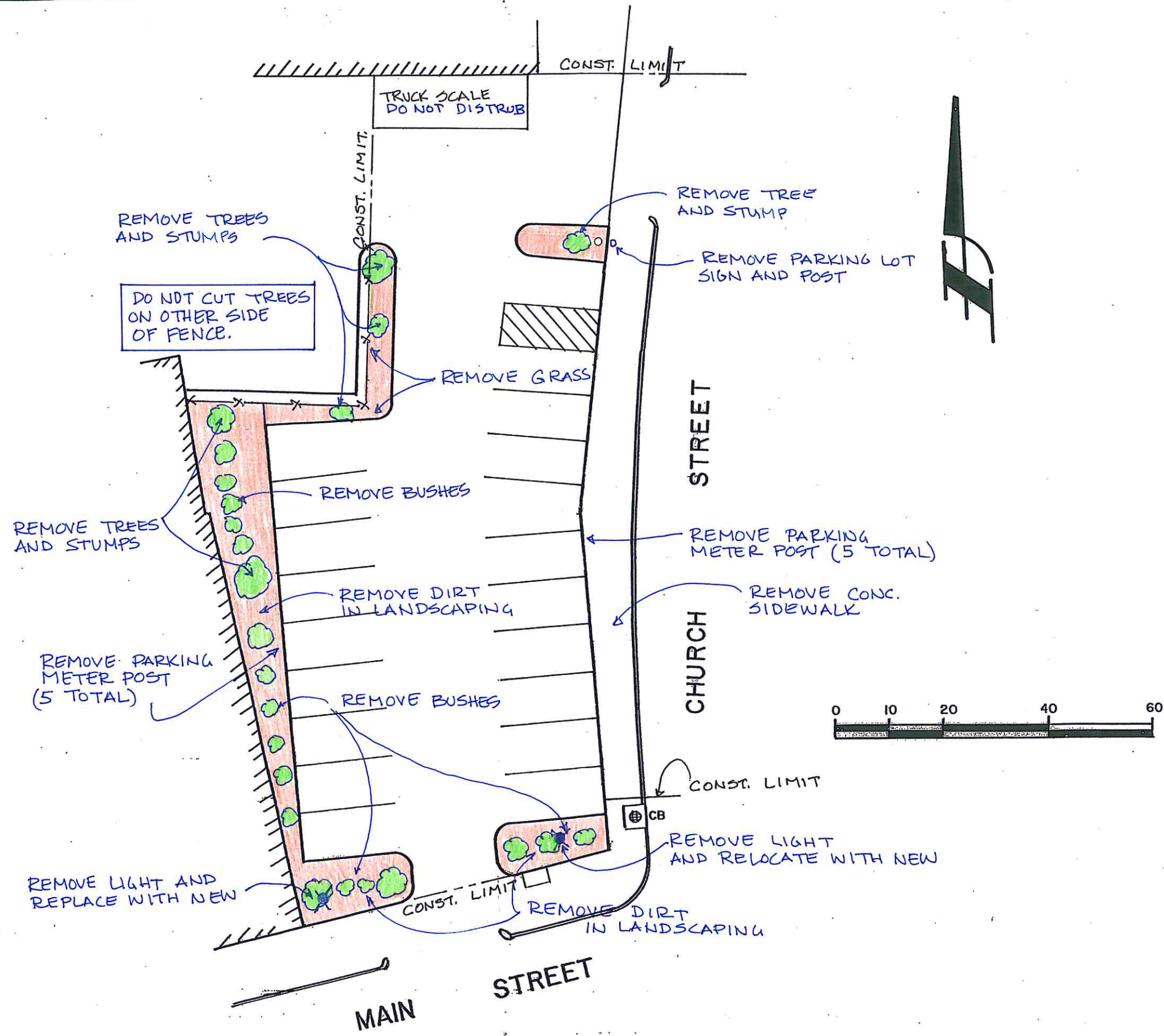
See attached specifications and drawings supplied by manufacture. Will be a 4' x 4' x 8" deep concrete pad. See attached details.

Parking Lot PK-1 Sign and Post

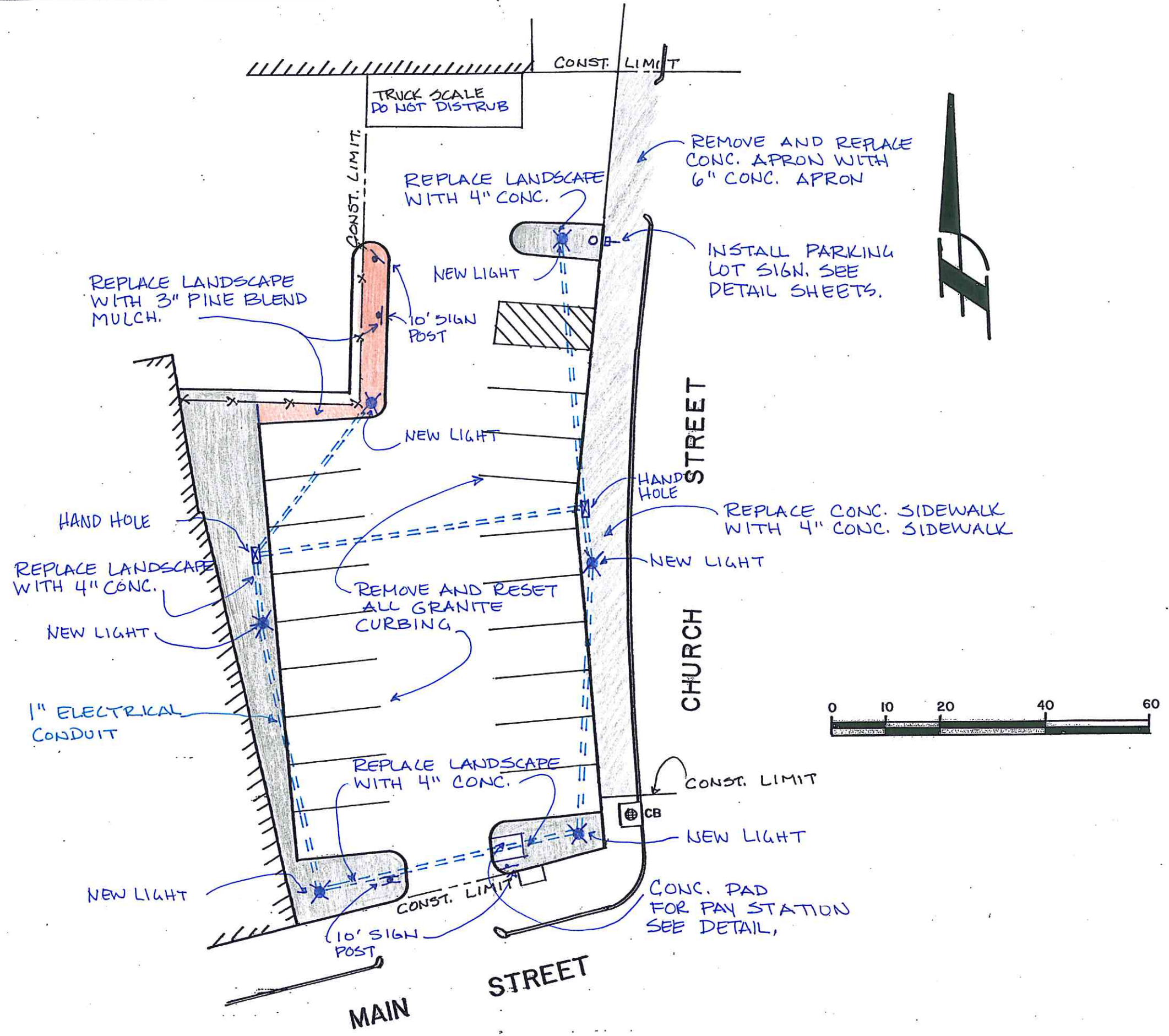
Sign will be double sided with the wording "Church Street Parking Lot". The side facing northbound traffic will have a left arrow and the side facing southbound will have a right arrow. See attached details.

8 - DETAIL DRAWINGS AND
DOCUMENTS FOR

RECONSTRUCTION OF CHURCH
STREET PARKING LOT



CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT
 APRIL 29, 2016 LMG

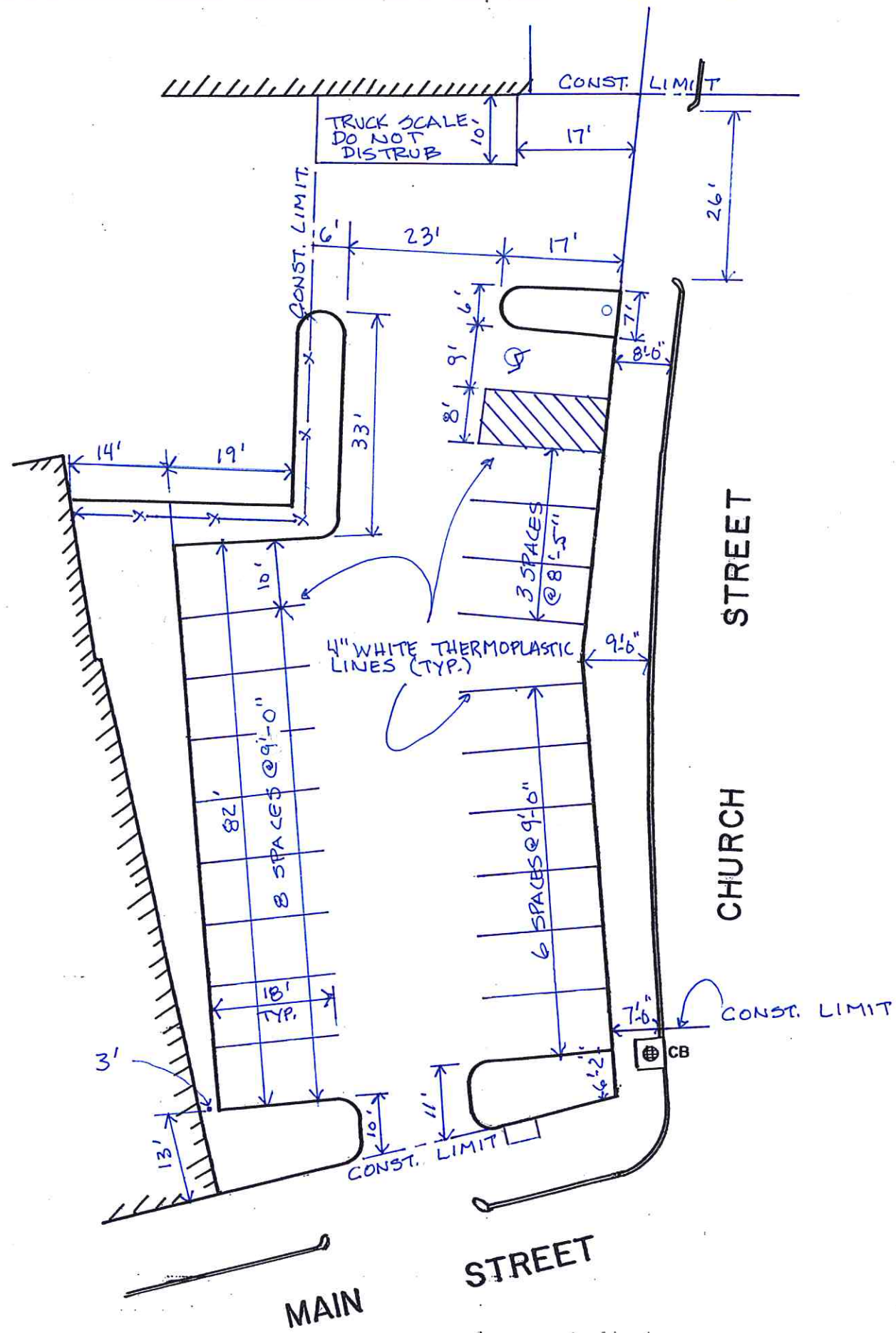


REVISED 10-26-2017

CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT

APRIL 29, 2016

LMG



CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT

APRIL 20, 2016

LMG



LISTED

 Underwriters Laboratories, Inc.

