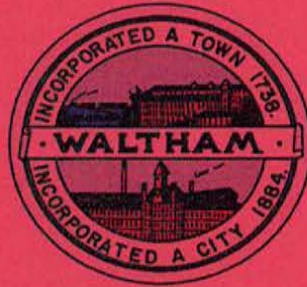


The City of Waltham



2024
Contract

With

Green Acres Landscape & Construction

For services and products herewith described:

190 Trapelo Road Improvements

*City of Waltham
Waltham, Massachusetts
Purchasing Department*

*Crystal Philpott
Purchasing Agent*

*610 Main Street
Waltham, MA 02452
Tel: 781-314-3244*



NOTICE TO PROCEED

Project Name: 190 Trapelo Road Improvements

Location: City of Waltham Recreation Department

Service Provider: Green Acres Landscape & Construction, Mr. Joseph Barbosa, President

Mr. Barbosa:

You are hereby notified to commence work on the referenced contract on or about January 19th, 2024 and shall fully complete all work of said contract as directed by the City of Waltham Recreation Department and as specified in the contract between the City of Waltham and Green Acres Landscape & Construction, of 21 Malbone Avenue, Lakeville, MA 02347.

This contract is for the **Not-to-Exceed Amount of \$7,911,927.00.**

Please contact Kim Hebert at 781-314-3480 to commence this project/service.

Dated this 19th day of January 2024.

Regards,

Crystal Philpott,
Purchasing Agent

cc: Kim Hebert
Ed Kelley

City of Waltham
Waltham, Massachusetts
Purchasing Department

Crystal Philpott
Purchasing Agent

610 Main Street
Waltham, MA 02452
Tel: 781-314-3244



AWARD LETTER

October 30th, 2023

Mr. Joseph Barbosa
Green Acres Landscape and Const. Co Inc.
21 Malbone Street
Lakeville, MA 02347

RE: 190 Trapelo Road Improvements, 2023

Dear Mr. Barbosa:

This is to notify you that your proposal for the "190 Trapelo Road Improvements, 2023" project submitted to the City of Waltham on October 20th, 2023 has been awarded to your Company, pending approval and availability of funds. Congratulations! This contract is for the Not-to-Exceed Amount of \$7,911,927.00.

Please forward to my office a certificate of insurance with the following PRECISE words in the Description of Service Box and supported by an endorsement: "The City of Waltham is a named additional insured for General Liability as required by contract." In addition, please provide to my office, an original performance bond and payment bond each equal to 100% of the contract value.

Contracts are being prepared for your signature and will be sent to you shortly. No work is to commence until the contract between our two organizations is signed by Mayor McCarthy.

Thank you for your response and interest in conducting business with the City of Waltham.

Very truly yours,

Crystal Philpott
Purchasing Agent

cc: Kim Hebert
Ed Kelley

AGREEMENT

SECTION 00 50 00

AGREEMENT

CITY OF WALTHAM

ARTICLE 1. This AGREEMENT is by and between the City of Waltham, with a principal place of business at 610 Main Street, Waltham, acting by and through its Mayor (hereinafter the "CITY"), and Green Acres Landscape and Const. Co Inc., with a principal place of business at 21 Malbone Street, Lakeville, MA 02347, hereinafter the "CONTRACTOR."

ARTICLE 2. Witnesseth, that the parties to this agreement, each in consideration of the AGREEMENT, do hereby agree as follows:

The CONTRACTOR shall furnish all equipment, machinery, tools, materials, and labor required to do and perform all work in strict conformity with the provisions of this AGREEMENT, as specified within the Invitation to Bid, Technical Specifications, Appendix A, Drawings and any Bid changes, corrections, or clarifications specified in any Addendum with respect to the "190 Trapelo Rd Renovations, 2023" and the CONTRACTOR'S October 20th, 2023 bid response thereto. The said Invitation to Bid, Technical Specifications, Appendix A, and Drawings and Bid Addendums are hereby made a part of this Agreement as fully and to the same effect as if the same had been set forth at length and incorporated herein.

In consideration of the foregoing promises, the CITY agrees to pay and the CONTRACTOR agrees to receive as full compensation the sum, not to exceed **\$7,911,927.00** for everything furnished and done by the CONTRACTOR under the terms of this AGREEMENT.

ARTICLE 3.

The Completion time for this project shall be **270 Calendar Days from Notice to Proceed.**

This AGREEMENT shall become effective upon the date of execution by the Mayor on behalf of the CITY.

RECEIVED

JAN 18 2024

Mayor's Office

CITY OF WALTHAM, MASSACHUSETTS

FOR THE CITY

FOR THE COMPANY

Jeannette A. McCarthy

Jeannette A. McCarthy, MAYOR,
City of Waltham

Date: 11/18/2024

Luke Stanton

Luke Stanton, Asst. City Solicitor

Date: 1-17-24

APPROVED AS TO FORM ONLY

[Signature]

CONTRACTOR (Signature),

Date: 1/18/24

Green Acres Landscape + Const

Company CO INC

21 Malbone St. Loxville, Ma

Address

Kimberly A Hebert

Kim Hebert, Recreation Director

Date: 1/12/24

Crystal Philpott

Crystal Philpott, Purchasing Agent

Date: 1/12/24

Laura M. Doane

Paul Centofanti, Auditor *Asst. Auditor*

Date: 1/12/2024

310-630-2024-6310
\$ 7,911,927.00

I CERTIFY THAT SUFFICIENT FUNDS
ARE AVAILABLE FOR THIS CONTRACT

City Charter – See attached Charter
Section 3-12

Change Orders are not effective until if,
as and when signed by mayor. No work
is to commence until change orders are
fully executed by all parties.

the provisions of this section, he shall exercise all the rights and powers of mayor including compensation and shall be sworn to the faithful discharge of his duties and a vacancy shall exist in his seat on the city council.

Section 3-8. Mayor's attendance at council meeting.

The mayor, when requested by the city council to be present at a council meeting to answer questions relative to matters properly within the jurisdiction of the council, shall be informed, in writing, of the subject matter to be discussed. The mayor shall personally, or through the head of a department or a member of a board, attend such meeting and publicly answer all such questions. The person so attending shall not be obliged to answer any questions relating to any other matter. The mayor may attend and address the city council in person or through the head of a department, or a member of the board, upon any subject.

Section 3-9. Adoption of measures, mayor's veto.

Every measure relative to the affairs of the city adopted by the city council, except such measures as relate to the internal affairs of the city council, the election of officers whose election by the city council is authorized by law or by the charter, or budgets submitted under section thirty-two of chapter forty-four of the General Laws or to appropriations by the city council under section thirty-three of said chapter, shall be presented to the mayor for his approval. If the mayor does approve it, he shall signify his approval by signing it. If he does not approve of it, he shall return it, with his objections in writing, to the city council. The city council shall enter the objections of the mayor upon its records and shall again consider the measure. If the city council, notwithstanding such disapproval of the mayor, shall pass such measure by a two-thirds vote of all its members, it shall be considered approved and shall then be in force, but such vote shall not be taken for at least seven (7) days after the measure has been returned to the city council. If any measure is not returned by the mayor within ten (10) days following the date it is presented to him, it shall be considered

approved. A filing with the clerk of the council shall be considered a return by the mayor to the city council. All votes taken on measures returned by the mayor shall be by roll call.

Section 3-10. Call of special council meeting by mayor.

The mayor may at any time call a special meeting of the city council by causing a notice of such meeting, specifying the matters which he desires to be considered, to be delivered in hand or to the place of residence of each councillor. Public notice of said meeting shall be posted at least forty-eight (48) hours in advance of the time set for such meeting; however, in the event of an emergency, of which the mayor shall be the judge, a lesser period shall suffice and no other business except as provided shall be in order.

Section 3-11. Employees in mayor's office not subject to civil service.

The civil service laws shall not apply to the appointment of the mayor's secretaries or of the stenographers, clerks, administrative assistant, and other employees in the mayor's office, and the mayor may remove such appointees without a hearing and without making a statement of the cause of their removal.

Section 3-12. Approval of contracts by mayor.

All contracts made by any department, board or commission where the amount involved is two thousand dollars (\$2,000.00) or more shall be in writing, and no such contract shall be deemed to have been made or executed until the approval of the mayor is affixed thereto. Any construction contract shall, and all other contracts may, where the amount exceeds five thousand dollars (\$5,000.00) be required to be accompanied by a bond with sureties satisfactory to the mayor or by a deposit of money, certified check or other security for the faithful performance thereof, and such bonds or other securities shall be deposited with the city treasurer until the contract has been carried out in all respects; and no such contract shall be altered except by a written agreement of the contractor, the sureties on his bond, if any, and the officer, department or board, as the case may be,

making the contract, with the approval of the mayor affixed thereto. Any cash deposit or check payable to a city received as security for performance under this section may be deposited by said treasurer in any bank or trust company under a separate account to be known as a performance deposit account.

The provisions of this section shall be deemed to have been complied with on all purchases made under the provisions of sections twenty-two A and twenty-two B of chapter seven of the General Laws when one municipality acting on behalf of other municipalities complies with the provisions of this section, or when purchases are made for a vendor holding a contract with the commonwealth for the item or items being purchased.

ARTICLE 4. SCHOOL COMMITTEE

Section 4-1. Composition, election, terms, organization, dual employment.

The school committee shall consist of seven (7) members, one (1) of whom shall be the mayor, who shall be chairman. The remaining six (6) members shall be elected at large, each to serve four (4) years, three (3) of whom shall be elected biennially. The members of the school committee shall elect one (1) of its members to serve as vice chairperson annually. The committee shall organize annually on the first Sunday in January, and shall elect one of its members as vice chairman, who shall preside at all meetings of the committee at which the mayor is not present. No member of the school committee shall, while a member thereof, hold any other office or position in the school department the salary or compensation for which is payable out of the city treasury.

Section 4-2. Powers and duties.

Except as otherwise provided in this charter and subject to any laws which limit the amount of money that may be appropriated in any city for school purposes, the school committee, in addition to the powers and duties conferred and imposed by law on school committees, may provide, when necessary, temporary accommodations for school purposes, may make all repairs, the ex-

penditures for which are made from the regular appropriation for the school department, shall have control of all school buildings and grounds connected therewith and shall make all reasonable rules and regulations, consistent with law, for the management of the public schools of the city and for conducting the business of the committee.

Section 4-3. School committee vacancy.

If a vacancy occurs at any time in the office of school committee by failure to elect, or otherwise, the city council and the remaining members of the school committee shall meet in joint convention, which shall be called by the city clerk forthwith, and elect a suitable person to fill the vacancy until the first Sunday in January following the next regular municipal election; and, if there would be a vacancy on said first Sunday, it shall be filled at such regular municipal election for the balance of the unexpired term. The mayor, if present, shall preside at the convention.

Section 4-4. Open and public meetings, roll call vote.

All meetings of the school committee shall be open to the press and to the public, except as otherwise authorized by section twenty-three A and twenty-three B of chapter thirty-nine of the General Laws. The vote in any particular measure taken in open session shall be recorded by roll call vote when requested by two (2) members. All votes taken in executive session shall be recorded by roll call vote.

Section 4-5. Superintendent of schools, selections, appointment, duties and compensation of other school employees.

The school committee shall elect a superintendent of schools annually, except as provided in section forty-one of chapter seventy-one of the General Laws, and may under chapter thirty-one of the General Laws appoint, suspend, or remove at pleasure such subordinate officers or assistants, including janitors of school buildings, as it may deem necessary for the proper discharge of its duties and the conduct of its business; it shall define their terms of service and their duties and shall fix their compensation.

INVITATION TO BID

SECTION 00 11 16INVITATION TO BID

In accordance with M.G.L. c.30, §39M, The City of Waltham, hereinafter called the "Owner" and/or the "Awarding Authority," invites sealed bids invites sealed bids from Contractors for 190 Trapelo Road Improvement Project, located in Waltham, MA in accordance with the contract documents. The project involves the renovation of the existing athletic field and track with related amenities.

Important Dates:

- Bid Forms and Contract Documents Available: Wednesday September 27th, 2023
- Pre-Bid Meeting Date: Wednesday October 11th, 2023 at 10:00AM onsite
- Questions Due: Thursday October 12th, 2023 at 12:00PM (must be emailed to cphilpott@city.waltham.ma.us)
- Deadline for Bid Submission: Friday October 20th, 2023 at 10:00AM

Bid Forms and Contract Documents will be available electronically from the City of Waltham's website at: city.waltham.ma.us/bids on or after: Wednesday September 27th, 2023.

Contact Crystal Philpott via email at cphilpott@city.waltham.ma.us (Tel: (781) 314-3244) to be registered and placed on the plan holders list. The Awarding Authority will not be responsible for notifying bidders that are not registered. The bids will be opened and read via ZOOM, see our city's website for details, <https://www.city.waltham.ma.us/category/tags/purchasing-bids-open-0>. Owner reserves the right to reject any/all proposals or any part of any proposal, as deemed in the best interest of the City of Waltham.

A non-mandatory Pre-Bid Meeting will be held at the project site on Wednesday October 11th, 2023 at 10:00AM. All those attending the Pre-Bid Meeting are instructed to meet on site at the entrance of 190 Trapelo Road Waltham, MA 02451.

Sealed bids for the General Contract shall be filed with the Awarding Authority by Friday October 20th, 2023 at 10:00AM

- At this time bids will be opened and read aloud via ZOOM. (See the City's website for details.) The clock in the office shall be considered official time.
- No late bids shall be accepted. Late bids will be considered non-responsive.
- No faxed or emailed bids shall be accepted.
- If, at the time of the scheduled bid opening, the designated location for receipt of bids is closed due to uncontrolled events, such as fire, snow, ice, wind, or building evacuation, the bid opening will be postponed until the time specified in the advertisement for delivery of bids on the next normal business day. Bids will be accepted until that date and time.

Each sealed bid shall be accompanied by a bid guaranty in the form of a bid bond, issued by a responsible surety company licensed to do business in Massachusetts, or a certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company and made payable to the "City of Waltham" in the amount of 5% of the bid price.

A performance bond in an amount equal to 100% of the total amount of the contract price with a surety company qualified to do business in the Commonwealth of Massachusetts, will be required for the faithful performance of the contract, as well as a payment bond in an amount equal to 100% of the total contract price.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including Massachusetts General Laws, Chapter 30, § 39M, as amended.

Each bid shall be accompanied by:

1. General Bid Form
2. Bid Bond
3. References for a minimum of Ten (10) projects of similar size and scope.
4. Additional Compliance forms and items outlined in this specification

No bidder may withdraw its bid for at least 60 days after the time and date set for the receipt of General Bids without the consent of the Owner.

Attention is directed to Prevailing wage rates as determined by the Commissioner of Labor and Workforce Development and the weekly payroll record submittal requirements under the provisions of Massachusetts General Laws, Chapter 149, Section 26 through 27D inclusive.

OSHA Construction Training Required: Pursuant to Massachusetts General Laws, Chapter 30, Section 39S, any person, submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the Commonwealth of Massachusetts/City of Waltham, and estimated by the awarding Authority to cost more than \$10,000, shall certify on the Bid or Contract, under penalty of perjury, that (1) that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

Selection of the contractor will be based upon bidder qualifications, including evidence of past performance on similar projects and bid price. The contract will be awarded to the bidder deemed by the awarding authority to be the lowest responsible and eligible bidder.

The bidder agrees that its bid shall be good and may not be withdrawn for a period of 60 days, with Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

The Awarding Authority reserves the right to waive any informalities, to accept or reject, in whole or in part, any or all bids, or take whatever other action may be deemed to be in the best interests of the Owner.

END OF SECTION

GENERAL CONDITIONS

SECTION 005030

GENERAL CONDITIONS

1. INFORMATION

All information shall come from the Office of the City Purchasing Agent. The Contractor shall inquire at this office for any information needed. Wherever the words "or equal as approved" are used, it is to be understood that the opinion of the City Purchasing Agent shall govern.

2. SUITS

The Contractor shall assume defense of and shall indemnify and hold the City and its agents harmless from all suits and claims against the City and its sub-contractors arising from the use of any invention, patent right labor or employment, or from any act of omission or neglect of the City, its agents, employees or any subcontractor in performing the work, under this contract.

3. LAWS AND REGULATIONS

The Contractor shall conform to all the applicable rules, regulations, laws and ordinances of the City of Waltham, the Commonwealth of Massachusetts, the United States of America and all agencies having jurisdiction over this contract.

4. PROTECTION OF PROPERTY

The Contractor shall take all proper precautions to protect the City's property from damage and unnecessary inconvenience. Any City property damaged by the Contractor in carrying out the provisions of this contract shall be restored to its original condition, by and at the expense of the Contractor.

5. PROTECTION OF PERSONS

The Contractor shall take all proper precautions to protect persons from injury, unnecessary inconvenience, and shall be responsible for his failure to do so. The Contractor agrees to hold the City harmless from any and all liabilities of every nature and description, which may be suffered through bodily injury, including death, to any person, by reason of negligence of the Contractor, his agents or employees, or any subcontractor.

6. INSURANCE

A. **WORKMAN'S COMPENSATION:** The Contractor shall provide by insurance for the payment of compensation and furnishing of other benefits under Chapter 152 of the General Laws of the Commonwealth of Massachusetts to all persons to be employed under this contract, the premiums for which shall be paid by the Contractor.

B. **COMPREHENSIVE GENERAL LIABILITY**

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

C. **AUTOMOBILE (VEHICLE) LIABILITY**

Bodily Injury	\$1,000,000 Each Occurrence
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D. **UMBRELLA POLICY**

General liability	\$2,000,000
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Your bid response must include a Certificate of Insurance with the above limits as a minimum. In addition, the Certificate of Insurance must have the following text contained in the bottom left box of the Certificate: "The City of Waltham is a Named Additional Insured for all Insurance". The Certificate of Insurance must be mailed directly to:

Office of the Purchasing Agent
Purchasing Department
City of Waltham
610 Main Street
Waltham, MA 02452

7. LABOR AND MATERIALS BOND

The Contractor agrees to execute and deliver to the City, a Performance Bond and a Labor and Materials Bond equal to 50% of the contract value. This contract shall not be in force until said bond has been delivered and accepted by the City. Bond to be issued by a company licensed by the Commonwealth of Massachusetts.

8. PERSONNEL:

The Contractor shall employ a competent supervisor and all properly licensed personnel necessary to perform the services required in this contract. The City Purchasing Agent shall have the right to require the Contractor to remove and/or replace any of the personnel for nonperformance or for unprofessional behavior. The City Purchasing Agent may require the Contractor to submit a weekly performance record of the areas and of the work performed, on forms approved by the City Purchasing Agent. The Contractor or his supervisor shall be available to inspect such work as required by the City Purchasing Agent.

9. PREVAILING WAGES

The Contractor is required to pay the prevailing wages as determined by the Federal Government and by Chapter 149, Sections 26 and 27D of the Massachusetts General Laws, including the submission of weekly payrolls to the awarding authority. Copies of the Prevailing Wage Schedule is found on line at www.city.waltham.ma.us/bids

10. MATERIALS

The City or its Agent reserves the right to approve or reject any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any rejected supplies, materials or equipment, to the satisfaction of the City or its Agents.

11. TERMINATION OF CONTRACT

This contract may be terminated by the City upon deliverance to the Contractor of a five-day written notice of said termination.

12. CONTRACT OBLIGATIONS

Contract obligations on behalf of the City are subject to an annual appropriation to cover the contract obligation and shall be in force until the date of Final acceptance excluding any guarantee period.

13. BIDDER EXPERIENCE EVALUATION

Each bidder shall submit with his bid, all the information relative to their experience and qualifications in performing the work required under this contract and shall have been in business for a minimum of five (5) years, in order for their bid to be considered.

14. NOT-TO-EXCEED AMOUNT

The bid amount proposed in your company's response is a "not-to- Exceed" amount unless the City makes changes, in writing, to the scope of work to be performed. The Change Order must be signed and approved by the City's Purchasing Agent, City Auditor, Law Department and the Mayor prior to the commencement of the change order work. No work is to begin until the proper approvals have been obtained. A change order will be priced at the unit price. Failure to comply with this procedure will result in the cancellation of the contract and the non-payment of services provided.

16. FINANCIAL STATEMENTS.

The City may require, within five (5) days after the bid opening, a complete and detailed Financial Statement prepared by a Certified Public Account, to determine a bidder's financial stability.

17 BREACH OF CONTRACT/ NON PERFORMANCE

If the Contractor shall provide services in a manner, which is not to the satisfaction of the City, the City may request that the Contractor refurnish services at no additional cost to the City until approved by the City. If the Contractor shall fail to provide services, which are satisfactory to the City, the City in the alternative may make any reasonable purchase or Contract to purchase services in substitution for those due from the Contractor. The City may deduct the cost of any substitute Contract for nonperformance of services together with incidental and consequential damages from the Contract price and shall withhold such damages from sums due or to become due to the Contractor. If the damages sustained by the City exceed sums due or to become due, the Contractor shall pay the difference to the City upon demand. The Contractor shall not be liable for any damages sustained by the City due to the Contractor's failure to furnish services under the terms of this Contract if such failure is in fact caused by the occurrence of a contingency the nonoccurrence of which was a basic assumption under which this Contract was made, including a state of war, embargoes, expropriation of labor strike or any unanticipated federal, state or municipal governmental regulation of order, provided that the Contractor has notified the City in writing of such cause within seven (7) days after its occurrence.

18 RIGHT TO AUDIT

The City of Waltham has the right to review and audit documents related to this contract. This right extends to any subcontractor, supplier or other entity used by the prime contractor to fulfill the obligations under this contract.

19. CITY ORDINANCE. APPROVAL OF CONTRACTS BY MAYOR, SEC. 3-12 OF THE CITY ORDINANCES.

All contract made by any department, board or commission where the amount involved is two thousand dollars (\$2,000) or more shall be in writing, and no such contract shall be deemed to have been made or executed until the approval of the Mayor is affixed thereto. Any construction contract shall, and all other contracts may, where the contract exceed five thousand dollars (\$5,000) be required to be accompanied by a bond with sureties satisfactory to the Mayor.

20. BID OPENING INCLEMENT WEATHER

If, at the time of the originally scheduled bid opening, City Hall is closed to inclement weather or another unforeseeable event, the bid opening will be extended until 2:00 PM on the next normal business day. Bids will be accepted until that date and time.

21 FUNDS APPROPRIATION.

THE CONTRACT OBLIGATION ON BEHALF OF THE CITY IS SUBJECT TO PRIOR APPROPRIATION OF MONIES FROM THE GOVERNMENTAL BODY AND AUTHORIZATION BY THE MAYOR.

22 THE AWARDING AUTHORITY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS, OR ANY PART OF ANY BID, WHICH IN THE OPINION OF THE AWARDING AUTHORITY, IS IN THE BEST INTERESTS OF THE CITY OF WALTHAM.

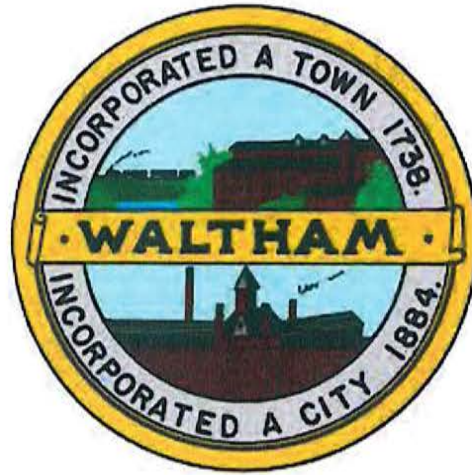
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TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS FOR:

**190 TRAPELO RD.
IMPROVEMENTS
WALTHAM, MASSACHUSSETS**

SEPTEMBER 6, 2023



PREPARED FOR:

**CITY OF WALTHAM
WALTHAM, MA**

PREPARED BY:



SECTION 01 10 00SUMMARY OF WORKPART 1 – GENERAL1.1 GENERAL PROVISIONS

- A. The General Conditions of the Contract and all other Sections of Division I, General Requirements apply to this section.

1.2 SITE WORK SCOPE

- A. Project Description: The project site:
- a. 190 Trapelo Rd., is located in Waltham Massachusetts and is bound by Trapelo Road to the North, Waverley Oaks Road to the Southeast, Chapel Road to the South, and West, and Bentley University to the East.
 - b. Work includes but is not limited to:
 1. General contractor is responsible for obtaining the SWPPP and NPDES general construction permit. Contractor to provide an electronic copy of SWPPP and NPDES to the Engineer and Owner prior to Construction. Access to online NPDES permit shall be granted and shared with the Engineer.
 2. Install silt socks at all locations indicated on plan and at other locations as determined by engineer. Install other temporary and permanent erosion and sediment control measures as earthwork proceeds and as determined necessary by the Engineer.
 3. Inspect all disturbed areas on a daily basis. Following the daily inspection, install as required any and all temporary drainage, erosion, and sediment control practices as indicated, i.e., diversion channels, berms, drains, ditches, seed and mulch or other practices.
 4. Construct inlet protection at all catch basins.
 5. Stabilize construction entrances and temporary access roads with coarse aggregate 4 inches (minimum) over compacted fill areas to prevent off-site tracking by vehicles and equipment. Provide steel plates as necessary for curb crossing.
 6. Remove and dispose existing access road within limits indicated on the plans. Remove and dispose center island including trees, stumps, roots, curbing, light poles, conduits etc. Remove and dispose existing dense graded crushed stone base under paved

- surfaces. Contractor shall provide all new material for asphalt parking and access road.
7. Remove and dispose existing vertical concrete curbing.
 8. Remove and dispose existing bituminous concrete walkways, access roads, parking lots, etc.
 9. Remove and dispose existing guard rails, posts, footings etc.
 10. Remove and dispose existing utility poles, overhead wiring, electrical boxes, panels, conduits, etc.
 11. Remove and dispose existing trees, stumps, roots, etc. As indicated on the drawings. Trees denoted to remain shall be protected. Clear and grub all remaining vegetation within limits indicated.
 12. Saw cut all areas to be met by new pavement. Remove pavement material and dispose.
 13. Import fill material to sub-grade levels.
 14. Install retaining walls.
 15. Install drainage utilities, conduits, water main, electrical service, etc.
 16. Install forbays, retention pond, rain garden, and other treatment areas.
 17. Place dense graded crushed stone within the limits of proposed pavement, compact and test.
 18. Pave binder course of asphalt.
 19. Install vertical granite curbing.
 20. Paving final course of asphalt.
 21. Install ADA/AAB accessible bituminous concrete walkways.
 22. Install flagpole, walkways, seat walls, pavers, site furniture, post and rope trail guide, monuments, educational and dedication signage etc., in the memorial area. Install new fencing.
 23. Install playground entrance walls, pillars, signage, etc.
 24. Install playground and splash pad equipment.

25. Install drainage base stone for playground and dense graded base stone for splash pad.
26. Install playground surfacing.
27. Pave splash pad and install acrylic surfacing.
28. Submit stamped shop drawings for mini golf course for review and approval. Once approved install perimeter curbing, walkways, surfacing, cups, signage, etc.
29. Install shade shelters and train parking shelter. All metal shelters shall be grounded.
30. Splash pad and adjacent fencing shall be grounded.
31. Provide electrical plugs at shade shelters and train parking location. Provide electrical service and plugs in compliance with the electric train charging requirements for fast charging.
32. Install sand based root zone for grass field and perimeter walkway.
33. Install passive exercise equipment along perimeter walkway. Install pip surfacing underneath equipment.
34. Install irrigation system for all landscaped areas and grass field.
35. Place topsoil and sod for natural grass field.
36. Place topsoil on all disturbed areas, complete permanent fertilizing, liming, seeding and mulching, install landscape plantings.
37. Clean and restore silt detention sites and drainage structures. Remove other erosion control practices on a timely basis as permanent measures take hold. Spot fertilize, seed, and mulch as required.
38. Inspect and maintain grading, erosion control and sediment control practices weekly and immediately after all storms of more than 1/2 inch precipitation in 24 hours.
39. Refer to erosion control notes for additional details relative to the required construction sequence.
40. Maintenance of all erosion and sediment control components and installation of additional erosion and sediment control components shall be an ongoing practice and in strict accordance with the contract specifications.

41. Perform as-built survey and submit as-built and record drawings.
42. Train owner's representatives in maintenance and operations of the facility.
43. Complete project punch list.
44. Submit all required documentation, including but not limited to warranties, maintenance documents, record documents, etc. Documents are to be provided on binders and flash drives (per specifications).

B. In addition, the Work under the Contract includes:

1. The restoration of any items damaged or destroyed by encroaching upon areas outside the Project Site.
2. Providing and restoring, where appropriate, all temporary facilities.
3. All other work indicated on the contract plans and/or specifications.
4. Winterization: Contractor to perform winterization, spring opening, and an additional winterization for the referenced project (Minimum 3 Times). Contractor to perform work in the presence of the City Representatives and conduct training of City employees at the same time.
5. Train owner's representatives in maintenance and operations of lighting, irrigation, winterization, etc.
6. Landscape Areas: Landscape to include cleanup along the perimeter of the facility, up to 30ft to remove invasive species, vines, litter, pipes, etc. and area to be controlled and maintained for 3 years. Work to be performed at no additional cost to the Owner.
 - A. Mowing: A minimum of 3 mowings must be completed 90 days after substantial completion. See Section 32 90 00-20 Planting for details.
7. On-site, larger boulders (beyond 3x3 FT) to be removed and disposed from site. Prior to removal, Contractor must coordinate with the Owner and Engineer as larger boulders may be relocated to other parts of the project. Work to relocate large boulders shall be performed at no additional cost to the Owner.

1.3 CONSTRUCTION DRAWINGS, PERMITS, AND FEES

- A. The Contractor, at its cost, shall schedule, secure and obtain all permits, approvals, licenses, and inspections necessary for the proper execution of the work under all sections of this project prior to installation, including but not limited to the following:
 - a. SWPPP (Stormwater Pollution Prevention Plan)

b. NPDES Permit

- i. Access to the NPDES Permit shall be granted at the Owner's / Engineer's discretion.

- B. The Contractor shall coordinate all of its work with the appropriate City of Waltham's Departments and Agencies as required by the Contract Documents.

1.4 TIME OF COMPLETION

- A. Per front end specifications.

1.5 LIQUIDATED DAMAGES

- A. Per front end specifications.

END OF SECTION

**REMAINING
TECHNICAL
SPECIFICATIONS
IN THE ORIGINAL
REQUEST FOR BID (RFB)
ARE INCLUDED
HERE AS REFERENCE**

APPENDIX A

APPENDIX A
IN THE ORIGINAL
REQUEST FOR BID (RFB)
ARE INCLUDED
HERE AS REFERENCE

COMPLIANCE FORMS

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

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

- Performance and Payment Bonds each for 100% of the contract value and naming the City of Waltham

Your Company's Name: Green Acres Landscape & Const. Co Inc

Service or Product Bid 190 Trapelo Road Improvements 2023


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.

Wet Signature Required

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


_____, 10/19/2023
(Signature of person signing bid or proposal) Date

Green Acres Landscape & Const. Co Inc
(Name of business)

Wet Signature Required

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.


