

ADDENDUM #1

To:	All Bidders	Prepared by:	Chris Huntress Huntress Associates, Inc.
Project:	Town of Boxford - Haynes Conservation & Recreation Area	Date:	June 30, 2015
Cc:	Alan Benson, Town Administrator	Issue No.	1

This is an Addendum to the original Construction Documents issued for the Haynes Recreation & Conservation Area, Dated June 17, 2015. In all other respects, the terms of the original documents will remain in full effect. However, if there is a conflict between this Addendum and the original specifications, the terms of this Addendum will prevail.

This addendum must be acknowledged on the form for general bid.

- 1.0** The Date & Time for submission of bids has been changed. All bids for the above reference **project will be due on Thursday July 16, 2015 at 2:00pm**. Bids will be received at the Boxford Town Hall, Selectmen's Office 7A Spofford Road, Boxford, MA 01921
- 2.0** **REPLACE** Section 00 21 13 INSTRUCTIONS TO BIDDERS dated June 17, 2015 with the attached Section 00 21 13 INSTRUCTIONS TO BIDDERS dated June 30, 2015.
- 3.0** **REPLACE** Section 00 41 13 FORM FOR GENERAL BID dated June 17, 2015 with the attached Section 00 41 13 FORM FOR GENERAL BID dated June 30, 2015.
- 4.0** **REPLACE** Section 00 52 13 OWNER/CONTRACTOR AGREEMENT dated June 17, 2015 with the attached Section 00 52 13 OWNER/CONTRACTOR AGREEMENT dated June 30, 2015.
- 5.0** **REPLACE** Section 00 61 13.13 PERFORMANCE BOND dated June 17, 2015 with the attached Section 00 61 13.13 PERFORMANCE BOND dated June 30, 2015.
- 6.0** **ADD** the attached "ADDENDUM TO SUPPLEMENTARY CONDITIONS" to Section 00800 Supplementary Conditions.
- 7.0** **REPLACE** Sheet 1.01 SITE PREPARATION PLAN dated 6.17.15 with the attached Sheet 1.01 SITE PREPARATION PLAN revised 6.30.15. (Plan re-issued at correct size)
- 8.0** **REPLACE** Sheet 1.02 SITE PREPARATION PLAN dated 6.17.15 with the attached Sheet 1.02 SITE PREPARATION PLAN revised 6.30.15. (Plan re-issued at correct size)

9.0 REPLACE Sheet E1.0 ELECTRICAL SITE PLAN dated 9.18.13 with the attached Sheet E1.0 ELECTRICAL SITE PLAN revised 6.30.15. (Plan re-issued at full size)

10.0 REPLACE Sheet E2.0 ELECTRICAL DETAILS dated 9.18.13 with the attached Sheet E1.0 ELECTRICAL DETAILS revised 6.30.15. (Plan re-issued at full size)

11.0 Questions Received to Date:

Q1. *Will the General Contractor or Architect keep the minutes of the project meetings?*

A1. The Architect will keep the minutes of the project meetings.

Q2. *Will the Town of Boxford provide a taxpayer ID to the selected contractor?*

A2. Yes.

Q3. *Will the Town of Boxford supply the builder's risk policy?*

A3. Yes.

Q4. *Please provide the well report mentioned in the irrigation specification.*

A4. All information regarding development of both wells is provided on Sheet 1.50 Irrigation Plan.

END OF ADDENDUM

00 21 13

INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 IDENTIFICATION

1. Awarding Authority: Town of Boxford - Boxford, Massachusetts.

1. Address: Town of Boxford
7A Spofford Road
Boxford, MA 01921
2. Telephone: (978) 887-6000 x 502
3. Contact Person: Alan Benson, Town Administrator / CPO

2. Landscape Architect: Huntress Associates, Inc.

1. Address: 17 Tewksbury Street, Andover MA 01810
2. Telephone: (978) 470-8882.
3. Fax Number: (978) 470-8890
4. Contact Person: Mr. Christian Huntress.

1.02 BIDDING DOCUMENTS

3. Instructions to Bidders: This "Instructions to Bidders" contains important information about bidding procedures and is intended to provide guidance and assistance to bidders. This "Instructions to Bidders" does not change or supersede the provisions of Law or the Contract Documents. This "Instructions to Bidders" is not part of the Contract Documents, unless specifically referenced or itemized in the Owner/Contractor Agreement.