556 INDUSTRIAL WAY W.
 EATONTOWN NJ 07724
 PH 732-578-1818
 FAX: 732-578-1808
 www.allied-signs.com

W

FILE:

C:/ ART FILES 03/
 M. FINNEGAN/
 WAYFINDING
 WALTHAM, MASS

DATE:

ORIG. 4-12-2013

REV.:

REV.:

REV.:

REP.:

MICHAEL FINNEGAN

DRN. BY:

P. Pesapane

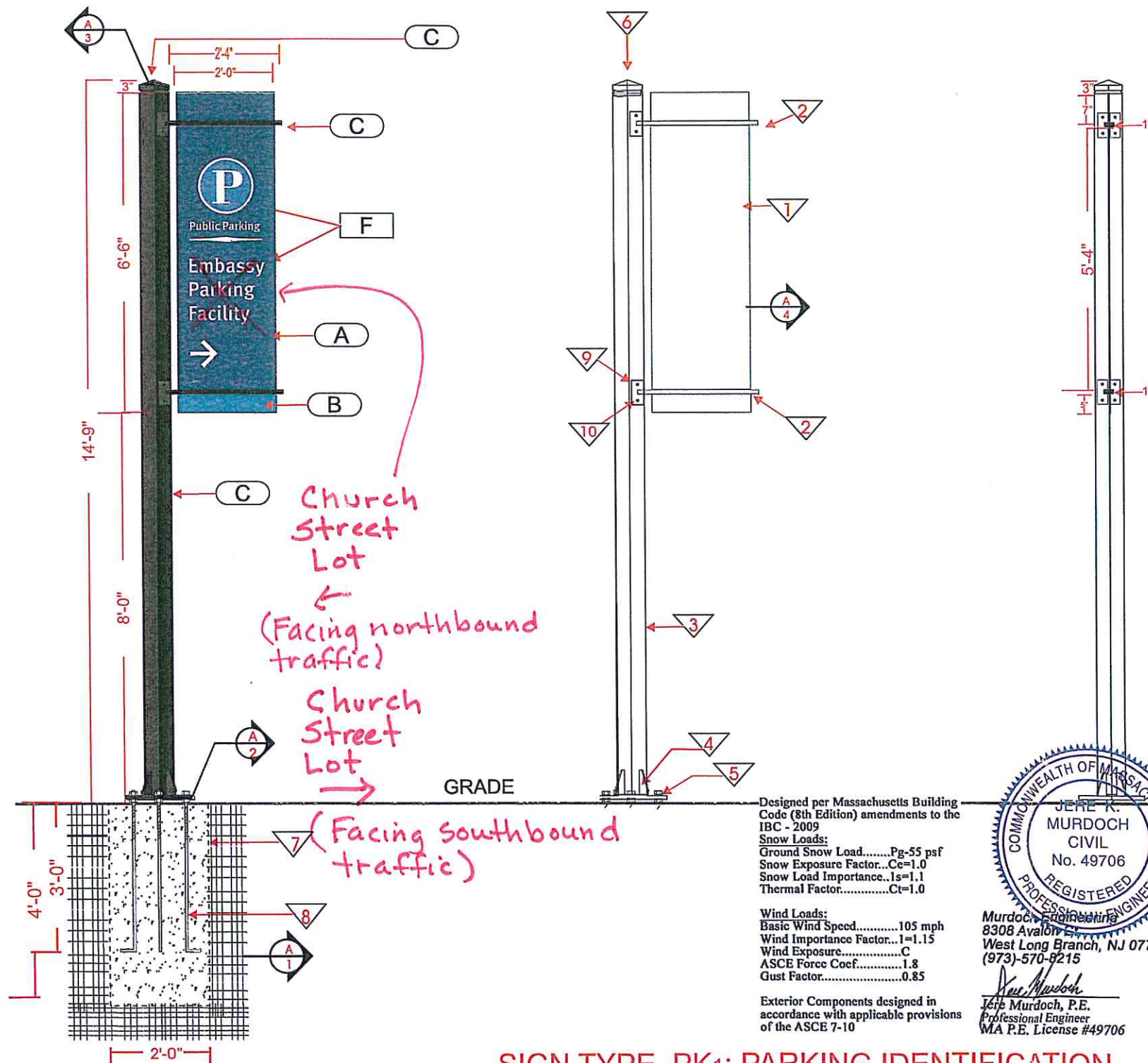
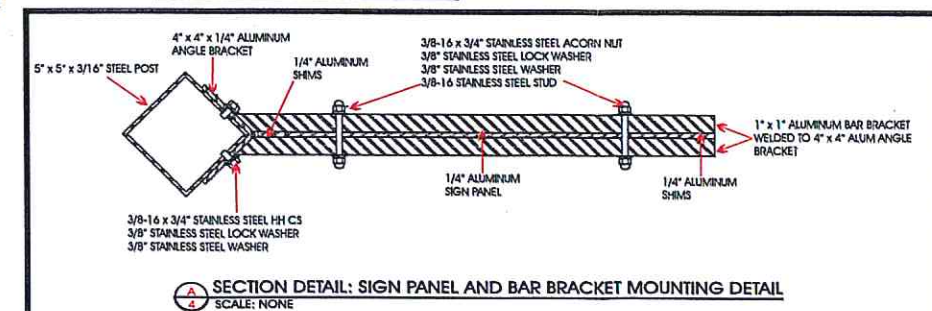
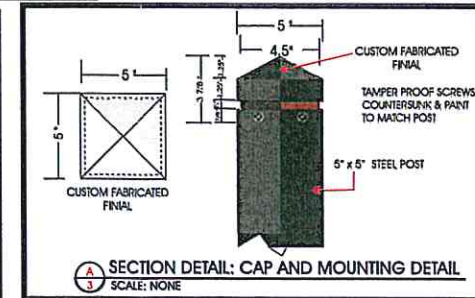
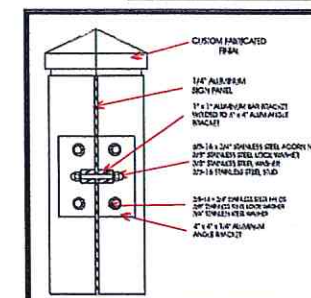
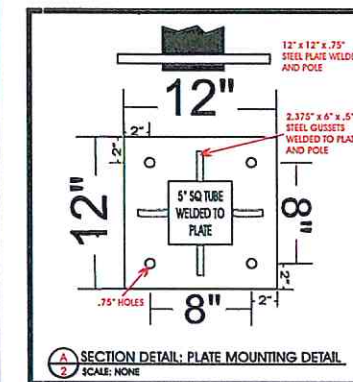
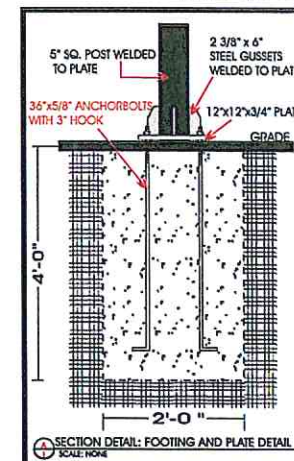
X
 APPROVED FOR FABRICATION

PAGE: 6 of 8

- PAINT SPECIFICATION**
- (A) - TO MATCH BENJAMIN MOORE 2063-10(OLD NAVY)
 - (B) - TO MATCH BENJAMIN MOORE 2063-30(BLUEBERRY)
 - (C) - TO MATCH BENJAMIN MOORE 2132-10(BLACK)

- VINYL SPECIFICATION**
- (F) - 3M ENGINEER GRADE REFLECTIVE SHEETING

- SIGN SPECIFICATION**
1. 250" ALUMINUM SIGN PANEL
 2. 1" x 1" SQUARE ALUM BRACKET
 3. 5" x 5" x 3/16"W STEEL POST
 4. 2 1/4" x 6" x 1/2" STEEL GUSSET
 5. 12" x 12" x 3/4" STEEL PLATE
 6. 5" x 5" x 3" ALUMINUM FINIAL
 7. 2'-0" RD. x 4'-0"D CONCRETE FOOTING
 8. 36" x 5/8" J-BOLTS
 9. 4" x 4" x 6" x 1/4" ALUM. ANGLE BRACKET
 10. 3/8-16 x 3/4" STAINLESS STEEL FASTENER WITH 3/8" STAINLESS LOCK WASHER AND 3/8" STAINLESS STEEL WASHER



Church Street Lot
 (Facing northbound traffic)
 Church Street Lot
 (Facing southbound traffic)

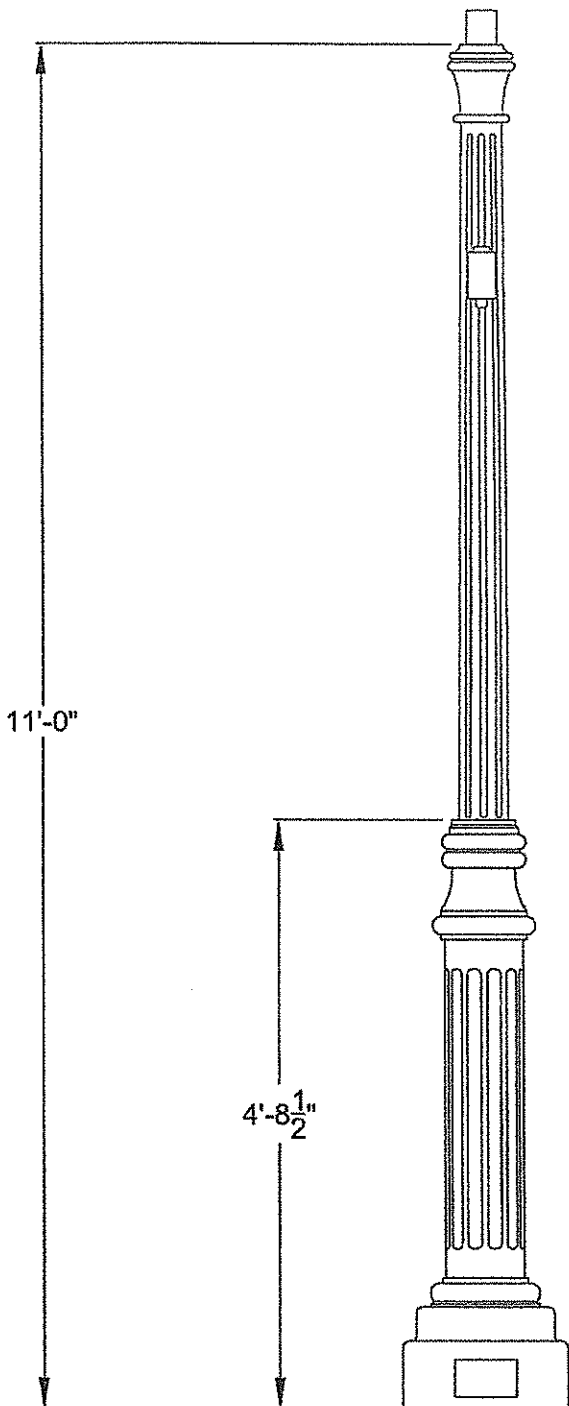
Designed per Massachusetts Building Code (8th Edition) amendments to the IBC - 2009
 Snow Loads:
 Ground Snow Load.....Pg-55 psf
 Snow Exposure Factor...Ce=1.0
 Snow Load Importance...Is=1.1
 Thermal Factor.....Ct=1.0
 Wind Loads:
 Basic Wind Speed.....105 mph
 Wind Importance Factor...I=1.15
 Wind Exposure.....C
 ASCE Force Coef.....1.8
 Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

MURDOCH CIVIL
 No. 49706
 REGISTERED PROFESSIONAL ENGINEER
 COMMONWEALTH OF MASSACHUSETTS
 Jere K. Murdoch
 8308 Avalon
 West Long Branch, NJ 07764
 (973)-570-8215
 Jere Murdoch, P.E.
 Professional Engineer
 MA P.E. License #49706

SIGN TYPE PK1: PARKING IDENTIFICATION

SCALE: 3/8" = 1'



GFI RECEPTACLE W/WP
IN USE COVER.

POLE SPECIFICATIONS

MANUFACTURER: ALLOY CASTINGS Co., INC.
 STYLE: HANCOCK SERIES
 MODEL No.: ACDP-P-11'0"-GFCIIU-BK
 HEIGHT: 11'-0" OVERALL POST HEIGHT
 BASE DIAMETER: 16"
 TENON: 3 1/2" DIA x 3" TALL
 MATERIAL: HEAVY WALL CAST ALUMINUM 356 ALLOY
 FINISH: GLOSS BLACK ENAMEL
 ANCHOR BOLTS: 3/4" DIA. x 24"L + 3" HOOK H.D.GALVANIZED

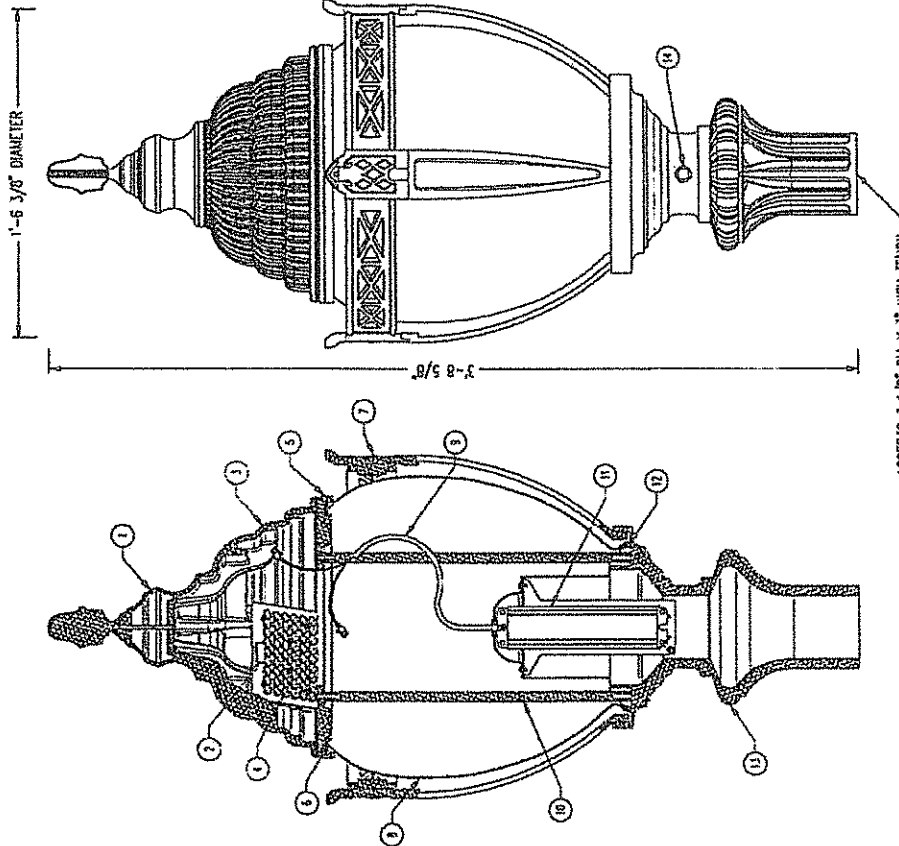
ALLOY CASTINGS CO., INC.
 151 WEST UNION STREET
 EAST BRIDGEWATER, MA 02333
 PHONE: (508) 378-2541
 FAX: (508) 378-1240

DESCRIPTION: 11' HANCOCK POST	
CUSTOMER: CITY OF WALTHAM	
DATE: 02 06 2014	DRW

This drawing is property of Spring City Electric Mfg. Co. and is loaned to the recipient with the understanding that it shall not be copied, reproduced, printed on or used in any way for any purpose other than that for which it is specifically furnished except with Spring City's written permission.