_____, 10/19/2023
Signature of person submitting bid or proposal Date

Green Acres Landscape & Const. Co Inc
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, Brenda Barbosa, Clerk of Green Acres Landscape & Const. Co Inc hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the 7 day of February, 2023 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 Joseph Barbosa (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 Joseph Barbosa is duly elected/appointed President of said corporation

SIGNED:

(Corporate Seal)

Brenda Barbosa
Clerk of the Corporation:

Print Name: Brenda Barbosa

COMMONWEALTH OF MASSACHUSETTS

County of Plymouth

Date: 10/19/2023

Then personally appeared the above named and acknowledged the foregoing instrument to be their free act and deed before me, Brenda Barbosa Treasurer/ Clerk

Notary Public; Walter Seaberg Jr



Walter F Seaberg Jr
NOTARY PUBLIC
Commonwealth of
Massachusetts
My Commission Expires
4/28/2028

My Commission expires: 20280428

CORPORATION IDENTIFICATION

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

If a Corporation:

Incorporated in what state Massachusetts
President Joseph Barbosa
Treasurer Brenda Barbosa
Secretary Brenda Barbosa
Federal ID Number 04-3142648

If a foreign (out of State) Corporation – Are you registered to do business in Massachusetts?
Yes _____, No X

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 N/A
Residence N/A
Name of partner N/A
Residence N/A

If an Individual:

Name N/A
Residence N/A

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

Name of Firm N/A
Name of Individual N/A
Business Address N/A
Residence N/A
Date N/A

Name of Bidder Green Acres Landscape & Const. Co Inc

By [Signature]
Signature
President

Title
21 Malbone St Lakeville, MA 02347

Business Address 508-823-6699/ 508-823-7502 (POST OFFICE BOX NUMBER NOT ACCEPTABLE)
10/19/2023

State Telephone Number _____ Today's Date _____

PROVIDE THREE (3) SERVICE APPROPRIATE REFERENCES

1. **Company Name:** City of Walham

Address: 610 Main Street Waltham, MA

Contact Name: Kim Hebert

Phone # 781-314-3243

Type of service/product provided to this Company: Improvements to Lowell field

Dollar value of service provided to this Company: \$3,424,506.00

2. **Company Name:** Mashpee High School

Address: 500 Old Barnstable Rd Mashpee, MA

Contact Name: Kathleen Hervol- Gale Associates

Phone # 781-335-6465

Type of service/product provided to this Company: Athletic Field Renovations

Dollar value of service provided to this Company: \$2,514,061.59

3. **Company Name:** Town of Weymouth Lovell Field/Athletic Field

Address: 75 Middle Street Weymouth, MA

Contact Name: Ben Gleason - Activitas

Phone # 781-355-7048

Type of service/product provided to this Company: Lovell Field Playground/Athletic Field Renovations

Dollar value of service provided to this Company: \$6,370,803.26

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

Oct, 19 20~~20~~23

I, Joseph Barbosa

President

(Name of signatory party)

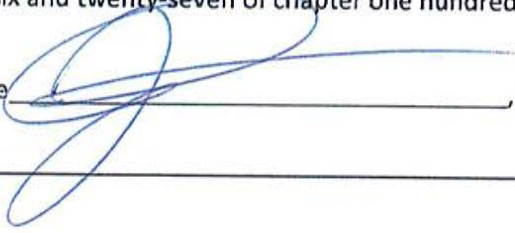
(Title)

I do hereby state that I pay or supervise the payment of the persons employed by
Green Acres Landscape & Const. Co Inc on the 190 Trapelo Road Improvements 2023

(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 _____

WEEKLY PAYROLL REPORT FORM

Company Name: _____
Project Name: _____
Awarding Auth: _____
Work Week Ending: _____
 Final Report

Prime Contractor
 Subcontractor
List Prime Contractor _____
Employer Signature: _____
Print Name & Title: _____

Employer Name & Address	Work Classification	Hours Worked							Tot Hrs	(B) Hourly Base Wage	Employer Contributions			(F) (B+C+D+E) Hourly Total Wage (incl wage)	(G) (A*F) Weekly Total Amount		
		S	M	T	W	T	F	S			(C) Health & Welfare	(D) Pension	(E) Supp Unemp				
																(A)	(B)

NOTE: Every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority

***Form is recognized

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:

	10/19/2023
Signature	Date
Joseph Barbosa President	
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 Green Acres Landscape & Const Co Inc


Address 21 Malbone Street

City Lakeville, State MA, Zip Code 02347

Phone Number (508) 823-6699

E-Mail Address jbarbosa@greenacreslandscape.net

Signed by Authorized Company Representative:



Print name Joseph Barbosa
Date 10/19/2023

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: Green Acres Landscape & Const. Co Inc

Address: 21 Malbone St Lakeville, MA 02347

Signature: 

Title: President

Print Name Joseph Barbosa

Date 10/19/2023

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.

INSURANCE CERTIFICATE



GREEACR-01

LLEMON

CERTIFICATE OF LIABILITY INSURANCE

 DATE (MM/DD/YYYY)
 12/18/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Bearingstar Insurance, Inc. 375 Airport Road Fall River, MA 02720	CONTACT NAME: PHONE (A/C, No, Ext): (844) 898-9151 FAX (A/C, No): (508) 837-6573 E-MAIL ADDRESS: Commercialservice@Bearingstar.com														
INSURED Green Acres Landscape & Construction Co. Inc. 21 Malbone St Lakeville, MA 02347	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">INSURER(S) AFFORDING COVERAGE</th> <th style="text-align: left;">NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Admiral Insurance Company</td> <td>24856</td> </tr> <tr> <td>INSURER B: Arbella Indemnity Insurance Company</td> <td>10017</td> </tr> <tr> <td>INSURER C: Evanston Ins Co</td> <td>35378</td> </tr> <tr> <td>INSURER D: Ohio Security Insurance Company</td> <td>24082</td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Admiral Insurance Company	24856	INSURER B: Arbella Indemnity Insurance Company	10017	INSURER C: Evanston Ins Co	35378	INSURER D: Ohio Security Insurance Company	24082	INSURER E:		INSURER F:	
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INSURER F:															

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	X		CA000038825-04	7/1/2023	7/1/2024	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Per occurrence) \$ 300,000
	<input checked="" type="checkbox"/> Employee Benefits						MED EXP (Any one person) \$ 5,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY \$ 1,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC						GENERAL AGGREGATE \$ 2,000,000
	OTHER:						PRODUCTS - COM/PO/AGG \$ 2,000,000
B	AUTOMOBILE LIABILITY	X		1020001609	7/1/2023	7/1/2024	COMBINED SINGLE LIMIT (Per accident) \$ 1,000,000
	<input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS						BODILY INJURY (Per person) \$
	<input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY						BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$
C	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR	X		MKLV1EUL104083	7/1/2023	7/1/2024	EACH OCCURRENCE \$ 5,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$
	DED <input type="checkbox"/> RETENTION \$ <input type="checkbox"/>						Aggregate \$ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/>
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		N/A				E.L. EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$
D	Commercial Property			BFS58101308	7/1/2023	7/1/2024	E.L. DISEASE - POLICY LIMIT \$
D	Commercial Property			BFS58101308	7/1/2023	7/1/2024	Property Stored 155,825
							Property Deductible 1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER**CANCELLATION**
 City of Waltham
 610 Main St
 Waltham, MA 02452

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03)

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ADDITIONAL REMARKS SCHEDULE

AGENCY Bearingstar Insurance, Inc.		NAMED INSURED Green Acres Landscape & Construction Co. Inc.	
POLICY NUMBER SEE PAGE 1		21 Malbone St Lakeville, MA 02347	
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

City of Waltham
The City of Waltham is listed as Additional Insured. See attached endorsements. ✓

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

BUSINESS AUTOMOBILE ANCHOR PLUS ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

GENERAL CONDITION

Coverage provisions 13-24 of this endorsement are applicable to a covered auto only when underlying coverage of full collision and either comprehensive or specified causes of loss are purchased for that auto.

1. BROADENED NAMED INSURED

SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured is amended to add the following as insureds:

- d. (1) Any legally incorporated subsidiary in which you own more than 50% of the voting stock during the period for which this endorsement is effective, if there is no other similar insurance available to that organization. However, the Named Insured does not include any subsidiary that is an "insured" under any other automobile policy, or that would be an "insured" under such a policy but for its termination or the exhaustion of its limit of insurance.
- d.(2) An organization which is acquired or formed by you, and over which you maintain majority ownership. However, the Named Insured does not include any newly formed or acquired organization that is a joint venture or partnership that is an "insured" under any other policy, that has exhausted its limit of insurance under any other policy, or 180 days or more after its acquisition or formation by you, unless you have given us the notice of acquisition or formation.

Coverage does not apply to "bodily injury" or "property damage" that results from an accident that occurred before you formed or acquired the organization.

2. ADDITIONAL INSURED BY CONTRACT, AGREEMENT OR PERMIT

SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured is amended to add the following as insureds:

Any person or organization with whom you have agreed in writing in a contract, agreement, or permit to provide insurance with respect to the operation or use of a covered "auto".

This coverage does not apply unless said written contract or agreement has been executed, or said permit has been issued, prior to the "bodily injury" or "property damage".

If required by the written contract or agreement, coverage afforded to an additional insured will be primary and non-contributory to any policy where the additional insured is listed as a Named Insured. Coverage is not primary to other policies providing coverage to the additional insured. We will share with those policies by the method described in this policy.

3. AMENDED DEFINITION OF BODILY INJURY

SECTION V – DEFINITIONS, C: is replaced by:

"Bodily Injury" means bodily injury, sickness or disease sustained by a person, including mental anguish or death resulting from any of these.

4. EMPLOYEE HIRED AUTOS

SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured is amended to add the following as insureds:

An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in that "employee's" name, with your permission, while performing duties related to the conduct of your business.

5. EMPLOYEES AS INSURED

SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured is amended to add the following as insureds:

Any "employee" of yours is an insured while using a covered "auto" you don't own, hire or borrow in your business or personal affairs.

This coverage is excess over any other collectible insurance.

6. LIABILITY COVERAGE EXTENSIONS - SUPPLEMENTARY PAYMENTS

SECTION II – LIABILITY COVERAGE, Paragraph A.2. Coverage Extensions is amended as follows:

- a.(2) The reference to \$2,000 for the cost of bail bonds is replaced by \$3,000.
- a.(4) The reference to \$250 per day for all reasonable expenses is replaced by \$500 per day.

7. AMENDED FELLOW EMPLOYEE EXCLUSION

SECTION II – LIABILITY COVERAGE, Paragraph B.5. Fellow Employee is replaced by the following:

"Bodily Injury" to any fellow employee of the insured arising out of and in the course of the fellow employee's employment. However, we will cover "bodily injury" caused by your employee to his or her fellow employee if:

- (1) You have workers compensation insurance in force covering all your employees, and
- (2) the "bodily injury" results from the use of a covered "auto" you own or hire.

This coverage is excess over any other collectible insurance.

8. EXTENDED CANCELLATION CONDITION

COMMON POLICY CONDITIONS – A. Cancellation applies except as follows:

If we cancel for any reason other than nonpayment of premium, any notice of cancellation will be sent to you at your last address shown on the Declarations at least 60 days prior to the effective date.

9. AMENDED DUTIES IN THE EVENT OF ACCIDENT, CLAIM, SUIT, OR LOSS

SECTION IV – BUSINESS AUTO CONDITIONS - Paragraph A.2. Duties In The Event Of Accident, Claim, Suit, Or Loss

The requirement in subsection a. of when you must notify us of an "accident" applies only when the "accident" is known to:

- (1) You, if you are an individual;
- (2) A partner, if you are a partnership;
- (3) An executive officer or insurance manager, if you are a corporation; or
- (4) A member, if you are a limited liability company.

10. BLANKET WAIVER OF SUBROGATION

SECTION IV – BUSINESS AUTO CONDITIONS, A.5 Transfer Of Rights Of Recovery Against Others To Us is amended by adding the following: We have the right to recover from anyone for payments we make caused by "bodily injury", "property damage" or "loss" to a covered "auto" or its equipment to which this insurance applies.

We will not enforce our right against any person or organization because of payments we make for "bodily injury" or "property damage" arising out of the operation of a covered "auto" when you have assumed liability for such "bodily injury" or "property damage" under an insured contract.

(This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

11. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

If you unintentionally fail to disclose any hazards existing at the inception date of your policy, we will not deny coverage under this Coverage Form because of such failure.

12. DRIVE OTHER CAR COVERAGE FOR SOLE PROPRIETORS, EXECUTIVE OFFICERS OR PARTNERS

A. This endorsement changes only those coverages where a premium is shown in the Declarations.

B. Changes In Liability Coverage

1. Any "auto" you hire, borrow or don't own is a covered "auto" for Liability Coverage while being used by you, any of your executive officers, or any of your partners, except:

a. Any "auto" owned by that individual or by any member of his or her household.

b. Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

2. The following is added to Who Is An Insured:

Any individual "insured" and his or her spouse, while a resident of the same household, are "insureds" while using any covered "auto" described in Paragraph 12.B.1. of this endorsement.

C. Changes In Auto Medical Payments And Uninsured And Underinsured Motorists Coverages

The following is added to Who Is An Insured:

Any individual "insured" and his or her "family members" are "insured" while "occupying" or while a pedestrian when being struck by any "auto" you don't own except:

Any "auto" owned by that individual or by any "family member".

D. Changes In Physical Damage Coverage

Any private passenger type "auto" you hire, borrow or don't own is a covered "auto" while in the care, custody or control of your executive officers except:

1. Any "auto" owned by that individual or by any member of his or her household.

2. Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

E. Additional Definition

As used in this endorsement:

"Executive officer" means a person holding any of the officer positions created by your company charter, constitution, bylaws, or any other similar governing document.

"Family member" means a person related to the individual named in the Schedule by blood, marriage or adoption who is a resident of the individual's household, including a ward or foster child.

This coverage is excess over any other collectible insurance.

13. AUTO LOAN / LEASE GAP COVERAGE

SECTION III – PHYSICAL DAMAGE COVERAGE, is amended to add the following coverage extension under Paragraph A.4 Coverage Extensions:

Auto Loan / Lease Gap Coverage

In the event of a total "loss" to a covered "auto" shown in the Schedule or Declarations for which a specific premium charge indicates that Auto Loan/Lease Gap Coverage applies, we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

1. The amount paid under the Physical Damage Coverage Section of the policy; and
2. Any:
 - a. Overdue lease/loan payments at the time of the "loss";
 - b. Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage.
 - c. Security deposits not returned by the lessor;
 - d. Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance purchased with the loan or lease; and
 - e. Carry-over balances from previous loans or leases.

14. HIRED AUTO PHYSICAL DAMAGE

- A. Any auto you lease, hire, or borrow from someone other than your employees or partners, or members of their households is a covered "auto" for each of your physical damage coverages.
- B. The most we will pay for "loss" in any one accident is the smaller of:
 1. \$75,000;
 2. The actual cash value of the damaged or stolen property as of the time of loss; or
 3. The cost of repairing or replacing the damaged or stolen property with other property of like kind and quality.
- C. Our obligation to pay for the repair, return, or replacement of damaged or stolen property will be reduced by a \$1,000 deductible for any "auto" for that coverage. However, this deductible does not apply to any Other-Than-Collision physical damage "loss" caused by fire or lightning.
- D. For this coverage, the insurance provided is primary for any covered "auto" you hire without a driver and excess over any other collectible insurance for any covered "auto" that you hire with a driver.

15. TOWING

SECTION III – PHYSICAL DAMAGE COVERAGE – Paragraph A2. Towing is replaced by the following: We will pay towing and labor costs up to \$100 each time an "auto" of the private passenger type or light truck type is disabled. Light trucks are trucks that have a gross vehicle weight (GVW) of 10,000 pounds or less. However, the labor must be performed at the place of disablement. For private passenger type "autos", the coverage limit provided herein applies in addition to any amount of towing coverage shown on the vehicle Schedule or Declarations of your policy.

16. AIRBAG COVERAGE

SECTION III – PHYSICAL DAMAGE COVERAGE, Paragraph B. Exclusions, 3.a. is amended to read:

Wear and tear, freezing, mechanical or electrical breakdown. However, the exclusion relating to mechanical breakdown does not apply to the repair of an airbag due to accidental discharge.

17. GLASS REPAIR WAIVER OF DEDUCTIBLE

SECTION III – PHYSICAL DAMAGE COVERAGE, Paragraph D. Deductible is amended to add the following:

However, our obligation to pay for glass damage will not be reduced by any deductible if glass is repaired, rather than replaced.

18. EXTRA EXPENSE – BROADENED COVERAGE

SECTION III – PHYSICAL DAMAGE COVERAGE, Paragraph A.4. Coverage Extensions is amended to include the following: We will pay the expense of returning a stolen covered "auto" to you subject to Paragraph C. **Limit Of Insurance.**

19. COMMUNICATIONS EQUIPMENT COVERAGE

- A. **SECTION III – PHYSICAL DAMAGE COVERAGE** – Notwithstanding the exclusions in Paragraph B.4.c. and B.4.d., with respect to a covered auto described in the Schedule or Declarations, also applies to loss of any electronic equipment that receives or transmits audio, visual, or data signals and that is not designed solely for the reproduction of sound.

THIS COVERAGE APPLIES ONLY IF THE EQUIPMENT IS PERMANENTLY INSTALLED IN THE COVERED AUTO AT THE TIME OF LOSS. Equipment that is removable from a housing unit which is permanently installed in the covered "auto", and is designed to be solely operated by the use of power from the covered "auto's" electrical system in or upon the covered "auto" is considered permanently installed. This coverage also applies to antennas and other accessories necessary for the use of the electronic equipment.

- B. No deductibles apply to this coverage.
- C. The most we will pay in the event of a loss is the lesser of:
1. The actual cash value of the damaged or stolen property as of the time of loss; or
 2. The cost of repairing or replacing the damaged or stolen property with other property of like kind and quality.
 3. \$1,500.

20. PERSONAL EFFECTS COVERAGE

SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following coverage extension under Paragraph A.4. **Coverage Extensions:**

Personal Effects

We will pay up to \$500 for loss of wearing apparel and other personal effects, which are owned by an "insured"; and which are in or on your covered "auto".

This coverage applies only in the event of a total theft of your covered "auto". We will pay for such loss only for covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. No deductibles apply to this coverage.

This insurance is excess over any other collectible insurance.

21. TAPES, RECORDS AND DISCS COVERAGE

SECTION III – PHYSICAL DAMAGE COVERAGE – Notwithstanding the exclusion in Paragraph B.4.a., we will provide coverage as follows:

- A. Under Comprehensive Coverage we will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:
1. Are your property or that of a family member, and
 2. Are in a covered "auto" at the time of "loss."
- B. The most we will pay for "loss" is \$200.
- C. Physical Damage Coverage provisions apply to this coverage, except for any deductible.

22. CUSTOMIZED FURNISHINGS COVERAGE

We will pay with respect to a covered "auto" for "loss" to custom furnishings including but not limited to:

1. Special carpeting and insulation,
2. Height extending roofs,
3. Custom murals, paintings or other decals or graphics.

Our limit of liability for loss to custom furnishings shall be the least of:

1. The actual cash value of the damaged or stolen property,
2. The amount necessary to repair or replace the property.
3. \$1,000.

This coverage does not apply to electronic equipment. No deductible applies to this coverage.

23. HIRED CAR PHYSICAL DAMAGE – LOSS OF USE

SECTION II – LIABILITY COVERAGE, Paragraph B. Exclusions, subsections 2 and 6 are amended as follows:

Notwithstanding **Exclusions B.2. and B.6.**, we will pay sums which you legally must pay to the lessor of a covered auto which you have leased without a driver for 30 days or less, for the lessor's loss of use of the covered auto, provided:

1. This insurance provides Comprehensive, Specified Causes of Loss, or Collision coverage on the covered "auto" and,
2. The loss of use results from the covered auto being damaged in an accident while you are leasing it.
3. We will pay up to \$65 per day subject to a maximum of \$1,950.

24. RENTAL REIMBURSEMENT OR ADDITIONAL TRANSPORTATION EXPENSE COVERAGE

A. General Conditions

1. The coverage limit provided herein applies in addition to any amount of rental reimbursement or loss of use coverage shown on the vehicle Schedule or Declarations of your policy.
2. We will pay for rental reimbursement of an "auto" of equivalent type and purpose as the covered "auto" involved in an "accident" or "loss", additional transportation expenses, or any combination thereof incurred by you because of a loss to a covered "auto". No deductibles apply to this coverage.

B. Limit of Coverage

1. We will pay only for those expenses incurred during the policy period beginning 24 hours after the loss and ending, regardless of the policy's expiration, with the lesser of the following number of days:
 - a. The number of days reasonably required to repair or replace the covered "auto", or
 - b. 30 days.
2. Our payment is limited to the lesser of the following amounts:
 - a. Necessary and actual expenses incurred; or
 - b. \$50 per day with a maximum amount in any one policy period of \$1,500.
3. This coverage does not apply while there are spare or reserve "autos" available to you within your "insured" organization for your operations.
4. If "loss" results from the total theft of a covered "auto" of the private passenger type, we will pay under this coverage only that amount of your rental reimbursement or additional transportation expense which is not already provided under **Physical Damage Coverage Paragraph A.4. of SECTION III – PHYSICAL DAMAGE COVERAGE** of the Business Auto Coverage Form.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Waiver is effective from 05/01/2023 to 05/01/2024

Adding Waiver of Subrogation

When required by written contract executed prior to date of injury or loss

Blanket Endorsement

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 05/01/2023
Insured

Policy No. WMZ-800-8007277-2023A

Endorsement No.
Premium \$41,510.00

Green Acres Landscaping & Construction Co Inc & Green Acres Construction Inc
Insurance Company

Countersigned by

WC 00 03 13
(Ed. 4-84)

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
Any person or organization that is an owner, lessee or manager of real property or personal property on which you are performing ongoing operations, or a contractor on whose behalf you are performing ongoing operations, but only if coverage as an additional insured is required by a written contract or written agreement that is an "insured contract", and provided the "bodily injury" or "property damage" first occurs, or the "personal and advertising injury" offense is first committed, subsequent to the execution of the contract or agreement.	All locations at which the Named Insured is performing ongoing operations.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

- A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
1. Your acts or omissions; or
 2. The acts or omissions of those acting on your behalf;
- in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.
- However:
1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
 2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.
- B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:**
- This insurance does not apply to "bodily injury" or "property damage" occurring after:
1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
 2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
 ADDITIONAL INSURED – OWNERS, LESSEES OR
 CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
 PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
Any person or organization that is an owner, lessee or manager of real property or personal property for whom you work or have worked, or a contractor on whose behalf you work or have worked, but only if coverage as an additional insured extending to "bodily injury" or "property damage" included in the "products-completed operations hazard" is required by a written contract or written agreement that is an "insured contract" and provided that the "bodily injury" or "property damage" first occurs subsequent to the execution of the contract or agreement.	All locations except locations where "your work" is or was related to a job or project involving single-family dwellings, multi-family dwellings (other than rental apartments in an apartment building: (a) originally constructed and at all times used for such purpose, or (b) converted from a commercial building), condominiums, townhomes, townhouses, time-share units, fractional-ownership units, cooperatives and/or any other structure or space used or intended to be used as a residence.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable limits of insurance;
- whichever is less.

This endorsement shall not increase the applicable limits of insurance.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**CONTRACTORS ENHANCED COVERAGE
(Commercial General Liability Coverage Form)**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

I. AMENDED EXCLUSIONS

NON-OWNED WATERCRAFT COVERAGE - Up to 55 feet

SECTION I - COVERAGES - COVERAGE A - BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Exclusion g. Aircraft, Auto or Watercraft, Paragraph (2) is deleted in its entirety and replaced by the following:

- (2) A watercraft you do not own that is:
- (a) Less than 55 feet long; and
 - (b) Not being used to carry persons or property for a charge;

**MEDICAL PAYMENTS -
PRODUCTS-COMPLETED OPERATIONS HAZARD**

SECTION I - COVERAGES - COVERAGE C - MEDICAL PAYMENTS Exclusion f. Products-Completed Operations Hazard is deleted in its entirety.

**CONSOLIDATED (WRAP-UP) INSURANCE PROGRAM EXCLUSION
(LIMITED EXCEPTION FOR OPERATIONS AWAY FROM PROJECT LOCATION)**

The following exclusion is added to paragraph 2., Exclusions of COVERAGE A - BODILY INJURY AND PROPERTY DAMAGE LIABILITY (Section I - Coverages):

This insurance does not apply to "bodily injury" or "property damage" arising out of either your ongoing operations or operations included within the "products-completed operations hazard" at any location for which a consolidated (wrap-up) insurance program has been provided by the prime contractor/project manager or owner of the construction project in which you are involved.

This exclusion applies whether or not the consolidated (wrap-up) insurance program:

- (1) Provides coverage identical to that provided by this Coverage Form;
- (2) Has limits adequate to cover all claims; or
- (3) Remains in effect.

However, if the consolidated (wrap-up) insurance program does not provide coverage for your operations that are performed away from the location of the construction project, this exclusion will not apply.

II. AMENDED COVERAGES

KNOWLEDGE OF OCCURRENCE

The following paragraph is added to Section IV – Commercial General Liability Conditions Paragraph 2. Duties In The Event Of Occurrence, Offense, Claim or Suit:

Notice of an “occurrence” which may result in a claim under this insurance shall be given as soon as practicable after knowledge of the “occurrence” has been reported to you, one of your “executive officers”, or any “employee” authorized by you to give or receive notice of an “occurrence”.

UNINTENTIONAL ERRORS AND OMISSIONS

The following paragraph is added to Section IV – Commercial General Liability Conditions Paragraph 6. Representations: However, the unintentional omission of, or unintentional error in, any information given or provided by you shall not prejudice your rights under this insurance. However, this provision does not affect our right to collect additional premium or to exercise our right of cancellation or non-renewal.

III. ADDED COVERAGES

PERSONAL PROPERTY OF OTHERS IN YOUR CARE, CUSTODY OR CONTROL – LIMITED COVERAGE

SCHEDULE

Sub-Limits of Insurance:

\$10,000 Each Occurrence (Included in the Each Occurrence Limit shown in the Declarations)

\$10,000 Aggregate (Included in the General Aggregate Limit shown in the Declarations)

The Sub-Limits of Insurance shown above are included within and not in addition to the Each Occurrence Limit and the General Aggregate Limit shown in the Declarations.

Supplementary Payments will reduce the Each Occurrence and Aggregate Sub-Limits of Insurance shown above.

It is agreed COMMERCIAL GENERAL LIABILITY COVERAGE FORM - SECTION I – COVERAGE A Exclusion j. (4) is deleted, but only with respect to personal property of others in the care, custody or control of the Named Insured, subject to the following exclusions, conditions and limitations.

1. Exclusions

This insurance does not apply to:

- a. “Property damage” arising out of operations performed on behalf of the Named Insured by others;
- b. “Property damage” arising out of an “occurrence” at premises owned, rented, leased, operated, occupied or used by you;
- c. “Property damage” to property while in transit;
- d. “Property damage” arising out of any error, omission or deficiency in the design, specifications, workmanship or materials of the personal property in the Named Insured’s care, custody or control;
- e. “Property damage” arising out of delay, loss of market, loss of use, loss of profits, or any similar indirect or consequential loss of any kind;
- f. “Property damage” included within the “products-completed operations hazard”; or
- g. Damages exceeding the actual cash value of the personal property in the care, custody or control of the Named Insured at the time of the “occurrence.”

2. Conditions

Our right and duty to defend ends when we have used up the applicable sub-limit of insurance in the payment of judgments or settlements or Supplementary Payments under the insurance provided by this endorsement.

3. Limits of Insurance

- a. The amount we will pay for damages is limited as described below with respect to damages covered under this endorsement:
- (1) The Aggregate Limit shown in the Schedule is the most we will pay for the sum of all damages because of "property damage";
 - (2) The Each Occurrence Limit shown above is the most we will pay for the sum of all damages because of "property damage" arising out of any one "occurrence";
 - (3) Supplementary Payments will reduce the Each Occurrence and Aggregate Limits of Insurance shown in the Schedule; and
 - (4) All sums we pay for damages or Supplementary Payments under this endorsement will reduce the Each Occurrence Limit and the General Aggregate Limit shown in the Declarations.

4. Other Insurance

This insurance is excess over any other valid and collectible Property or Inland Marine insurance available to you, either as a Named Insured or an Additional Insured, whether primary, excess, contingent or any other basis.

**PRIMARY AND NONCONTRIBUTORY –
OTHER INSURANCE CONDITION**

(Insurance Services Office Endorsement CG 20 01 04 13)

The following is added to the **Other Insurance Condition** and supersedes any provision to the contrary:

Primary And Noncontributory Insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

- (1) The additional insured is a Named Insured under such other insurance; and
- (2) You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

(Insurance Services Office Endorsement CG 24 04 05 09)

SCHEDULE

Name Of Person Or Organization:

Any person or organization, but only if the following conditions are met:

- (1) You have expressly agreed to the waiver in a written contract; and
- (2) The injury or damage first occurs subsequent to the execution of the written contract.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – **Conditions**:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

CONTRACTUAL LIABILITY – RAILROADS
(Insurance Services Office Endorsement CG 24 17 10 01)

SCHEDULE

Scheduled Railroad: Any railroad, but only if the following conditions are met: a. You have expressly agreed to indemnify the railroad in a written contract entered into by you; and b. The injury or damage occurs subsequent to the execution of the written contract.	Designated Job Site: Any job site covered by this insurance where you are performing operations for or affecting a Scheduled Railroad.
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(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

With respect to operations performed for, or affecting, a Scheduled Railroad at a Designated Job Site, the definition of "insured contract" in the Definitions section is replaced by the following:

9. "Insured Contract" means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";
- b. A sidetrack agreement;
- c. Any easement or license agreement;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury" or "property damage" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. does not include that part of any contract or agreement:

- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
 - (a) Preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;
- (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in Paragraph (1) above and supervisory, inspection, architectural or engineering activities.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT
(WITH TOTAL AGGREGATE LIMIT FOR COVERAGES A, B AND C)

SCHEDULE

Designated Construction Projects: All construction projects covered by this insurance.
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(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
However, the most we will pay under the Designated Construction Project General Aggregate Limit for all Designated Construction Projects combined is \$5,000,000 .
 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under COVERAGE A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under COVERAGE C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 4. The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of Limits Of Insurance (SECTION IID) not otherwise modified by this endorsement shall continue to apply as stipulated.

IV. ADDITIONAL INSUREDS

ADDITIONAL INSURED – LESSOR OF LEASED EQUIPMENT – AUTOMATIC STATUS WHEN REQUIRED IN LEASE AGREEMENT WITH YOU

(Insurance Services Office Endorsement CG 20 34 04 13)

- A. Section II – Who Is An Insured is amended to include as an additional insured any person(s) or organization(s) from whom you lease equipment when you and such person(s) or organization(s) have agreed in writing in a contract or agreement that such person(s) or organization(s) be added as an additional insured on your policy. Such person(s) or organization(s) is an insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

However, the insurance afforded to such additional insured:

1. Only applies to the extent permitted by law; and

2. Will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

A person's or organization's status as an additional insured under this endorsement ends when their contract or agreement with you for such leased equipment ends.

- B. With respect to the insurance afforded to these additional insureds, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.
- C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement you have entered into with the additional insured; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

ADDITIONAL INSURED – MANAGERS OR LESSORS OF PREMISES

(Insurance Services Office Endorsement CG 20 11 04 13)

SCHEDULE

Designation Of Premises (Part Leased To You):

All premises leased to you and covered by this insurance.

Name Of Person(s) Or Organization(s) (Additional Insured):

Any person or organization that is a manager or lessor of real property, but only if coverage as an additional insured is required by a written contract or written agreement that is an "insured contract", and provided the "bodily injury" or "property damage" first occurs, or the "personal and advertising injury" offense is first committed, subsequent to the execution of the contract or agreement.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises leased to you and shown in the Schedule and subject to the following additional exclusions:

This insurance does not apply to:

1. Any "occurrence" which takes place after you cease to be a tenant in that premises.
2. Structural alterations, new construction or demolition operations performed by or on behalf of the person(s) or organization(s) shown in the Schedule.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

- B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance**:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

ADDITIONAL INSURED – MORTGAGEE, ASSIGNEE OR RECEIVER
 (Insurance Services Office Endorsement CG 20 18 04 13)

SCHEDULE

Name Of Person(s) Or Organization(s)	Designation Of Premises
Any person or organization that is a mortgagee, assignee or receiver for a premises shown in this Schedule, but only if coverage as an additional insured is required by a written contract or written agreement that is an "insured contract", and provided the "bodily injury" or "property damage" first occurs, or the "personal and advertising injury" offense is first committed, subsequent to the execution of the contract or agreement.	All premises covered by this insurance.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

- A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of the premises by you and shown in the Schedule.
- However:
1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
 2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.
- B.** This insurance does not apply to structural alterations, new construction and demolition operations performed by or for that person or organization.
- C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:**
- If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:
1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

**ADDITIONAL INSURED – TRADE SHOW SPONSOR –
 AUTOMATIC STATUS WHEN REQUIRED IN WRITTEN AGREEMENT WITH YOU**

- A. Section II – Who Is An Insured** is amended to include as an additional insured any person or organization who is a sponsor of a trade show where you are operating a booth or displaying your product, but only:
1. For injury or damage occurring at the trade show; and
 2. When you and such person or organization have agreed in writing in a contract or agreement executed prior to the beginning of the trade show that such person or organization be added as an additional insured on your policy.
- Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
1. Your acts or omissions; or
 2. The acts or omissions of those acting on your behalf;
- while attending the trade show sponsored by this additional insured.

A person's or organization's status as an additional insured under this endorsement ends when your attendance at the trade show ends.

- B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury" or "property damage" arising out of "your work" or "your product" and included in the "products-completed operations hazard".

- C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

**ADDITIONAL INSURED – STATE OR GOVERNMENTAL AGENCY OR SUBDIVISION
OR POLITICAL SUBDIVISION – PERMITS OR AUTHORIZATIONS**

(INSURANCE SERVICES OFFICE ENDORSEMENT CG 20 12 04 13)

SCHEDULE

<p>State Or Governmental Agency Or Subdivision Or Political Subdivision: Any state or governmental agency or subdivision or political subdivision that has issued a permit or authorization for operations performed by you or on your behalf.</p>
<p>Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>

- A. Section II – Who Is An Insured is amended to include as an additional insured any state or governmental agency or subdivision or political subdivision shown in the Schedule, subject to the following provisions:

1. This insurance applies only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued a permit or authorization.

However:

- a. The insurance afforded to such additional insured only applies to the extent permitted by law; and
- b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

2. This insurance does not apply to:

- a. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or
- b. "Bodily injury" or "property damage" included within the "products-completed operations hazard".

- B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
SNOW OR ICE REMOVAL OPERATIONS EXCLUSION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
OWNERS AND CONTRACTORS PROTECTIVE LIABILITY COVERAGE FORM

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of any snow plowing operations, snow removal operations or ice removal operations in or from parking lots, sidewalks, streets and/or roads for hire.