4. To view the Bidding Documents: Contact the Landscape Architect. .

5. Bid Documents: Bid Documents: Bid documents consist of one set of Contract Document Drawings and one copy of the Contract Document Project Manual.

- a. General Bidders may obtain one bid set by sending a request via email to chris@huntressassociates.com. Bid Documents are available in PDF format, upon request.
- b. General bidders must provide a contact, including name, address, phone and email.
- c. Bid sets will be issued only in complete sets.
- d. Printed copies of the plans and specs are available from the Landscape Architect.

6. Bid Documents Deposit Required: No deposit is required to receive PDF copies. Deposit amount for printed sets is \$50.00 per bid set. Bid document deposit shall be in the form of company check or bank check

INSTRUCTIONS TO BIDDERS

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payable to the Town of Boxford.

7. Bid Documents Deposit Refund: Deposits will be returned in full, if the bid documents are returned complete and in good condition within 10 calendar days after general bids are due, otherwise the deposit shall be the property of the Awarding Authority.

8. Mailing and Handling: Bidding documents will be available for pick-up by the bidder at the office of the landscape Architect. Mailing or handling costs are the responsibility of the bidder and are to be coordinated directly with selected printing company. Payment must be received prior to shipment of bidding documents.

1.03 BIDDING REQUIREMENTS

1. Site Visit Required: Each bidder shall visit the site of the proposed work and become fully and completely aware of all existing conditions, existing facilities, and the character of the operations to be carried on under the proposed Contract. Each bidder shall make itself fully understand the facilities, physical conditions, and restrictions attending the work under the Contract. Failure to make such examinations will not relieve the bidder from any obligation under the bidder's bid or sub-bid as submitted, nor shall it serve as the basis for change orders or equitable adjustments.
2. A non-mandatory pre-bid conference will be held at **10:00 AM on Thursday, June 24, 2015** at Town Hall, 7A Spofford Road, Boxford, MA. All bidders are required to visit the construction site before submitting a bid.
3. Document Examination: Each bidder shall thoroughly examine and become familiar with the Contract Documents and the Bidding Documents. Failure to make thorough examinations will not relieve the bidder from any obligation under the bidder's bid as submitted, nor shall it serve at the basis for change orders or equitable adjustments.
4. Form of Agreement: An example Form of Owner/Contractor Agreement is included in the bidding documents.
5. Applicable Laws: All bids are subject to all applicable provisions of law.
6. Questions, Clarifications, and Interpretations: Bidders shall promptly notify the Landscape Architect of questions, ambiguities, inconsistencies, errors, or omissions, which they may discover upon examination of the Contract Documents, the site, and local conditions.
 1. Written Request Required: Submit written requests for clarification and interpretation to the Landscape Architect by mail or fax.
 2. Time Required: Requests for clarifications and interpretations must be received by the Landscape Architect at least five working days (Saturdays, Sundays, and Holidays excluded) prior to the date bids are due.

3. Landscape Architect's Response, Addenda: The Landscape Architect's response will be in the form of written Addenda that shall become part of the Contract Documents. Clarifications and interpretations offered by the Authority, the Landscape Architect, or any of the Landscape Architect's consultant's in any form other than a formal written Addenda shall be invalid.
4. Issuance of Addenda: Addenda will be issued to every bidder on record as having obtained bid documents. Copies of Addenda will be available at locations where Contract Documents are filed for public inspection as listed in the Advertisement and these Instructions to Bidders.
5. Addenda Must Be Acknowledged: Bidders shall acknowledge Addenda in the spaces provided on the bid forms. Failure of a bidder to acknowledge Addenda in the spaces provided on the bid form may cause rejection of the bid or lead to a protest. Failure of a bidder to receive any addenda shall not relieve it from any obligation under its bid as submitted.

1.04 ALTERNATES

1. Alternates by General Bidders: Each General Bidder shall bid on all alternates listed and shall list for each alternate only one amount which shall be the total amount in dollars and cents to be added or deducted from base bid amount for the alternate and shall include Sub-Bidders's alternate amounts. Clearly indicate whether the amount is to be added or deducted, if the bid form does not already make this clear. If an alternate does not change the bid amount, print "No Change" or "0" in the amount space provided for that alternate. Do not leave alternate proposal spaces blank.
2. Alternates May Affect Low Bidder Selection: The low bidder will be determined on the basis of the sum of the base bid and the alternates selected by the Awarding Authority.