LUMINAIRE SPECIFICATIONS:

STYLE: WASHINGTON WITH 110 ALUMINUM FINIAL
 HEIGHT: 1'-8 5/8"
 WIDTH: 1'-6 3/8" DIAMETER
 MATERIAL: CAST ALUMINUM ALLOY ANS1 J56 PER A.S.T.M. B26-95
 FINISH: POWDER COAT - GLOSS BLACK
 LAMPING: 80 WATT LED
 VOLTAGE: PLEASE SEE QUANTITY FOR VOLTAGE
 NUM. OF BOARDS: 2
 COLOR TEMP: 4500K (NEUTRAL WHITE)
 DISTRIBUTION: TYPE III (ASYMMETRIC)
 OPTICS: CROSSFIRE REFRACTIVE
 GLOBE: 118 SHIPPED OR ACRYLIC
 ELECTRICAL: BUTTON-TYPE PHOTO CELL
 MODIFIER: TARBORO RING AND STRUTS
 CATALOG NO. ALUMINA-LEDO/TV_/X2-45-CR3-1SH1-4PA-1B-81-CU



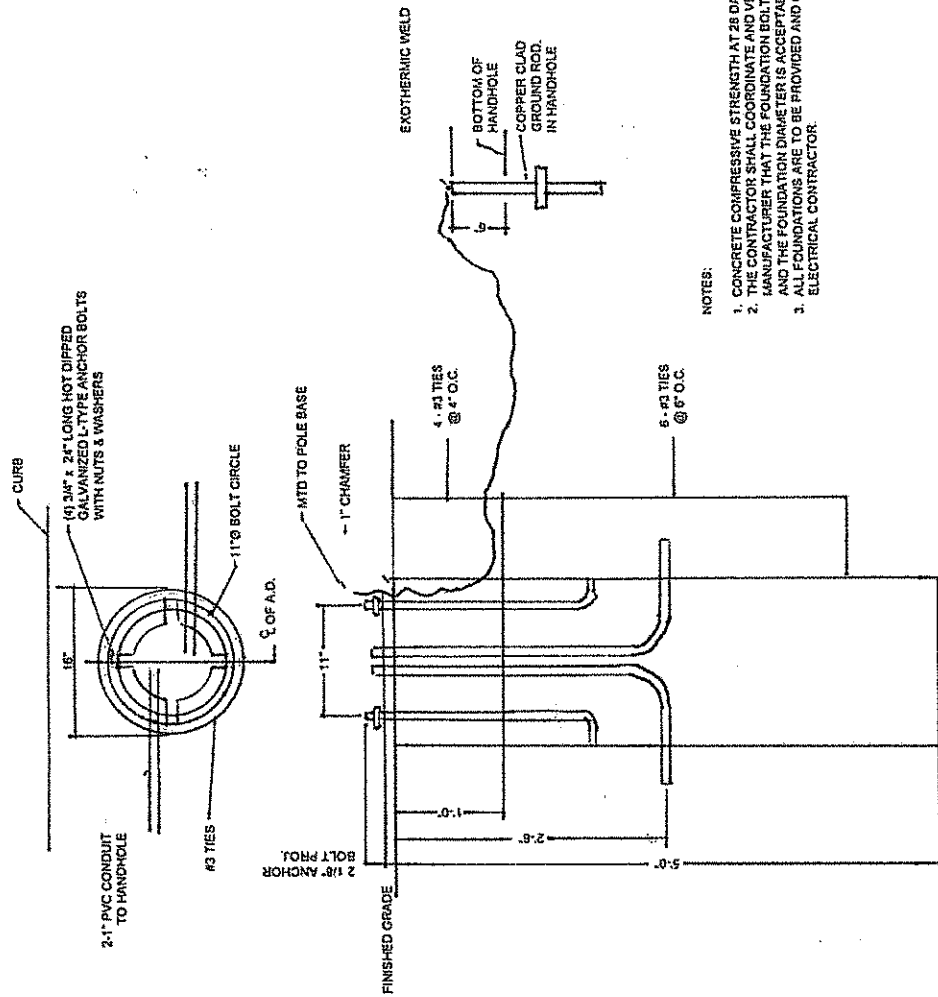
ACCEPTS 3 1/2" DIA X 3" HIGH TENDON

- 1) FINIAL: CAST ALUMINUM, J56 ALLOY, SECURED WITH (1) 1/4"-20 ROUND HEAD MACHINE SCREW
- 2) CROSSFIRE™ OPTICAL OPTICAL SYSTEM: INJECTION MOLDED REFRACTIVE OPTICS
- 3) COOLCAST™ HEAT DISSIPATING ROOF: CAST ALUMINUM, J56 ALLOY, SECURED WITH (4) 10-24 ROUND HEAD MACHINE SCREWS
- 4) CREE XT-E LED - 54 CHIPS PER BOARD TO PRODUCE 120 WATTS
- 5) LUMINAIRE ROOF RING: CAST ALUMINUM, J56 ALLOY
- 6) SILICONE GASKET: ONE PIECE MOLDED GASKET TO SEAL THE LUMINAIRE RING TO THE ROOF AND GLOBE
- 7) DECORATIVE TARBORO RING AND STRUTS: CAST ALUMINUM, J56 ALLOY
- 8) GLOBE: DAMAGE RESISTANT 118 SHIPPED ACRYLIC
- 9) POWER CABLE: BUNDLED POWER CABLE RISE WITH CHUCK DISCONNECTS
- 10) ILL-HOOD: (2) MACHINED ALUMINUM STAND OFF TO SECURE LUMINAIRE RING AND GLOBE TO CASING
- 11) LED DRIVER: LOCATED IN SPUN HOUSING WIRED AT 700mA (SPUL CURRENT)
- 12) GASKET: SILICONE GASKET TO SEAL GLOBE TO LUMINAIRE CASING
- 13) LUMINAIRE CASING: CAST ALUMINUM, J56 ALLOY
- 14) BUTTON-TYPE PHOTO CELL (SEE QUANTITY FOR VOLTAGE)

Spring City Electrical Mfg. Co.
 1941 AND 1944 STREETS - PA. BOX 19 - SPRING CITY, PA. 19115
 PHONE (610) 916-4000 - FAX (610) 946-5377 - 84959-0000

DESCRIPTION	THE WASHINGTON LED LUMINAIRE WITH TARBORO RING AND STRUTS		
DRAWING NO.	CITY OF WAL BRWA, MA MAIN STREET		
SCALE	DRAWING NO.	DATE	DRAWING 102
R.T.S.	MFG	10-31-13	TRC-28674

Foundation Detail - Waltham MA



- NOTES:
1. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS, F_c'=3000 psd (Min.)
 2. THE CONTRACTOR SHALL COORDINATE AND VERIFY WITH THE POLE MANUFACTURER THAT THE FOUNDATION BOLT POSITIONS ARE ACCURATE, AND THE FOUNDATION DIMETER IS ACCEPTABLE TO THE ENGINEER.
 3. ALL FOUNDATIONS ARE TO BE PROVIDED AND COORDINATED BY THE ELECTRICAL CONTRACTOR.

CONCRETE FOUNDATION

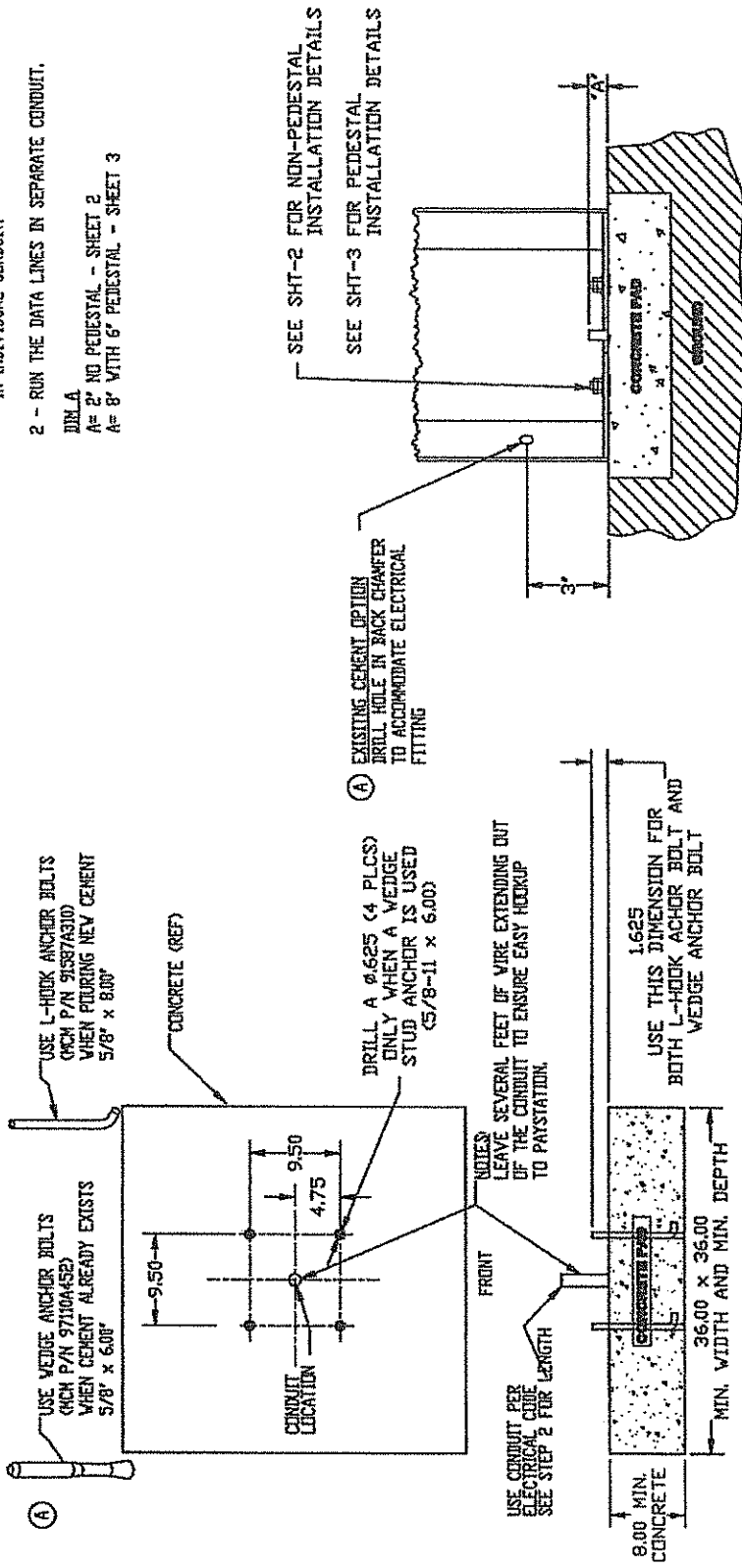


8" CONC
PAD

4'-0"

PAY STATION PAD

- NOTES:**
- 1 - RUN THE POWER AND PHONE LINES IN INDIVIDUAL CONDUIT.
 - 2 - RUN THE DATA LINES IN SEPARATE CONDUIT.
- DIM. A**
 A = 2' NO PEDESTAL - SHEET 2
 A = 8' WITH 6' PEDESTAL - SHEET 3