We shall have no duty to investigate, defend or indemnify any insured against any loss, claim, "suit," demand, fine or other proceeding alleging injury or damages of any kind, to include but not limited to "bodily injury," "property damage," or "personal and advertising injury" to which this exclusion applies.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED STATE EXCLUSION – NEW YORK

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
OWNERS AND CONTRACTORS PROTECTIVE LIABILITY COVERAGE FORM
LIQUOR LIABILITY COVERAGE FORM

Schedule
Job or Project: None
Premises: None

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury", including costs or expenses, actually or allegedly arising out of, related to, caused by, contributed to by, or in any way connected with:

- (1) Any operations or activities performed by or on behalf of any insured in the State of New York; or
- (2) Any premises, site or location owned, leased, occupied, maintained or used by or on behalf of any insured in the State of New York.

This exclusion does not apply to the Job or Project, or to the Premises, shown in the Schedule above.

We shall have no duty to investigate, defend or indemnify any insured against any loss, claim, "suit," demand, fine or other proceeding alleging injury or damages of any kind, to include but not limited to "bodily injury," "property damage," or "personal and advertising injury" to which this endorsement applies.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED STATE EXCLUSION – COLORADO

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
OWNERS AND CONTRACTORS PROTECTIVE LIABILITY COVERAGE FORM
LIQUOR LIABILITY COVERAGE FORM

Schedule
Job or Project: None
Premises: None

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury", including costs or expenses, actually or allegedly arising out of, related to, caused by, contributed to by, or in any way connected with:

- (1) Any operations or activities performed by or on behalf of any insured in the State of Colorado; or
- (2) Any premises, site or location owned, leased, occupied, maintained or used by or on behalf of any insured in the State of Colorado.

This exclusion does not apply to the Job or Project, or to the Premises, shown in the Schedule above.

We shall have no duty to investigate, defend or indemnify any insured against any loss, claim, "suit," demand, fine or other proceeding alleging injury or damages of any kind, to include but not limited to "bodily injury," "property damage," or "personal and advertising injury" to which this endorsement applies.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
SPECIAL EXCLUSIONS – JOINT FORM (OCCURRENCE)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM (OCCURRENCE VERSION)

PRE-EXISTING DAMAGE EXCLUSION

It is agreed under Section 1 Coverages, Coverage A Bodily Injury and Property Damage Liability, 1. Insuring Agreement, Paragraphs b (3), c and d are deleted in their entirety and the following exclusion is added to this policy:

This insurance does not apply to:

1. "Bodily injury" or "property damage", whether such "bodily injury" or "property damage" is known or unknown,
 - (a) which first occurred prior to the inception date of this policy (or the retroactive date of this policy, if any; whichever is earlier); or
 - (b) which are, or are alleged to be, in the process of occurring as of the inception date of the policy (or the retroactive date of this policy, if any; whichever is earlier) even if the "bodily injury" or "property damage" continues during this policy period.
2. Any damages arising out of or related to "bodily injury" or "property damage", whether known or unknown, which are in the process of settlement, adjustment or "suit" as of the inception date of this policy (or the retroactive date of this policy, if any; whichever is earlier).

We shall have no duty to defend any insured against any loss, claim, "suit", or other proceeding alleging damages arising out of or related to "bodily injury" or "property damage" to which this endorsement applies.

EMPLOYMENT-RELATED PRACTICES EXCLUSION

- A. The following exclusion is added to Paragraph 2., Exclusions of Section I – Coverage A – Bodily Injury And Property Damage Liability:

This insurance does not apply to:

"Bodily injury" to:

- (1) A person arising out of any "wrongful employment act(s)"; or
- (2) The spouse, child, parent, brother, sister or registered domestic partner of that person as a consequence of "bodily injury" to that person at whom any of the "wrongful employment act(s)" described in Paragraph (1) above is directed.

This exclusion applies:

- (1) Whether any insured may be liable as an employer or in any other capacity;
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury; and
- (3) Whether the "wrongful employment act(s)" occurs before employment, during employment or after employment of that person.

B. The following exclusion is added to Paragraph 2., Exclusions of Section I – Coverage B – Personal And Advertising Injury Liability:

This insurance does not apply to:

“Personal and advertising injury” to:

- (1) A person arising out of any “wrongful employment act(s)”; or
- (2) The spouse, child, parent, brother, sister or registered domestic partner of that person as a consequence of “personal and advertising injury” to that person at whom any of the “wrongful employment act(s)” described in Paragraph (1) above is directed.

This exclusion applies:

- (1) Whether any insured may be liable as an employer or in any other capacity;
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury; and
- (3) Whether the “wrongful employment act(s)” occurs before employment, during employment or after employment of that person.

C. Additional Definitions:

- (1) “Wrongful employment act(s)” means any of the following actual, alleged or related acts committed by or on behalf of any insured arising out of a potential, actual or post-employment relationship with any person:
 - (a) Discrimination or harassment because of race, color, religion, age, sex, disability, pregnancy, national origin, sexual orientation, marital status, or any other basis prohibited by law which results in termination of the employment relationship, or demotion, or failure or refusal to hire or promote, or failure to accommodate an “employee” or potential “employee”, or denial of an employment privilege, or the taking of any adverse or differential employment action; or
 - (b) Sexual harassment including unwelcome sexual advances, requests for sexual favors or other conduct of a sexual nature that is made a condition of employment, is used as a basis for employment decisions, or creates an intimidating, hostile or offensive work environment that interferes with work performance; or
 - (c) Termination, constructive discharge, wrongful failure to hire, wrongful demotion, retaliation, misrepresentation, infliction of emotional distress, defamation, invasion of privacy, humiliation, wrongful evaluation, or breach of an implied contract or agreement relating to employment, whether arising out of any personnel manual, policy statement or oral representation; or
 - (d) Physical assault or battery, or any other similar behavior that creates an intimidating, hostile, offensive or dangerous work environment; or
 - (e) Training or failing to train any “employee” in accordance with any applicable federal, state or local law, regulation, ordinance, rule, guidance document or policy directive governing any act described in Paragraph C. (1) (a) through Paragraph C. (1) (d) above; or
 - (f) Failure to comply with any applicable federal, state or local law, regulation, ordinance, rule, guidance document or policy directive related to the prevention of any act described in Paragraph C. (1) (a) through Paragraph C. (1) (d) above; or
 - (g) malicious prosecution.

Policy Number: CA000038825-03

AD 67 08 02 22

Effective Date: 07/01/2022

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
OCCUPATIONAL DISEASE EXCLUSION (ABSOLUTE)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE FORM

It is agreed there is no coverage afforded under this policy for any "bodily injury" to any individual resulting from any occupational or environmental disease arising out of any insured's operations, completed operations or products.

BONDS

PERFORMANCE BOND

BOND No. GM234027

KNOW ALL MEN BY THESE PRESENTS: That we **Green Acres Landscape & Construction Company, Inc.,**
Principal,

and **Great Midwest Insurance Company,** Surety, are held and firmly bound

unto **City of Waltham, 610 Main Street, Waltham, MA 02452** Obligee, In the sum of
Seven Million Nine Hundred Eleven Thousand Nine Hundred Twenty Seven and 00/100 Dollars
(\$7,911,927.00),

for the payment of which we bind ourselves, our legal representatives, successors and assigns,
jointly and severally, firmly by these presents.

WHEREAS, Principal has entered into a contract with Obligee, dated **January 2, 2024**
for **190 Trapelo Road Improvements**

copy of which contract is by reference made a part hereof.

NOW, THEREFORE, if Principal shall faithfully perform such contract and guarantee that
the work will be free of defective materials or workmanship for a period of 12 months following
the substantial completion of the project, then this obligation shall be null and void. Any
additional warranty or guarantee either expressed or implied is extended by the principal or
manufacturer only, and the surety assumes no liability for such a guarantee.

No suit, action or proceeding by reason of any default whatever shall be brought on this bond
after one (1) year from the day on which the final payment under said construction contract falls
due.

Signed, sealed and dated this **9th** day of **January, 2024.**

Green Acres Landscape & Construction Co., Inc.

Principal

By:

Joseph Barbosa - President

Great Midwest Insurance Company

Surety

By:

Alyssa R. Michael
Alyssa R. Michael, Attorney-in-Fact



Bond No. GM234027

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we **Green Acres Landscape & Construction Co., Inc.**,
Principal,

and **Great Midwest Insurance Company**, Surety, are held and firmly bound

unto **City of Waltham, 610 Main Street, Waltham, MA 02452**, Obligee

In the sum of **Seven Million Nine Hundred Eleven Thousand Nine Hundred Twenty Seven and 00/100 Dollars (\$7,911,927.00)**,

for the payment of which we bind ourselves, our legal representatives, successors and assigns,
jointly and severally, firmly by these presents.

WHEREAS, Principal has entered into a contract with Obligee, dated **January 2, 2024**
for **190 Trapelo Road Improvements**

copy of which contract is by reference made a part hereof.

NOW, THEREFORE, if Principal shall, in accordance with applicable Statutes, promptly make
payment to all persons supplying labor and material in the prosecution of the work provided for in
said contract, and any and all duly authorized modifications of said contract that may hereafter be
made, notice of which modifications to Surety being waived, then this obligation to be void;
otherwise to remain in full force and effect.

Signed, sealed, and dated this **9th** day of **January, 2024**.

Green Acres Landscape & Construction Co., Inc.

Principal

By: _____ (Seal)

Joseph Barbosa - President

Great Midwest Insurance Company

Surety

By: _____ (Seal)

Alyssa R. Michael, Attorney-in-fact



POWER OF ATTORNEY

Great Midwest Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that GREAT MIDWEST INSURANCE COMPANY, a Texas Corporation, with its principal office in Houston, TX, does hereby constitute and appoint: Barry Horgan, William L. Labbe, Anne M. Higginbottom, Alyssa R. Michael

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of GREAT MIDWEST INSURANCE COMPANY, on the 1st day of October, 2018 as follows:

Resolved, that the President, or any officer, be and hereby is, authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed Twenty-Five Million dollars (\$25,000,000.00), which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed in the Company's sole discretion and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, GREAT MIDWEST INSURANCE COMPANY, has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 11th day of February, 2021.

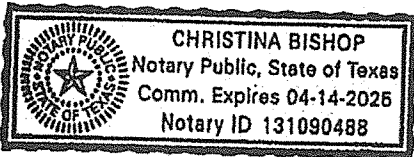


GREAT MIDWEST INSURANCE COMPANY

BY [Signature] Mark W. Haushill President

ACKNOWLEDGEMENT

On this 11th day of February, 2021, before me, personally came Mark W. Haushill to me known, who being duly sworn, did depose and say that he is the President of GREAT MIDWEST INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.



BY [Signature] Christina Bishop Notary Public

CERTIFICATE

I, the undersigned, Secretary of GREAT MIDWEST INSURANCE COMPANY, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Houston, TX this [Signature] Day of January, 2024.



BY [Signature] Leslie K. Shaunty Secretary

WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files and application for insurance of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties.

GREAT MIDWEST INSURANCE COMPANY

BID BOND

Know all Men by These Presents:

That We, **Green Acres Landscape & Construction Company, Inc.**
21 Malbone Street, Lakeville, MA 02347

as Principal, (hereinafter called the "Principal"), and the **Great Midwest Insurance Company** a corporation duly organized under the laws of the State of Texas, as Surety, (hereinafter called the "Surety") are held and firmly bound unto

City of Waltham
610 Main St., Waltham, MA 02452

as Obligee, (hereinafter called the "Obligee"), in the sum of **Five Percent (5%)** of attached Bid, for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

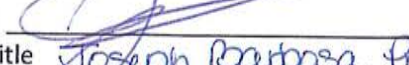
Whereas, the Principal has submitted a bid for

190 Trapelo Rd Renovation Project

Now, Therefore, if the Obligee shall accept the bid of the Principal and Principal shall enter into a contract with the Obligee in accordance with the terms of such bid and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract another party to perform the work covered by said bid, then this obligation shall be null and void; otherwise to remain in full force and effect.

Signed and Sealed this **20th** day of **October** AD **2023**.

Green Acres Landscape & Construction Company, Inc.

By:  (Seal)
Title **Joseph Barbosa President**

Great Midwest Insurance Company

By:  (Seal)
Alyssa R. Michael, Attorney-in-Fact



POWER OF ATTORNEY

Great Midwest Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that GREAT MIDWEST INSURANCE COMPANY, a Texas Corporation, with its principal office in Houston, TX, does hereby constitute and appoint: Barry Horgan, William L. Labbe, Anne M. Higginbottom, Alyssa R. Michael

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This authority is made under and by the authority of a resolution which was passed by the Board of Directors of GREAT MIDWEST INSURANCE COMPANY, on the 1st day of October, 2018 as follows:

Resolved, that the President, or any officer, be and hereby is, authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed Twenty-Five Million dollars (\$25,000,000.00), which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed in the Company's sole discretion and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, GREAT MIDWEST INSURANCE COMPANY, has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 11th day of February, 2021.

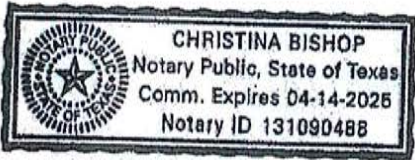


GREAT MIDWEST INSURANCE COMPANY

BY [Signature] Mark W. Haushill President

ACKNOWLEDGEMENT

On this 11th day of February, 2021, before me, personally came Mark W. Haushill to me known, who being duly sworn, did depose and say that he is the President of GREAT MIDWEST INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.



BY [Signature] Christina Bishop Notary Public

CERTIFICATE

I, the undersigned, Secretary of GREAT MIDWEST INSURANCE COMPANY, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Houston, TX this 20th Day of October, 2023.



BY [Signature] Leslie K. Shaunty Secretary

WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files and application for insurance of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties.

BID PRICE FORM

SECTION 00 41 13

GENERAL BID FORM

Date: 10/19/2023

From: (Insert name of General Bidder) Green Acres Landscape & Const Co Inc

To: City of Waltham

A. The undersigned proposes to furnish all labor and materials required for the 190 TRAPELO RD. RENOVATION PROJECT, in accordance with the accompanying Plans and Specifications prepared by Nesra Engineering, LLC, for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. The bid includes addenda number(s) & date:

1. 1
2. _____
3. _____
4. _____

C. **Base Bid: Shall consist of all the work specified in drawings and includes work, but not limited to demolition work, new bituminous concrete walkways, sidewalks, lighting, parking areas, mini golf and associated infrastructure, train and accessories, playground and splashpad installation, associated utilities, fencing, foundation installation, sodding, hydroseeding, plantings, earthwork, including 500 cubic yards of rock/ledge removal (as part of the base bid; See Supplemental Unit Prices).**

1. Under the unit price bid for Item E, the Contractor shall excavate, remove, and dispose of rock/ledge from trenches and excavated areas. Included in the price bid per cubic yard shall be related costs such as drilling, blasting, permitting, removal, and disposal of excavated material, and replacement of excavated material with suitable gravel borrow material.

2. Measurement for payment will be on the basis of cubic yards of rock or ledge excavated as measured and approved by the Engineer.

The proposed Contract Amount to furnish all Base Bid labor, equipment and materials associated with the 190 TRAPELO RD. RENOVATION PROJECT in Waltham, Massachusetts in accordance with the Contract Documents is:

BASE BID CONTRACT LUMP SUM PRICE
Seven Million Nine Hundred Eleven Thousand Nine Hundred
Words: Twenty-Seven Dollars No Cents
Numbers: \$7,911,927.00

D. Allowances:

The undersigned Bidder further proposed and agreed to include the following allowances within the LUMP SUM base bid amount and be included in the Contract. All materials and workmanship shall be in strict accordance with the Drawings and Specification and shall be in-place, completed prices.

1. **Allowance No. 1: POLICE DETAIL**

Words: Ten Thousand

Numbers: \$ 10,000

2. **Allowance No. 2: UTILITY COMPANY INSTALL FEES**

Words: Ten Thousand

Numbers: \$ 10,000

E. Unit Pricing: See Section 00 43 22.13 for details.

	ITEM	UNIT	UNIT PRICE
	ROCK/LEDGE REMOVAL		
1	REMOVAL VIA HOE RAMS	CY	\$250.00
2	REMOVAL VIA IMPACT HAMMERS	CY	\$250.00
3	REMOVAL VIA SYSTEMATIC DRILLING & BLASTING	CY	\$300.00

F. Alternates:

1. **Alternate I: N/A**

Words N/A

Numbers _____

E. The undersigned agrees that, if selected as General Contractor, he will within five (5) days, Saturdays, Sundays, and legal holidays excluded, after presentation thereof by the Awarding Authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the sum of the contract price, the premiums for which are to be paid by the General Contractor and are included in the contract price.

F. The Bidder proposes to provide all labor and materials necessary to complete the

work, as specified in the Contract Documents, and as is reasonably expected due to existing conditions and required construction, within the completion time specified in the General Bid Form.

- G. The undersigned hereby certifies that he/she/it is able to furnish labor that can work in harmony with all other elements of the labor employed, or to be employed on the work, and that he/she will comply fully with all laws and regulations applicable to this award.
- H. The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

Green Acres Landscape & Const. Co Inc

Company Name

Joseph Barbosa-President

Name and Title of Person Signing Bid

Signature

21 Malbone St Lakeville, MA 02347

Address **508-823-6699/ 508-823-7502**

jbarbosa@greenacreslandscape.net

Phone/Fax Number/Email

Note: If the bidder is a corporation, this form shall be sealed.

END OF SECTION

DRAWINGS



FERNALD PROPERTY IMPROVEMENTS PROJECT

WALTHAM, MASSACHUSETTS



PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPELO ROAD,
 WALTHAM, MA 02452

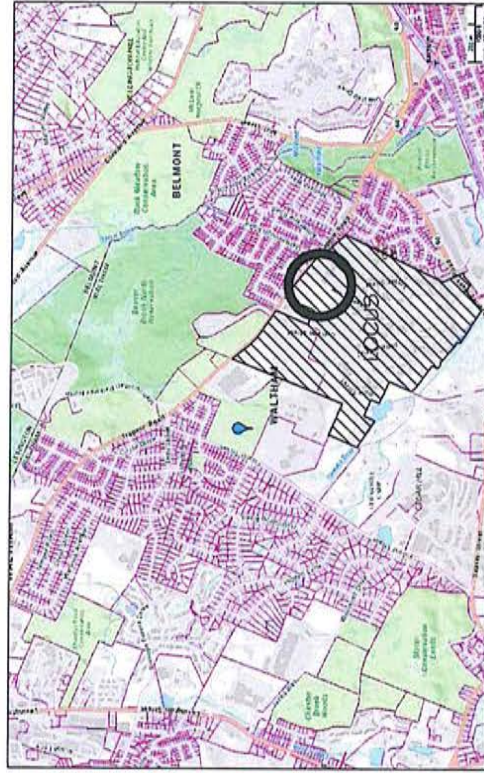
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE

SCALE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

COVER SHEET

C-1



IRRIGATION DESIGNER:
 IRRIGATION CONSULTANT SERVICES, INC.
 2129 GERRARD ROAD
 MADISON, GA 30650

GEOTECHNICAL ENGINEERING:
 TERRACK
 77 SUNDIAL AVE #401W
 MANCHESTER, NH 03103

ELECTRICAL ENGINEERING:
 VINCENT A DILORIO INC.
 89 ACCESS ROAD #18
 MERRIMACK, MA 02662

CIVIL ENGINEERING:
 NESRA ENGINEERING, LLC
 111 WASHINGTON STREET
 PLAINVILLE, MA 02762

DRAWING INDEX:

SHEET	DESCRIPTION
CIVIL PLANS	
C - 1	COVER SHEET
C - 2	GENERAL NOTES
C - 3	EXISTING CONDITIONS
C - 4	DEMOLITION & EROSION CONTROL PLAN (TBP)
C - 5	LAYOUT AND MATERIALS PLAN
C - 6	GRADING PLAN
C - 7	DRAINAGE AND UTILITY PLAN
C - 8	PLAYGROUND LAYOUT AND MATERIALS PLAN
C - 9	CONSTRUCTION DETAILS
C - 10	CONSTRUCTION DETAILS
C - 11	CONSTRUCTION DETAILS
C - 12	CONSTRUCTION DETAILS
C - 13	CONSTRUCTION DETAILS
C - 14	CONSTRUCTION DETAILS
L - 1	PLANTING PLAN SHEET 1
L - 2	PLANTING PLAN SHEET 2 (TBP)
L - 3	PLANTING DETAILS AND NOTES
I - 1	OVERALL IRRIGATION PLAN
I - 2	IRRIGATION PLAN SHEET 1
I - 3	IRRIGATION PLAN SHEET 2
I - 4	IRRIGATION PLAN SHEET 3
I - 5	IRRIGATION PLAN SHEET 4
I - 6	IRRIGATION SLEEVING PLAN
I - 7	IRRIGATION DETAILS
I - 8	IRRIGATION DETAILS
ES-0.1	ELECTRICAL LEGEND AND NOTES
ES-0.2	ELECTRICAL DETAILS
ES-1.1	ELECTRICAL SITE PLAN

EROSION CONTROL NOTES:

- AN AREA SHALL BE CONSIDERED EROSION CONTROL AREA IF ONE OF THE FOLLOWING ARE OCCURRING:
 - GRAVE, BUMP COURSE OR ANY OTHER TYPE OF SURFACE IMPROVEMENTS ARE BEING PERFORMED.
 - CONSTRUCTION OF ANY TYPE OF FOUNDATION OR STRUCTURE IS BEING PERFORMED.
 - CONSTRUCTION OF ANY TYPE OF FOUNDATION OR STRUCTURE IS BEING PERFORMED.
 - CONSTRUCTION OF ANY TYPE OF FOUNDATION OR STRUCTURE IS BEING PERFORMED.
- CONSTRUCTION SHALL BE CONDUCTED IN SUCH A MANNER AS TO PREVENT EROSION OF EXISTING CURBS, SIDEWALKS AND DRIVEWAYS. EROSION CONTROL MEASURES SHALL BE INSTALLED IN THE COURSE OF THE CONSTRUCTION OF ANY TYPE OF FOUNDATION OR STRUCTURE.
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CONSTRUCTION SEQUENCE:

- GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND CONSTRUCTION PERMITS.
- INSTALL CURB AND GUTTER AT ALL LOCATIONS INDICATED ON PLAN AND AT OTHER LOCATIONS AS DETERMINED BY INSPECTOR. INSTALL OTHER DRAINAGE AND CURBWORK AS SHOWN ON PLAN AND AS DETERMINED BY INSPECTOR.
- INSTALL CURB AND GUTTER AT ALL LOCATIONS INDICATED ON PLAN AND AT OTHER LOCATIONS AS DETERMINED BY INSPECTOR. INSTALL OTHER DRAINAGE AND CURBWORK AS SHOWN ON PLAN AND AS DETERMINED BY INSPECTOR.
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- INSTALL CURB AND GUTTER AT ALL LOCATIONS INDICATED ON PLAN AND AT OTHER LOCATIONS AS DETERMINED BY INSPECTOR. INSTALL OTHER DRAINAGE AND CURBWORK AS SHOWN ON PLAN AND AS DETERMINED BY INSPECTOR.

GENERAL NOTES:

- ALL CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND MAINTAINING ALL NECESSARY CONSTRUCTION PERMITS THROUGHOUT THE WORK.
- ALL UTILITIES SHOWN, LOCATIONS, AND DEPTHS ARE SUBJECT TO THE APPROVAL AND OR REVISION OF THE RESPECTIVE UTILITY PROVIDING AGENCY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONSTRUCTION PERMITS FROM THE CITY AND STATE OF MASSACHUSETTS.
- ALL EXISTING UTILITIES SHALL BE PROTECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION.
- ALL EXISTING UTILITIES SHALL BE PROTECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION.
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PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 THRAPPEL ROAD,
 WALTHAM, MA 02452

CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE

SCALE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

GENERAL NOTES

C-2



PROJECT
 HERALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAFALGO ROAD,
 WALTHAM, MA 02452

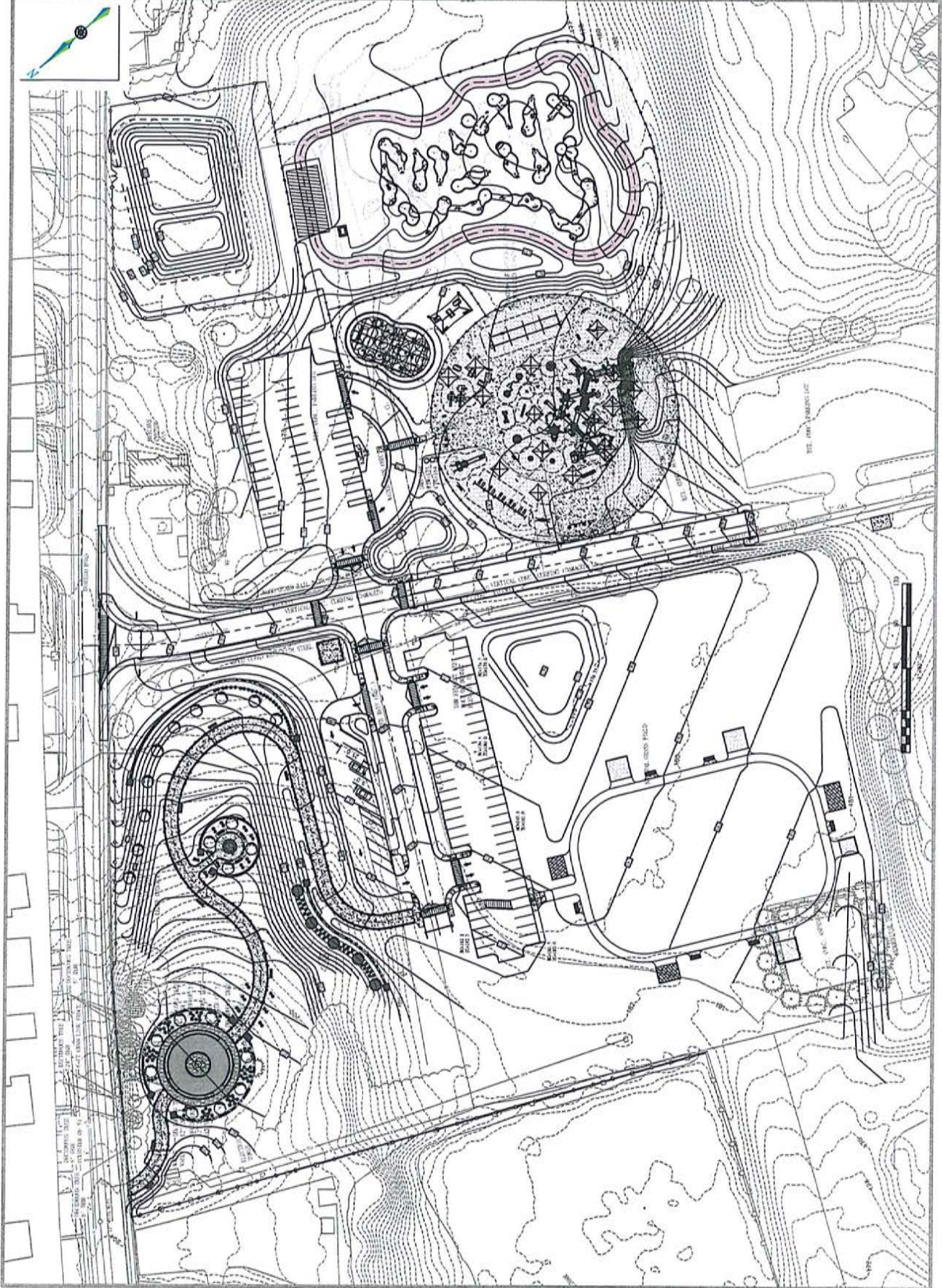
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE
1.	ENTER ENGINE FOR CITY'S PROJECT	7/27/23

SCALE - AS NOTED
 DATE - 7/27/23
 PROFESSIONAL SEAL

GRADING PLAN

C-6





PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPPEL ROAD,
 WALTHAM, MA 02452

CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

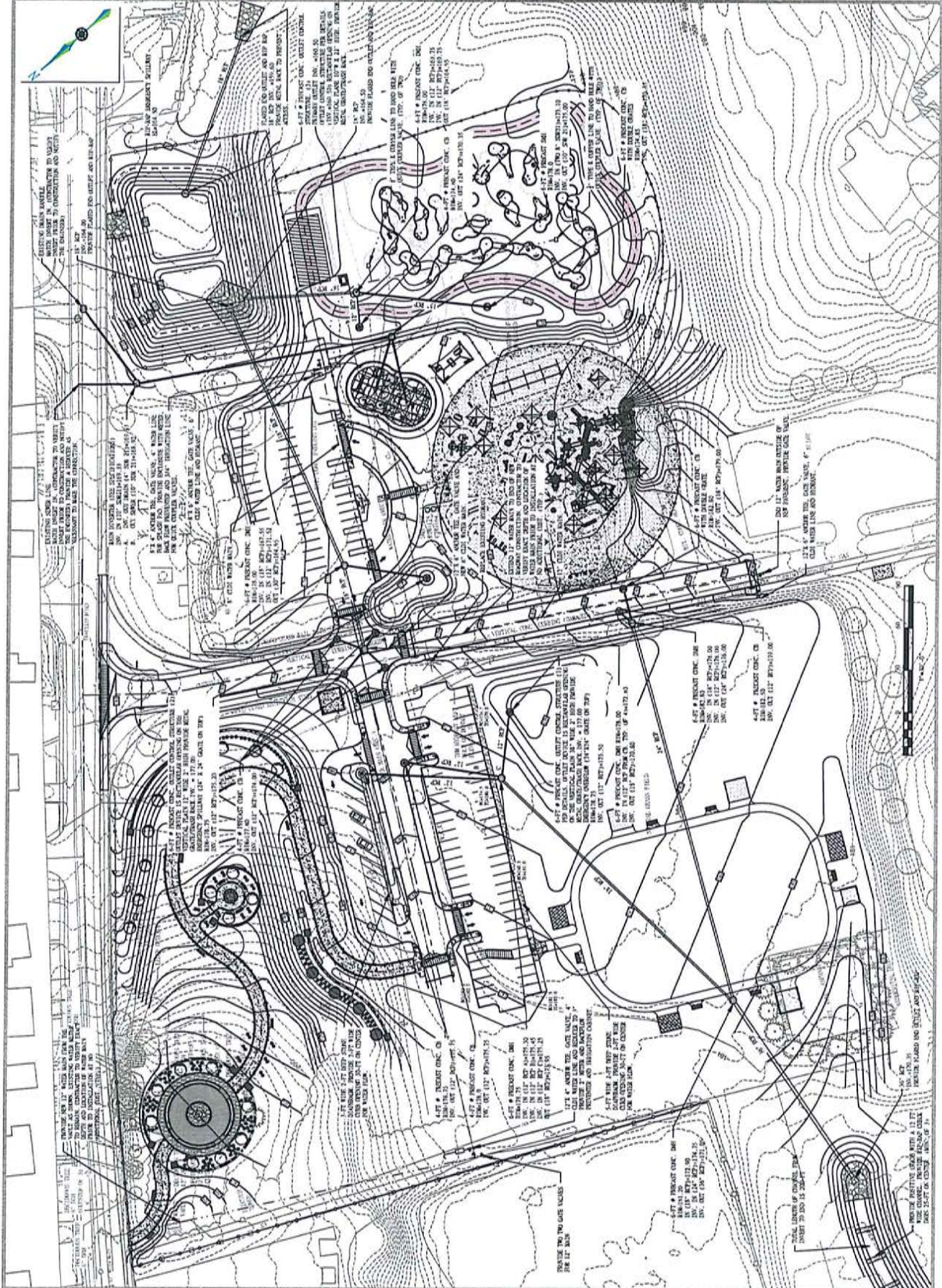
NO.	REVISION	DATE
3.	REVISE UTILITY LINES PER CITY ENGINEERING	07/20/23
1.	REVISE DRAINAGE PER CITY'S RECORD	07/12/23
1.	REVISION	DATE