1.05 PREPARATION AND SUBMISSION OF BIDS

3. Completion of Bid Forms: Use only the Bid Forms furnished with the bidding documents by the Authority. Additional forms will not be mailed by the Landscape Architect. Complete Bid Forms with typewriter or hand printed in ink.
4. Alterations Not Permitted: Do not alter bid forms. Do not include any recapitulation of the work to be done. Do not provide any information not requested. Do not strike out, line out, white out, or erase any information.
5. Amounts: Express amounts in both words and numbers where space for both is provided. In cases of conflict, written amounts shall control over numbers.

6. Blanks: Complete all spaces provided. Do not leave any blanks. Print “N/A” in any space not needed or used.
7. Bid Withdrawal: Any bid may be withdrawn by mailed written request, faxes written request, or telegraphic request prior to date and time of receipt of bids. Withdrawn bids may be resubmitted until date and time of receipt of bids.
 1. Telegraphic Request: Bid withdrawal by telegraph shall be confirmed in writing with the Bidder’s signature.
 2. Mailed Written Request: Bid withdrawal by mail shall be in writing and shall be post-marked on or before the date and time of receipt of bids.
 3. Faxed Written Request: Bid withdrawal by fax shall be in writing and shall be received by the Authority on or before the date and time of receipt of bids.
 4. Modifications: No written, oral, telephone, or telegraphic modifications to bids will be considered after the bid is received.
8. Bid Deposit (Bid Security): A Bid Deposit (Bid Security) is required for each General Bid in the amount of 5% of the total bid amount including all add alternates.
 - a. Form of Bid Deposit: Bid Deposit shall be made payable to the Awarding Authority and shall be in the form of cash, certified check, issued by a responsible bank or trust company, or a bid bond issued by a surety company licensed to do business in the Commonwealth of Massachusetts. Form of bid bond shall be similar to AIA A310 and must be acceptable to the Awarding Authority.
 - b. General Bidder Bid Deposit Return: Bid deposits of General Bidders will be returned within five working days after bid opening, except bid deposits of the three lowest general bidders will be retained by the Authority until a Contract is signed.
9. General Bid Submission: Submit one copy of bid forms, bid deposit and the required, completed Qualifications and References Form, in a sealed envelope. Clearly and boldly identify the envelope with the words, **“General Bid Enclosed for Haynes Recreation and Conservation Area – Hold for Public Opening.”** The envelope must also include the name, business address and telephone number of the bidder. Submit Bids as specified in the advertisement of bid.

1.06 PERFORMANCE AND PAYMENT BONDS

1. Performance and Payment Bonds: Bonds shall be issued by a surety company that is licensed to do business in the Commonwealth of Massachusetts and is satisfactory to the awarding authority. Performance and Payment Bonds shall be issued by a company having an A.M. Best

rating of A+, XII or higher, subject to the Awarding Authorities' discretion. Bonds shall be issued by a surety company that is licensed to do business in the Commonwealth of Massachusetts, State Division of Insurance. Bond form shall be as bound in the Project Manual or other form approved by the Awarding Authority.

1. Changes in Contract Price: Whenever the Contract Price is adjusted by Change Order, the General Contractor shall adjust the amount of both the Performance Bond and a Labor and Materials Payment Bond to the new full amount of the Contract Price. The cost of this adjustment shall be included in the General Contractor's mark-up on Change Orders.
2. Bond Cost: All Performance Bond and a Labor and Materials Payment Bond costs, shall be included in the Bid Amount and all premiums for bonds shall be paid by the General Contractor.
3. Additional Bond Documents Required: With each bond provide certified power of attorney or other certificate of authority where bond is executed by an agent, officer, or other representative of Contractor or surety.

1.07 CONTRACT TIME

1. Contract Time: Time is of the essence in this Contract. The Awarding Authority expects the work to begin on November 1, 2015 after issuance of Notice to Proceed and expects the work to be Substantially Complete by August 15, 2017, and to achieve Final Completion including all punch list items by September 30, 2017.