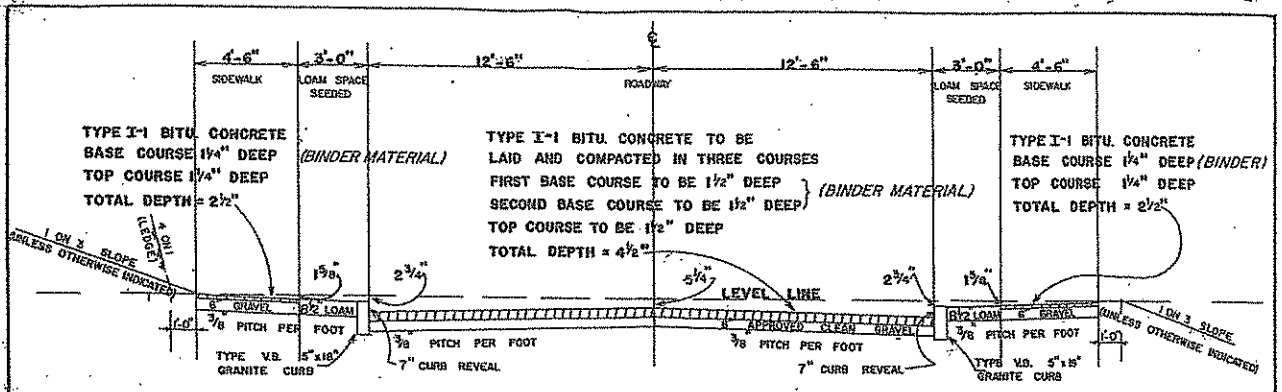
CONC. PAD SPECIFICATIONS

STEP 2

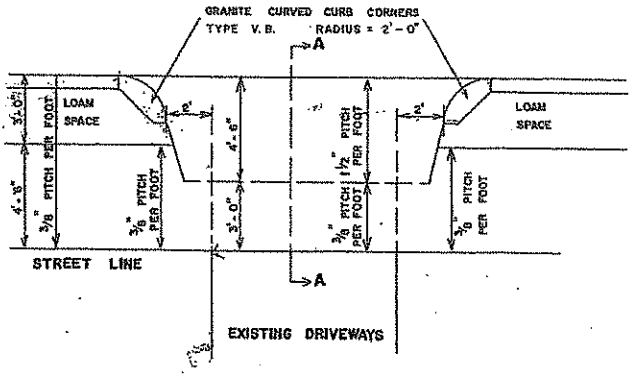
<p>VenTek International 424 PAVAN STREET, SUITE D, RAYLMA, CA 94582 TEL (925) 775-3075 FAX (925) 775-3380</p>	<p>DESIGNER: [] CHECKED BY: [] DATE: []</p>	<p>REVISION: []</p>
	<p>APPROVALS: [] DATE: 04/20/03</p>	<p>ENCLOSED PEDESTAL INSTALLATION VENSTATION</p>
<p>ISSUES: []</p>	<p>TRAVELING NO: 61-905</p>	<p>REV. DESCRIPTION: REVAC - MOVE SIDE PANEL OPTIONS TO SEPARATE DRAWINGS ECO # 369</p>

PAY STATION CONC. PAD

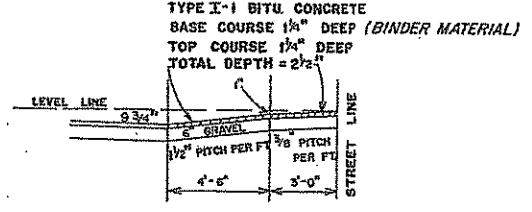
V 25-18



CONSTRUCTION METHODS AND MATERIALS TO COMPLY WITH "STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES & WATERWAYS", DEPARTMENT OF PUBLIC WORKS, COMMONWEALTH OF MASSACHUSETTS, CURRENT EDITION.



DETAILS AT DRIVEWAYS



DRIVEWAYS FROM OUTTERS TO STREET LINES WILL BE CONSTRUCTED AS SHOWN ON THIS SECTION, ADJUSTMENTS BEYOND STREET LINES WILL BE TO EXTENT INDICATED ON PLAN & WILL CONFORM TO ORIGINAL MATERIALS.

TYPICAL LEVEL STREET SECTION FOR 40.00 FT. STREET WITH SIDEWALKS FOR USE IN RESIDENTIAL DISTRICTS CITY OF WALTHAM, MASS.

SCALE: 1 INCH = 4 FT. HOR & VERT. SEPT. 1972

Edward F. Delaney CITY ENGINEER

SECTION 10430
EXTERIOR SIGNAGE

PART 1, GENERAL

1.00 RELATED DOCUMENTS

- A. The BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.01 WORK INCLUDED

- A. Fabrication of all sign types indicated on the Drawings and enumerated in the Bid Form attached to the end of these Specifications.
- B. Site survey to verify existing site conditions and dimensions. This survey shall note all potential installation conflicts between sign installation locations and existing building conditions and systems.
- C. Sign Message Schedule: Sign Contractor to prepare message schedule and submit to Owner for approval.
- D. Sign Location Plans: Sign Contractor to prepare site-specific dimensioned sign location plans for submittal to Owner.
- E. Coordination with Owner and Designer during all phases of development, fabrication, and installation.
- F. Shop drawings, layouts, samples, and prototypes for Owner and Designer approval.
- G. Full scale prototypes as described in these Specifications.
- H. Structural design and calculations when appropriate to substantiate design. It is required that the Sign Contractor include a certified engineer's review and stamp for all signage elements and footings.
- I. Sign Fabrication: Signs, messages, and graphics are indicated on the Drawings and herein, and require various materials, various finishes, and various fabrication and installation techniques.
- J. Replacement Sign Faces: Fabrication of and storage of additional message panels as described in the Bid Form attached to the end of these Specifications.
- K. Review and coordinate, furnish and install all supports and footings not provided by General Contractor required for the installation of all signs.

- L. Review and coordinate, furnish and install all electrical hardware and connections from junction boxes to illuminated signs.
- M. Installation of all fabricated signs, including all fasteners related electrical connections.

1.02 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

- 1. American Concrete Institute (ACI):

- 304 Measuring, Mixing, Transporting, and Placing Concrete.
- 305 Hot Weathering Concrete
- 316 Construction of Concrete Pavements and Concrete Bases.

- 2. American Society for Testing and Materials (ASTM):

- A 53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
- B 209 Aluminum and Aluminum Alloy Sheet and Plate.
- B 221 Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
- B 308 Aluminum-Alloy 6061 T6 Standard Structural Shapes Rolled or Extruded.
- B 429 Aluminum-Alloy Extruded Structural Pipe and Tubing.
- C 33 Concrete Aggregates
- C 94 Ready-Mixed Concrete
- C 143 Slump of Portland Cement Concrete
- C 150 Portland Cement
- C 171 Sheet Materials for Curing Concrete
- C 494 Chemical Admixtures for Concrete
- D 256 Impact Resistance of Plastics and Electrical Insulating Materials
- D 638 Tensile Properties of Plastics

D 648 Deflection Temperature of Plastics Under Flexural Load

3. American Welding Society (AWS):

Aluminum

Welders Certification: Provide certifications signed by Sign Contractor, certifying that welders employed on Project comply with requirements specified under AWS D.1 and AWS D1.3.

4. Manual of Uniform Traffic Control Devices (MUTCD):

Standards for Streets and Highways

5. Massachusetts Department of Transportation - Highway Division (MassDOT):

Specifications Standard Specifications for Construction of Highways, Streets and Bridges

B. CODES:

1. Sign Contractor is responsible for complying with all federal, state, and city/town building codes. Any and all proposed fabrication/installation that does not comply with these codes shall be brought to the attention of the Owner and Designer for review and resolution prior to fabrication.

2. Sign Contractor is responsible for complying with the Americans with Disabilities Act. ADA legislation and guidelines have been published in the Department of Justice Federal Register, July 26, 1991; 28 CFR Part 36, Title III: Public Accommodations and Commercial Facilities. Sign Contractor is responsible for complying with all regulations subsequently issued.

3. Any and all proposed fabrication/installation that does not comply with ADA (including but not limited to construction, mounting, finish, contrast, and character height) shall be brought to the attention of the Owner and Designer for review and resolution prior to fabrication.

1.03 SIGN CONTRACTOR QUALIFICATIONS

A. Indicate five (5) projects which are similar in nature to the project described herein and provide the following for each:

1. Name of project and its geographic location.
2. Start date and completion date of project/work.
3. Owner's name, address, telephone, and contact person.

4. Brief, but thorough, description of the work including all trades involved; name(s) of responsible supervisory fabrication and installation personnel.
 5. Photographs of project examples listed above which represent the work of the firm.
- B. The Sign Contractor must have previous experience in the fabrication and installation of a similar sign program. At least three (3) of five (5) of the projects listed above must be of similar scope and complexity to the project described herein.
 - C. Firm References: Provide three (3) references from the experience list above. Provide contact name, address, telephone number, and project name and location for each reference. It is imperative that accurate contact names and phone numbers be given for the projects listed. All references should include a contact person who can comment on the firm's ability to successfully complete a project of this type. The Owner reserves the right to contact references for any projects provided as noted above, or through any other source available. Such references will be held in strict confidence.
 - D. Insurance: provide a Certificate of Insurance verifying the amount of your firm's coverage for comprehensive general liability, worker's compensation, employer's liability, and professional liability.
 - E. Sub-contractors: All sub-contractors must be identified, and a complete description of their role relative to this contract must be included. It is highly desirable that all sub-contractors named will have prior experience working as a team. All sub-contractors must have a good working relationship with the prime contractor. If no sub-contractors are noted, it is understood that all work will be performed by the proposer's staff. The Owner reserves the right to accept or reject any sub-contractor.
 - F. Minor irregularities in the bid which are immaterial or inconsequential in nature may be waived whenever it is determined by the Owner to be in their best interest. If company literature or other publications are included, they should include reference to the document name and page. Submittals containing no such citations will be considered complete and without need to refer to other documents.

1.04 SHOP DRAWINGS

- A. The drawings in this package are for design intent only. The Sign Contractor is responsible for the proper engineering of all items. The internal structure, dimensions, and specifications for all items shall be indicated in the shop drawings. Designer will not provide electronic files of design intent drawings – it is intended that the Sign Contractor produce original, CADD-generated shop drawings. In certain cases, artwork will be provided for specified patterns, logos and custom profiles.
- B. Detailed shop drawings, including engineers stamp, to be provided for each and every sign and foundation.

- C. Drawings to be complete, including each and every dimension, complete specification for every material and finish, and part numbers for all hardware.
- D. Description: Provide shop drawings for all items including:
 - 1. Complete fabrication and installation drawings for each sign type, indicate dimensions, materials, finishes, fastening, anchorage, joining, sealing, backing, utility requirements, rough-in, paving, foundation, expansion joints and adjacent related site conditions.
 - 2. Each sign type with all graphic elements.
 - 3. Accurately reproduced letter styles.
 - 4. Provide three (3) complete sets to Owner for review.

1.05 PRODUCT / CATALOG DATA

- A. Submit only manufacturer's standard drawings and catalog sheets, brochures, diagrams, schedules, charts, illustrations, test results, and other standard descriptive data pages which are pertinent. Delete all non-applicable data.
 - 1. Mark-up each copy to identify pertinent materials, products, or models.
 - 2. Clearly mark-up each copy of the submittal data to identify the Section, Page Number, and Article of the Specifications to which it is referenced.
 - 3. Show dimensions and clearances required.
- B. Provide three (3) complete sets to Owner for review.

1.06 SUBMITTALS

- A. Submit physical samples of sufficient size and quantity to illustrate materials, finishes, equipment or workmanship, and to establish standards by which completed work will be judged. Samples must represent the functional characteristics of the product or material, with integrally related parts and attachment devices, colors, and finishes.
- B. Welders Certification: Provide certifications signed by Sign Contractor, certifying that welders employed on Project comply with requirements specified under AWS D.1 and AWS D1.3.
- C. Complete list of prototypes required shall be provided to selected Sign Contractor. Prototypes shall become the property of Owner and may be part of completed signs as noted in Signage Schedule.

- D. First article of production-run items, both large and small, will be reviewed by the Owner and Designer before production run is commenced.
- E. Product Data: Submit manufacturer's product data of work of this Section. Provide complete product description and specifications, catalog cuts, and other descriptive data including concrete admixtures, concrete sealer, curing material.
- F. Sign Message Schedule: Sign Contractor to prepare message schedule and submit to Owner for approval.
- G. Sign Location Plans: Provides herein are diagrammatic sign location plans. Based on these, the Sign Contractor to prepare site-specific dimensioned sign location plans for submittal to Owner. Submittal may be supported by site photos and notes.
- H. Field Measurements: Take all necessary field measurements before preparation of shop drawings and fabrication. Do not delay progress of the job. If field measurements are not possible prior to fabrication, allow for field cutting and fitting.
- I. Initial Selection Samples: Submit samples showing complete range of colors, textures, and finishes available for each material used.
- J. Verification Samples: Submit representative samples of the following materials for approval prior to construction. Show full color ranges and finish variations expected. Provide (4) samples of each having minimum size of 6" x 6".
 - 1. Vinyl samples, in specified type style, size and graphic, for each color and finish designated on Drawings.
 - 2. Representative masked and sprayed sample pattern in each color and finish designated on the Drawings.
 - 3. Paint color and finish sample on 1/8 in. thick aluminum, for each color and finish required.
 - 4. For each sign type, provide one (1) full size sign face layout, accompanied by scaled plots of every sign face as listed in the attached Message Schedule. Templates are not acceptable. Include character and word spacing. Outlined (pen-plotted) lettering is not acceptable. Relate all layouts directly to the sign location plan.
 - 5. Plotted template or camera-ready artwork for making symbols specified; include arrow, parking symbol, etc.
 - 6. One cast cap with finish.
 - 7. A minimum 12" piece of 5" square tubing, hot-dip galvanized and finish painted per specifications.
 - 8. One sample weld of aluminum square bar stock to mounting angle with paint finish.