SCALE - AS NOTED
 DATE - 7/17/23

PROFESSIONAL SEAL

**DRAINAGE AND
 UTILITY PLAN**

C-7



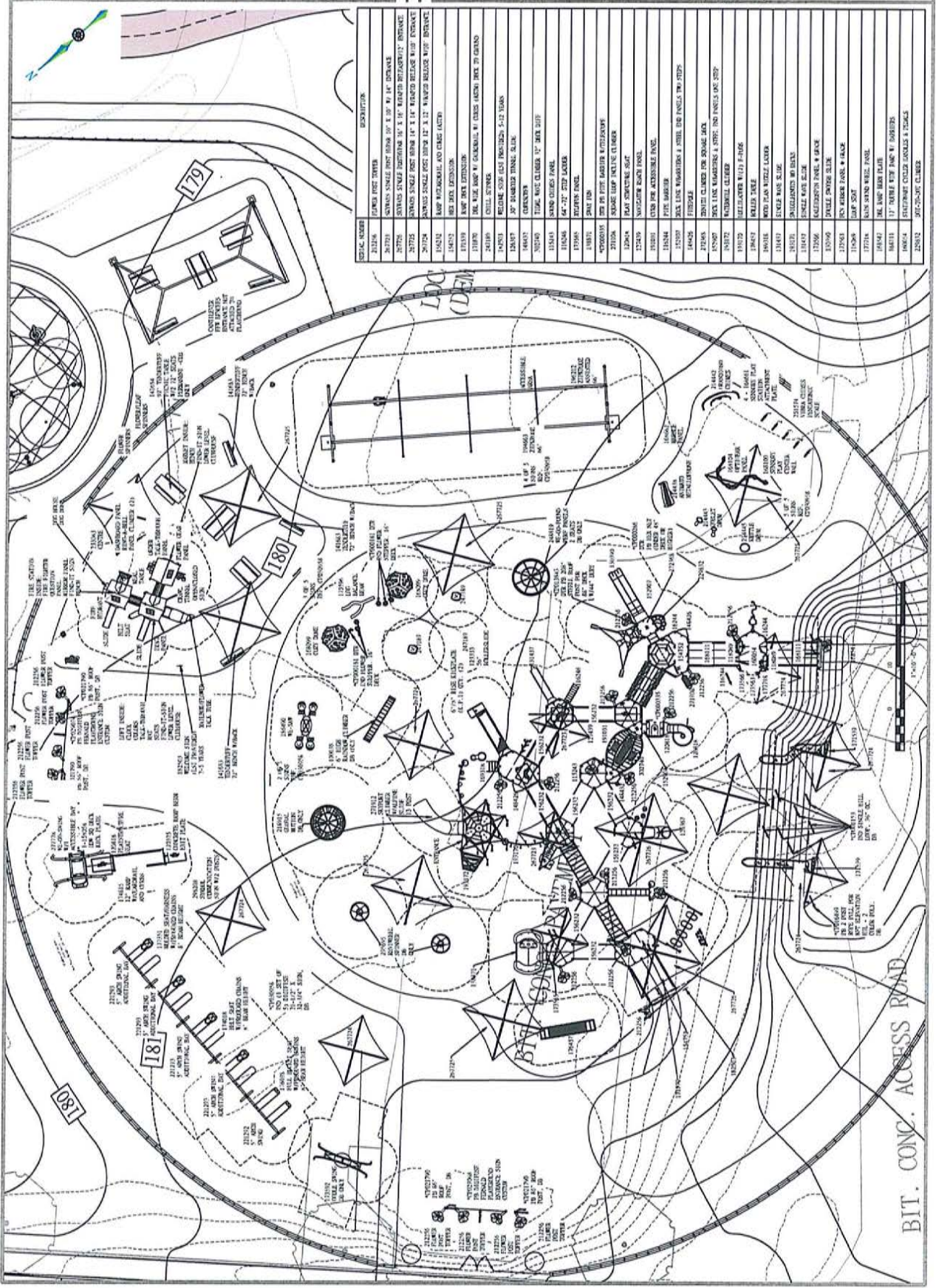


PROJECT
 FERRARD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPELO ROAD,
 WALTHAM, MA 02452

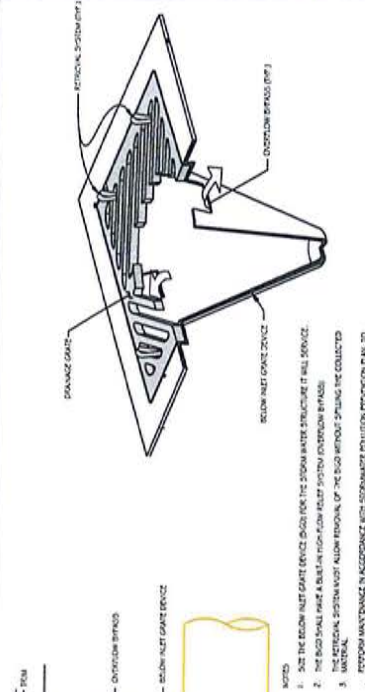
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE

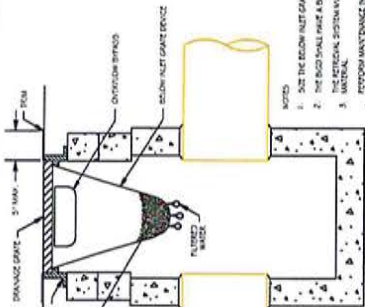
SCALE - AS NOTED
 DATE - 7/27/23
 PROFESSIONAL SEAL
**PLAYGROUND
 LAYOUT AND
 MATERIALS PLAN**
C-8



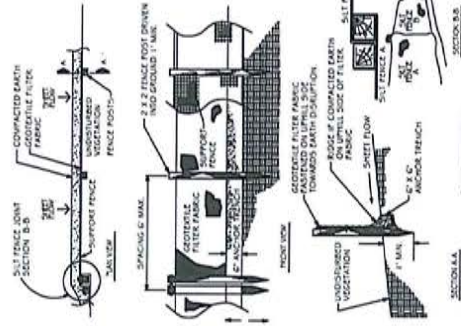
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ISOMETRIC VIEW

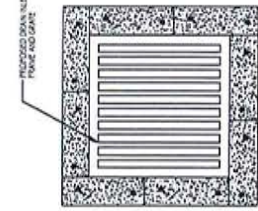


SECTION VIEW

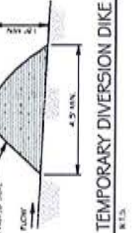


SILT FENCE

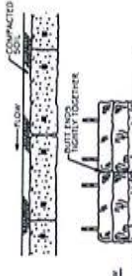
CATCH BASIN STRAW BALE FILTER DETAIL



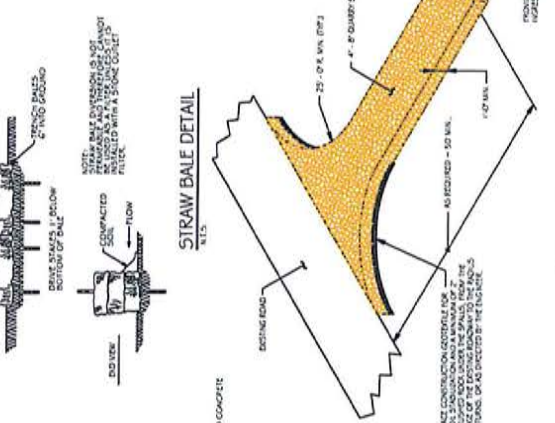
NOTES:
 1. BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY BUTTING.
 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STRAPS OR CHAINS.
 3. THE FIRST STRAP AT EACH END SHALL BE SECURED TO THE WALLS OF THE BASIN.
 4. ADDITIONAL STRAPS SHALL BE PROVIDED AS NECESSARY TO MAINTAIN STRAP TENSION.
 5. INSPECTION SHALL BE REQUIRED AND REPORT ON REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.



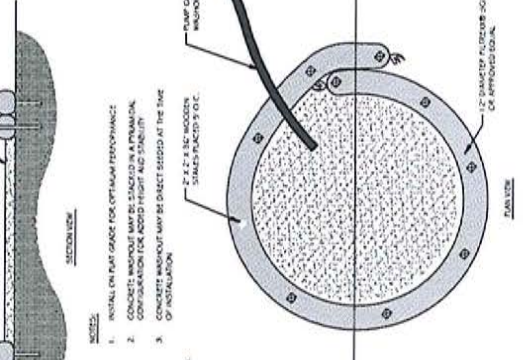
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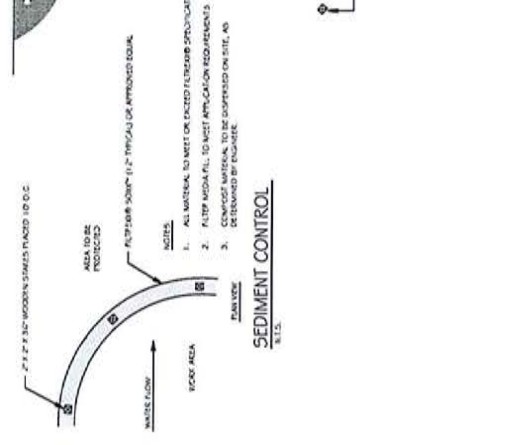
STRAW BALE DETAIL



STABILIZED CONSTRUCTION ENTRANCE



CONCRETE WASHOUT STATION



SEDIMENT CONTROL

NOTES:
 1. INSTALL ON RAY GRADE FOR OPTIMUM PERFORMANCE.
 2. CONSTRUCTION FOR ROAD, DRIVE AND FOOTING.
 3. CONCRETE WASHOUT MAY BE DIRECT GATED AT THE TIME OF INSTALLATION.
 4. ALL MATERIAL TO BE USED ON EXISTING FOUNDATIONS.
 5. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
 6. COMPACT MATERIAL TO BE COMPLETED ON SITE, AS DETERMINED BY ENGINEER.



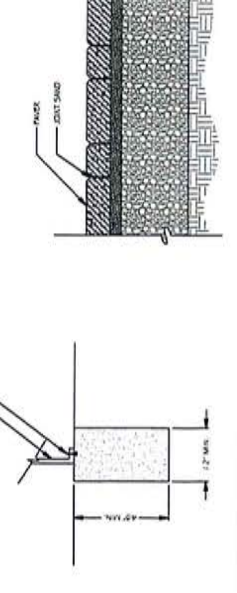
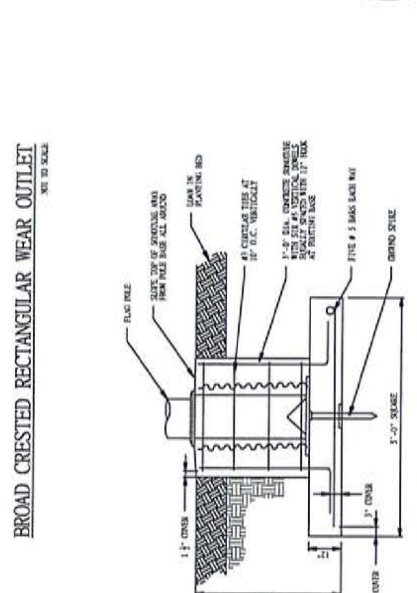
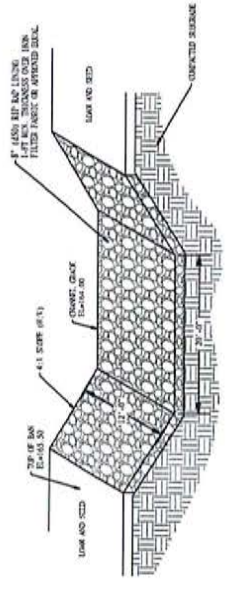
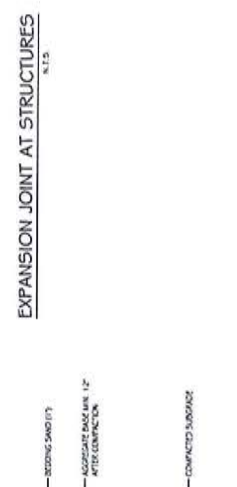
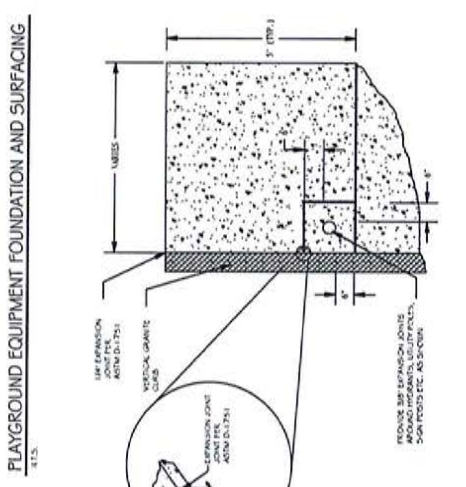
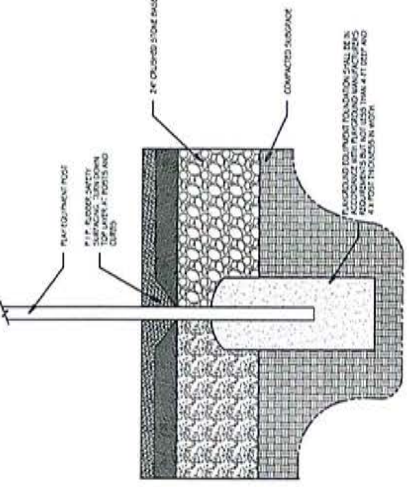
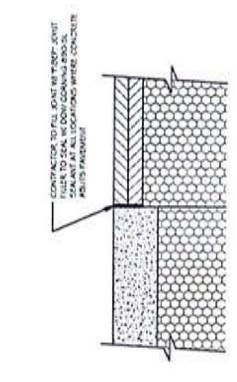
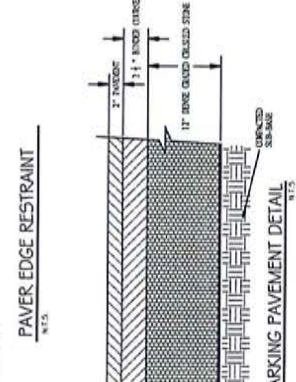
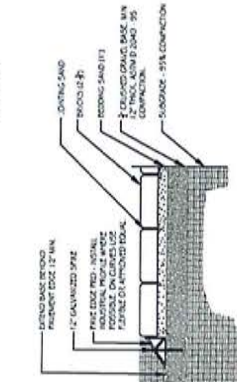
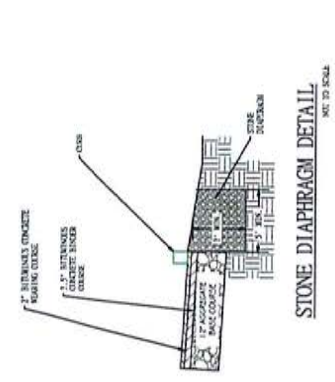
PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPELO ROAD,
 WALTHAM, MA 02452

CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE
	SCALE - AS NOTED	
	DATE - 07/27/23	

**CONSTRUCTION
 DETAILS**

C-10





PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPPELO ROAD,
 WALTHAM, MA 02452

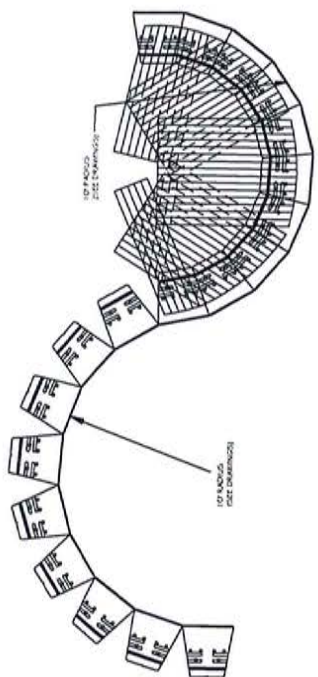
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE

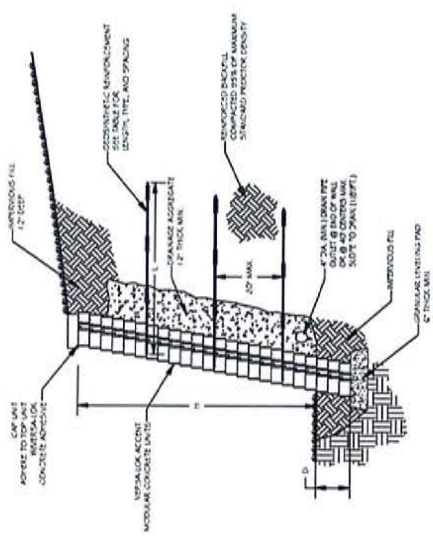
SCALE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

**CONSTRUCTION
 DETAILS**

C-11

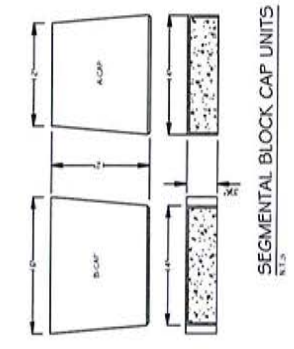


TYPICAL CURVE DETAIL
N.T.S.

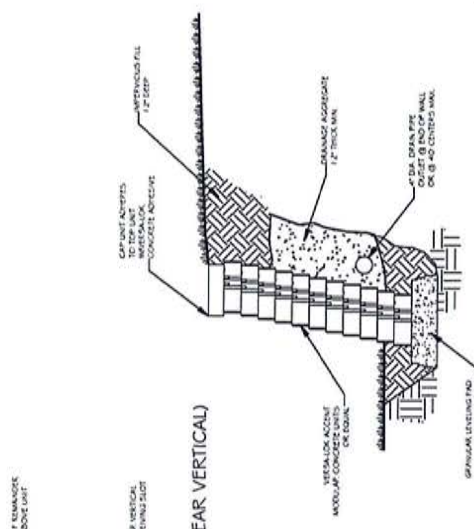


TYPICAL SECTION-REINFORCED RETAINING WALL (4' AND HIGHER)
N.T.S.

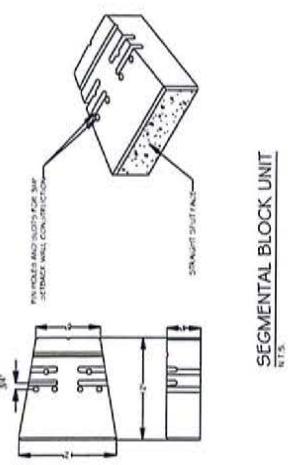
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2	4.0	48	2	W-3	3" X 3" DEE EDAK
3	4.0	48	3	W-3	3" X 3" DEE EDAK
4	4.0	48	4	W-3	3" X 3" DEE EDAK
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6	4.0	48	6	W-3	3" X 3" DEE EDAK
7	4.0	48	7	W-3	3" X 3" DEE EDAK
8	4.0	48	8	W-3	3" X 3" DEE EDAK
9	4.0	48	9	W-3	3" X 3" DEE EDAK
10	4.0	48	10	W-3	3" X 3" DEE EDAK
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12	4.0	48	12	W-3	3" X 3" DEE EDAK



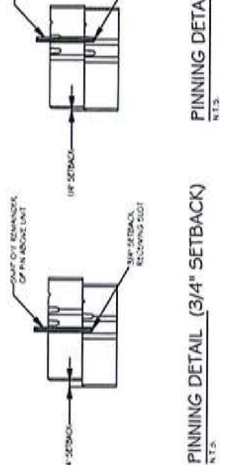
SEGMENTAL BLOCK CAP UNITS
N.T.S.



TYPICAL SECTION-UNREINFORCED RETAINING WALL (UP TO 4')
N.T.S.

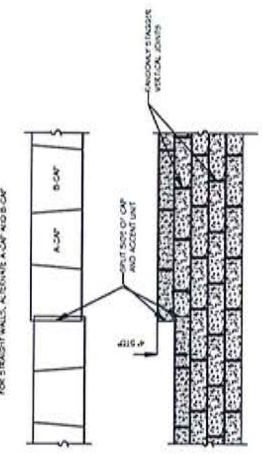


SEGMENTAL BLOCK UNIT
N.T.S.



PINNING DETAIL (NEAR VERTICAL)
N.T.S.

PINNING DETAIL (3/4" SETBACK)
N.T.S.



CAPPING DETAIL-PROFILE (UNIT-STEP AT TOP OF WALL)
N.T.S.



PROJECT
 RONALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPELO ROAD,
 WALTHAM, MA 02452

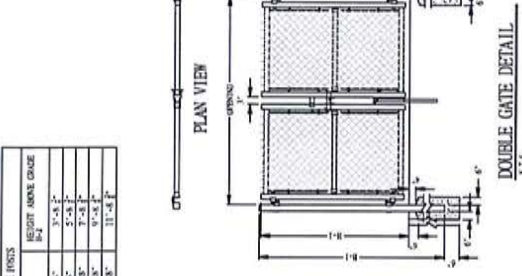
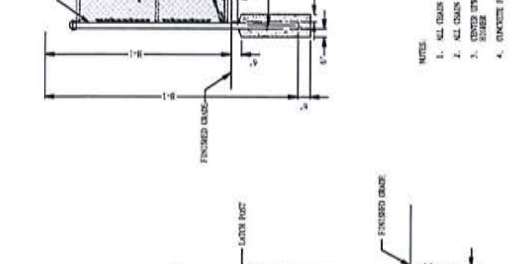
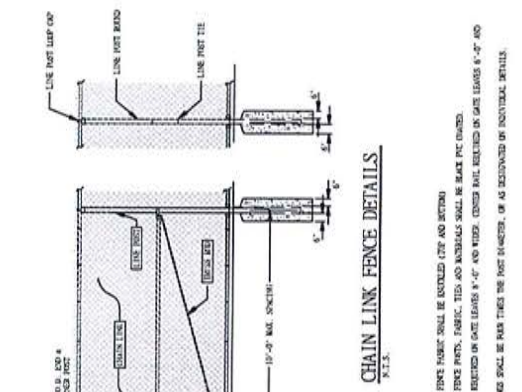
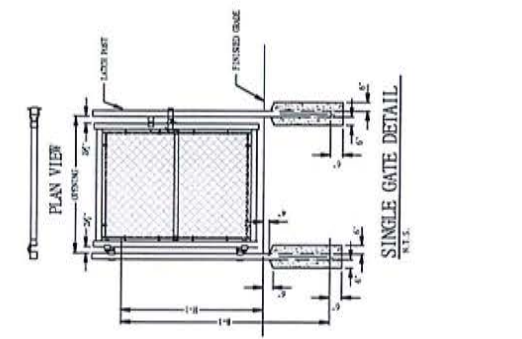
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE

SCALE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

**CONSTRUCTION
 DETAILS**

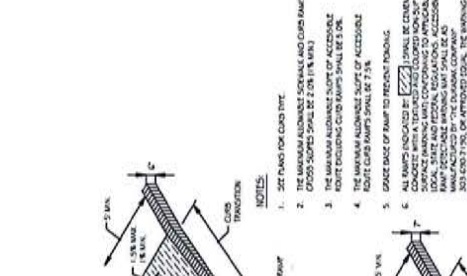
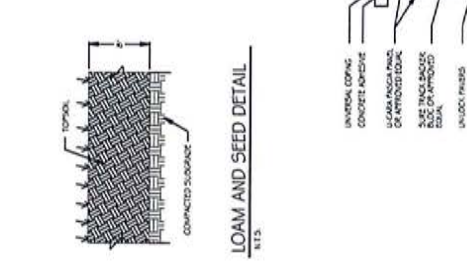
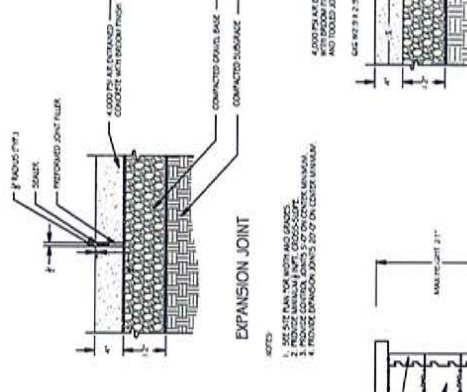
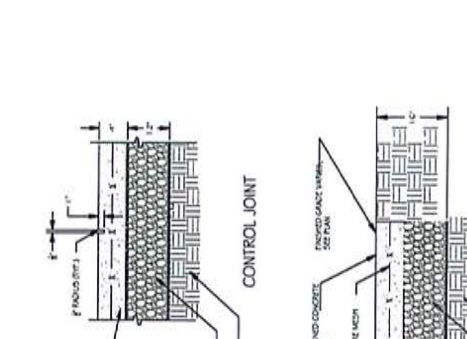
C-12



FENCE HEIGHT		END & CORNER POSTS		LINE POSTS	
NOMINAL HEIGHT	MIN LENGTH	HEIGHT ABOVE GRADE	MIN LENGTH	MIN LENGTH	HEIGHT ABOVE GRADE
4'-0"	8'-0"	3'-0"	8'-0"	8'-0"	3'-0"
6'-0"	12'-0"	3'-0"	12'-0"	12'-0"	3'-0"
8'-0"	16'-0"	3'-0"	16'-0"	16'-0"	3'-0"
10'-0"	20'-0"	3'-0"	20'-0"	20'-0"	3'-0"
12'-0"	24'-0"	3'-0"	24'-0"	24'-0"	3'-0"

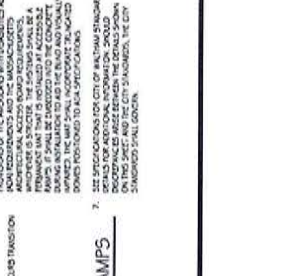
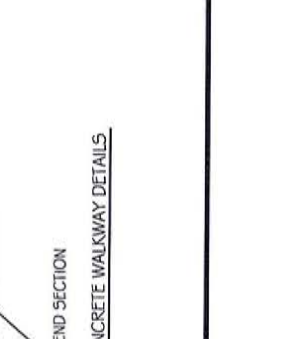
SINGLE LEAF GATE		DOUBLE LEAF GATE	
OPENING	GATE POSTS	OPENING	GATE POSTS
3'-0" TO 6'-0"	2	6'-0" TO 12'-0"	4
6'-0" TO 12'-0"	4	12'-0" TO 18'-0"	6

SINGLE LEAF GATE		DOUBLE LEAF GATE	
FACE TO FACE	FACE TO FACE	FACE TO FACE	FACE TO FACE
3'-0" TO 6'-0"	2' 11" O.C.	6'-0" TO 12'-0"	4' 11" O.C.
6'-0" TO 12'-0"	4' 11" O.C.	12'-0" TO 18'-0"	6' 11" O.C.



CHAIN LINK FENCE & GATE NOTES
 N.T.S.

- ALL CHAIN LINK FENCE TYPES SHALL BE INSTALLED C/PF AND BOTTOM.
- ALL CHAIN LINK FENCE PANTS, FABRIC, TIES AND ANCHORS SHALL BE BLACK PVC COATED.
- CHAINS SHOULD BE INSTALLED ON GATE LEAVES 8'-0" AND 12'-0" SPACING.
- CHAINS SHOULD BE INSTALLED ON GATE LEAVES 8'-0" AND 12'-0" SPACING.
- CHAINS SHOULD BE INSTALLED ON GATE LEAVES 8'-0" AND 12'-0" SPACING.



CHAIN LINK FENCE & GATE NOTES
 N.T.S.

- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.

ACCESSIBLE CURB RAMPS
 N.T.S.

- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.
- SEE NOTATIONS FOR CITY OF WALTHAM STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS ON THIS SHEET AND THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WALKWAYS AND CURB RAMPS.



PROJECT
 ERNOLD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPELO ROAD,
 WALTHAM, MA 02452

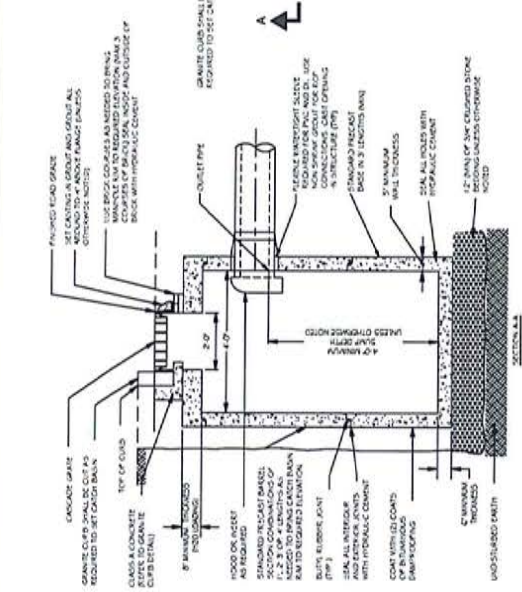
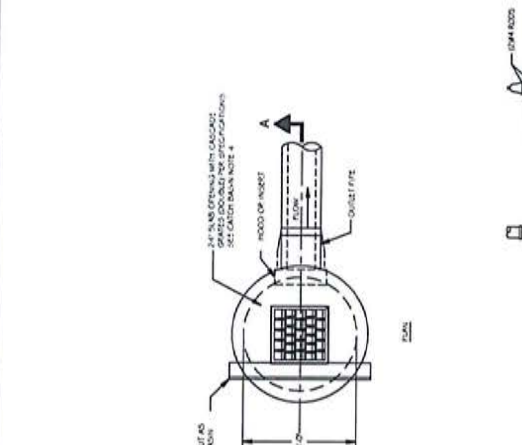
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE
1.	REVISED PER CITY REVIEW	9/15/23

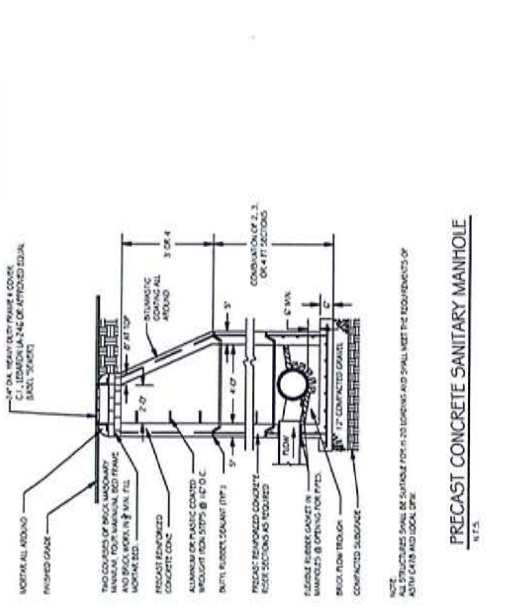
SOLE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

**CONSTRUCTION
 DETAILS**

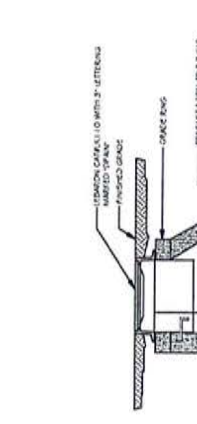
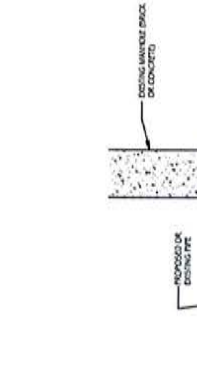
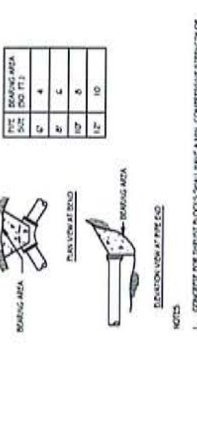
C-13



PRECAST CONCRETE CATCH BASIN
 N.T.S.



PRECAST CONCRETE SANITARY MANHOLE
 N.T.S.



NOTES
 1. CONCRETE FOR THRUST BLOCKS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 5000 P.S.I. AT 28 DAYS.
 2. CONCRETE TO BE PLACED AGAINST UNFINISHED WORK.

NOTES
 1. ALL VENT, VENTED SHALL BE GALVANIZED STEEL.
 2. SERVICE AIR SHALL BE PLUG WITH THE EDGE OF THE MANHOLE.
 3. FOR PRECAST MANHOLE INSTALLATION AT EXISTING PIPE, CONSTRUCTION SHALL BE TO THE TOP OF THE MANHOLE USING A TYPICAL REINFORCEMENT OF 3" DIA. PIPE MANHOLE, SEE FIGURE C-13.

NOTES
 1. ALL VENT, VENTED SHALL BE GALVANIZED STEEL.
 2. SERVICE AIR SHALL BE PLUG WITH THE EDGE OF THE MANHOLE.
 3. FOR PRECAST MANHOLE INSTALLATION AT EXISTING PIPE, CONSTRUCTION SHALL BE TO THE TOP OF THE MANHOLE USING A TYPICAL REINFORCEMENT OF 3" DIA. PIPE MANHOLE, SEE FIGURE C-13.

NOTES
 1. ALL VENT, VENTED SHALL BE GALVANIZED STEEL.
 2. SERVICE AIR SHALL BE PLUG WITH THE EDGE OF THE MANHOLE.
 3. FOR PRECAST MANHOLE INSTALLATION AT EXISTING PIPE, CONSTRUCTION SHALL BE TO THE TOP OF THE MANHOLE USING A TYPICAL REINFORCEMENT OF 3" DIA. PIPE MANHOLE, SEE FIGURE C-13.

CONNECTION TO EXISTING MANHOLE
 N.T.S.

SEWER DROP INLET DETAIL
 N.T.S.

PRECAST CONCRETE DRAIN MANHOLE
 N.T.S.

CONNECTION TO EXISTING MANHOLE
 N.T.S.

** SHOULD DISAPPROPRIATE ACTIONS BETWEEN THE CONTRACTOR, DESIGN PROFESSIONAL, CITY ENGINEER AND THE CITY OF WALTHAM STANDARDS, PROVIDED AT THE APPROVAL, THE CONTRACTOR SHALL PROVIDE THE MATERIAL AND CONSTRUCTION IN ACCORDANCE WITH THE CITY STANDARD DETAILS.