1.08 CONTRACT AWARD

1. Bid Opening and Disposition: Bids will be opened in public.
2. Contract Award: The contract will be awarded within 10 business days after the approval of funding for the project, scheduled for Boxford Town Meeting, October 27, 2015. The contract will be awarded to the lowest responsible and eligible bidder.
3. General Bids May be Rejected: The Awarding Authority reserves the right to waive informalities in any or all general bids; to reject any or all general bids; to revise the Contract Documents and rebids, if it is in their interest to do so.
4. Definition of "Lowest Responsible and Eligible Bidder": The "lowest responsible and eligible bidder" means the General Bidder whose bid is the lowest of those General Bidders who demonstrably possess the skill, ability, and integrity necessary for faithful performance of the work, and who certify that they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

4.10 DOCUMENT SUBMISSION CHECKLIST

1. General Bid Required Submittals: On or before the date and time of receipt of general bids, general bidders must submit the following:

1. General Bid Form.
2. Bid Deposit
3. Town of Boxford Qualifications and Reference Form.

2. Documents Required at Contract Signing: Three copies of each of the following documents are required prior to Contract Signing.

4. Signed and executed Section 00 61 13.13 Performance Bonds and Section 00 61 13.16 Labor and Material Payment Bonds including Power-of -Attorney for the General Contractor.
5. Signed and executed Insurance Certificates for the General Contractor.

END OF SECTION

00 41 13

FORM FOR GENERAL BID

From: (Insert name of General Bidder) _____

To the Awarding Authority:

1. The undersigned proposes to furnish all labor and materials required for performance and completion of the work of the HAYNES RECREATION AND CONSERVATION AREA project in accordance with the accompanying Contract Documents prepared by Huntress Associates, Inc. for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

2. This bid includes addenda numbered _____.

3. The proposed contract base bid price is: (Bidder: insert words and numbers. In cases of conflict between words and numbers, the words shall control.) dollars (\$ _____).

4. Add Alternates:

a. Alternate Number One (1) price is: _____

b. Alternate Number Two (2) price is: _____

c. Alternate Number Three (3) price is: _____

d. Alternate Number Four (4) price is: _____

5. Unit prices for Change Orders as specified in the General Conditions and Section 01035. The difference in Unit Prices between add and deduct shall not exceed 15%.

<u>Description of Work</u>	<u>Unit</u>	<u>Amount to add</u>	<u>Amount to deduct</u>
a. Earth Excavation	Cu. Yd.	\$ _____	\$ _____
b. Rock Excavation	Cu. Yd.	\$ _____	\$ _____
c. Unsuitable material Excavation, including replacement with ordinary borrow	Cu. Yd.	\$ _____	\$ _____

- d. Trench Excavation including all temporary sheeting, shoring, dewatering and granular backfill
- | | | | |
|---------------|---------|----------|----------|
| 0-5' depth | Cu. Yd. | \$ _____ | \$ _____ |
| over 5' depth | Cu. Yd. | \$ _____ | \$ _____ |
- e. Rock Excavation - trench
- | | | |
|---------|----------|----------|
| Cu. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- f. Unsuitable material Excavation, including replacement with sand and gravel borrow
- | | | |
|---------|----------|----------|
| Cu. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- g. Ordinary Borrow
- | | | |
|---------|----------|----------|
| Cu. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- h. Processed Gravel
- | | | |
|---------|----------|----------|
| Cu. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- i. Gravel Borrow Type B&C
- | | | |
|---------|----------|----------|
| Cu. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- j. 15" paving section, including 3" Bit Conc. and 12" gravel.
- | | | |
|---------|----------|----------|
| Sq. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- k. 8 1/2" paving section, including 2 1/2" Bit Conc. and 6" gravel.
- | | | |
|---------|----------|----------|
| Sq. Yd. | \$ _____ | \$ _____ |
|---------|----------|----------|
- l. Sod in place of seed on Field #1
- | | | |
|-----------|----------|----------|
| 88,000 sf | \$ _____ | \$ _____ |
|-----------|----------|----------|
- m. Sod in place of seed on Field #2
- | | | |
|-----------|----------|----------|
| 88,000 sf | \$ _____ | \$ _____ |
|-----------|----------|----------|
6. The Undersigned agrees that, if he selected as general contractor, he will within five 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 business in the Commonwealth of Massachusetts and satisfactory to the awarding authority and each in the sum of the contract price, the premiums of which are to be paid by the general contractor and are included in the contract price. The undersigned acknowledges that companies issuing performance and payment bonds must meet with the approval of the awarding authority and that the required bonds shall be written with a company having an A.M. Best rating of A+, XII or higher, subject to the Awarding Authorities' discretion

The Undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable.