9. One sample of each piece of hardware used on the entire project.

K. Painting plan: to include products used for painting of each material (galvanized steel, aluminum, stainless hardware). Provide narrative of steps used for processing of each material.

1.07 PROTOTYPES

- A. Sign Prototype: Prior to commencing work of this Section, provide full-size sign mockup for each sign type listed below, at locations acceptable to Architect.
- B. Include in cost (1) complete, full size type PK1
- C. Include the PK1 sign with brackets attached to an approximate 6' full size, galvanized and finished steel post with finial.
- D. Deliver to City of Waltham for review.
- E. Obtain Owner's acceptance of visual qualities
- F. If mock-up is unacceptable, Sign Contractor must repair or replace at their cost.
- G. Protect and maintain accepted mockups throughout the remainder of work of this Section to serve as criteria for acceptance of visual qualities
- H. Approved mockups may be incorporated into finished work.

1.08 SUBMITTAL REQUIREMENTS

- A. Make submittals at least ten (10) days before date that approved submittals are required.
- B. Accompany submittals with transmittal letter in duplicate, containing:
 - 1. Date
 - 2. Project title and number.
 - 3. Sign Contractor's name and address.
 - 4. Description of data contained in submittals.
 - 5. Listing of any letters containing description of deviations from Contract Documents.
 - 6. Other pertinent data.
- C. Submittals shall include:

1. Date and revision dates.
 2. Project title and name.
 3. The names of Owner, Designer, Sign Contractor, sub-contractor, supplier, manufacturer, and separate detailer when pertinent.
 4. Identification of product or materials.
 5. Relationship of product to adjacent structure or materials.
 6. Clearly identified field dimensions, when known.
 7. Specification Section Number.
 8. Applicable standards, such as ASTM and others.
 9. A blank space, 4" x 4", for the Designer's (or consultant's) stamp.
 10. Identification and description of deviations from Contract Documents.
 11. Written request for selection of colors, patterns, and textures for materials contained in submittals. Note: Provide each and every item of finish, including color, pattern, and texture as selected or approved by Designer.
 12. Sign Contractor's stamp, initialed or signed, indicating review of submittal, compliance with Contract Documents, and verification of field measurements when applicable.
- D. Provide three (3) complete sets to Owner for review.
- E. Calculations: Provide professionally prepared calculations and certification of the performance of the work. Show how design load requirements, wind load requirements and other performance criteria have been met. Provide calculations stamped and sealed by a professional engineer registered in the State of Massachusetts.

1.09 RE-SUBMITTAL REQUIREMENTS

A. Shop Drawings

1. Review drawings and indicate revisions date as required, and resubmit as specified for initial submittal.
2. Indicate on drawings all changes that are different than those requested by the Owner.

- B. Product data and samples: Submit new data and samples in accord with some criteria as required for first submittals.

1.10 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute copies of shop drawings and product data which carry Owner's approval stamp to:
 - 1. Sign Contractor's file, job site file, and product record documents file.
 - 2. Sub-contractors, suppliers, and Sign Contractors as appropriate.
 - 3. Other prime contractors.
- B. Distribute samples as directed by Owner or Designer

1.11 SIGN CONTRACTOR'S RESPONSIBILITIES

- A. General responsibilities include:
 - 1. Sign Contractor is responsible for all project management and coordination.
 - 2. Coordination shall include all fieldwork, layout and verification.
 - 3. Sign Contractor will provide final location plans that show precise sign locations, dimensioned from curbs, sidewalks, rights of way and / or other control points.
 - 4. Sign Contractor shall stake all locations for approval by city representative, and shall convene a meeting with the representative to review and approve each location.
 - 5. Sign Contractor shall provide all utility locates; if any locations are affected by utility or other obstructions sign relocation must be approved by the city representative.
 - 6. Sign Contractor is responsible for any and all repairs to underground utilities, sidewalks or other structures damaged in the process of installation.
 - 7. Sign Contractor will submit to the City of Waltham a detailed installation plan and schedule for review and approval, including any locations where a street or public right of way will be impeded by their activities. Sign Contractor to include all costs for traffic control, security, police details, and barricades etc. that are required to complete the work.
 - 8. All overtime or off-hours work is to be included.
 - 9. Each location to be properly barricaded during construction.
 - 10. Upon completion each location to be broom clean, all spoils removed in a timely fashion with excavations finished to grade with topsoil. Seeding by others.
- B. Sign Contractor is responsible for providing any necessary computer program conversion, font, computer program, or equipment purchases; or other provisions in order to coordinate exactly with the Designer's drawings and other submissions.
- C. Review shop drawings, product data, and samples prior to submittal to Owner and Designer.
- D. Verify field measurements, field construction criteria, catalog numbers, and similar data.
- E. Coordinate each submittal with work of the project and with the Owner's Contract Documents.

- F. Sign Contractor's responsibility for errors and omissions in submittals or in deviations from the requirements of the Contract Documents is not relieved by the Owner's and Designer's review of submittals.
- G. Notify Owner and Designer in writing of deviations from requirements of the Contract Documents at the time of submittals.
- H. A "deviation" shall be construed to mean any change to the sequence indicated on Drawings or specifications.
- I. A "deviation" is not intended to allow substitutions or product options.
- J. In addition to notifying Owner and Designer in writing of deviations, clearly indicate deviations on shop drawings.
- K. Do not begin work that requires submittals until submittals have been returned with Designer's (or consultant's) stamp and initials indicating review and approval.
- L. After Owner and Designer review, distribute copies of approved drawings, data, and submittals.

1.12 OWNER'S RESPONSIBILITIES

- A. Review submittals with reasonable promptness on basis of design concept of project and information contained in Contract Documents.
 - 1. The scope of the Owner's review is to check for general conformance with the design concept of the project and general compliance with Contract Documents only. No responsibility is assumed by Owner for accuracy of dimensions, details, quantities, or procedures shown on shop drawings or submittals.
 - 2. Omission in shop drawings of items, materials, or processes indicated in Contract Drawings or Specifications, or otherwise required for proper execution and completion of work, does not relieve the Sign Contractor from responsibility for providing such items, materials, or processes. Sign Contractor is responsible for accuracy, dimensions, quantities, strength of connection, coordination with various trades, and conformance to project requirements and all applicable codes.
 - 3. Approval of a separate or specified item does not necessarily constitute approval of an assembly in which item functions.
- B. Affix stamp and initials or signature acknowledging review of submittal as follows:
 - 1. Approved.
 - 2. Approved with notations, re-submittal not required.
 - 3. Not approved. Re-submittal required.

- C. Return submittals to Sign Contractor for distribution.

1.13 MAINTENANCE MANUALS

- A. Provide three (3) up-to-date copies of all shop drawings, product data, and other information described in this Section.

1. Make required submittals not later than six (6) weeks prior to scheduled completion of project.
2. Submittals shall be made by permanent reproduction copy equipment from typewritten or typeset originals.
3. Pre-punch 8 ½ x 11" sheets for standard three ring binders.
4. Submit larger sheets in rolled and protected packages.

- B. Submittal format: Provide each of the following items, as applicable, for each required item.

1. Manufacturer's data: provide catalog data sheets, specifications, name plate data, and parts list.
2. Extra parts: Provide a listing of extra stock or parts furnished as part of the Contract.
3. Warranties: Provide specific manufacturer's warranty. List each component covered with day and date warranty begins, date of expiration, and name, address, and telephone number of person to contact regarding problems during warranty period.
4. Provide names, addresses, and telephone number of Sign Contractor, its subcontractors, suppliers, installers, and authorized service and part suppliers. Format as follows:

4a. Contractor: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Person to Contact: _____

4b. Sub-Contractor: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Person to Contact: _____

4c. Installer: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Person to Contact: _____

4d. Local Representative: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Person to Contact: _____

1.14 WARRANTY

- A. Warrant all work against failure because of faulty materials, workmanship, assembly and installation, for a period of five (5) years from date of substantial completion.
- B. Fading, cracking, warping, peeling, delaminating, rusting, corroding, and structural failure, including distortion by whatever cause, shall be construed to mean failure because of faulty materials and workmanship.
- C. Paint: provide proof of 10 year limited warranty from PPG Company.
- D. Vinyl Graphics: provide proof of 7 year limited warranty from 3M.
- E. Failures during the warranty period shall be repaired or replaced to the satisfaction of the Owner and Designer.

1.15 MAINTENANCE MATERIALS

- A. Touch-up paint: Provide Owner with one quart can of touch-up paint of each type and color used in the work.

1.16 QUALITY ASSURANCE

- A. Source: For each material type required for the work of this Section, provide primary materials which are the product of one manufacturer. Provide secondary or accessory materials which are acceptable to the manufacturers of primary materials.
- B. Installer: A firm with a minimum of three years experience in type of work required by this Section and which is acceptable to manufacturers of primary materials.
 - 1. If installer is different company than sign manufacturer, notify Designer in advance providing installer's name, address, telephone number, and name of contact person.
- C. All work and material shall be in accordance with all applicable codes and standards and shall be acceptable to all authorities having jurisdiction. Work shall meet or exceed the requirements of the Louisiana State Building Code.
- D. Design Criteria: The Drawings indicate size, profiles, and dimensional requirements of signs and graphics, and are based on the specific type and model indicated. Signs by other manufacturers may be considered provided the deviations in dimensions and profiles are minor and do not, in the opinion of the Architect, change the design concept.
 - 4. ~~Fonts: Sign Contractor must purchase specified original font software from font suppliers; Architect will not supply font software or digital copies of fonts. Conversions, translations, or "close matches" are not acceptable.~~
 - 2. Computer Capabilities: Manufacturer must have capability to process digital files prepared on Windows PC platform. Translations to alternate sign cutting platforms must be approved by the Designer.
 - 3. Software: Manufacturer must possess PC-based software versions of Adobe Illustrator and Microsoft Access. Conversions to other software or platforms must be approved by the Architect.
- E. Lighting materials shall be UL approved and shall conform to NFPA 70 requirements, as applicable.

1.17 PERFORMANCE REQUIREMENTS

- A. Design: Engineer and design signage units to withstand stresses induced by wind loads, live loads, dead loads, temperature, shrinkage, fabrication, handling and erection in accordance with applicable codes. Furnish engineer's certificate stating that sign design meets or exceeds requirements of Contract Documents.
 - 1. Design Wind Load: Positive and negative pressure of 25 psf at typical areas; 35 psf at corner zones.

1.18 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials and products unopened. Store and handle in strict compliance with manufacturer's instructions and recommendations. Store under cover and protect from weather damage.
- B. Sequence deliveries to avoid delays, but minimize on-site storage. Coordinate work and storage requirements with the Building Contractor, subject to approval by the Owner and Architect.

1.19 ENGINEERING

- 1. It is the Sign Contractor's responsibility to provide engineering for all signs, including foundations
- 2. It is the Sign Contractor's responsibility to determine which signs require breakaway foundations required by Mass DOT or Federal Highway regulations (or any other governing body)
- 3. Sign Contractor must engineer breakaway feature to conform to requirements
- 4. All drawings must be stamped by a structural engineer licensed in the Commonwealth of Massachusetts.

PART 2 PRODUCTS

2.01 ALUMINUM

- A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.
- B. Yield strength for Alloy 6063-T5/T52 is 15 to 16 ksi (105 to 110 MPa).
- C. Extruded Bars and Shapes: ASTM B 221 (ASTM B 221M), Alloy 6063-T5/T52.
- D. Drawn Seamless Tubing: ASTM B 210 (ASTM B 210M) or ASTM B 483/B 483M, Alloy 6063-T832.
- E. Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.
- F. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.
- G. All sign panels to be .250 flattened aluminum plate, 5052-H32

- H. Aluminum mounting angles at size shown for signs less than 30" projection, architectural profile, 6063-T52. Signs greater than 30" projection require same size with minimum 3/8" wall, or heavier as engineering requires.
- I. Solid aluminum square stock to be 6061-T6511; minimum 1" square at signs less than 30" projection, minimum 2" square at signs greater than 30" projection, or heavier as engineering requires.
- J. Welding to be performed by certified welders per specifications.
- K. Welds must be performed using TIG method; or if wire-feed equipment all exposed welds must be ground smooth.
- L. All dissimilar metals to be properly isolated from one another.

2.02 STEEL

- A. General: Provide manufacturer's standard extrusions, sections, sheet, and plate, of alloy and temper recommended by steel manufacturer or finisher for type, use, and finish indicated, but not less than strength and durability properties specified below.
- B. Steel Tubing: ASTM A\500 or A 501, hot or cold rolled.
- C. ASTM A-500 square tubing
- D. Steel tube post for signs with less than 30" projection must be minimum 5"x5"x3/16" wall, or thicker wall if engineering requires.
- E. Steel tube post for signs with greater than 30" projection must be minimum of 5"x5"x5/16" wall, or thicker wall if engineering requires.
- F. No horizontal seams allowed in posts.
- G. Steel plates and gussets ASTM A-36, thickness as required by engineering.
- H. Plates and gussets to be precision machine cut.
- I. Welding performed by certified welders only, per specifications.
- J. Steel to be sandblast cleaned prior to galvanizing.

2.03 VINYL

- A. Applied Reflective Vinyl Graphics: Pressure sensitive vinyl graphics shall be Scotchlite Reflective Sheeting Series 3200, Engineer Grade, enclosed lens reflective sheeting, manufactured by 3M, or approved equal. Color shall be manufacturer's standard white.