PROJECT
 FERNALD PROPERTY
 IMPROVEMENTS PROJECT
 200 TRAPPEL ROAD,
 WALTHAM, MA 02452

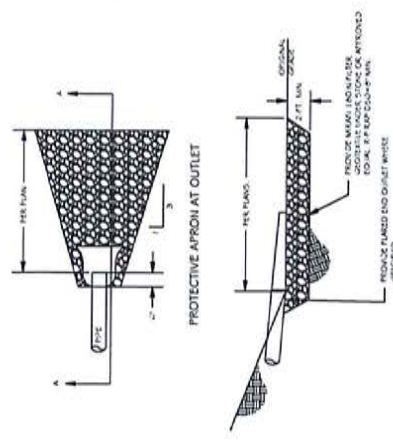
CLIENT
 CITY OF WALTHAM
 610 MAIN ST
 WALTHAM, MA 02452

NO.	REVISION	DATE
1.	REVISE SHEET CHECKERS BASED ON DRAWING CHANGES	07/17/23

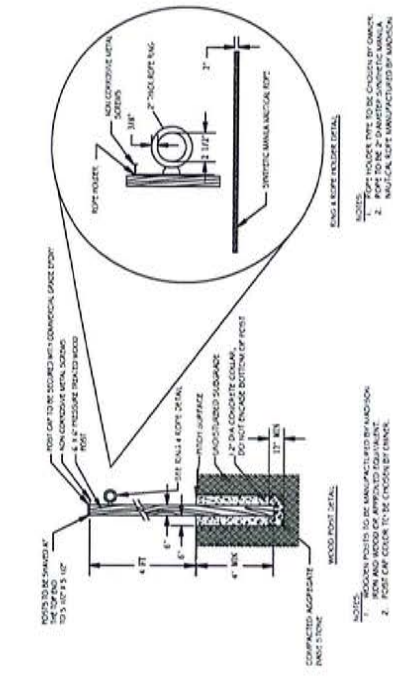
SCALE - AS NOTED
 DATE - 07/27/23
 PROFESSIONAL SEAL

**CONSTRUCTION
 DETAILS**

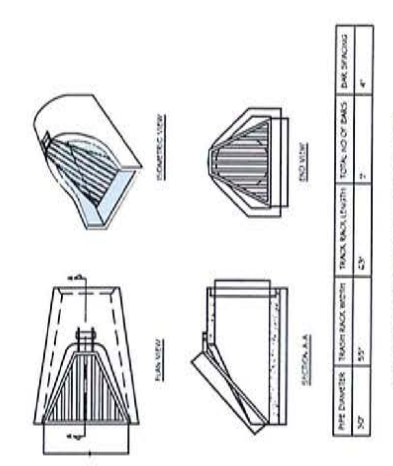
C-14



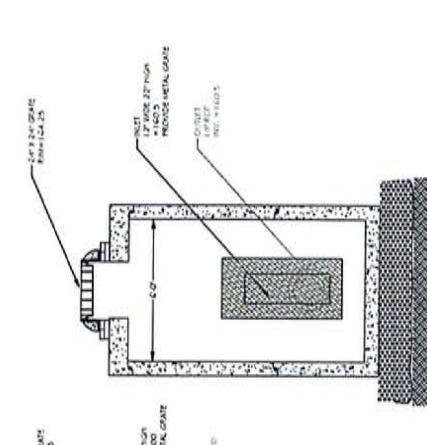
RIP-RAP OUTLET PROTECTION
 N.T.S.



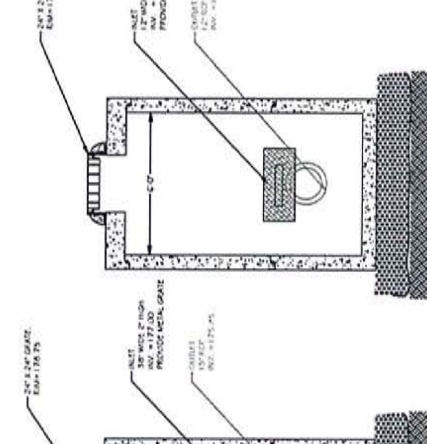
POST AND ROPE DETAIL
 N.T.S.



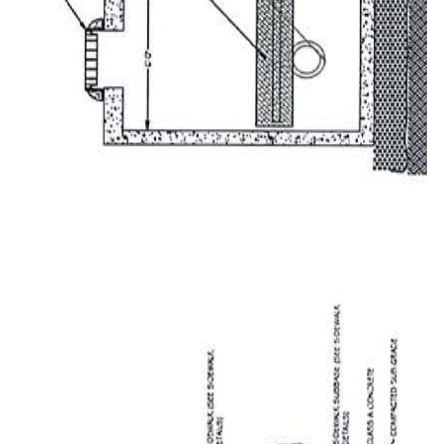
PIPE OUTLET WITH TRACK RACK
 N.T.S.



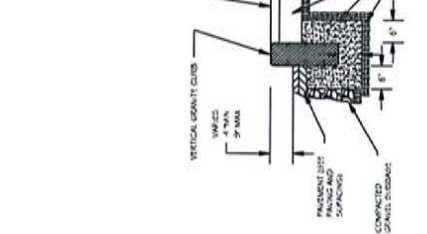
OUTLET CONTROL STRUCTURE 1
 N.T.S.



OUTLET CONTROL STRUCTURE 2
 N.T.S.



OUTLET CONTROL STRUCTURE 3
 N.T.S.



VERTICAL GRANITE CURBING
 N.T.S.



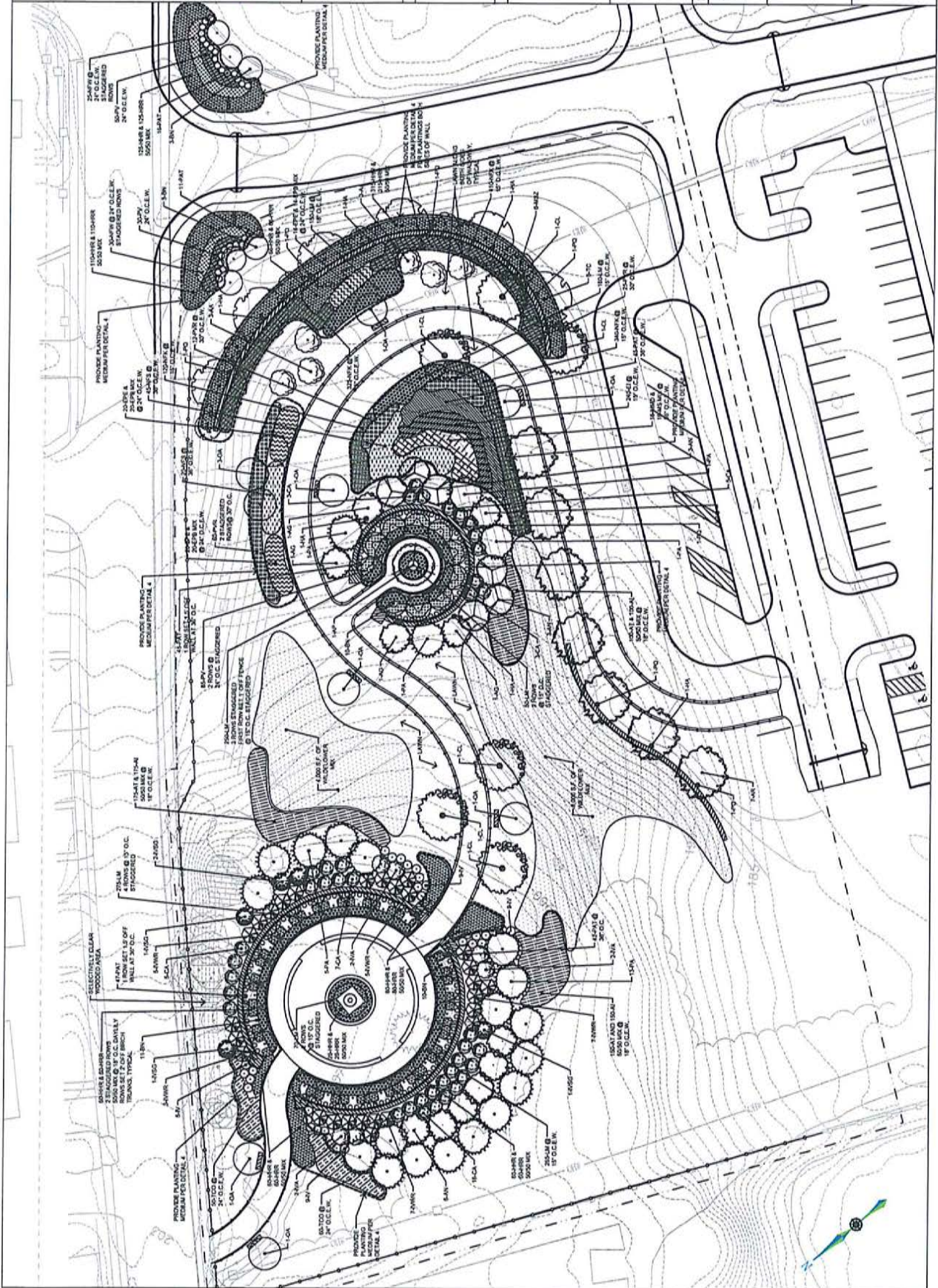
PROJECT
 FERNALD PROPERTY
 TRAPELO ROAD
 WALTHAM, MA 02453

CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date

Scale: 1"=30'-0"
 Date: 7/27/2023
 Professional Seal

PLANTING PLAN
L-1





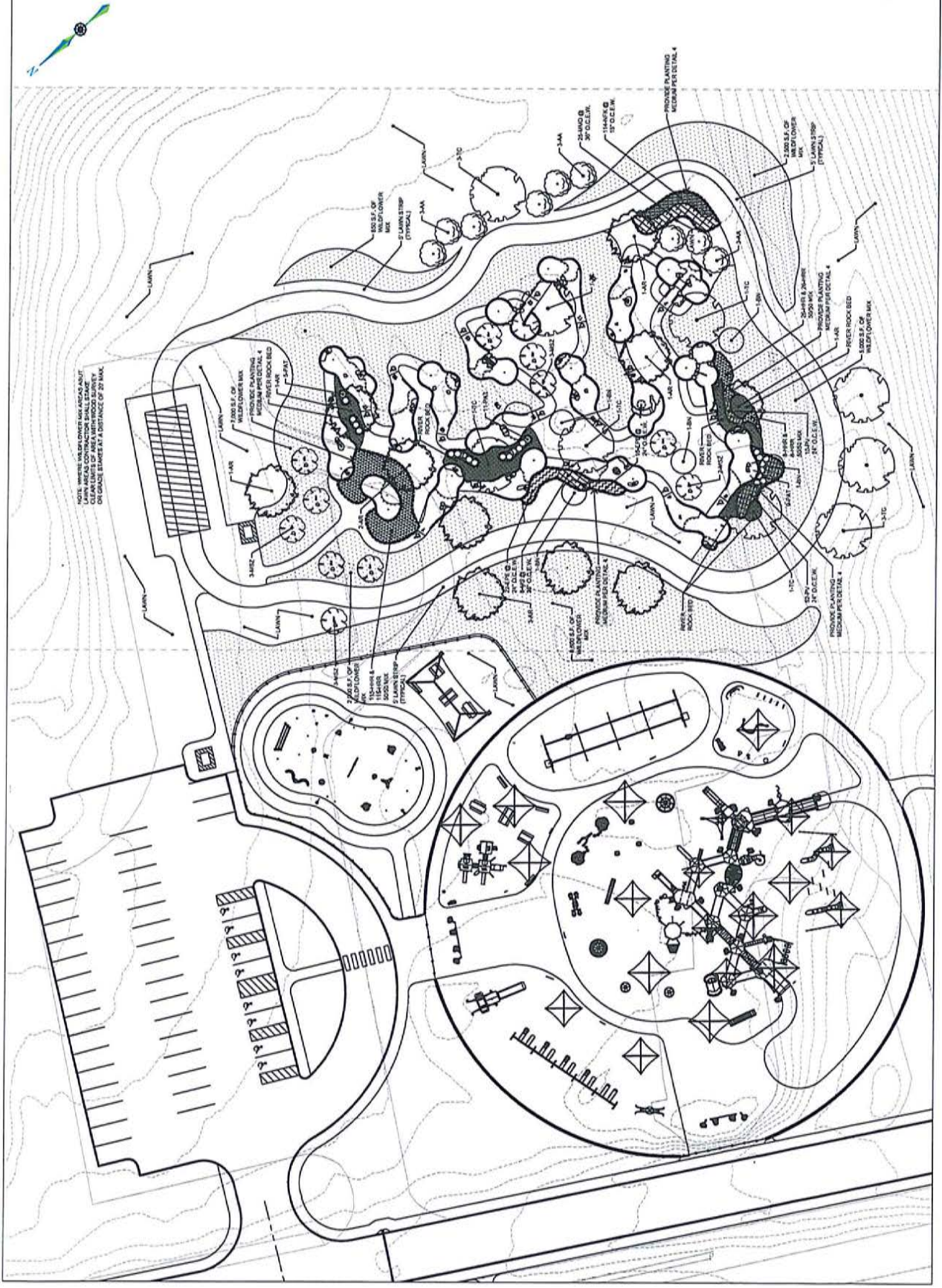
PROJECT
 FERNALD PROPERTY
 TRAPELO ROAD
 WALTHAM, MA 02453

CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date

PLANTING PLAN

L-2





PROJECT
 FERNALD PROPERTY
 TRAFPELO ROAD
 WALTHAM, MA 02453

CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date
	AS NOTED	11/27/2023
	Professional Seal	

**PLANTING
 DETAILS
 AND NOTES**

L-3

Plant Abbreviation	Common Name	Quantity
AA	American Elm	10-12' Ht. MA-66m, MB
AM	American Maple	10-12' Ht. MB
AN	American Norway Spruce	10-12' Ht. MB
AP	Asplenium Platyneuron	10-12' Ht. MB
AR	Arbutus Menziesii	10-12' Ht. MB
AS	Aspidodermis	10-12' Ht. MB
AT	American Tulip	10-12' Ht. MB
CA	Cornus	10-12' Ht. MB
CC	Cornus	10-12' Ht. MB
CD	Cornus	10-12' Ht. MB
CR	Cornus	10-12' Ht. MB
CS	Cornus	10-12' Ht. MB
CT	Cornus	10-12' Ht. MB
CU	Cornus	10-12' Ht. MB
CV	Cornus	10-12' Ht. MB
CW	Cornus	10-12' Ht. MB
CX	Cornus	10-12' Ht. MB
CY	Cornus	10-12' Ht. MB
CZ	Cornus	10-12' Ht. MB
DA	Dawsonia	10-12' Ht. MB
DB	Dawsonia	10-12' Ht. MB
DC	Dawsonia	10-12' Ht. MB
DD	Dawsonia	10-12' Ht. MB
DE	Dawsonia	10-12' Ht. MB
DF	Dawsonia	10-12' Ht. MB
EG	Eastern White Pine	10-12' Ht. MB
EH	Eastern White Pine	10-12' Ht. MB
EJ	Eastern White Pine	10-12' Ht. MB
EK	Eastern White Pine	10-12' Ht. MB
EL	Eastern White Pine	10-12' Ht. MB
EM	Eastern White Pine	10-12' Ht. MB
EN	Eastern White Pine	10-12' Ht. MB
EO	Eastern White Pine	10-12' Ht. MB
EP	Eastern White Pine	10-12' Ht. MB
EQ	Eastern White Pine	10-12' Ht. MB
ER	Eastern White Pine	10-12' Ht. MB
ES	Eastern White Pine	10-12' Ht. MB
ET	Eastern White Pine	10-12' Ht. MB
EU	Eastern White Pine	10-12' Ht. MB
EV	Eastern White Pine	10-12' Ht. MB
EW	Eastern White Pine	10-12' Ht. MB
EX	Eastern White Pine	10-12' Ht. MB
EY	Eastern White Pine	10-12' Ht. MB
EZ	Eastern White Pine	10-12' Ht. MB
FA	Fern	10-12' Ht. MB
FB	Fern	10-12' Ht. MB
FC	Fern	10-12' Ht. MB
FD	Fern	10-12' Ht. MB
FE	Fern	10-12' Ht. MB
FF	Fern	10-12' Ht. MB
FG	Fern	10-12' Ht. MB
FH	Fern	10-12' Ht. MB
FI	Fern	10-12' Ht. MB
FJ	Fern	10-12' Ht. MB
FK	Fern	10-12' Ht. MB
FL	Fern	10-12' Ht. MB
FM	Fern	10-12' Ht. MB
FN	Fern	10-12' Ht. MB
FO	Fern	10-12' Ht. MB
FP	Fern	10-12' Ht. MB
FQ	Fern	10-12' Ht. MB
FR	Fern	10-12' Ht. MB
FS	Fern	10-12' Ht. MB
FT	Fern	10-12' Ht. MB
FU	Fern	10-12' Ht. MB
FV	Fern	10-12' Ht. MB
FW	Fern	10-12' Ht. MB
FX	Fern	10-12' Ht. MB
FY	Fern	10-12' Ht. MB
FZ	Fern	10-12' Ht. MB
GA	Gardenia	10-12' Ht. MB
GB	Gardenia	10-12' Ht. MB
GC	Gardenia	10-12' Ht. MB
GD	Gardenia	10-12' Ht. MB
GE	Gardenia	10-12' Ht. MB
GF	Gardenia	10-12' Ht. MB
GG	Gardenia	10-12' Ht. MB
GH	Gardenia	10-12' Ht. MB
GI	Gardenia	10-12' Ht. MB
GJ	Gardenia	10-12' Ht. MB
GK	Gardenia	10-12' Ht. MB
GL	Gardenia	10-12' Ht. MB
GM	Gardenia	10-12' Ht. MB
GN	Gardenia	10-12' Ht. MB
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GP	Gardenia	10-12' Ht. MB
GQ	Gardenia	10-12' Ht. MB
GR	Gardenia	10-12' Ht. MB
GS	Gardenia	10-12' Ht. MB
GT	Gardenia	10-12' Ht. MB
GU	Gardenia	10-12' Ht. MB
GV	Gardenia	10-12' Ht. MB
GW	Gardenia	10-12' Ht. MB
GX	Gardenia	10-12' Ht. MB
GY	Gardenia	10-12' Ht. MB
GZ	Gardenia	10-12' Ht. MB
HA	Holly	10-12' Ht. MB
HB	Holly	10-12' Ht. MB
HC	Holly	10-12' Ht. MB
HD	Holly	10-12' Ht. MB
HE	Holly	10-12' Ht. MB
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HK	Holly	10-12' Ht. MB
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HV	Holly	10-12' Ht. MB
HW	Holly	10-12' Ht. MB
HX	Holly	10-12' Ht. MB
HY	Holly	10-12' Ht. MB
HZ	Holly	10-12' Ht. MB
IA	Iris	10-12' Ht. MB
IB	Iris	10-12' Ht. MB
IC	Iris	10-12' Ht. MB
ID	Iris	10-12' Ht. MB
IE	Iris	10-12' Ht. MB
IF	Iris	10-12' Ht. MB
IG	Iris	10-12' Ht. MB
IH	Iris	10-12' Ht. MB
II	Iris	10-12' Ht. MB
IJ	Iris	10-12' Ht. MB
IK	Iris	10-12' Ht. MB
IL	Iris	10-12' Ht. MB
IM	Iris	10-12' Ht. MB
IN	Iris	10-12' Ht. MB
IO	Iris	10-12' Ht. MB
IP	Iris	10-12' Ht. MB
IQ	Iris	10-12' Ht. MB
IR	Iris	10-12' Ht. MB
IS	Iris	10-12' Ht. MB
IT	Iris	10-12' Ht. MB
IU	Iris	10-12' Ht. MB
IV	Iris	10-12' Ht. MB
IW	Iris	10-12' Ht. MB
IX	Iris	10-12' Ht. MB
IY	Iris	10-12' Ht. MB
IZ	Iris	10-12' Ht. MB
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JB	Jasmine	10-12' Ht. MB
JC	Jasmine	10-12' Ht. MB
JD	Jasmine	10-12' Ht. MB
JE	Jasmine	10-12' Ht. MB
JF	Jasmine	10-12' Ht. MB
JG	Jasmine	10-12' Ht. MB
JH	Jasmine	10-12' Ht. MB
JI	Jasmine	10-12' Ht. MB
IJ	Jasmine	10-12' Ht. MB
JK	Jasmine	10-12' Ht. MB
IL	Jasmine	10-12' Ht. MB
JL	Jasmine	10-12' Ht. MB
JM	Jasmine	10-12' Ht. MB
JN	Jasmine	10-12' Ht. MB
JO	Jasmine	10-12' Ht. MB
JP	Jasmine	10-12' Ht. MB
JQ	Jasmine	10-12' Ht. MB
JR	Jasmine	10-12' Ht. MB
JS	Jasmine	10-12' Ht. MB
JT	Jasmine	10-12' Ht. MB
JU	Jasmine	10-12' Ht. MB
JV	Jasmine	10-12' Ht. MB
JW	Jasmine	10-12' Ht. MB
JX	Jasmine	10-12' Ht. MB
JY	Jasmine	10-12' Ht. MB
JZ	Jasmine	10-12' Ht. MB
KA	Kalmia	10-12' Ht. MB
KB	Kalmia	10-12' Ht. MB
KC	Kalmia	10-12' Ht. MB
KD	Kalmia	10-12' Ht. MB
KE	Kalmia	10-12' Ht. MB
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KG	Kalmia	10-12' Ht. MB
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KI	Kalmia	10-12' Ht. MB
KJ	Kalmia	10-12' Ht. MB
KK	Kalmia	10-12' Ht. MB
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KT	Kalmia	10-12' Ht. MB
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KV	Kalmia	10-12' Ht. MB
KW	Kalmia	10-12' Ht. MB
KX	Kalmia	10-12' Ht. MB
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KZ	Kalmia	10-12' Ht. MB
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LB	Lamb	10-12' Ht. MB
LC	Lamb	10-12' Ht. MB
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QY	Quince	10-12' Ht. MB
QZ	Quince	10-12' Ht. MB
RA	Rose	10-12' Ht. MB
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RE	Rose	10-12' Ht. MB



PROJECT

FERNALD PROPERTY
 TRAFLELO ROAD
 WALTHAM, MA 02453

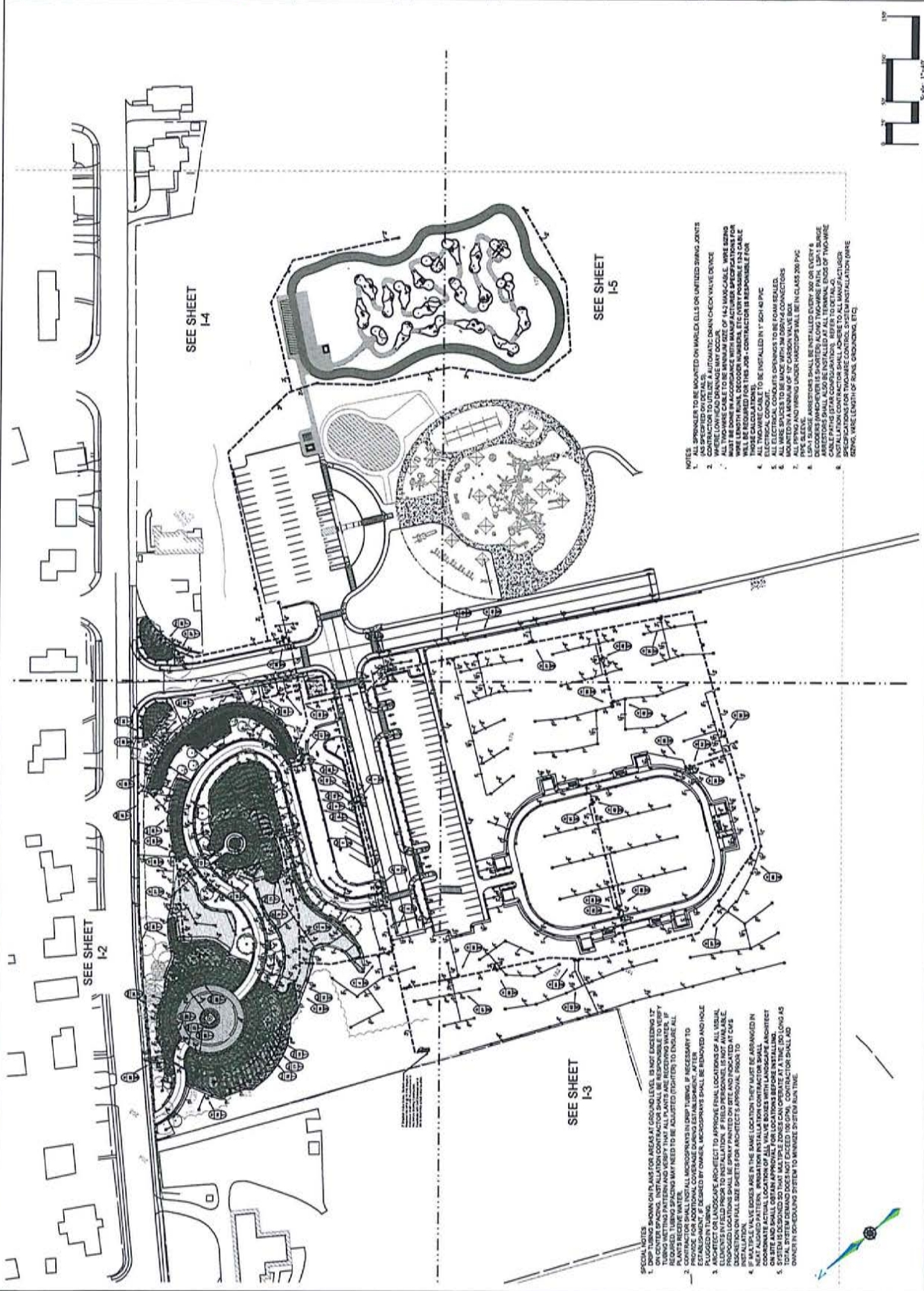
CLIENT

CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date
1	1"-50'-0"	7/28/2013
2	Professional Seal	

OVERALL
 IRRIGATION
 PLAN

I-1



- NOTES
1. APPROXIMATE TO BE MARKED ON MARKED ELLS OR UNLIMITED SWING JOINTS AND SPECIFIED ON DETAILS.
 2. CONTRACTOR TO PROVIDE A AUTOMATIC DRAIN CHECK VALVE DEVICE FOR EACH HYDRANT AND EACH VALVE.
 3. ALL THYREWIRE CABLE TO BE MINIMUM SIZE OF #12 MANG-CABLE. WIRE BEING USED FOR ALL THYREWIRE SHALL BE APPROVED BY THE CITY ENGINEER FOR ALL THYREWIRE. ALL THYREWIRE SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY ENGINEER'S SPECIFICATIONS FOR THYREWIRE. ALL THYREWIRE SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY ENGINEER'S SPECIFICATIONS FOR THYREWIRE.
 4. ALL THYREWIRE CABLE TO BE INSTALLED IN 1" SOFT 40 PVC.
 5. ALL ELECTRICAL CONDUITS DEPENDENCIES TO BE FORM SEALS.
 6. ALL WIRE SPICES TO BE MADE WITH 3M DRY-PAK CONNECTORS.
 7. ALL PIPING AND WIRING UNDER MANHOLES SHALL BE IN CLASS 200 PVC.
 8. ALL PIPING AND WIRING UNDER MANHOLES SHALL BE IN CLASS 200 PVC.
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 20. ALL PIPING AND WIRING UNDER MANHOLES SHALL BE IN CLASS 200 PVC.

- SPECIAL NOTES
1. DRY PIPING SHOWN ON PLAN FOR AREAS AT GROUND LEVEL IS NOT EXCEEDING 12" IN DIAMETER. CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 2. CONTRACTOR SHALL INSTALL MICROPIPERIES IN DRY TUBING. IF NECESSARY TO ESTABLISHMENT, IF DEGRADED BY OWNER, MICROPIPERIES SHALL BE REMOVED AND HOLE REPAIRED BY CONTRACTOR. CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 3. ARCHITECT OR LANDSCAPE ARCHITECT TO APPROVE FINAL LOCATIONS OF ALL VALVES, HYDRANTS, AND WIRING. IF FIELD PERSONNEL IS NOT AVAILABLE, CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 4. IF MULTIPLE VALVES EXIST IN THE SAME LOCATION THEY MUST BE ARRANGED IN A LINE FROM THE MAINLINE TO THE VALVE. CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 5. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 6. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 7. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 8. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 9. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.
 10. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT OR LANDSCAPE ARCHITECT ON FINAL SIZE SHEETS FOR ARCHITECT'S APPROVAL. PRIOR TO INSTALLATION, CONTRACTOR SHALL VERIFY THAT ALL PLANTS ARE RECEIVING WATER. IF PLANTS ARE NOT RECEIVING WATER, CONTRACTOR SHALL INVESTIGATE AND CORRECT AS NECESSARY TO ENSURE ALL PLANTS RECEIVE WATER.



PROJECT

FERNOLD PROPERTY
 TRAFLEO ROAD
 WALTHAM, MA 02453

CLIENT

CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

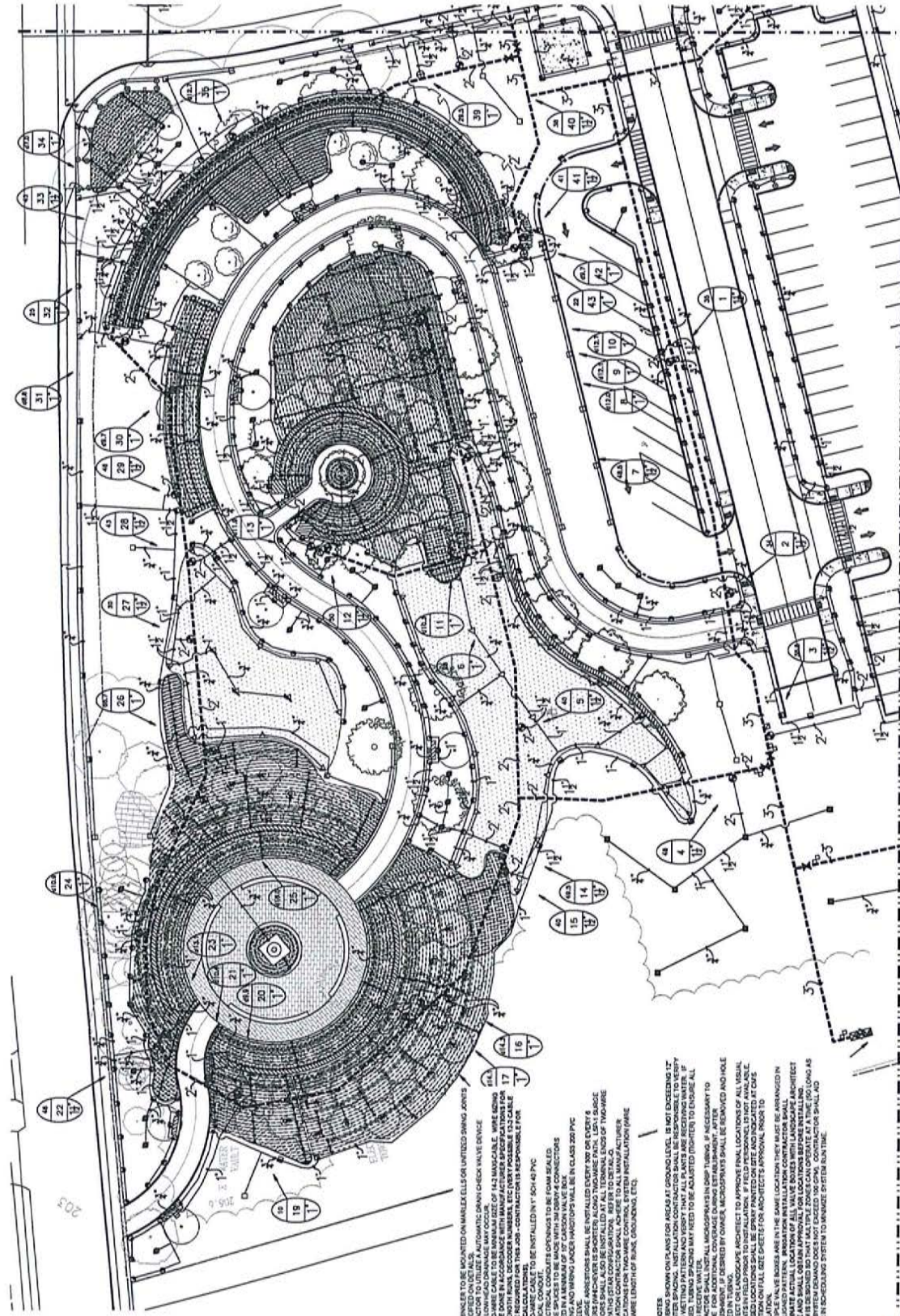
No. | Revision

Date

Scale: 1"=20'-0"
 Date: 7/28/2023
 Professional Seal

IRRIGATION PLAN

I-2



- NOTES:
1. ALL SPRINKLERS TO BE MOUNTED ON MANHOLE OR LIMITED DRINK POINTS AS SPECIFIED ON DETAILS.
 2. WASHABLE LOW-HEAD DRAINAGE MAY OCCUR.
 3. ALL WIRE CABLES TO BE MINIMUM SIZE OF 1/4" IRREDUCIBLE. WIRE BONDING SHALL BE MADE TO EACH WIRE IN THE CABLE.
 4. WIRE LENGTHS SHALL BE INDICATED ON THIS JOB - CONTRACTORS RESPONSIBLE FOR THOSE CALCULATIONS.
 5. ALL TUBING TO BE INSTALLED IN 1" SCH 40 PVC.
 6. ALL ELECTRICAL CONDUITS TO BE FOAM SEALED.
 7. PIPING AND WIRING UNDER HIGHSIDES TO BE IN CLASS 200 PVC MANHOLE BOXES.
 8. 1/2" BARGE ARRESTORS SHALL BE INSTALLED EVERY 500' OR EVERY 60' WHICHEVER IS GREATER.
 9. ALL VALVES TO BE INSTALLED AT ALL TERMINAL ENDS OF TUBING.
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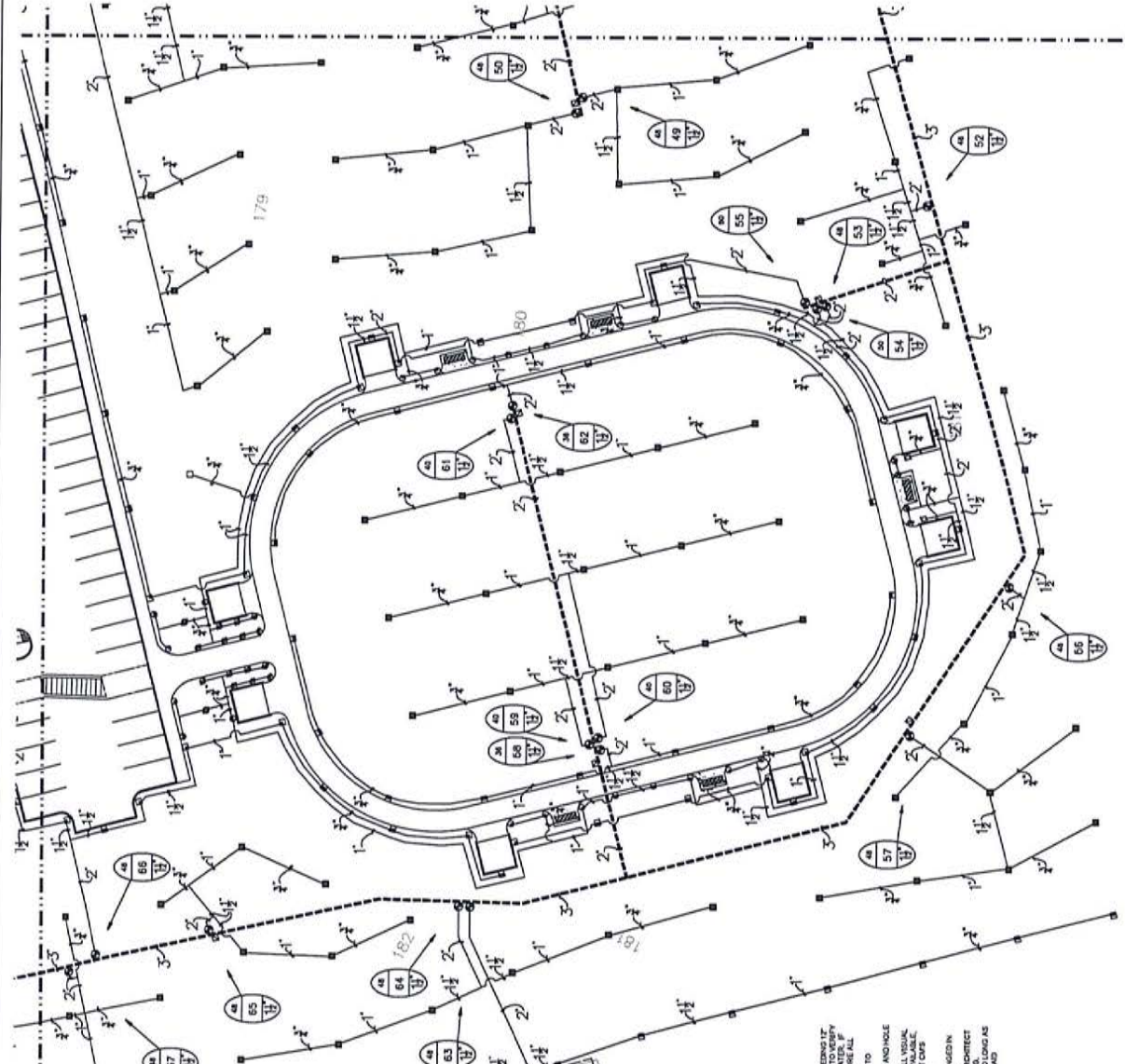
- SPECIAL NOTES:
1. DRIP TUBING SHOWN ON PLANS FOR AREAS AT GROUND LEVEL IS NOT EXCEEDING 12" IN CENTER SPACING. INSTALLATION CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF CENTER SPACING IS GREATER THAN 12".
 2. TUBING SPACING MAY NEED TO BE ADJUSTED (UP/DOWN) TO COORDINATE ALL
 3. CONTRACTOR SHALL INSTALL MICROSPRAYS IN DRIP TUBING. IF NECESSARY TO PROVIDE FOR ADDITIONAL COVERAGE DURING ESTABLISHMENT. AFTER ESTABLISHMENT IS COMPLETE, MICROSPRAYS SHALL BE REMOVED AND HOLE PLUGGED IN TUBING.
 4. ALL SPRINKLER HEADS SHALL BE PLUGGED OR SEALS SHALL BE INSTALLED ON ALL CLIENTS IN FIELD PRIOR TO INSTALLATION. IF FIELD PERSONNEL NOT AVAILABLE, PHOTOGRAPHS OF HEADS SHALL BE TAKEN AND SUBMITTED TO ARCHITECT.
 5. ALL TUBING SHALL BE INSTALLED TO A MINIMUM OF 18" FROM ALL EXISTING UTILITIES AND ALL VALVE LOCATIONS SHALL BE MARKED WITH LANTARNS AND RANGERS.
 6. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO INSTALLATION.
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 34. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO INSTALLATION.

PROJECT	FERNALD PROPERTY TRAPELO ROAD WALTHAM, MA 02453
CLIENT	CITY OF WALTHAM PARKS AND RECREATION DEPARTMENT 210 MOODY STREET WALTHAM, MA 02453

No. / Revision	Date
Scale: 1"=20'-0"	Date: 7/28/2023
Professional Seal	

IRRIGATION
PLAN

I-3



- NOTES
- 1. SPRINKLERS TO BE MOUNTED ON HANGERS ELLS OR LIMITED BENDING JOINTS AND PROTECTED ON DE WALS.
 - 2. CONTRACTOR TO VERIFY AUTOMATIC DRAW DOWN VALVE DEVICE.
 - 3. ALL TWI-WIRE CABLE TO BE MINIMUM GAGE OF #12 MANG-CABLE. WIRE BEING USED SHALL BE IDENTIFIED BY MANUFACTURER'S TRADE NAME. WIRE SHALL BE INSTALLED IN A 1/2" DIA. GALV STEEL CONDUIT WITH 1/2" DIA. WIRE BUNDLES. WIRE SHALL BE INSTALLED IN 1" DIA. GALV STEEL CONDUIT FOR THIS JOB - CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND LABELING CONDUITS.
 - 4. ALL TWI-WIRE CABLE TO BE INSTALLED IN 1" DIA 40 PVC CONDUIT.
 - 5. ALL ELECTRICAL CONDUITS OPENINGS TO BE FOAM SEALED.
 - 6. ALL WIRE SHALL BE IDENTIFIED BY MANUFACTURER'S TRADE NAME AND SHALL BE INSTALLED IN 1/2" DIA. GALV STEEL CONDUIT WITH 1/2" DIA. WIRE BUNDLES.
 - 7. ALL 1/2" BURGE ARRESTORS SHALL BE INSTALLED EVERY 200' OR EVERY 400' ON THE TWI-WIRE SYSTEM. REFER TO DETAIL FOR SPECIFICATIONS FOR TWI-WIRE CONDUIT, SYSTEM INSTALLATION (WIRE BUNDLES, WIRE LENGTH OF RUNS, GROUNDING, ETC).
 - 8. ALL 1/2" BURGE ARRESTORS SHALL BE INSTALLED EVERY 200' OR EVERY 400' ON THE TWI-WIRE SYSTEM. REFER TO DETAIL FOR SPECIFICATIONS FOR TWI-WIRE CONDUIT, SYSTEM INSTALLATION (WIRE BUNDLES, WIRE LENGTH OF RUNS, GROUNDING, ETC).
 - 9. ALL TWI-WIRE CONDUITS SHALL BE INSTALLED EVERY 200' OR EVERY 400' ON THE TWI-WIRE SYSTEM. REFER TO DETAIL FOR SPECIFICATIONS FOR TWI-WIRE CONDUIT, SYSTEM INSTALLATION (WIRE BUNDLES, WIRE LENGTH OF RUNS, GROUNDING, ETC).
 - 10. ALL TWI-WIRE CONDUITS SHALL BE INSTALLED EVERY 200' OR EVERY 400' ON THE TWI-WIRE SYSTEM. REFER TO DETAIL FOR SPECIFICATIONS FOR TWI-WIRE CONDUIT, SYSTEM INSTALLATION (WIRE BUNDLES, WIRE LENGTH OF RUNS, GROUNDING, ETC).

NOTES

- 1. SPACING SHOWN ON PLAN FOR AREAS AT GROUND LEVEL. IS NOT EXCEEDING 12' ON CENTER SPACING. INSTALLATION CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY SPACING AND TO ADJUST SPACING AS NECESSARY. TURNING SPACING MAY NEED TO BE ADJUSTED (FOR NOTES) TO ENSURE FULL COVERAGE.
- 2. CONTRACTOR SHALL VERIFY ALL MESSAGES IN SHOP DRAWINGS. IF NECESSARY TO PROVIDE FOR ADDITIONAL COVERAGE DURING ESTABLISHMENT, AFTER CONSULTATION WITH ARCHITECT.
- 3. ALL TWI-WIRE CONDUIT SHALL BE IDENTIFIED BY MANUFACTURER'S TRADE NAME AND SHALL BE INSTALLED IN 1/2" DIA. GALV STEEL CONDUIT WITH 1/2" DIA. WIRE BUNDLES.
- 4. ALL TWI-WIRE CONDUITS SHALL BE IDENTIFIED BY MANUFACTURER'S TRADE NAME AND SHALL BE INSTALLED IN 1/2" DIA. GALV STEEL CONDUIT WITH 1/2" DIA. WIRE BUNDLES.
- 5. TOTAL SYSTEM DRAINAGE DOES NOT EXCEED 100' GPM. CONTRACTOR SHALL ADJUST IN SPECIFICATIONS TO MATCH SYSTEM DRAINAGE.



Scale: 1"=20'

PROJECT
 FERNALD PROPERTY
 TRAFELO ROAD
 WALTHAM, MA 02453

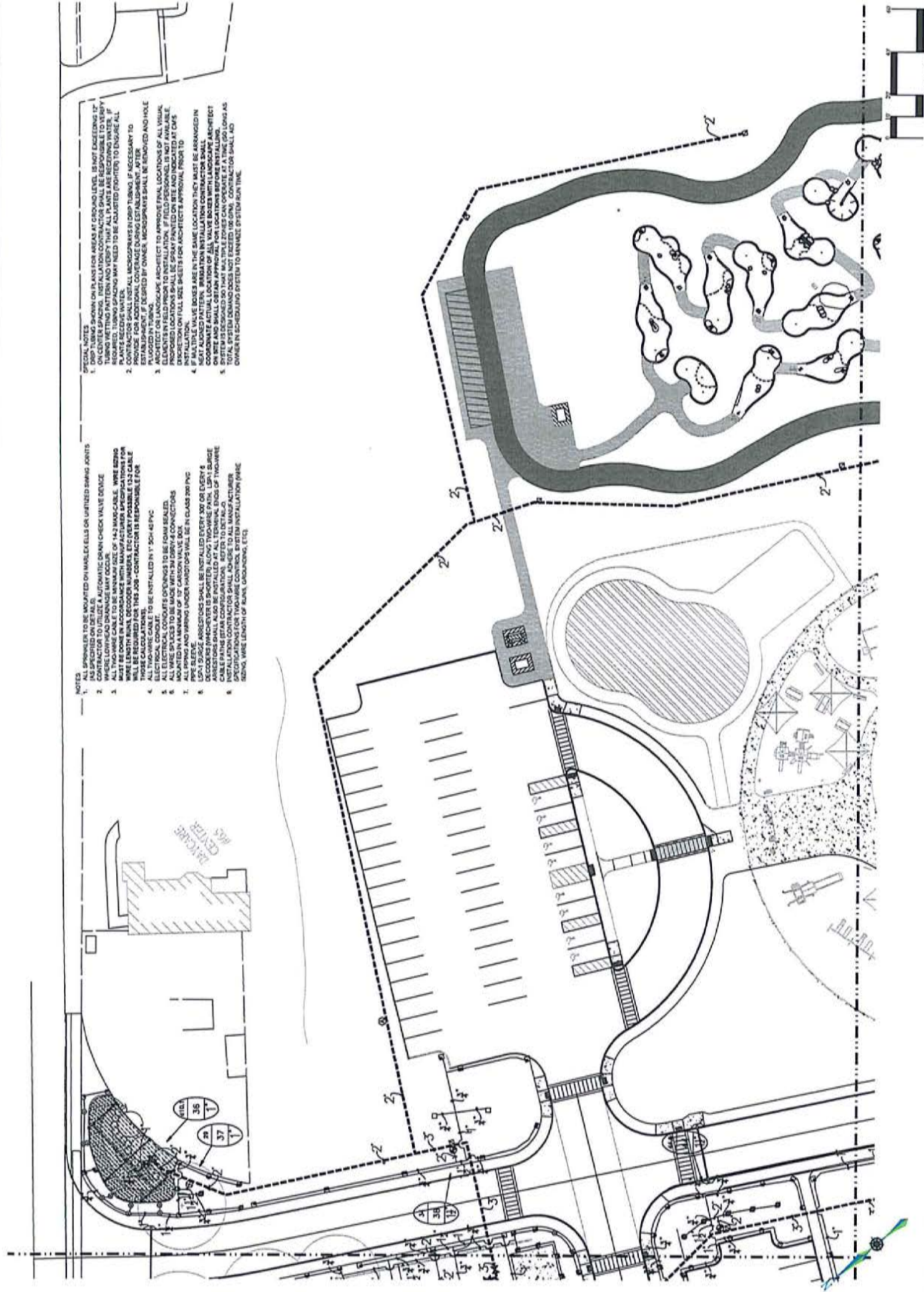
CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date

Scale: 1"=30'-0"
 Date: 7/27/2003
 Professional Seal

IRRIGATION PLAN

I-4



- NOTES**
1. ALL SPROCKETS TO BE MOUNTED ON WALLS OR VERTICAL DRIVING JOINTS.
 2. CONTRACTOR TO UTILIZE AN AUTOMATIC DRAIN CHECK VALVE DEVICE TO PREVENT BACKFLOW INTO THE MAIN WATER SUPPLY.
 3. ALL THROAT-WIRE CABLE TO BE MINIMUM SIZE OF 1/2" BOND-CABLE. WIRE BONDING MUST BE DONE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR THE CABLE TYPE. WIRE BONDING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 4. ALL THROAT-WIRE CABLE TO BE INSTALLED IN 1" 90°-45° PVC.
 5. ALL ELECTRICAL CONDUIT TO BE INSTALLED IN 1" 90°-45° PVC.
 6. ALL WIRE SPLICES TO BE MADE WITH 3/4" DRIP-FREE CONNECTIONS.
 7. ALL PIPING AND WIRING UNDER HANDICAPS SHALL BE IN CLASS 200 PVC.
 8. ALL VALVES AND SPROCKETS SHALL BE INSTALLED EVERY 300' OR EVERY 4' DECORATIVE HANDICAPERS TO SHORTER, ALONG THROAT-WIRE PATH. LAP SURGE SHALL BE 10' TO 15'.
 9. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO DETAIL TO DETERMINE THE LENGTH OF RAIN GARDENS, ETC.

- SPECIAL NOTES**
1. CONTRACTOR TO VERIFY ALL ELEVATIONS AND LEVELS. BE MOST CAREFUL IN ALL CENTER SPACING. INSTALLATION CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATIONS AND LEVELS. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL CENTER SPACING. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL CENTER SPACING.
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Scale: 1"=30'

PROJECT
 FERNALD PROPERTY
 TRAFLELO ROAD
 WALTHAM, MA 02453

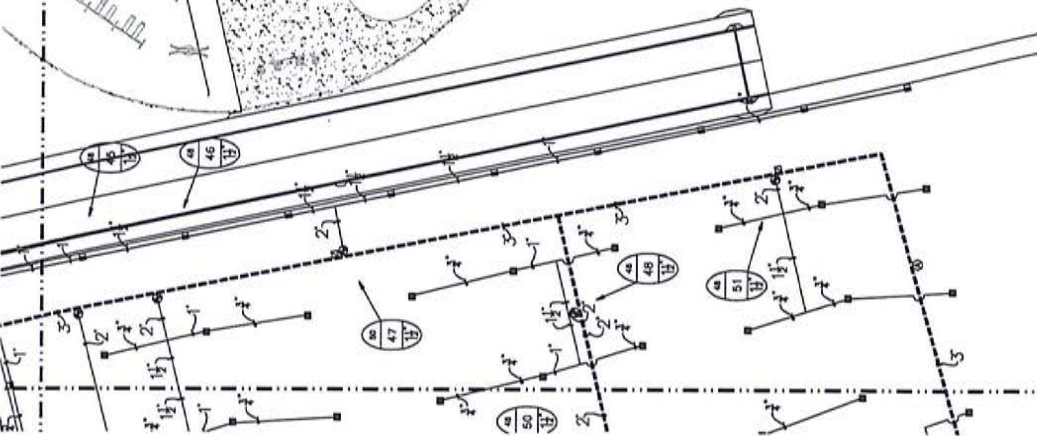
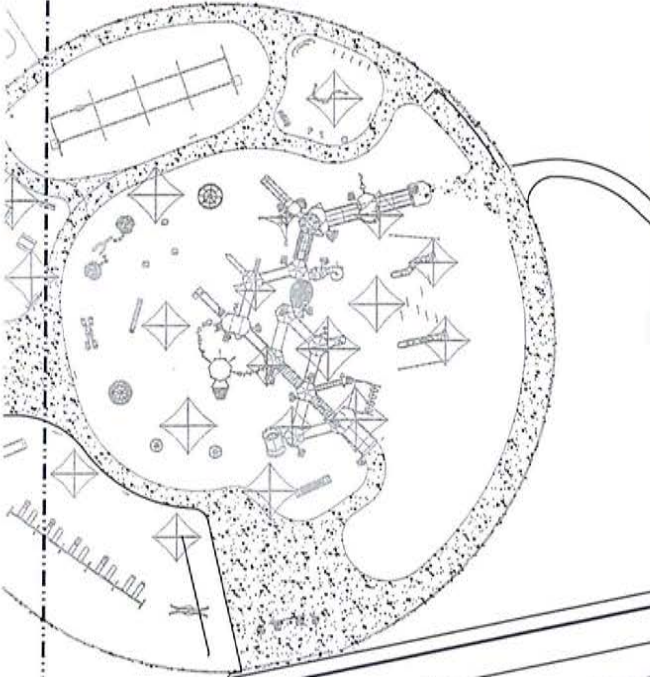
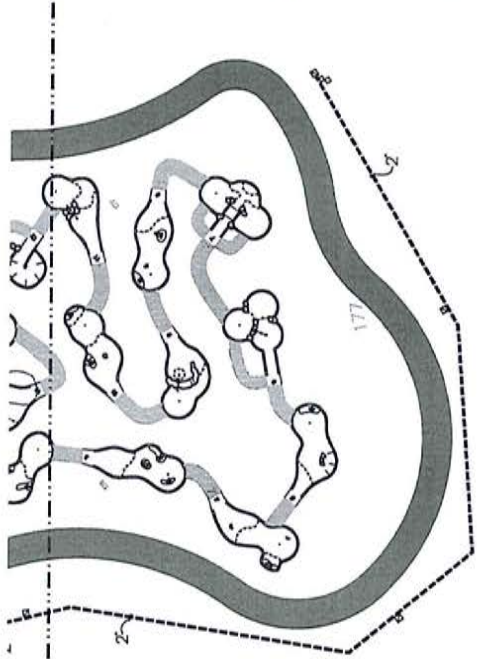
CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date

Scale: 1"=20'-0"
 Date: 7/28/2023
 Professional Seal

**IRRIGATION
 PLAN**

I-5



SPECIAL NOTES
 1. DWP TUBING SHOWN ON PLANS FOR AREAS AT GROUND LEVEL IS NOT EXCEEDING 12' DEPTH. CONTRACTOR SHALL VERIFY ALL TUBING IS AT GROUND LEVEL AND ADJUST TO DEPTH AS REQUIRED. TUBING SPACING MAY NEED TO BE ADJUSTED (TIGHTER) TO COARSE ALL AREAS TO BE IRRIGATED.
 2. CONTRACTOR SHALL INSTALL MICROSPRINKS IN DWP TUBING, IF NECESSARY TO IRRIGATE AREAS AT GROUND LEVEL. CONTRACTOR SHALL VERIFY ALL TUBING IS AT GROUND LEVEL. ESTIMATED TUBING LENGTHS ARE SHOWN ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING TUBING LENGTHS AND ADJUSTING AS NECESSARY.
 3. ALLOWED IN TUBING: (A) MICROSPRINKS TO APPROXIMATE FINAL LOCATIONS OF ALL VALVE ELEMENTS IN FIELD PRIOR TO INSTALLATION. IF FIELD PERSONNEL IS NOT AVAILABLE, CONTRACTOR SHALL VERIFY TUBING LENGTHS AND ADJUST AS NECESSARY. (B) CONTRACTOR SHALL VERIFY TUBING LENGTHS AND ADJUST AS NECESSARY. (C) CONTRACTOR SHALL VERIFY TUBING LENGTHS AND ADJUST AS NECESSARY.
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 9. CONTRACTOR SHALL VERIFY TUBING LENGTHS AND ADJUST AS NECESSARY.
 10. CONTRACTOR SHALL VERIFY TUBING LENGTHS AND ADJUST AS NECESSARY.

NOTES
 1. ALL SPRINKLER HEADS TO BE MOUNTED ON MANHOLE ELLS OR UNLIMITED DRIVING JOINTS.
 2. CONTRACTOR TO UTILIZE AN AUTOMATIC CHECK VALVE DEVICE.
 3. ALL TUBING SHALL BE 1/2" OR 3/4" POLYETHYLENE GLASS REINFORCED (PEGR) TUBING. ALL TUBING SHALL BE 1/2" OR 3/4" POLYETHYLENE GLASS REINFORCED (PEGR) TUBING. ALL TUBING SHALL BE 1/2" OR 3/4" POLYETHYLENE GLASS REINFORCED (PEGR) TUBING.
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Scale: 1"=20'


ENGINEERING
 607-506-2772
 WWW.NESRA.COM
 829 SOUTH WASHINGTON STREET
 NORTH ATTLEBORO
 MASSACHUSETTS 02760



PROJECT
 FERNALD PROPERTY
 TRAFLELO ROAD
 WALTHAM, MA 02453

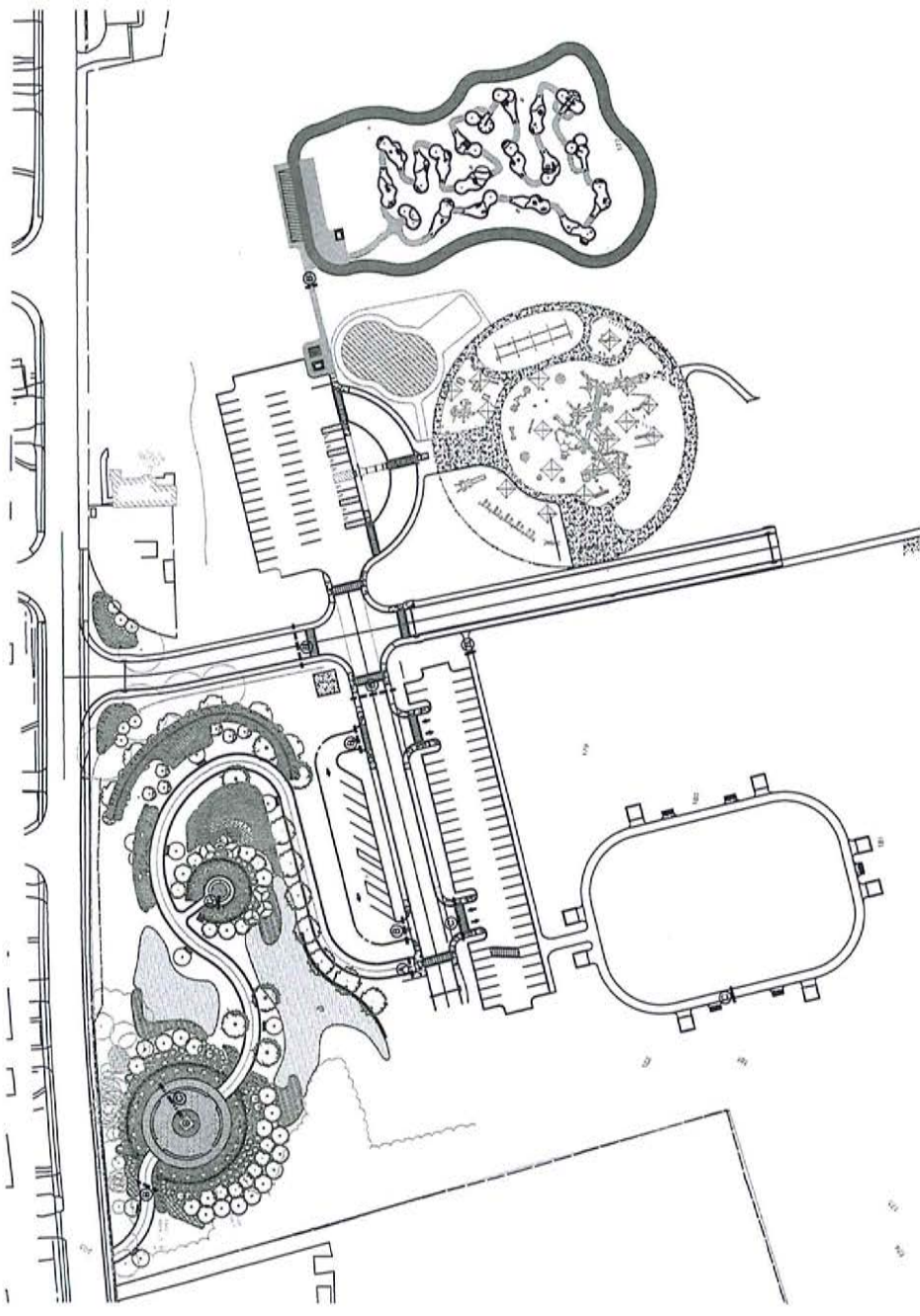
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 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

No.	Revision	Date

Scale: 1"=50'-0"
 Date: 7/28/2023
 Professional Seal

**IRRIGATION
 SLEEVING
 PLAN**

I-6



- SLEEVING LEGEND**
- 
 8" CLASS 200 PVC IRRIGATION SLEEVE
 - 
 6" CLASS 200 PVC IRRIGATION SLEEVE
 - 
 4" CLASS 200 PVC IRRIGATION SLEEVE












































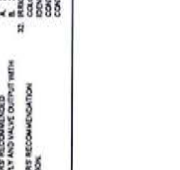
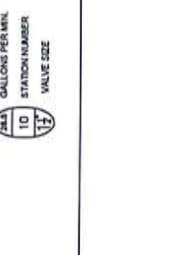
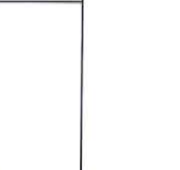
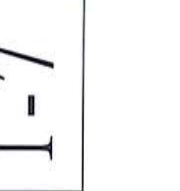
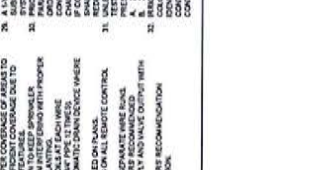
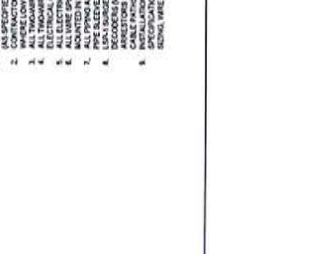
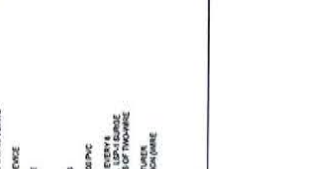
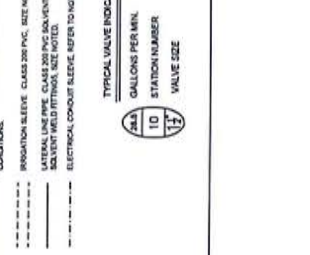
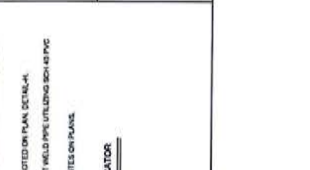
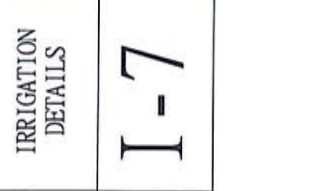
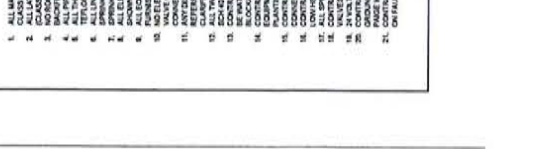
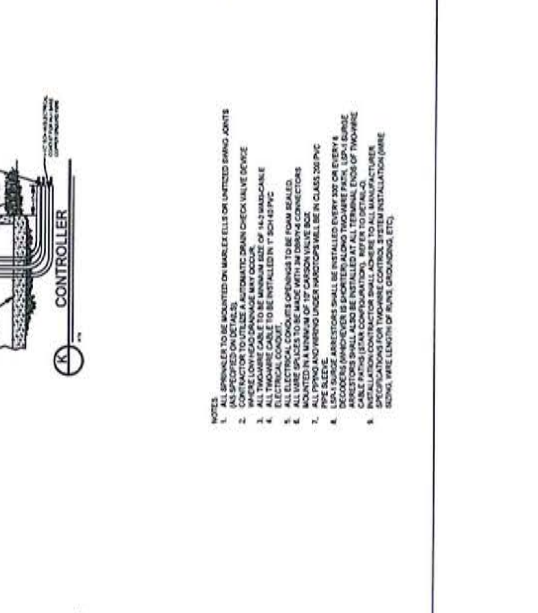
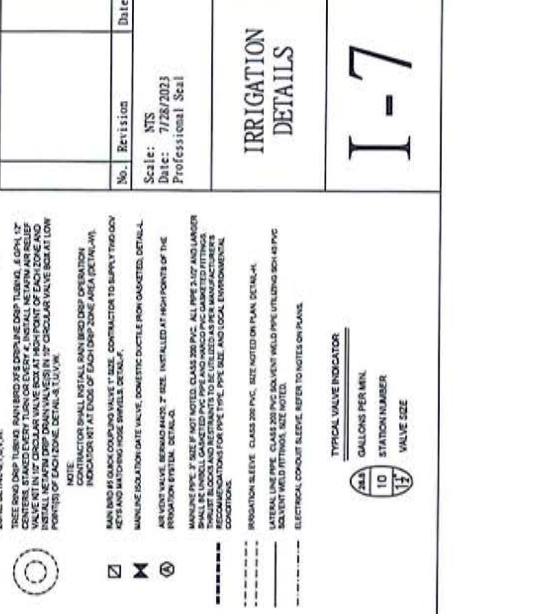
SLEEVING



PROJECT	CLIENT
FERNALD PROPERTY TRAFALGO ROAD WALTHAM, MA 02453	CITY OF WALTHAM PARKS AND RECREATION DEPARTMENT 210 MOODY STREET WALTHAM, MA 02453