- B. Applied Non-reflective Vinyl Graphics: Pressure sensitive vinyl graphics shall be Scotchcal, 0.4 mil applied pressure sensitive vinyl, manufactured by 3M, or approved equal.
- C. All white graphics to be 3M engineer grade reflective sheeting.
- D. Blue vinyl graphics to be 3M translucent blue over white reflective sheeting, per approved color and sample.
- E. Graphics to be precision cut on plotter, installed precisely per layouts.
- F. Vinyl cannot be installed on sign panels until completely cured, per PPG MAP and 3M standards.
- G. Air-bubbles or de-lamination of any sort are unacceptable, panels will be rejected.

2.04 MISCELLANEOUS MATERIALS

- A. Fasteners: Unless otherwise indicated, use concealed fasteners in all work of this Section. Fabricate fasteners from metals that are non-corrosive (aluminum or non-magnetic stainless steel) to sign surface materials and mounting substrates.
 - 1. Exposed fasteners shall be roundhead and vandal-resistant.
 - 2. Spacers and washers shall be neoprene or EPDM.
 - 3. Provide break-away bolts where indicated.
- B. Anchors and Inserts: Provide non-ferrous metal or hot-dip galvanized anchors and inserts for exterior installations. ~~Provide toothed steel or lead expansion bolt devices for drilled-in place anchors.~~ Furnish inserts to other trades when required to be cast into concrete.
- C. ~~All hardware to be stainless steel~~
- D. ~~Anchor bolts to be stainless steel, including nuts and washers, provide leveling nut, top nut and locking nut on each bolt.~~
- E. Hardware and anchor bolts to be sized to conform to engineering calculations and loads
- F. Exposed hardware to be painted to same color as background it is applied to, or other color as designated, using Mathews prescribed system for stainless preparation and painting
- G. Provide to the City of Waltham extra hardware at a quantity equaling 10% of the hardware used on the project.

- H. Permanent Bond Adhesive: Provide structural adhesive suitable for bonding a variety of dissimilar industrial surfaces over a wide temperature range, similar to "PR-943", manufactured by Products Research and Chemical Corporation, Gloucester City, NJ 08030, or approved equal.
- I. Conduit Hub Fittings: Provide Model No. CHM-75 Conduit Hubs as manufactured by OZ/Gedney, Terryville, CT 06705.

2.05 FINISHES: PAINT

- A. Acrylic Polyurethane Finish: For surfaces indicated to be painted with acrylic polyurethane, provide Matthews Acrylic Polyurethane, satin finish paint system consisting of a pigmented component, a catalyst and a flattening agent, manufactured by Matthews Paint Company, Wheeling, IL 60090, or approved equal. Paint shall contain three ultraviolet inhibitors to prevent fading.
- B. Color selection: Exterior aluminum sign, post, and support surfaces indicated to be painted shall be in colors and finishes indicated on the Drawings
 - 1. Compile and maintain a listing of all colors with the factory batch number and formulation code for all paints and coatings. At the date of substantial completion, submit the list to the Owner for future maintenance reference.
- C. Provide finish coat color matching accepted color samples within industry tolerances and identified as specified. More than one color will be required.
- D. Gloss shall be satin.
- E. The term "paint" refers to those materials that require a finished surface as recommended by the approved materials manufacturer. "Paint" includes preparation, priming/sealing, and intermediate and finish coats as applicable.
- F. Sample finishes: Refer to Previous Section.
- G. Application and Finish:
 - 1. Coatings shall be applied by an applicator having facilities, equipment, and experience required to apply the finish to the manufacturer's specifications. All substrates shall be cleansed of any foreign substance such as oil, grease, dirt, etc. Typical finish shall consist of:
 - 1a. An acid-wash prime coat applied per manufacturer's specifications when using raw metal as a substrate.
 - 1b. Primer/filler seal coat, properly applied to all substrates per manufacturer's specifications including dry film thickness.

- 1c. Primer/filler coat sanded smooth before top coating and coated with a minimum of two applications of acrylic polyurethanes in colors indicated on the design drawings. Top coating shall be applied per manufacturer's recommendations to a minimum total dry film thickness of 2.0 mil.
2. Coating Performance Criteria: (In addition to above)
 - 2a. Dry film thickness: Within minus 5% to plus 25% of the specified thickness.
 - 2b. Abrasion resistance: ASTM D968 coefficient of abrasion 65 minimum.
 - 2c. Pencil hardness: 2H minimum.
 - 2d. Salt spray: ASTM B-117 withstanding 3500 hours, 100% salt fog at 95 degrees F and retaining adhesion, corrosion resistance, color, and gloss with no more than minimal blisters no larger than No. 8 (ASTM D-714), and no more than 1/16" creep or loss of adhesion from scribed line.
 - 2e. Humidity test: ASTM D-2247 withstanding 3500 hours 100% relative humidity at 95 to 100 degrees F and retaining adhesion, corrosion resistance, color, and gloss with no more than minimal blisters no larger than No. 8 (ASTM D-714), and no more than 1/16" creep or loss of adhesion from scribed line.
 - 2f. Gloss: ASTM D523, +/-5%, using a 60 degree glossmeter, of the gloss level selected by the Designer.
 - 2g. Adhesion: No removal of any finish after 1/16" crosshatching to base metal, impacting to the point of metal rupture, and subjected to application and quick removal of cellophane tape.
- H. All steel must be completely finished with each and every hole or other penetration, including threading as required. No field drilling or other penetration of any type that disrupts the galvanized surface is allowed.
- I. Steel to be sandblasted and then hot dip galvanized all surfaces inside and out.
- J. Galvanized steel to be finished smooth, prepped, primed, bonding coated, finish coated per exact specifications provided by the PPG Mathews Acrylic Polyurethane procedures and standards.
- K. Provide proof that paint area meets all PPG MAP specifications, and proof that technicians have attended PPG MAP training; provide certificates.
- L. Finish on posts to match control sample in submittals section above.
- M. All aluminum surfaces to be painted, again using prescribed process and finishes per PPG MAP, and per submission.

- N. Provide one quart of brush-able touch up paint of every project color

2.06 WORKMANSHIP

- A. It is intended that the workmanship be of the highest quality obtainable by the respective trades and crafts experienced in the fabrication of signs, and that all work be done by journeymen, or by tradesmen under the direct supervision of journeymen.

1. "Journeymen" shall be interpreted to mean those craftspeople having the qualifications and experience to meet the requirements described in the Job Classification and Description for the Electric Sign Industry, as developed by the NESAs/Tri-Trades Committee.

2.07 FABRICATION

- A. General: Fabricate work of this Section in conformance with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, and sizes.

- B. All Signs: Fabricate flat and curved signs using metals and shapes of sufficient thickness, with reinforcing when necessary, to produce sufficient flatness, free of "oil canning", and to impart sufficient strength for size, design, and application indicated. Produce smooth, even level sign surfaces.

1. Fabricate posts, brackets, and fittings from extruded aluminum to suit sign panel construction and mounting conditions indicated; all seams welded and ground smooth prior to painting.

2. Colors: Where applied graphics require color selection, provide colors as indicated and as approved by Designer.

3. Graphic Content and Style: Provide graphics for signs in letter style, size, spacing, and arrangement indicated.

4. Where applied vinyl copy is indicated, provide die-cut copy characters from vinyl film with pressure sensitive adhesive backing. Apply copy to exposed face of sign panel.

5. Fabricate framing with reinforced corners, fabricated to a hairline fit.

6. All signs to be properly vented top and bottom to minimize water penetration and prevent moisture buildup or condensation on transparent surfaces.

7. Any openings or vents must have fine mesh screen barrier to prevent insect or animal intrusion and nesting.

- C. Allow for thermal movement resulting from a maximum ambient temperature change (range) of 100° F. (55.5° C.). Design, fabricate, and install the sign assembly to prevent buckling, opening up of joints, and overstressing of welds and fasteners.

- D. Welded Connections: Comply with AWS for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of the exposed side. Clean exposed welded surfaces of welding flux and dress on all exposed and contact surfaces.
- E. Mill joints to a tight, hairline fit. Form joints exposed to the weather to exclude water penetration.
- F. It is intended that all finished work be of the highest quality to pass eye-level examination and scrutiny by the Owner and Designer.
 - 1. Construct all work to eliminate burrs, dents, cutting edges, and sharp corners.
 - 2. Finish welds on exposed surfaces to be imperceptible in the finished work.
 - 3. Finish all surfaces smooth except as indicated or directed otherwise.
 - 4. Surfaces which are intended to be flat shall be without dents, bulges, oil canning, gaps, or other physical deformities.
 - 5. Surfaces which are intended to be curved shall be smoothly free-flowing to required shapes.
 - 6. All exterior hardware and fasteners shall be non-corrosive, non-rusting aluminum or stainless steel as noted on Fabricator's Shop Drawings.
 - 7. Conceal all fasteners except as indicated or directed otherwise.
 - 8. Make access panels tight-fitting, lightproof, and flush to adjacent surfaces.
 - 9. Conceal all identification labels and U.L. labels to conform to U.L. Codes.
 - 10. Carefully follow manufacturer's recommended fabricating procedures regarding expansion/contraction, fastening, and restraining of all materials.
 - 11. Exercise care to assure that painted, polished, and plated surfaces are unblemished in the finished work.
 - 12. Isolate dissimilar materials. Exercise particular care to isolate nonferrous metals from ferrous metals.
 - 13. All illumination shall be even and without hot spots.

2.08 UNEXPOSED CONCRETE

- A. Forms for Unexposed Finish: Plywood, lumber or metal, with lumber dressed on at least two edges and one side.

1. Cylindrical Forms: Sonotube Fibre Forms, wax-impregnated strippable forms manufactured by Sonoco Products Company, General Products Division or approved equal, or ABS or PVC plastic reusable forms.
- B. Form Coatings: Commercial formulation compounds that will not bond with, stain, or adversely affect concrete.
- C. Forms shall be true to line and free from warp, and shall be of sufficient strength, when staked, to resist the pressure of the concrete without springing. Formwork shall be designed so that sections may be fastened together to prevent vertical or horizontal movement of ends.
- D. Concrete shall be air-entrained type, conforming to ASTM C 94.
- E. Unless otherwise indicated on the Drawings, minimum 28 day compressive strength shall be 4,000 psi.
- F. Concrete slump shall be no less than 2 in. no greater than 4 in., determined in accordance with ASTM C 143.
- G. Cement shall be Portland cement, conforming to ASTM C 150, Type I or II.
- H. Aggregates shall conform to ASTM C 33.
- I. Concrete shall contain a water reducing agent to minimize cement and water content of the concrete mix at the specified slump. Water reducing agent shall conform to ASTM C 494.
- J. ~~No calcium chloride or admixtures containing calcium chloride shall be added to the concrete. No admixtures other than those specified shall be used in the concrete without the specific written permission of the Architect in each case.~~
- K. Excavation, rebar and anchor bolts to be inspected by City of Waltham representative prior to pouring concrete.
- L. Any open excavation to be completely barricaded with constructions fencing, or completely covered with ¾"plywood until concrete is poured.
- M. Sloped grouting to occur between baseplate and concrete foundation:

PART 3 INSTALLATION

3.01 GENERAL

- A. Locate sign units and accessories where shown and scheduled. Use mounting methods indicated.

- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installation of work of this Section.
- C. Erect work square, plumb and true, accurately fitted, and with tight joints and intersections. All anchors, inserts and other members to be set in concrete shall be furnished loose by this trade to be built-into concrete by that trade. Avoid field cutting or drilling to greatest extent possible.
- D. Fit exposed connections accurately together to form hairline joints, except where invisible joints are indicated. Shop weld connections, except when work cannot be shop welded due to shipping size or galvanizing limitations.
- E. Fastening to In-Place Construction: Provide anchorage devices and fasteners necessary for securing work of this Section to in-place construction. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors required.
- F. Field Welding: Comply with AWS Code for procedures of manual welding, appearance and quality of welds, and correction methods for defective welds.
- G. Where members other than expansion bolts or inserts are fastened into concrete, set such members in proprietary-type expanding grout manufactured specifically for such purpose. Use grouts strictly in accordance with manufacturer's directions. Form to receive members with galvanized metal sleeves, or other approved method to provide at least 1/2 in. clearance around entire perimeter. At exposed applications, hold expanding grout back 1/2 in. from finish surface and fill voids with Portland cement grout to match color and texture of surrounding concrete surface.
- H. Electrolytic Isolation: Where dissimilar metals are to come into contact with one another, or in contact with concrete, isolate by application of a heavy coating of bituminous paint on contact surfaces in addition to shop coat specified above. Do not permit the bituminous paint in any way to remain on surfaces to be exposed or to receive sealant.

3.02 EXCAVATION AND SUB-GRADE PREPARATION

- A. Provide excavation work as required to install signage and footings as indicated. Sign Contractor shall notify Dig Safe prior to the commencement of excavation.
- B. As excavation approaches underground utilities and structures, excavation shall be done by hand tools. Such manual excavation is incidental to normal excavation and no special payment will be made.
- C. Excavation shall include satisfactory disposal of excavated material not employed as backfill or fill materials.
 - 1. Excavation material, other than topsoil, which is not required for or is unsuitable for backfill or fill materials, shall be legally disposed of off-site.