No.	Revision	Date
1	N/S	7/28/2023
2	PROVISION	08/1/2024

IRRIGATION LEGEND	
	MANUAL MAIN VALVE. 8" PVC TRIPLE UNION MAIN VALVE. DETAIL C.
	RAINFREEZE SENSOR. DETAIL D.
	RAINFREEZE SENSOR. DETAIL D.
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Scale: N/S
 Date: 7/28/2023
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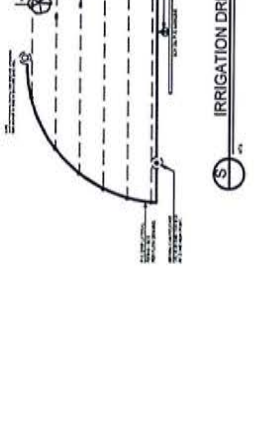
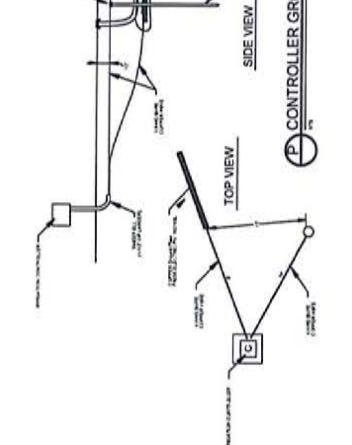
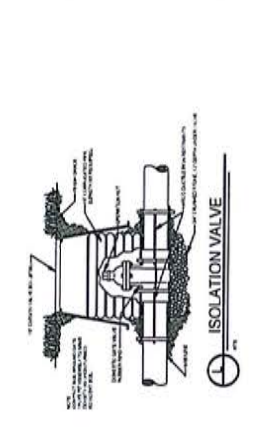
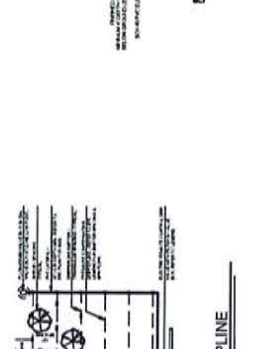
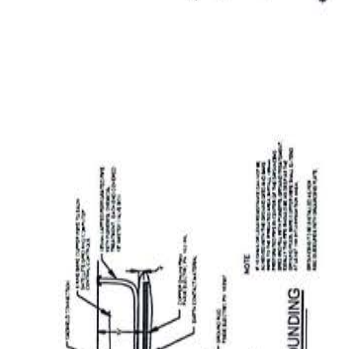
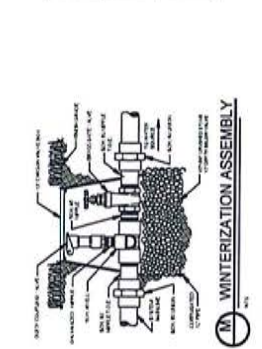
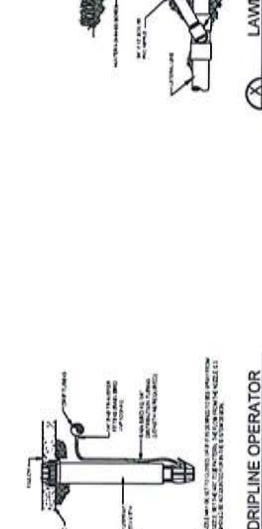
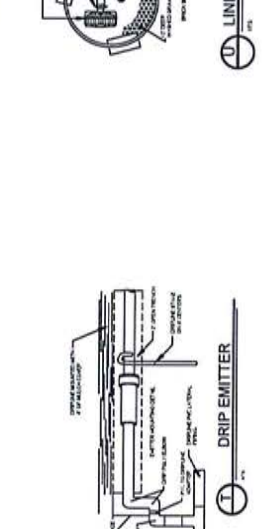
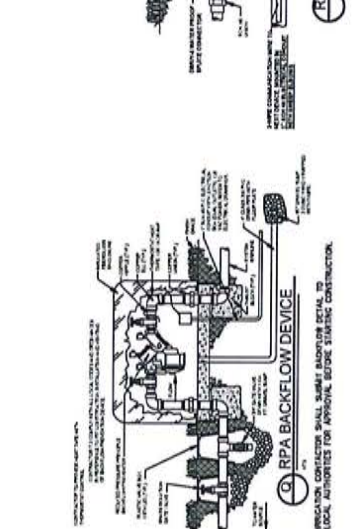
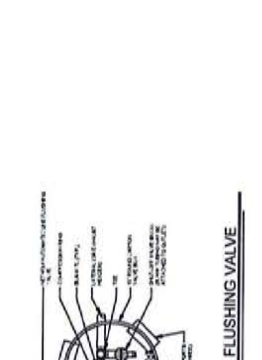
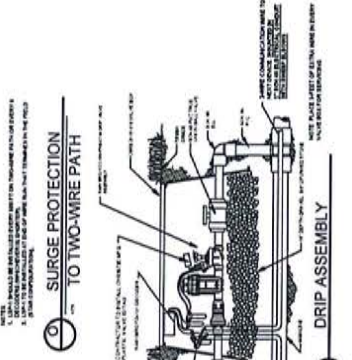
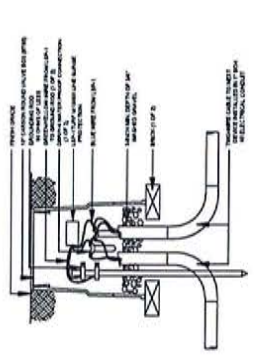
Scale: N/S
 Date: 7/28/2023
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PROJECT
 FERNALD PROPERTY
 TRAFLELO ROAD
 WALTHAM, MA 02453

CLIENT
 CITY OF WALTHAM
 PARKS AND RECREATION
 DEPARTMENT
 210 MOODY STREET
 WALTHAM, MA 02453

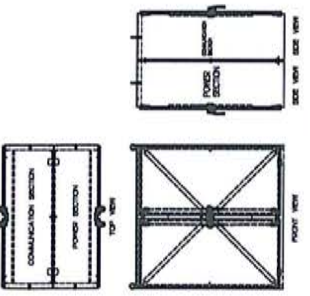
No.	Revision	Date

**IRRIGATION
 DETAILS**



DESCRIPTION	VOLUME		FINISH		PAINT		GLASS		TYPE OF MAIN SEAL		TYPE OF MAIN SEAL	TYPE OF GLASS
	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft		
ENCLOSURE #1	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #2	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #3	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #4	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #5	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #6	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #7	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #8	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #9	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #10	100	100	100	100	100	100	100	100	100	100	100	100

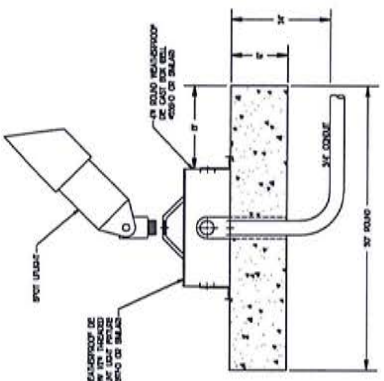
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	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	sq ft		
ENCLOSURE #1	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #2	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #3	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #4	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #5	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #6	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #7	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #8	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #9	100	100	100	100	100	100	100	100	100	100	100	100
ENCLOSURE #10	100	100	100	100	100	100	100	100	100	100	100	100



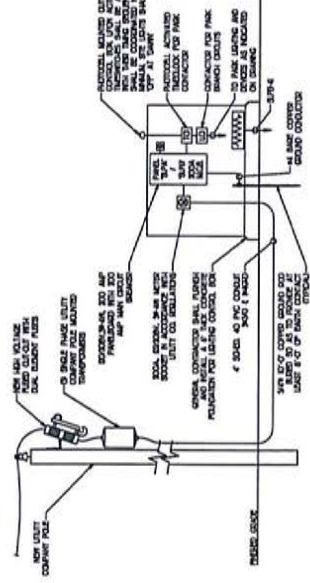
74"X24" WEATHER-PROOF ENCLOSURE
SCALE: 1/4" = 1'-0"

ENCLOSURE NOTES:

- THE ENTIRE ENCLOSURE SHALL BE FINISHED WITH A CONCRETE AND MANUFACTURED BY LITTON. THE ENCLOSURE SHALL BE FINISHED WITH A WEATHER-PROOF FINISH AND A POWER-PLATE MOUNTED TO THE FRONT PANEL. THE ENCLOSURE SHALL BE FINISHED WITH A WEATHER-PROOF FINISH AND A POWER-PLATE MOUNTED TO THE FRONT PANEL. THE ENCLOSURE SHALL BE FINISHED WITH A WEATHER-PROOF FINISH AND A POWER-PLATE MOUNTED TO THE FRONT PANEL.
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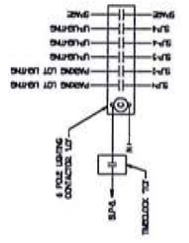


LIGHT MOUNTING DETAIL
SCALE: 1/4" = 1'-0"



DISTRIBUTION ONE-LINE DIAGRAM (TYPICAL FOR BOTH SERVICES)
SCALE: 1/4" = 1'-0"

- FOR THE LIGHTING SERVICE, THE DISTRIBUTION ONE-LINE DIAGRAM SHALL BE FINISHED WITH A WEATHER-PROOF FINISH AND A POWER-PLATE MOUNTED TO THE FRONT PANEL. THE DISTRIBUTION ONE-LINE DIAGRAM SHALL BE FINISHED WITH A WEATHER-PROOF FINISH AND A POWER-PLATE MOUNTED TO THE FRONT PANEL.
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LIGHTING FIXTURE SCHEDULE
SCALE: 1/4" = 1'-0"

ITEM	DESCRIPTION	QTY	REMARKS
1	4\"/>	1	SEE LIGHT SCHEDULE
2	4\"/>	1	SEE LIGHT SCHEDULE
3	4\"/>	1	SEE LIGHT SCHEDULE
4	4\"/>	1	SEE LIGHT SCHEDULE
5	4\"/>	1	SEE LIGHT SCHEDULE
6	4\"/>	1	SEE LIGHT SCHEDULE
7	4\"/>	1	SEE LIGHT SCHEDULE
8	4\"/>	1	SEE LIGHT SCHEDULE
9	4\"/>	1	SEE LIGHT SCHEDULE
10	4\"/>	1	SEE LIGHT SCHEDULE

PROJECT:
FERNALD PROPERTY IMPROVEMENTS PROJECT PHASE I
200 TRAPELO ROAD, WALTHAM, MA 02452

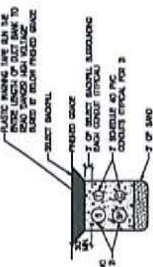
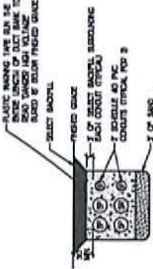
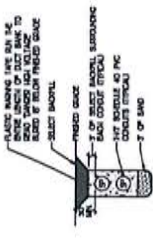
CLIENT:
CITY OF WALTHAM
610 MAIN ST
WALTHAM, MA 02452

NO. _____ **REVISION** _____ **DATE** _____

SCALE - AS NOTED
DATE - 09/15/23
PROFESSIONAL SEAL

ELECTRICAL DETAILS

ESO. 2



CLASSIC MARKING LIKE SHOWN SHALL BE USED FOR ALL DUCT BANKS TO INDICATE LOCATION OF DUCT BANK TO BE INSTALLED. MARKING SHALL BE PLACED AT REGULAR INTERVALS ALONG THE LENGTH OF THE DUCT BANK TO BE INSTALLED. MARKING SHALL BE PLACED AT REGULAR INTERVALS ALONG THE LENGTH OF THE DUCT BANK TO BE INSTALLED. MARKING SHALL BE PLACED AT REGULAR INTERVALS ALONG THE LENGTH OF THE DUCT BANK TO BE INSTALLED.

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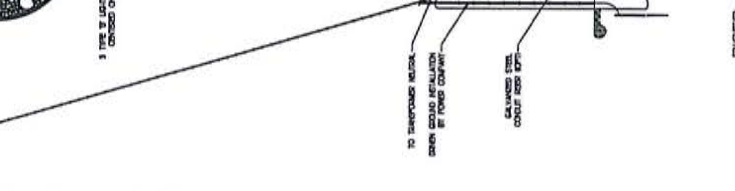
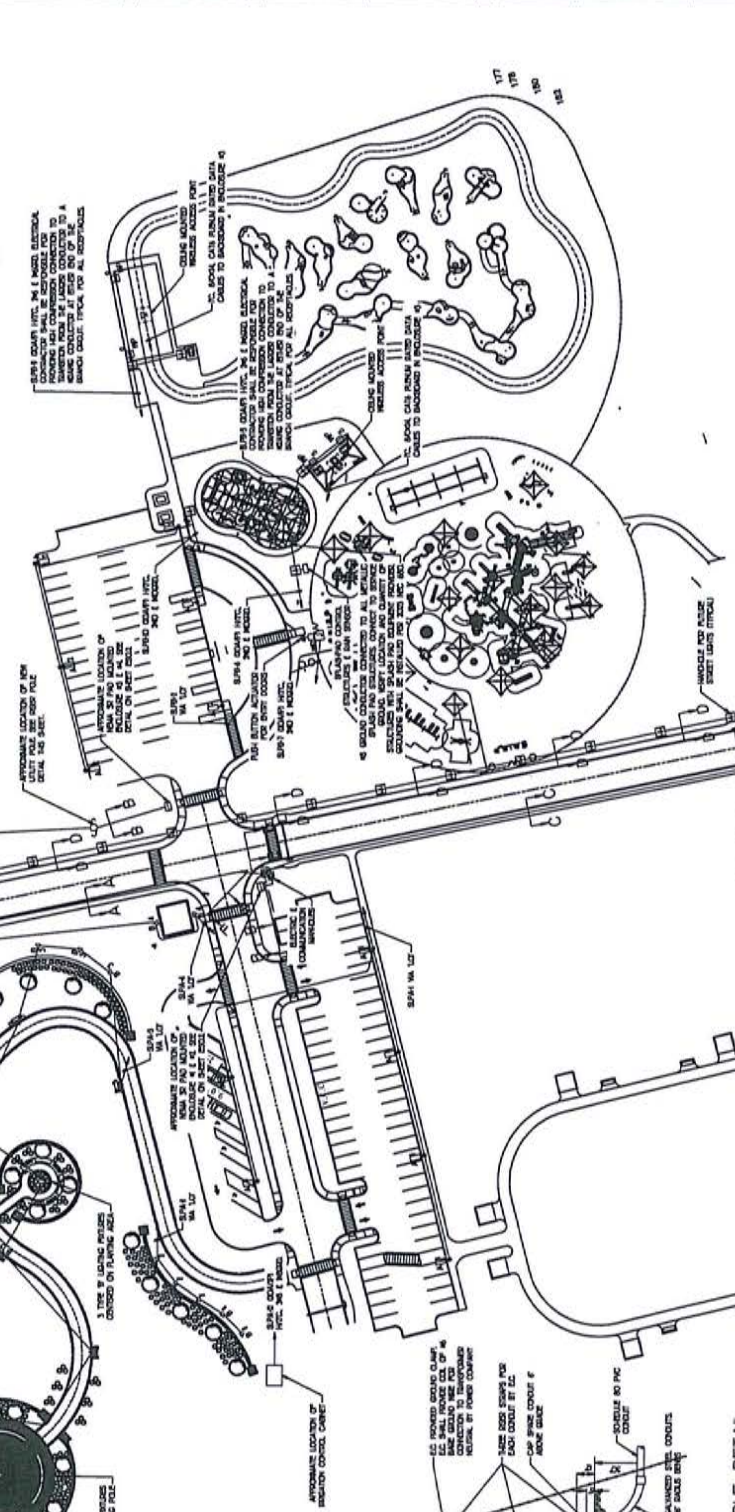
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ADDENDA

THE CITY OF WALTHAM
MASSACHUSETTS

PURCHASING DEPARTMENT

190 Trapelo Rd Improvements, 2023

ADDENDUM NO. 1

October 16, 2023

CHANGES, CORRECTIONS AND CLARIFICATIONS

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications. The items set forth herein, whether of omission, addition, substitution, or clarification are all to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM (NO. 1) MUST BE ACKNOWLEDGED ON YOUR BID FORM.

ITEM 1: CLARIFICATION

- The Completion time for this project shall be **270 Days from Notice to Proceed.**

ITEM 2: DELETE AND REPLACE

- **DELETE SECTION 32 14 13 UNIT PAVING -NON-PERMEABLE and REPLACE with attached**
- **DELETE SK-1 DESIGN CLARIFICATIONS and REPLACE with attached.**
- **DELETE SK-2 DRAINAGE CLARIFICATIONS and REPLACE with attached.**

ITEM 2: ANSWERS TO QUESTIONS

Q1. The "Site Requirements" spec section says the contractor pays for police but the bid form says to carry \$10,000 allowance. Will the police details be reimbursed through this allowance?

A1. Police Details will be reimbursed through this allowance.

Q2. The drainage plan has some pipe runs labeled two or three different sizes. Please review and clarify the correct pipe sizes.

A2. - Revised Plan Attached.

Q3. Drawing C-7 shows a drainage basin going off the bottom left side of the page. This is also outside the limit of work shown on other drawings. Is this part of the bid? If it is please provide a plan showing the rest of the work that is cut off.

A3. Revised Plan Attached.

Q4. Some of the details in the drawings are a little different than the details in the “City of Waltham Standard Details” appendix section of the specs. Please confirm we should be using the details on the drawings for bidding purposes.

A4. Whenever there are discrepancies, the City of Waltham Standards shall govern. Carry City of Waltham for bidding purposes.

Q5. The plans call out a “20” high black polished granite seat wall.” Can you provide a spec and detail for this?

A5. See SK-1 Design Clarifications.

Q6. Can you clarify the “retaining wall with capping stone and pillars”? The plans say not to exceed 30” in height and a detail on drawing C-12 shows a max height of 21”. What are the details on drawing C-11 for that show retaining walls up to 4’ and taller than 4’ as I don’t see these on the layout plans? There are specs for unilock blocks and versa lok-blocks that both appear to be for this 30” and/or 21” tall retaining wall with pillars so do we have the option to choose which one we want to use?

A6. The Memorial area seat wall shall be 21” The retaining wall that is used for soil retention shall be 30” or less, otherwise fencing/guard rail is required per code.

Q7. At the pre-bid it was mentioned that test pits were done in the work area. Can you provide this information to give bidders an idea of the subsurface conditions?

A7. A field test pit was excavated to determine dept of ledge at the top of the memorial area. Ledge was not discovered. Depth of test pit was 6-ft. No additional information is available for soils.

Q8. Demo - Please clarify which trees are to be removed. Trees appear to be circled, but its unclear whether they are to be removed or not since there is no note or anything called out in the legend. There are also some notes for trees to be cleared and pruned on the Trapelo Road line. Please clarify.

A8. All trees that are circled shall be removed. All trees that are 5” caliper or small in the memorial area shall be removed. Remaining trees in the area shall be pruned.

Q9. Electrical – Please indicate the size of the (2) electrical manholes and (1) communication manhole on *Drawing ES-1.1*.

A9. Manholes should be a minimum of 4’x6’x6’ precast. Exact dimensions should be coordinated with the respective utility company.

Q10. Electrical – The security gate at the splash pad shows a push button actuator for opening the gate. Please provide more information on wiring required to integrate this. *Drawing ES-1.1*.

A10. The gate will require a 120-volt feed for the operator and control box. The gate should be provided with a keypad and limit switch. Wiring diagrams should be provided from the manufacturer.

Q11. Irrigation – Is a conduit required for all of the irrigation wiring?

A11. All two-wire cable is to be installed in conduit

Q12. Irrigation – Please provide make/model/size of backflow enclosure to be installed.

A12. The backflows should be Watts model 009 Reduced Pressure Zone Assembly Backflow Preventers. They should be the same size as the water line they is on. A spec sheet for the 009 is attached for reference.

Q13. Irrigation – Does the Backflow need to be heated if the system will be winterized yearly? Will the water meter be going in this same cabinet?

A13. Water meter will be in the same cabinet. Backflow will be removed and winterized.

Q14. Irrigation – Please provide the make/model and location of the Irrigation controller. (not shown on the irrigation plan)

A14. That is shown on sheet I-7 Drip edge shall be Rain Bird ESP-LXD with 75 station expansion module. The City standard for Irrigation Controls are Hunter.

Q15. Irrigation – Drawing Pages I-1 & I-6 both state a scale of 1" = 40', however, the scale line indicated 1" = 50'. Please clarify which measurement to use. Assuming 1" = 50" is the desired scale.

A15. Those sheets are 1"=50'

Q16. Does the city want to keep the granite curbing that is to be removed.

A16. Yes, any salvaged granite curbing shall be placed at the construction entrance and CPW will pick them up.

Q17. Musco lighting is called out in the legend, but no Musco lighting is shown in the plans or specs. Please clarify if Musco lighting is intended for the Project.

A17. The reference is in the Nesra Standard Legend. There are no Musco lights existing or proposed for this project.

Q18. The Concrete Culvert located on site has been vandalized with graffiti. Is the intent to clean the culvert to remove the graffiti?

A18. What is referred to as a Culvert is a Retaining wall. It shall be demolished. The adjacent catch basins and drainage lines shall be removed as well and the line capped. Contractor shall carry demolition of 86-ft long concrete wall, 1-ft thick and 10-ft total height.

Q19. Where is the Train located on this Project? Is the intent to have it ride around the path around the Mini Golf Course? Please clarify.

A19. Yes, that is correct. The electric train is on wheels and will be driven on the path round the mini golf.

Q20. Will a Hardscape Plan be provided to show which pavers are required in their respective locations? Spec shows Products desired, but no locations are called out.

A20. – See SK-1

Q21. PIP Surfacing – Are all of the Pads located on the outside of the Concrete Walking Track at the Recreation Area to have PIP Surfacing? Of the 7 pads, only 3 show the surface in bold. The others are in grey scale. Please clarify.

A21. YES, all pads shall have PIP surfacing. Depth in accordance with the equipment fall zones.

Q22. Please provide clarification on traffic signs. Plans state signage is required but no locations and sign types are indicated.

A22. See SK-1

Q23. Please identify locations for silt sacks to be installed for erosion control measures.

A23. Contractor shall include in the bid installation of 6 silt sacks. Actual locations will be determined in the field.

Q24. The spec calls for certain paints and stains to be used, but it isn't clear what product is to be used in specific locations, making it difficult to for our painters to quantify how much to carry for product and where they are to be applied.

A24. Contractors are to provide the following anti-graffiti coating on all walls. The owner's and engineer's approval is required prior to installation on the Unilock and granite walls.

Sherwin-Williams Anti-graffiti Clear #B97C150.

Sherwin-Williams

325 New State Highway Suite 9

Raynham, MA 02767-5467

(508) 821-4010

Or approved equal.

Q25. Fencing – Please provide clarification on fencing. Fence height around playground and splash pad indicates 6' on the drawings and 4' in the spec. Need clarification.

A25. Provide 4-ft for playground and splash pad.

Q26. Fencing – Where the perimeter fencing at mini golf meets the playground fencing/splash pad fencing, the heights are unclear. Is this transition to be 4' or 6'?

A26. 6-ft for Mini Golf.

Q27 Fencing – specs call out for Decorative Fence GMBH. What does GMBH stand for?

A27 GMBH is the corporate definition for LEGI. It has nothing to do with the product. This is a model number. Waive mesh is required for this project. We are informed that B or Lite fence posts will not work with the waive top, contractor to provide R type posts. Full description of the model is

RP-Suno-R+K fence model. For additional information contact:

Mary Cutchin, President

Outerspace Landscape Furnishings

7533 Draper Avenue

La Jolla Ca 92037

cell 858 729 3888

or approved equal.

Q28 Fencing Can you provide more information on the LEGI / Decorative fence? The specification is leaving it open ended for the City to choose a style during the submittal process. There are many different styles with different costs.

A28

See A27 and photo below:



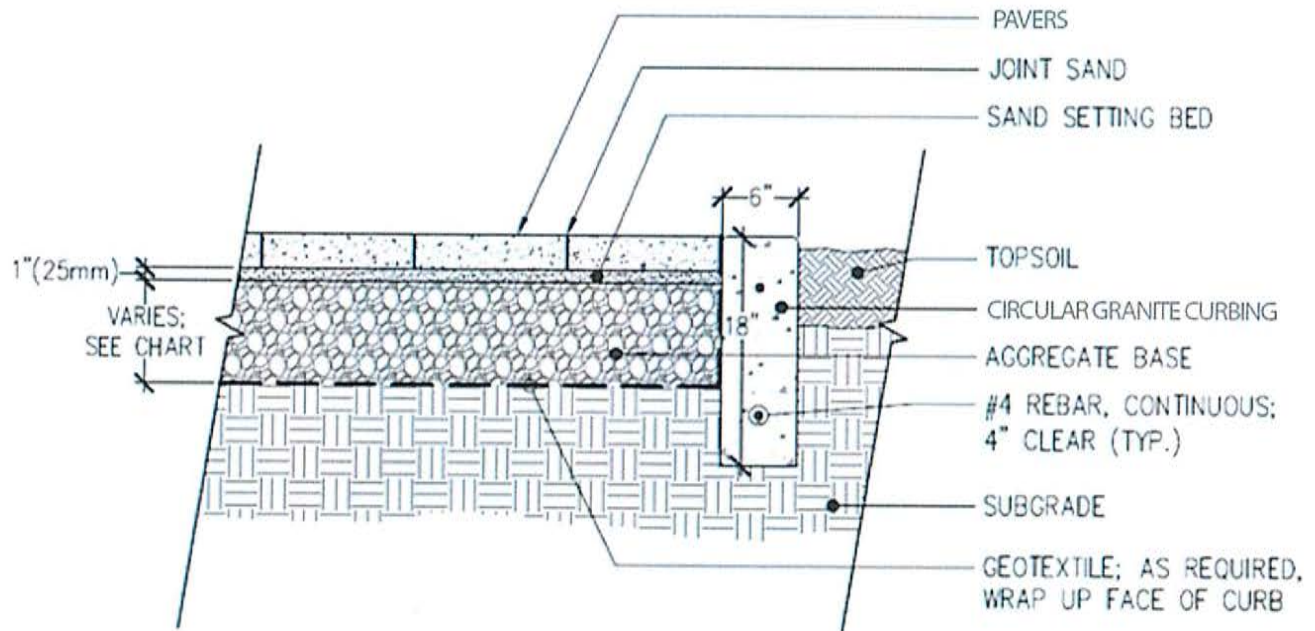
Gates are shown as 8-ft opening. Please revise to 12-ft opening total to allow for emergency access.

Q28 What is the post spacing on the rope and post fence?

A28 10-ft maximum.

SECTION 32 14 13

UNIT PAVING – NON-PERMEABLE



COMMERCIAL USE	MINIMUM BASE THICKNESS
MEMORIAL AREAS	12"

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes the following:
1. Concrete Pavers
 2. Joint Sand
 3. Setting Bed Sand
 4. Base Aggregate
 5. Subbase Aggregate

1.02 REFERENCES

- A. ASTM International, latest edition:
1. C 33, Standard Specification for Concrete Aggregates.
 2. C 136, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

3. C 140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
4. C 144 Standard Specifications for Aggregate for Masonry Mortar.
5. D 448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
6. C 936, Standard Specification for Solid Concrete Interlocking Paving Units.
7. C 979, Standard Specification for Pigments for Integrally Colored Concrete.
8. D 698 Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 5.5 lb (24.4 N) Rammer and 12 in. (305 mm) drop.
9. D 1557 Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 10-lb (44.5 N) Rammer and 18 in. (457 mm) drop.
10. C1645 Standard Test Method for Freeze-thaw and De-icing Salt Durability of Solid Concrete Interlocking Paving Units
11. D 2940 Graded Aggregate Material for Bases or Subbases for Highways or Airports.
12. D 4632, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
13. D 4533, Standard Test Method for Index Trapezoidal Tearing Strength of Geotextiles
14. D 4833, Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products
15. D 4491, Standard Test Method for Water Permeability of Geotextiles by Permittivity
16. D 4751, Standard Test Method for Determining Apparent Opening Size of a Geotextile

1.03 SUBMITTALS

A. Concrete Pavers:

1. Samples for verification: Three representative full-size samples of each paver type, thickness, color and finish that indicate the range of color variation and texture expected upon project completion.
2. Accepted samples become the standard of acceptance for the product produced.
3. Test results from an independent testing laboratory for compliance of concrete pavers with ASTM C 936.
4. Manufacturer's catalog product data, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.

B. Joint and Setting Bed Sand:

1. Provide three representative one-pound samples in containers of Joint Sand materials.
2. Provide three representative one-pound samples in containers of Setting Bed Sand materials.

3. Test results from an independent testing laboratory for sieve analysis per ASTM C 136 conforming to the grading requirements of ASTM C 144.
- C. Polymeric Joint Sand:
1. POLYBIND G2 by Alliance – Add Oxford Grey Color, or approved equal.
 2. Test results from an independent testing laboratory for sieve analysis per ASTM C 136 conforming to the grading requirements of ASTM C 144.
 3. Samples for Initial Selection: Provide three representative samples in containers of Polymeric Joint Sand material, cured and dried, for color selection.
 4. Samples for Verification: Provide three one-pound samples in containers of Polymeric Joint Sand.
- D. Base and Subbase Aggregate:
1. Test results from an independent testing laboratory for sieve analysis per ASTM C 136.
- E. Paving Installation Contractor:
1. Job references from a minimum of three projects similar in size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and email address.

1.04 QUALITY ASSURANCE

- A. Utilize a Manufacturer having at least ten years of experience manufacturing concrete pavers on projects of similar nature or project size.
- B. Source Limitations:
1. Obtain Concrete Pavers from one source location with the resources to provide products of consistent quality in appearance and physical properties.
 2. Obtain Joint and Setting Bed Sands from one source with the resources to provide materials and products of consistent quality in appearance and physical properties.
 3. Obtain Polymeric Joint Sand from one source with the resources to provide materials and products of consistent quality in appearance and physical properties.

- C. Paving Contractor Qualifications:
 - 1. Utilize an installer having successfully completed concrete paver installation similar in design, material, and extent indicated on this project.
- D. Mockups:
 - 1. Install a 5 ft x 5 ft paver area per each paving pattern.
 - 2. Use this area to determine surcharge of the Setting Bed Sand layer, joint sizes, lines, laying pattern(s) and levelness. This area will serve as the standard by which the workmanship will be judged.
 - 3. Subject to acceptance by owner, mock-up may be retained as part of finished work.
 - 4. If mock-up is not retained, remove and dispose legally.

1.05 DELIVERY, STORAGE & HANDLING

- A. In accordance with Conditions of the Contract and Division 1 Product Requirement Section.
- B. Deliver Concrete Pavers in manufacturer's original, unopened and undamaged container packaging with identification labels intact.
 - 1. Coordinate delivery and paving schedule to minimize interference with normal use of streets and sidewalks adjacent to paver installation.
 - 2. Deliver Concrete Pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift.
 - 3. Unload Concrete Pavers at job site in such a manner that no damage occurs to the product or adjacent surfaces.
- C. Store and protect materials free from mud, dirt and other foreign materials.
- D. Prevent Joint and Setting Bed Sand from exposure to rainfall or removal by wind with secure, waterproof covering.
- E. Store Polymeric Joint Sand on elevated platforms, under a cover and/or in a dry location.

1.06 PROJECT/SITE CONDITIONS

- A. Environmental Requirements:
 - 1. Install Concrete Pavers only on unfrozen and dry Setting Bed Sand.

2. Install Setting Bed Sand only on unfrozen and dry Base or Subbase Aggregate materials.
 3. Install Base or Subbase Aggregates only over unfrozen subgrade.
 4. Install Setting Bed Sand or Concrete Pavers when no heavy rain or snowfall are forecast within 24 hours.
- B. Weather Limitations for Polymeric Jointing Sand:
1. Install Polymeric Joint Sand only when ambient temperature is above 40°F (5°C), under dry conditions with no rain forecast for 24 hours and when surface of pavement is completely dry.

1.07 CONCRETE PAVER OVERAGE AND ATTIC STOCK

- A. Provide a minimum of 5% additional material for overage to be used during construction.
- B. Contractor to provide 100 square feet of each product and size used to Owner for maintenance and repair. Furnish Pavers from the same production run as installed materials.
- C. Manufacture to supply maintenance and reinstatement manuals for Concrete Paver units.

PART 2 PRODUCTS

2.01 CONCRETE PAVERS

- A. Basis-of-Design Product: The Concrete Paver shapes are based on:
 1. As manufactured by:

Unilock
35 Commerce Drive,
Uxbridge MA

Contact: Ashley Allard-LaCroix,
Tel: 508-277-4413
Email: Ashley.Allard-LaCroix@unilock.com
 2. Pavers:
 - a. Paver Finish: FACE-MIX manufacturing process. **NOTE: All FACE-MIX specified below shall be: Premier Smooth Finish.**

b. Exterior Circle: Holland Premier, Smooth Finish | Fossil Color*

1. 4x8 6cm

c. Interior Circle: Premier, Smooth Finish | Steel Mountain Color*

1. Size: 4x8 6cm

* Colors to be finalized by Owner during submittal process at no additional cost.

3. Or Approved Equal

4. The above listed acceptable manufacturer/supplier does not disqualify other substitute manufacturers/suppliers seeking approval. Substitute manufacturers/suppliers must submit literature on the specified product(s) to the Engineer for review and receive approval from the Engineer 5 days prior to the bid date.

5. The above listed as an acceptable manufacturer/supplier does not exclude the contractor from meeting the specifications outlined.

B. Product requirements:

1. Concrete Paver for Exterior Circle: Holland Premier

a. Finish:

1. Smooth (Premier)

b. Color: Fossil Color

c. Edge: CHAMFERED

d. Size: Manufacture the sizes indicated with a maximum tolerance of plus or minus 1/16 inch for length and width. Maximum height tolerance of plus or minus 1/8 inch.

1. 4x8 6cm

Note: Imperial dimensions are nominal equivalents to the metric dimensions.

2. Concrete Paver for Interior Circle: Artline Format (Artline 7pc Format)

a. Finish:

1. Use FACE-MIX Manufacturing Process: Premier, Smooth Finish

b. Color: Steel Mountain Color

- c. Edge: Chamfer
- d. Size: Manufacture the sizes indicated with a maximum tolerance of plus or minus 1/16 inch for length and width. Maximum height tolerance of plus or minus 1/8 inch.
 - 1. Size: Artline 7pc 7 size format.

Note: Imperial dimensions are nominal equivalents to the metric dimensions.

C. Exterior Seat Wall with Pillars

1. Main Wall Fascia:

- a. U CARA Fascia, or Approved Equal
- b. Size: 6" x 18 1/2" x 2 3/8"
- c. Finish: Premier Smooth Finish
- d. Color: Opal Color

e. Note: Contractor is responsible for:

- i. Using closed end fascia panels when needed.
- ii. Using closed end backer blocks when needed.

2. Wall Accent Fascia for Banding:

- a. U CARA Fascia, or Approved Equal
- b. Size: 6" x 18 1/2" x 2 3/8"
- c. Finish: Premier Smooth, FACE-MIX manufacturing process.
- d. Color: Midnight Charcoal

e. Note: Contractor is responsible for:

- i. Using closed end fascia panels when needed.
- ii. Using closed end backer blocks when needed.

3. Wall Coping:

- a. Universal Coping

- b. Color: Midnight Charcoal
 4. Universal Base Unit:
 - a. Positioning of universal base, when using small back block, run the universal base at its 19" long with a 14" depth. Using the larger backer, rotate Universal base and run 14" long with a 19" depth.
 - b. Length and depth of the universal base MUST be consistent for the full length of the wall.
 5. Walls Submittals and Details to be stamped by a Structural Engineer.
- D. Provide pavers meeting the minimum material and physical properties set forth in ASTM C 936, Standard Specification for Interlocking Concrete Paving Units. Efflorescence is not a cause for rejection.
1. Average compressive strength 8000 psi (55MPa) with no individual unit under 7,200 psi (50 MPa).
 2. Average absorption of 5% with no unit greater than 7% when tested according to ASTM C 140.
 3. Conforming to ASTM C 1645 when tested for freeze-thaw requirements.
 4. Height tolerances +/- 3.2 mm (1/8 in).
- E. Accept only pigments in concrete pavers conforming to ASTM C 979.
- Note: ACI Report No. 212.3R provides guidance on the use of pigments.
- E. Maximum allowable breakage of product is 5%.

2.02 JOINT SAND

- A. Provide natural Joint Sand as follows:
1. Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
 2. Do not use limestone screenings, stone dust, or sand for the Joint Sand material that does not conform to the grading requirements of ASTM C 33.
 3. Utilize sands that are as hard as practically available where concrete pavers are subject to vehicular traffic.
 4. Gradation as shown in Table 1 below:

**TABLE 1 – JOINT SAND
GRADATION REQUIREMENTS FOR JOINT SAND**

ASTM C 144		
Sieve Size	Natural Sand Percent Passing	Manufactured Sand Percent Passing
No. 4 (4.75 mm)	100	100
No. 8 (2.36 mm)	95 to 100	95 to 100
No. 16 (1.18 mm)	70 to 100	70 to 100
No. 30 (0.600 mm)	40 to 75	40 to 75
No. 50 (0.300 mm)	10 to 30	20 to 40
No. 100 (0.150 mm)	2 to 15	10 to 25
No. 200 (0.075)	0 to 1	0 to 10

2.03 POLYMERIC JOINT SAND

- A. Provide Polymeric Joint Sand as manufactured by:
 - 1. POLYBIND G2, by Alliance, Or Approved Equal
 - a. Product Type: Dry mix, contains polymeric binding agent, activated with water.
 - b. Color: Oxford Grey Color
 - 2. Techniseal Next Gel Sand, HP Grey
 - a. Product Type: Dry mix, contains polymeric binding agent, activated with water.
 - b. Color: HP Grey
- B. Provide Polymeric Joint Sand meeting the minimum material and physical properties as follows:
 - 1. Compression Strength: proven resistance to compression of 550 PSI after drying for 7 days under controlled conditions (73°F (23°C) at 50% humidity).
 - a. Test sand sample shape: cylinder (2" (5 cm) dia. X 4" (10 cm) high).
 - 2. Gradation as shown Table 1 above.

2.04 SETTING BED SAND

- A. Provide Setting Bed Sand as follows:

1. Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
2. Do not use limestone screenings, stone dust, or sand material that does not conform to conform to the grading requirements of ASTM C 33.
3. Do not use mason sand or sand conforming to ASTM C 144.
4. Utilize sands that are as hard as practically available where concrete pavers are subject to vehicular traffic.
5. Conform to the grading requirements of ASTM C 33 with modifications as shown in Table 2 below:

**TABLE 2 – SETTING BED SAND
GRADATION REQUIREMENTS FOR SETTING BED SAND**

ASTM C 33	
Sieve Size	Percent Passing
3/8 in (9.5 mm)	100
No. 4 (4.75 mm)	95 to 100
No. 8 (2.36 mm)	85 to 100
No. 16 (1.18 mm)	50 to 85
No. 30 (0.600 mm)	25 to 60
No. 50 (0.300 mm)	10 to 30
No. 100 (0.150 mm)	2 to 10
No. 200 (0.075)	0 to 1

Note: Coarser sand than that specified in Table 1 above may be used for joint sand including C 33 material as shown in Table 2. Use material where the largest sieve size easily enters the smallest joints. For example, if the smallest paver joints are 2 mm wide, use sand 2 mm and smaller in particle size. If C 33 sand is used for joint sand, extra effort may be required in sweeping material and compacting the pavers in order to completely fill the joints.

2.05 BASE AGGREGATE

- A. Provide Base Aggregate materials conforming to ASTM D 2940 and gradation requirements as presented in Table 3.

**TABLE 3
BASE AGGREGATE
GRADATION REQUIREMENTS**

ASTM D 2940	
Sieve Size	Percent Passing

2 in (50 mm)	100
1-1/2 in (37.5 mm)	95 to 100
3/4 in (19 mm)	70 to 92
3/8 in (9.5 mm)	50 to 70
No. 4 (4.75 mm)	35 to 55
No. 30 (600 μm)	12 to 25
No. 200 (75 μm)	0 to 8*

* In order to prevent damage by frost heaving, it may be necessary to limit the percentages of material passing the No. 200 sieve to less than shown in the tables.

2.06 SUBBASE

- A. Contractor to Provide Subbase Aggregate as designed per the Structural Engineer.
- B. See table gradation requirements.

2.07 GEOTEXTILE

- A. Provide Geotextile material conforming to the following performance characteristics, measured per the test methods referenced:
 - 1. 4 oz., nonwoven needle punched geotextile composed of 100% polypropylene staple fibers that are inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.
 - 2. Grab Tensile Strength: ASTM D 4632: 115 lbs.
 - 3. Grab Tensile Elongation: ASTM D 4632: 50%
 - 4. Trapezoidal Tear: ASTM D 4533: 50 lbs.
 - 5. Puncture: ASTM D 4833: 65 lbs.
 - 6. Apparent Opening Size: ASTM D 4751: 0.212 mm, 70 U.S. Sieve
 - 7. Permittivity: ASTM D 4491: 2.0 sec⁻¹
 - 8. Flow Rate: ASTM D 4491: 140 gal/min/s.f.
- B. As supplied by Unilock- 35 Commerce Dr, Uxbridge MA, or approved equal.
- C. Contact Ashley Allard-LaCroix (508-277-4413 ashley.allard-lacroix@unilock.com)
 - 1. Mirafi – 140N, Or Approved Equal

2.08 EDGE RESTRAINTS

- A. Granite Stone with Radius Edge Restraint to be supplied and installed as indicated in details.

2.09 ACCESSORIES

- A. Paver Cleaners for Efflorescence:

1. Supplier: Unilock – 35 Commerce Dr, Uxbridge MA, or Approved Equal.

Contact: Ashley Allard-LaCroix (508-277-4413 ashley.allard-lacroix@unilock.com)

PART 3 EXECUTION**3.01** EXAMINATION

- A. Examine areas indicated to receive paving for compliance with requirements for installation tolerances and other conditions affecting performance for the following items before placing the Concrete Pavers.
1. Verify that subgrade preparation, compacted density and elevations conform to specified requirements.
 2. Verify that Geotextiles have been placed according to drawings and specifications.
 3. Verify that the Base and Subbase Aggregate materials, thickness, compacted density, surface tolerances and elevations conform to specified requirements.
 4. Contractor to provide written density test results for soil subgrade, Base and Subbase Aggregate materials to the Owner and Engineer.
 5. Verify location, type, and elevations of edge restraints, concrete curbing, concrete collars around utility structures, and drainage inlets.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
1. Beginning of Bedding Sand and Concrete Paver installation signifies acceptance of Base and edge restraints.

3.02 PREPARATION

- A. Verify that the subgrade soil is free from standing water.
- C. Stockpile Setting Bed Sand, Joint Sand, Base and Subbase Aggregate materials such that they are free from standing water, uniformly graded, free of any organic material or sediment, debris, and ready for placement.

- D. Remove any excess thickness of soil applied over the excavated soil subgrade to trap sediment from adjacent construction activities before placing the Geotextile and Subbase Aggregate materials.
- E. Keep area where pavement is to be constructed free from sediment during entire job. Remove and replace all Geotextile, Joint Sand, Setting Bed Sand, Base and Subbase Aggregate materials contaminated with sediment with clean materials.
- F. Complete all subdrainage of underground services within the pavement area in conjunction with subgrade preparation and before the commencement of Base or Subbase Aggregate construction.
- F. Prevent to damage underdrain pipes, overflow pipes, observation wells, or inlets and other drainage appurtenances during installation. Report all damage immediately.
- G. Compact soil subgrade uniformly to at least 95 percent of Standard Proctor Density per ASTM D 698 for pedestrian areas. Compact soil subgrade uniformly to at least 98 percent Modified Proctor per ASTM D 1557 for vehicular areas. Stabilization of the subgrade and/or base material may be necessary with weak or saturated subgrade soils.
- H. Backfill all service trenches within the pavement area to the sub-grade level with approved material placed in uniform lifts not exceeding 4 in. (100 mm) loose thickness. Compact each lift to at least 100 percent Standard Proctor Density as specified in ASTM D 698.
- I. Trim the subgrade to within 0 to ½ in. (0 to 13mm) of the specified grades. Do not deviate the surface of the prepared subgrade by more than 3/8 in. (10mm) from the bottom edge of a 39 in. (1m) straight edge laid in any direction.
- J. Proof-roll prepared subgrade according to requirements in Division 31 Section "Earth Moving" to identify soft pockets and areas of excess yielding. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting and replace with compacted backfill or fill as directed by the Engineer.
- K. Do not proceed with further pavement construction, under any circumstances, until the subgrade has been inspected by the Architect/Engineer.

Note: Base compaction of the subgrade soil shall be performed. Contractor to inspect subgrade preparations, elevations and conduct density tests for conformance to specifications.

3.03 INSTALLATION

A. EDGE RESTRAINTS

- 1. Provide concrete edge restraints as indicated.

- a. Install job-built concrete edge restraints to comply with requirements in Division 3 Section "Cast-in-Place Concrete."
- b. Provide concrete edge restraint along the perimeter of all paving as indicated. Install the face of the concrete edge restraint, where it abuts pavers vertical down to the subbase.
- c. Construct concrete edge restraint to dimensions and level specified and support on a compacted subbase not less than 6 in (150 mm) thick.

B. GEOTEXTILES

1. Provide separation geotextile on bottom and sides of prepared soil subgrade. Secure in place to prevent wrinkling or folding from equipment tires and tracks.
2. Overlap ends and edges a minimum of 18 in. (450 mm) in the direction of drainage.

C. BASE AND SUBBASE AGGREGATE

1. Provide the Subbase Aggregate in uniform lifts not exceeding 6 in., (150 mm) loose thickness and compact to at least 100 percent Standard Proctor Density as per ASTM D 698.
2. Compact the Subbase Aggregate material with at **least three (3) passes** in the vibratory mode then at **least three (3)** in the static mode with a minimum 10 ton vibratory roller until there is no visible movement. Do not crush aggregate with the roller.
3. Tolerance: Do not exceed the specified surface grade of the compacted Subbase Aggregate material more than $\pm 3/4$ in. (20 mm) over a 10 ft. (3 m) long straightedge laid in any direction.
4. Provide the Base Aggregate material in uniform lifts not exceeding 6 in. (150 mm) over the compacted Subbase Aggregate (or Subgrade) material and compact to at least 100 percent Standard Proctor Density as per ASTM D 698.
5. Compact the Base Aggregate material with at least two passes in the vibratory mode then at least two in the static mode with a minimum 10 ton vibratory roller until there is no visible movement. Do not crush aggregate with the roller.
6. Tolerance: Do not exceed the specified surface grade of the compacted Base Aggregate material more than $\pm 3/8$ in. (10 mm) over a 10 ft. (3 m) long straightedge laid in any direction.
7. Compact and grade the upper surface of the base sufficiently to prevent infiltration of the bedding sand into the base both during construction and throughout its service life. Blend segregated areas of the granular base by the

application of crushed fines that have been watered and compacted into the surface.

D. SETTING BED SAND

1. Provide, spread and screed Setting Bed Sand evenly over the compacted Base Aggregate course.
 - a. Protect screeded Setting Bed Sand from being disturbed by either pedestrian or vehicular traffic.
 - b. Screed only the area which can be covered by pavers in one day.
 - c. Do not use Setting Bed Sand material to fill depressions in the base surface.
2. Keep moisture content constant and density loose and constant until Concrete Pavers are set and compacted.
3. Screed Setting Bed Sand using either an approved mechanical spreader (e.g.: an asphalt paver) or by the use of screed rails and boards. Maintain in a loose condition slightly ahead of the paving units and fully protect against incidental compaction following screeding. Loosen compacted sand by rain or screeded sand left overnight before further paving units are placed.
4. Inspect the Setting Bed Sand course prior to commencing the placement of the Concrete Pavers. Acceptance of the Setting Bed Sand occurs with the initiation of Concrete Paver placement.

E. CONCRETE PAVERS

1. Replace Concrete Pavers with chips, cracks, voids, discolorations, and other defects that might be visible in finished work.
2. Mix Concrete Pavers from a minimum of three (3) bundles simultaneously drawing the paver vertically rather than horizontally, as they are placed, to produce uniform blend of colors and textures. (Color variation occurs with all concrete products. This phenomenon is influenced by a variety of factors, e.g. moisture content, curing conditions, different aggregates and, most commonly, from different production runs. By installing from a minimum of three (3) bundles simultaneously, variation in color is dispersed and blended throughout the project).
3. Exercise care in handling face mix concrete pavers to prevent surfaces from contacting backs or edges of other units.
4. Provide Concrete Pavers using laying pattern as indicated. Adjust laying pattern at pavement edges such that cutting of edge pavers is minimized. Cut all pavers exposed to vehicular tires no smaller than one-third of a whole paver.

5. Use string lines or chalk lines on Setting Bed Sand to hold all pattern lines true.
6. Set paver surface elevation a minimum of 3 mm (1/8 inch) to a maximum of 6 mm (1/4 inch) above adjacent drainage inlets, concrete collars or channels (provided the change in slope does not impede or alter the drainage or direction of flow).
7. Place units hand tight against spacer bars. Adjust horizontal placement of laid pavers to align straight.
 - a. When installation is performed with mechanical equipment, use only unit pavers with spacer bars on sides of each unit.
8. Provide space between paver units of 1/32 in. (1 mm) wide to achieve straight bond lines.
9. Prevent joint (bond) lines from shifting more than $\pm 1/2$ in. (± 13 mm) over 50 ft. (15 m) from string lines.
10. Fill gaps between units or at edges of the paved area that exceed 3/8 inch (10 mm) with pieces cut to fit from full-size unit pavers.
11. Cut Concrete Pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.
12. Prevent all traffic on installed Concrete Pavers until Joint Sand has been vibrated into joints. Keep skid steer and forklift equipment off newly laid Concrete Pavers that have not received initial compaction and Joint Sand material.
13. Vibrate Concrete Pavers into leveling course with a low-amplitude plate vibrator capable of a to 5000-lbf (22-kN) compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate under the following conditions:
 - a. After edge pavers are installed and there is a completed surface or before surface is exposed to rain.
 - b. Compact installed Concrete Pavers to within 6 feet (2 meters) of the laying face before ending each day's work. Cover Concrete Pavers that have not been compacted and leveling course on which pavers have not been placed, with nonstaining plastic sheets to prevent Setting Bed Sand from becoming disturbed.
14. Protect face mix Concrete Paver surface from scuffing during compaction by utilizing a urethane pad.
15. Remove any cracked or structurally damaged Concrete Pavers and replace with new units prior to installing Joint Sand material.

F. JOINT SAND

1. Provide, spread and sweep dry Joint Sand into joints immediately after vibrating pavers into Setting Bed Sand course until full. Vibrate pavers and add Joint Sand material until joints are completely filled, then remove excess material. This will require at least 4 passes with a plate compactor.
2. Leave all work to within 3 ft. (1 m) of the laying face fully compacted with sand-filled joints at the completion of each day.
3. Remove excess Joint Sand broom clean from surface when installation is complete.
4. Polymeric Joint Sand
 - a. Install Polymeric Joint Sand per manufacturers recommended instructions.
 - b. Polymeric Sand to be: POLYBIND G2 by Alliance – Add Oxford Grey Color, or approved equal.

3.04 FIELD QUALITY CONTROL

- A. Verify final elevations for conformance to the drawings after sweeping the surface clean.
 1. Prevent final Concrete Paver finished grade elevations from deviating more than $\pm 3/8$ in. (± 10 mm) under a 10 ft (3 m) straightedge or indicated slope, for finished surface of paving.
- B. Lippage: Paver-to-Paver Lippage:
 1. No greater than 1.5 mm (1/16 inch) difference in height between adjacent pavers.

3.05 REPAIRING, CLEANING, AND SEALING

- A. Remove and replace unit pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.
- B. Cleaning: Remove excess dirt, debris, stains, grit, etc. from exposed paver surfaces; wash and scrub clean.
 1. Clean Concrete Pavers in accordance with the manufacturer's written recommendations.

2. Note: Contractor to responsible for purchasing and using commercially available cleaners to remove efflorescence deposits. Contractor shall strictly adhere to manufacturer recommendations to ensure pavers are not damaged during this cleaning process.

C. Wall Sealant for Unilock, or approved equal, Walls Only:


1. One sample product of each shall be ordered by the Contractor. Contractor to stain a 2ft x 2ft sample section of non-visible wall before full sealant is applied. Owner and Engineer to be notified for visual inspection and approval of selected sealant.
2. Engineer to provide selected product via the submittal process.
3. Sealants:
 - a. SEK Surebond SB-1300 Natural look, water-based, or approved equal.
 - b. Alliance Gator Natural look Signature series, or approved equal.

3.06 PROTECTION

- A. Protect completed work from damage due to subsequent construction activity on the site.

END OF SECTION

NESRA
 ENGINEERING INC.
 170 BRIMLEY ROAD
 NORTH ATTLEBORO
 MASSACHUSETTS 01940
 508-252-2722




PROJECT
 FEDERAL PROPERTY
 FEDERAL BUREAU OF INVESTIGATION
 200 HIGHLAND AVENUE
 BURLINGTON, MA 02462

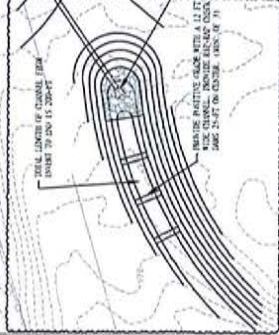
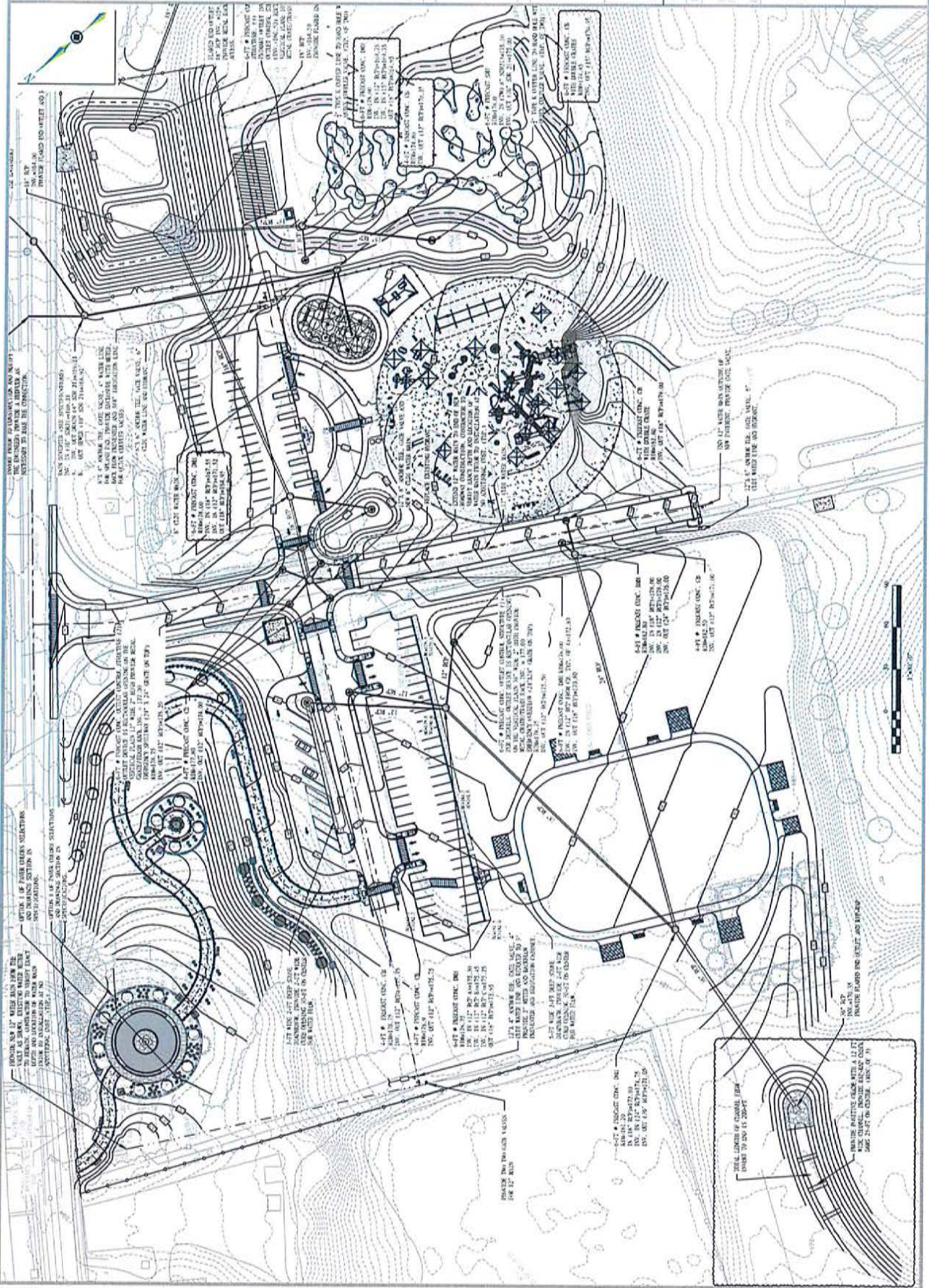
CLIENT
 CITY OF BURLINGTON
 609 MAIN ST
 BURLINGTON, MA 02462

2.	REVISED UTILITY LAYOUT AND CITY ENGINEERING	8-29-21	UTILITY
1.	REVISED DRAINAGE AND UTILITY LAYOUT		UTILITY
0A.	DESIGN		UTILITY

AS NOTED
 0107 - 7/27/23
 PRELIMINARY SHEET

DRAINAGE CLARIFICATIONS

SK-2



Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series 009

Reduced Pressure Zone Assemblies

1/4" – 2"

WARNING

It is illegal to use this product in any plumbing system providing water for human consumption, such as drinking or dishwashing, in the United States. Before installing standard material product, consult your local water authority, building and plumbing codes.

Series 009 Reduced Pressure Zone assemblies are designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. Specifically, the series protects drinking water supplies from dangerous cross-connections in accordance with national plumbing codes and water authority requirements for non-potable service applications such as irrigation, fireline, or industrial processing.

The series features two in-line, independent check valves, captured springs, and replaceable check seats with an intermediate relief valve. Its compact modular design facilitates maintenance and assembly access. Sizes 1/4" to 1" shutoffs have tee handles.

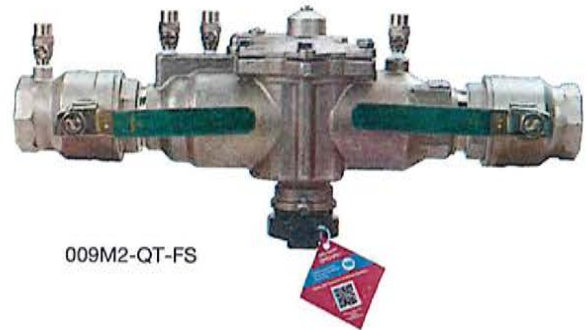
Series 009 assemblies of sizes 1/2" to 2" include a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility who can take corrective action, thus avoiding the possibility of ruinous flooding and costly damage.

NOTICE

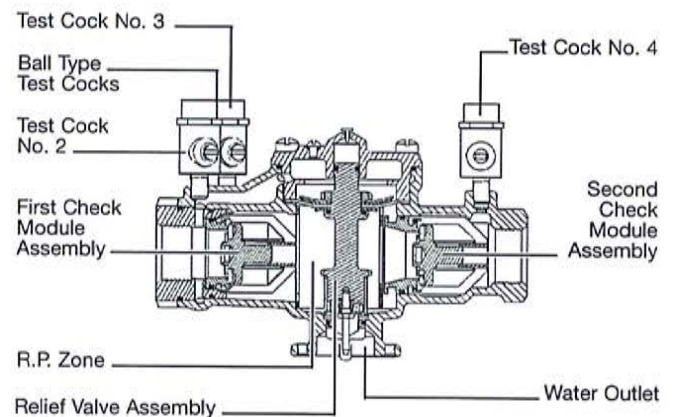
An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information, download RP/IS-009.)

Features

- Single access cover and modular check construction for ease of maintenance
- Top entry to all internals for immediate accessibility
- Captured springs for safe maintenance
- Internal relief valve for reduced installation clearances
- Replaceable seats for economical repair
- Bronze body construction for durability (1/4" – 2")
- Ball valve test cocks — screwdriver slotted (1/4" – 2")
- Large body passages provides low pressure drop
- Compact, space saving design
- No special tools required for servicing
- Sensor on the relief valve for flood detection (1/2" – 2")



009M2-QT-FS



NOTICE

Use of the flood sensor does not replace the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of this product, including the need to provide proper drainage in the event of a discharge.

Watts® is not responsible for the failure of alerts due to connectivity or power issues.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Specification

A Reduced Pressure Zone assembly shall be installed at each potential health hazard location to prevent backflow due to backsiphonage and/or backpressure. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access bronze cover secured with stainless steel bolts. The assembly shall also include two resilient seated isolation valves, four resilient seated test cocks, and an air gap drain fitting. The assembly shall meet the requirements of USC; ASSE Std. 1013; AWWA Std. C511-92; CSA B64.4. Shall be a Watts® Series 009, and shall include a sensor on the relief valve for flood detection.

Model/Option

Prefix:

U – Union connections (For more information download ES-U009 at watts.com.)

Suffix:

AQT – Elbow fittings for 360° rotation (3/4" – 2")
FS – Flood detection sensor (1/2" – 2")
HC – 2 1/2" Inlet/outlet fire hydrant fitting (2")
LF – Without shutoff valves
PC – Internal polymer coating
QT – Quarter-turn ball valves
S – Bronze strainer
SH – Stainless steel ball valve handles

Materials

Bronze body construction, silicone rubber disc material in the first and second check plus the relief valve. Replaceable polymer check seats for first and second checks. Removable relief valve seats. Stainless steel cover bolts.

Standardly furnished with NPT body connections. For optional bronze union inlet and outlet connections, specify prefix U (1/2" – 2"). Series 009QT furnished with quarter turn, full port, resilient seated, bronze ball valve shutoffs.

Pressure / Temperature

Suitable for supply pressure up to 175 psi (12.1 bar)
Water temperature: 33°F – 180°F (0.5°C – 75°C)

Standards

USC
ASSE No. 1013
AWWA C511-92
CSA B64.4
IAPMO File No. 1563

Approvals



ASSE, AWWA, CSA, IAPMO

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California

UL Classified 3/4" – 2"
(LF models only except 009M3LF)

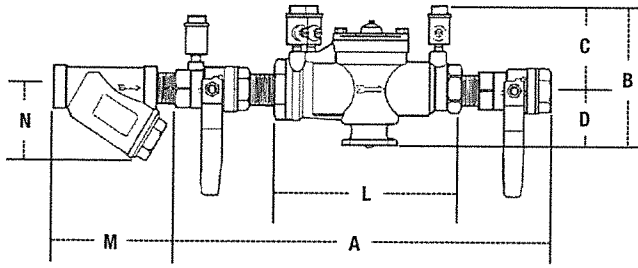
Insulated Enclosure

The WattsBox insulated enclosure is available for Series 009. For more information download ES-WB at watts.com.

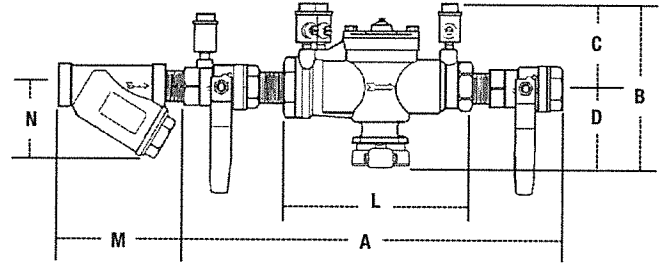
Dimensions — Weight

Call customer service if you need assistance with technical details.

1/4" – 3/8"



1/2" – 2"



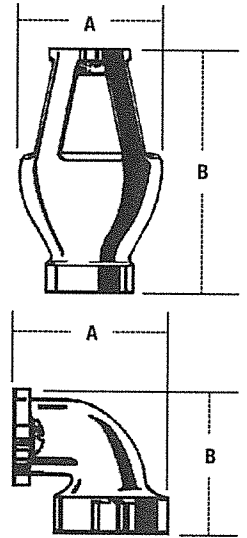
MODEL		DIMENSIONS (APPROX.)								STRAINER DIMENSIONS				WEIGHT		
in.	mm	A	B	C	D	L	M	N	lb	kg						
1/4	10	250	4 3/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
3/8	10	250	4 3/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
1/2	10	250	5 1/8	149	3 3/8	86	2 1/2	64	5 1/2	140	2 3/4	70	2 1/4	57	5	2
3/4	10 3/4	273	6 1/4	159	3 1/2	89	2 3/4	70	6 3/4	171	3 3/16	81	2 3/4	70	6	3
1	14 1/2	368	6 1/4	159	3	76	3 1/4	83	9 1/2	241	3 3/4	95	3	76	12	5
1 1/4	17 3/8	441	6 3/4	169	3 1/2	89	3 3/4	83	11 1/8	289	4 7/16	113	3 1/2	89	15	6
1 1/2	17 7/8	454	6 3/4	169	3 1/2	89	3 3/4	83	11 1/8	283	4 7/16	124	4	102	16	7
2	21 3/8	543	8 3/4	222	4 1/2	114	4 1/4	108	13 1/2	343	5 1/16	151	5	127	30	13

Suffix HC – Fire Hydrant Fittings dimension 'A' = 25"

Air Gaps and Elbows

MODEL	SIZE	DRAIN OUTLET		DIMENSIONS				WEIGHT	
		in.	mm	A	B	lb	kg		
	For 909, 009, and 993								
909AGA	1/4"-1/2" 009, 3/4" 009M2/M3	1/2	13	2 3/4	60	3 3/8	79	0.625	0.28
909AGC	3/4"-1" 009/909, 1"-1 1/2" 009M2	1	25	3 3/4	83	4 7/8	124	1.5	0.68
909AGF	1 1/4"-2" 009M1, 1 1/4"-3" 009/909, 2" 009M2, 4"-6" 993	2	51	4 3/8	111	6 3/8	171	3.25	1.47
909AGK	4"-6" 909, 8"-10" 909M1	3	76	6 3/8	162	9 3/8	244	6.25	2.83
909AGM	8"-10" 909	4	102	7 3/8	187	11 1/4	286	15.5	7.03
909ELA	1/4"-1/2" 009, 3/4" 009M2/M3	-	-	-	-	-	-	-	-
909ELC	3/4"-1" 009/909	-	-	2 3/8	60	2 3/8	60	0.38	0.17
909ELF*	1 1/4"-2" 009M1, 1 1/4"-2" 009/909, 2" 009M2, 4"-6" 993	-	-	3 3/8	92	3 3/8	92	2	0.91
909ELH* Vertical	2 1/2"-3" 009/909	-	-	-	-	-	-	-	-

* Epoxy coated



Capacity

Performance as established by an independent testing laboratory.

The asterisk (*) indicates typical maximum system flow rate (7.5 ft/s, 2.3 m/s).