- D. Prepared sub grade at areas to be paved will be inspected by the Architect. Subgrade shall be approved by the Architect before installation of any work of this Section. Disturbance to sub grade caused by inspection procedures shall be repaired

3.03 UNEXPOSED CONCRETE

- A. Before placing concrete, forms and space to be occupied by concrete shall be thoroughly cleaned, and reinforcing steel and embedded metal shall be free from dirt, oil, mill scale, loose rust, paint, and other material which might tend to reduce bond.
- B. Existing concrete, earth, and other water-permeable material against which new concrete is to be placed shall thoroughly damp when concrete is placed. There shall be no free water on surface.
- C. Concrete which has set or partially set before placing shall not be employed. Retempering of concrete will not be permitted.
- D. Concrete shall be thoroughly spaded and tamped to secure a solid and homogeneous mass, thoroughly worked around reinforcement and into corners of forms.
- E. It is essential that concrete be kept continuously damp from time of placement until end of specified curing period. Between finishing operations surface shall be protected from rapid drying by a covering of waterproofing paper. Surface shall be damp when the covering is placed over it, and shall be kept damp by means of a fog spray of water, applied as often as necessary to prevent drying, but not sooner than 24 hours after placing concrete. None of the water so applied shall be troweled or floated into surface.

3.04 FINISH

- A. Paint finish shall be applied in strict compliance with coating system manufacturer's instructions and recommendations for surface preparation, mil thickness, curing and other requirements.

3.05 INSPECTION

- A. The Installer shall examine substrates, supports, and conditions detrimental to the proper completion of work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning of installation will be construed as installer accepting substrates and conditions.

3.06 TRANSPORTATION OF WORK

- A. Transport, deliver, handle, and store materials and equipment at the job site in such a manner as to prevent damage to both the site and the signs, including damage to finishes

and damage which might result from intrusions of foreign matter or moisture from any source.

B. Packaging:

1. Maintain packaged materials in manufacturer's original container with seals unbroken and labels intact until they are incorporated into the Work.
2. Packaged material shall bear the name of the manufacturer and the product, including brand name, color, stock number, and all other complete identifying information.
3. Packages showing indications of damage that may affect conditions of content are not acceptable.

C. Promptly remove all damaged or otherwise unsuitable materials and equipment from the job site.

D. Storing:

1. Store all materials and equipment in accord with manufacturer's instructions. Store above grade and properly protected from weather and construction activities.

E. Protection:

1. Protect all finished building surfaces, including jambs and soffits of all openings used as passage-ways through which materials and equipment are handled.
2. Provide protection for all finished flooring surfaces in traffic areas before allowing materials and equipment to be moved over those finished surfaces.
3. Maintain all finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

3.07 SIGN INSTALLATION

- A. General Installation Requirements: Strictly comply with manufacturer's instructions and recommendations, except where more restrictive requirements are specified in this section.
- B. Exterior signs shall be installed in various stages in response to the overall Project construction schedule. Install signage in strict accordance with approved phasing plan.
- C. Installation: Install units plumb, level, in alignment and plane without warp or rack. Anchor securely in place.
- D. Verify the exact location with the Owner and Designer for all signs which are not precisely dimensioned on the Drawings.
- E. Sign installation work shall be under the direct supervision of a journeyman sign erector.

- F. Securely anchor work in proper location using anchors, fasteners, or other methods approved on shop and erection drawings. All anchors/fasteners shall be appropriate for the anchorage condition.
- G. The Sign Contractor shall be held directly responsible for the correct installation of all work performed under this Contract. He/she must make good repair, without expense to the Owner, of any part of the work which may become inoperative on account of leaving the work unprotected or unsupervised during the construction of the system or which may break or give out in any manner by reason of poor workmanship, defective materials, or lack of space to allow for expansion/contraction of the work during a period on one (1) year from date of final acceptance of the work by the Owner.

3.08 TOLERANCES

- A. The following allowable installed tolerances are allowable variations from locations and dimensions indicated by the Contract Documents. Do not add these tolerances to any allowable tolerances indicated for other work.
 - 1. Allowable Variation from True Plumb: + 1/8 in. in 20 ft. - 0 in.
 - 2. Allowable Variation from True Line: + 1/8 in. in 20 ft. - 0 in.
 - 3. Allowable Variation from True Level: + 1/16 in. in 20 ft. - 0 in.

3.09 ADJUSTING, CLEANING, TOUCH-UP, AND PROTECTION

- A. Clean exposed surfaces using manufacturer's printed instructions recommending materials and methods to be used. Remove and replace work which cannot be successfully cleaned.
- B. Touch-up damaged coatings and finishes: Eliminate visible evidence of repair.
- C. Provide temporary protection during the course of work, and immediately after completion to ensure work is not damaged or deteriorated in any way at time of final acceptance. Remove temporary protections and re-clean as necessary immediately prior to final acceptance.
- D. Clean-up work area after installation has been completed.

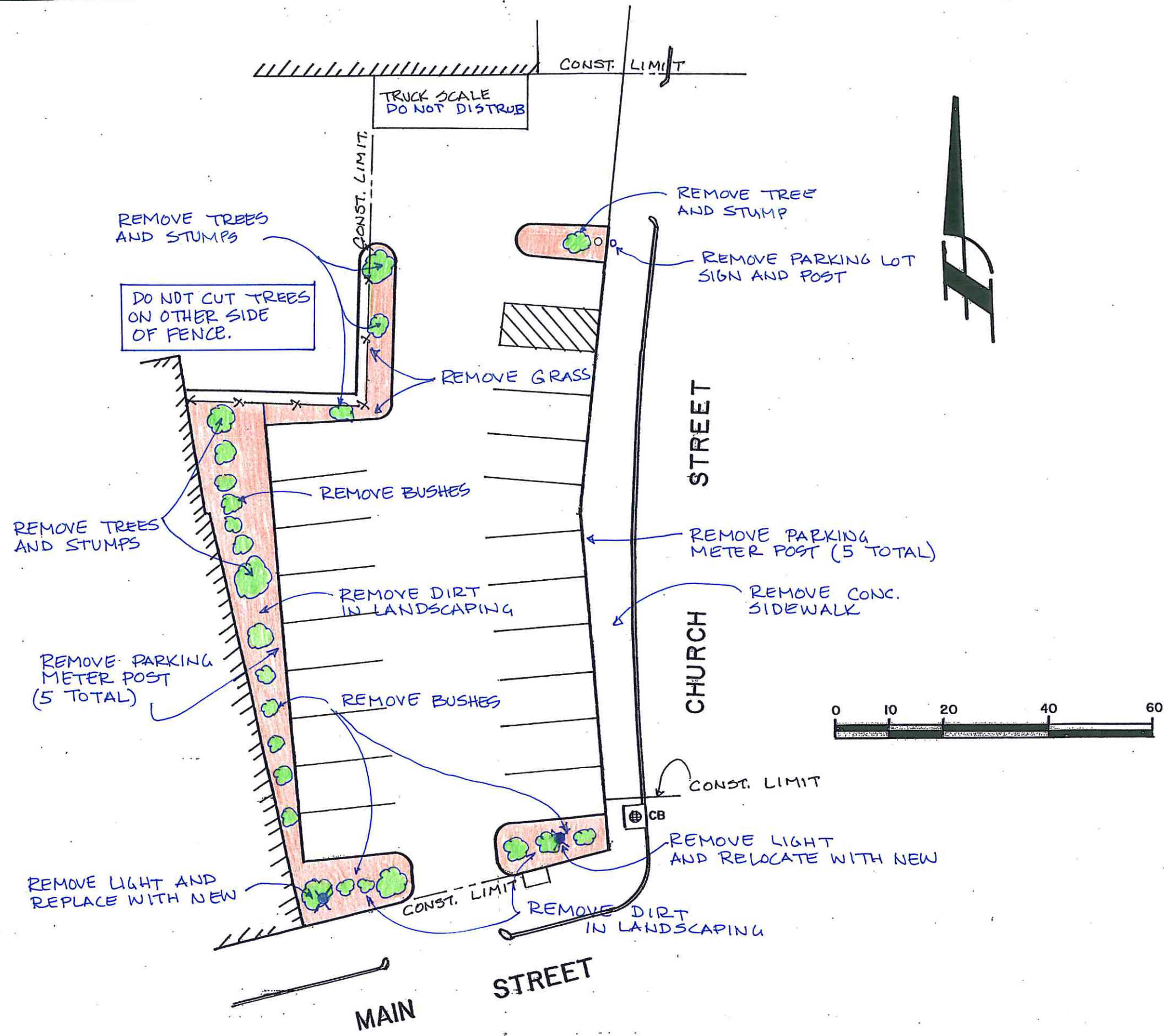
3.10 PUNCH LIST

- A. When Sign Contractor considers the work has reached final completion (that is, when less than one percent of the Contract remains to be completed), submit written notice, together with a written list of items to be completed or corrected.
- B. The Owner will inspect the status of completion and prepare a "Punch List" setting forth in detail any items on the Sign Contractor's list and additional items found unacceptable. When the Punch List is complete, the Owner will arrange a meeting with the Sign Contractor

to identify and explain all items and respond to questions regarding the work which must be done before final acceptance.

- C. Sign Contractor shall correct Punch List items within an Owner-approved time frame established when the punch list is made. The time frame for completion of the Punch List items shall not exceed the completion date of the Contract. The Contract shall not be considered complete until Punch List items are completed.

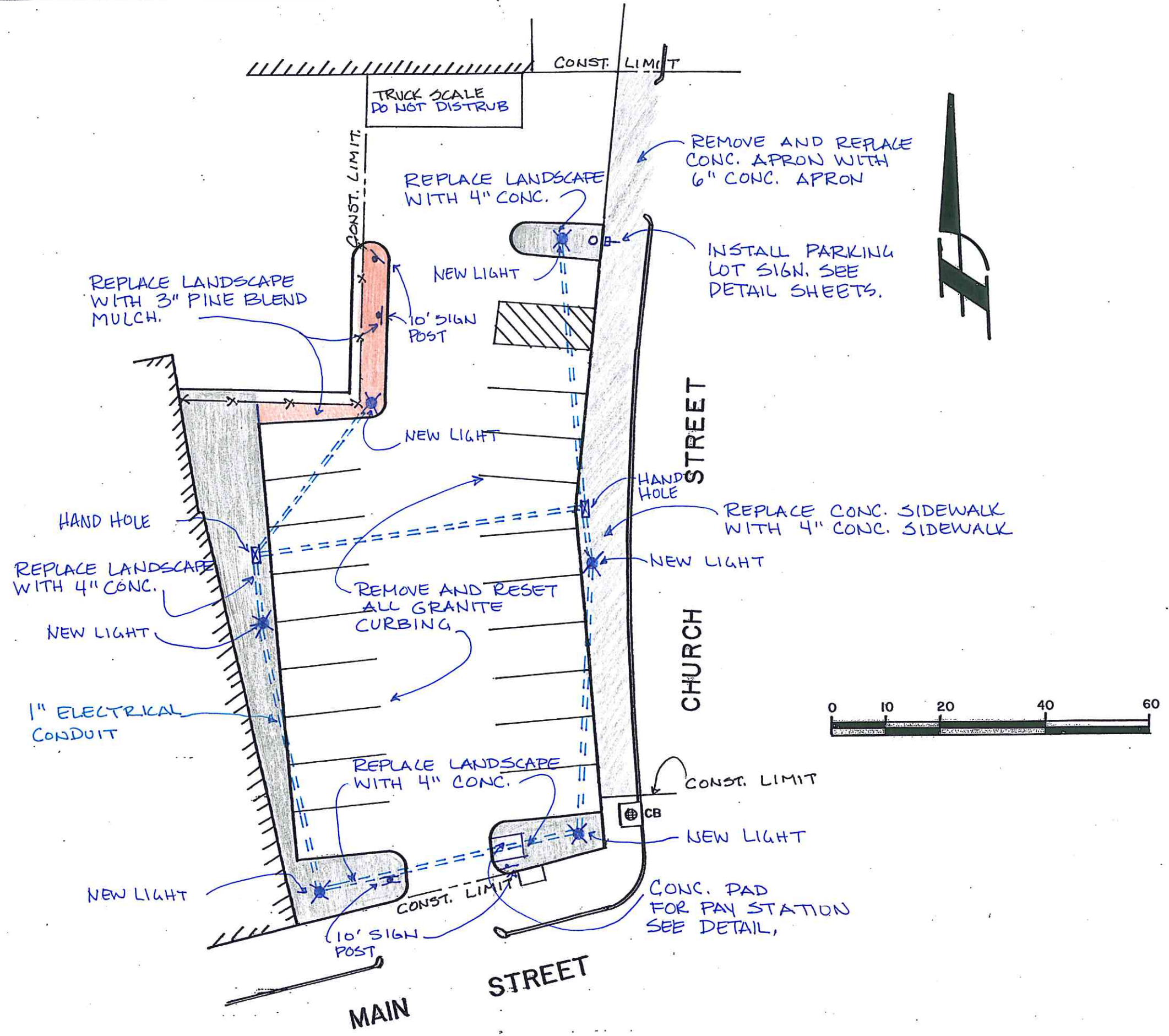
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CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT

APRIL 29, 2016

LMG

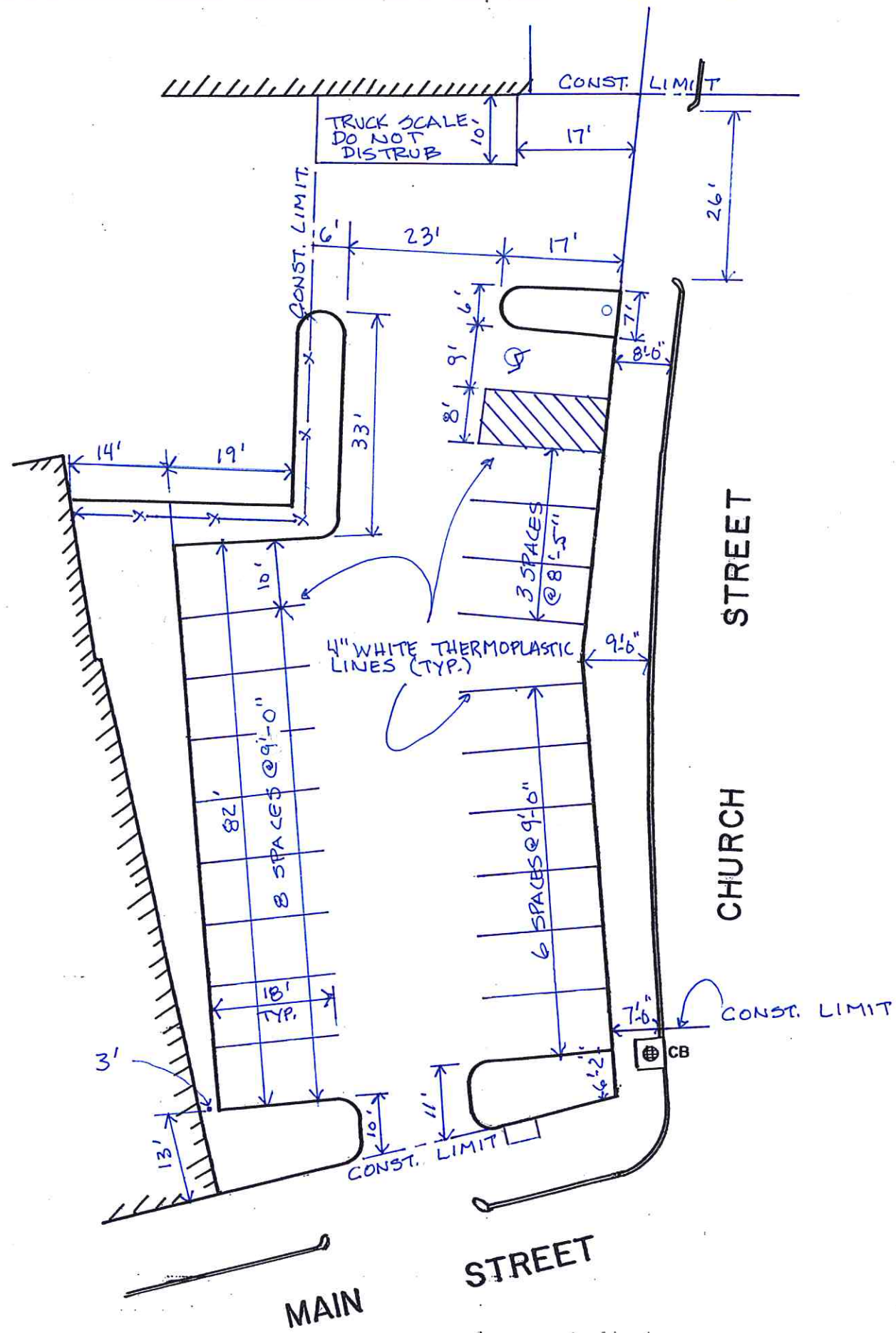


REVISED 10-26-2017

CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT

APRIL 29, 2016

LMG



CITY OF WALTHAM
 CHURCH STREET
 PARKING LOT

APRIL 20, 2016

LMG



LISTED

 Underwriters Laboratories, Inc.

556 INDUSTRIAL WAY W.
 EATONTOWN NJ 07724
 PH 732-578-1818
 FAX: 732-578-1808
 www.allied-signs.com

W

FILE:

C:/ ART FILES 03/
 M. FINNEGAN/
 WAYFINDING
 WALTHAM, MASS

DATE:

ORIG. 4-12-2013

REV.:

REV.:

REV.:

REP.:

MICHAEL FINNEGAN

DRN. BY:

P. Pesapane

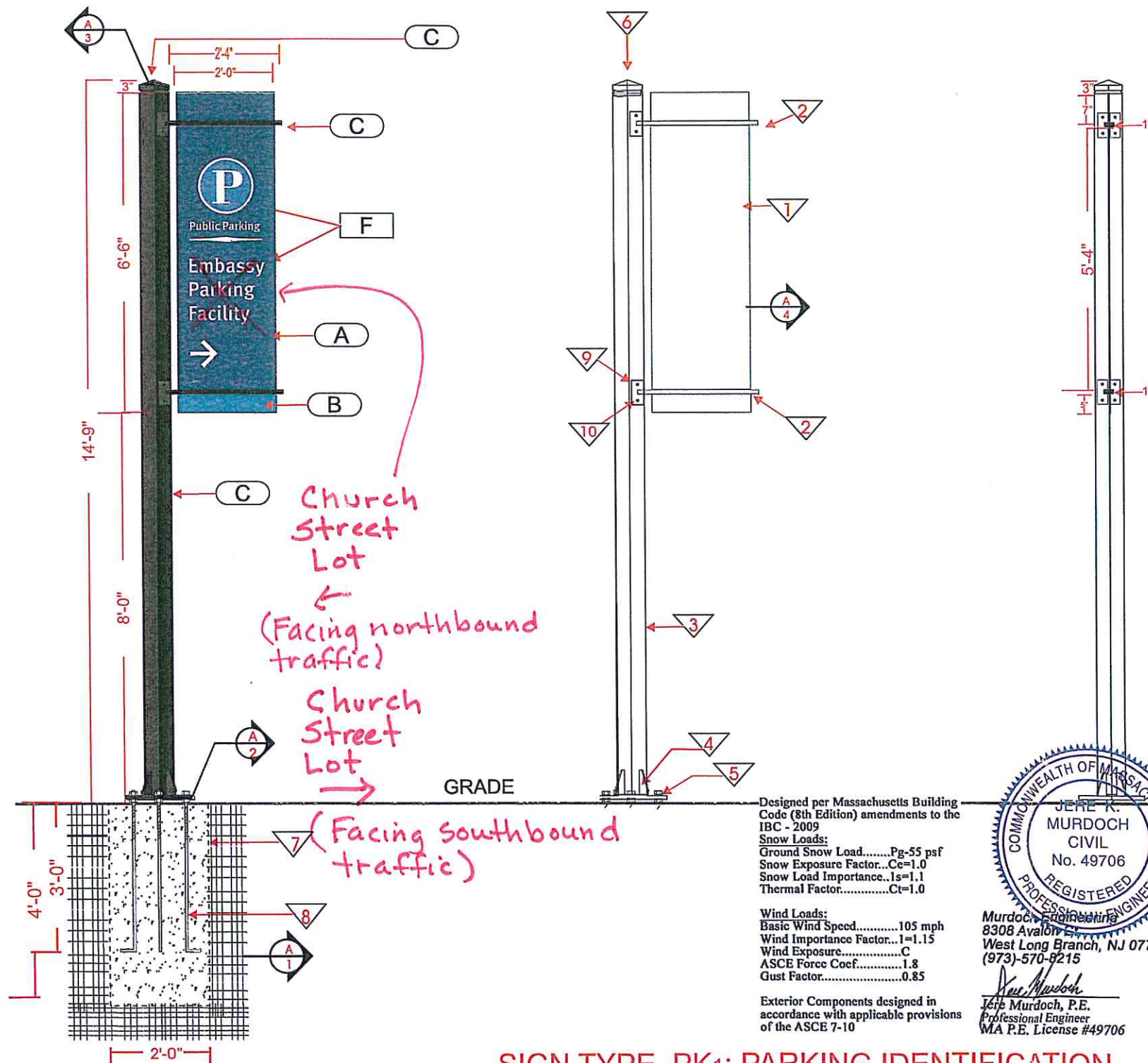
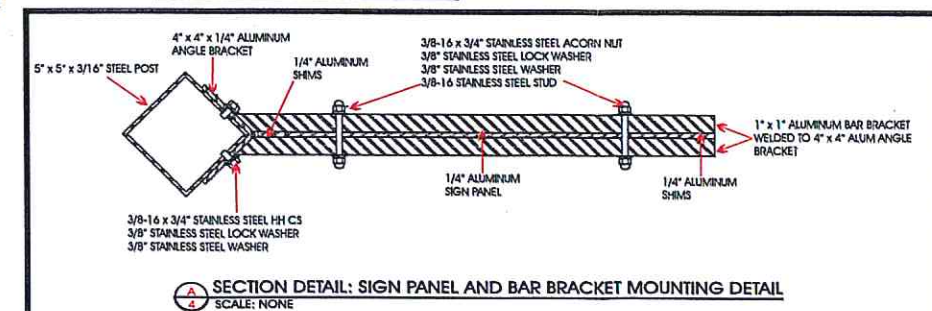
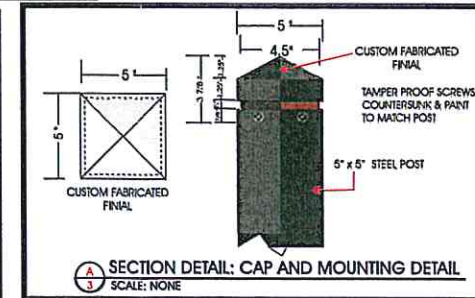
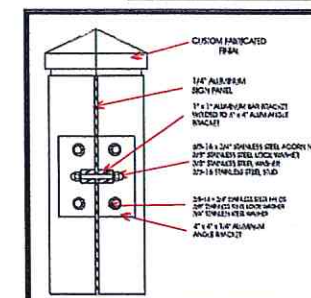
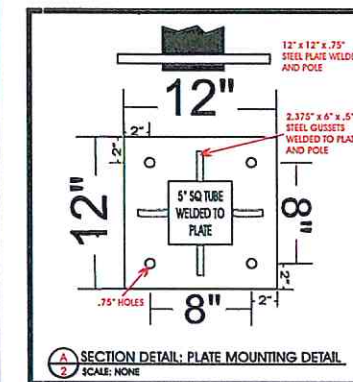
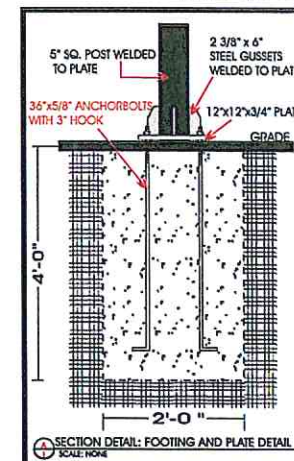
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 APPROVED FOR FABRICATION

PAGE: 6 of 8

- PAINT SPECIFICATION**
- (A) - TO MATCH BENJAMIN MOORE 2063-10(OLD NAVY)
 - (B) - TO MATCH BENJAMIN MOORE 2063-30(BLUEBERRY)
 - (C) - TO MATCH BENJAMIN MOORE 2132-10(BLACK)

- VINYL SPECIFICATION**
- (F) - 3M ENGINEER GRADE REFLECTIVE SHEETING

- SIGN SPECIFICATION**
1. 250" ALUMINUM SIGN PANEL
 2. 1" x 1" SQUARE ALUM BRACKET
 3. 5" x 5" x 3/16"W STEEL POST
 4. 2 1/4" x 6" x 1/2" STEEL GUSSET
 5. 12" x 12" x 3/4" STEEL PLATE
 6. 5" x 5" x 3" ALUMINUM FINIAL
 7. 2'-0" RD. x 4'-0"D CONCRETE FOOTING
 8. 36" x 5/8" J-BOLTS
 9. 4" x 4" x 6" x 1/4" ALUM. ANGLE BRACKET
 10. 3/8-16 x 3/4" STAINLESS STEEL FASTENER WITH 3/8" STAINLESS LOCK WASHER AND 3/8" STAINLESS STEEL WASHER



Church Street Lot
 (Facing northbound traffic)
 Church Street Lot
 (Facing southbound traffic)

Designed per Massachusetts Building Code (8th Edition) amendments to the IBC - 2009
 Snow Loads:
 Ground Snow Load.....Pg-55 psf
 Snow Exposure Factor...Ce=1.0
 Snow Load Importance...Is=1.1
 Thermal Factor.....Ct=1.0
 Wind Loads:
 Basic Wind Speed.....105 mph
 Wind Importance Factor...I=1.15
 Wind Exposure.....C
 ASCE Force Coef.....1.8
 Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

MURDOCH CIVIL
 No. 49706
 REGISTERED PROFESSIONAL ENGINEER
 COMMONWEALTH OF MASSACHUSETTS
 Jere K. Murdoch
 8308 Avalon
 West Long Branch, NJ 07764
 (973)-570-8215
 Jere Murdoch, P.E.
 Professional Engineer
 MA P.E. License #49706

SIGN TYPE PK1: PARKING IDENTIFICATION

SCALE: 3/8" = 1'