Date: _____

Name of General Bidder

By _____
Name and Title of Person Signing Bid

Business Address

City and State

Note: This bid shall bear the written signature of the bidder.

1. If the bidder is an individual, provide residential address if different from business address.
2. If the bidder is a partnership, the bid must be signed by a partner and provide full names and residential addresses of all partners.
3. If the bidder is a corporation, the bid must be signed by a duly authorized officer or agent of the corporation, the state of incorporation must be provided, and the corporate seal must be affixed. Provide the state of incorporation and the names of all corporate officers.

If an individual:

Name: _____

Residence: _____

If an individual doing business under a firm name:

Name of Firm: _____

Name of Individual: _____

Business Address: _____

Residence: _____

If a partnership:

Name of Partner: _____

Residence: _____

Name of Partner: _____

Residence: _____

Name of Partner: _____

Residence: _____

If a corporation:

Incorporated in
what State: _____

President: _____

Treasurer: _____

Secretary: _____

END OF SECTION

00 52 13

OWNER - CONTRACTOR AGREEMENT

Note to Parties to the Agreement: This form of agreement is only a suggested guideline agreement. The Landscape Architect is not an attorney and is not qualified to assist in the preparation of contracts between the Awarding Authority and the Contractor or any Subcontractor. The parties to this agreement should obtain qualified legal advice and counsel before using or signing this form of agreement.

THIS AGREEMENT, made this _____ day of _____, 2015 by and between the Town of Boxford, herein called the "Owner" and

_____ a corporation organized and existing under the laws of _____

_____ a partnership consisting of _____

_____ an individual doing business as _____

_____ hereinafter called the "Contractor".

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

Article 1. SCOPE OF THE WORK: The Contractor shall furnish all of the materials and perform all of the work shown and described in the Contract Documents titled HAYNES RECREATION AND CONSERVATION AREA, prepared by Huntress Associates, Inc., acting as and in these Contract Documents entitled the Landscape Architect, or Architect, and shall do everything required by this Agreement and the Contract Documents.

Article 2. TIME OF COMPLETION: The Contractor hereby agrees to commence work within 10 calendar days (Saturdays, Sundays and legal holidays excluded) from receipt of a written "Notice to Proceed" and to Substantially Complete the Work by August 15, 2017.

The parties acknowledge that time is of the essence in the performance of this Contract.

Article 3. THE CONTRACT PRICE: The Owner shall pay the Contractor for the performance of the Work subject to additions and deductions by Change Order as provided in the Conditions of the Contract, in current funds, the sum of:

_____ DOLLARS (\$) _____).

Article 4. PAYMENTS: The Owner agrees to pay the Contractor in current funds for the performance of the Contract as provided in the GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as amended by the SUPPLEMENTARY GENERAL CONDITIONS.

Article 5. THE CONTRACT: The following together with this Agreement, form the CONTRACT:

The General Documents (Bidding Documents, Contract Forms & Conditions of the Contract) as listed in the Table of Contents.

The Specifications as listed in the Table of Contents.

The Contract Drawings as listed on the Contract Drawing coversheet.

Addenda No. _____ through _____ inclusive.

Modifications issued after the execution of the Contract.

Article 6. REQUIRED TERMS: This Contract shall be considered to include all items required to be included by the Contract Documents.

Article 7. ALTERNATES: The following ALTERNATES have been accepted and the Contract Sum stated in Article 3 of this Agreement includes and has been adjusted to reflect the total cost of each accepted alternate.

<u>Alternate Number</u>	<u>Indicate Accepted or Rejected</u>	<u>Original Bid Value of Alternate</u>
Alternate No. 1		\$ _____
Alternate No. 2		\$ _____
Alternate No. 3		\$ _____
Alternate No. 4		\$ _____
Alternate No. 5		\$ _____

IN WITNESS WHEREOF, the parties hereto on the day and year first above written have executed this Agreement in two (2) counterparts, each of which shall, without proof of accounting for the other counterpart, be deemed an original thereof.

SEAL

TOWN OF BOXFORD,

Commonwealth of Massachusetts

(County) _____,

Then personally appeared the above _____

of the aforesaid Town of Boxford and acknowledged the foregoing instrument to be the free act and deed,
before me.

Notary Public

My Commission expires: _____

SEAL

CONTRACTOR

Address _____

By _____

Title _____

Note: If the Contractor is a corporation, attach Certificate of Vote by Board of Directors stating that the
officer signing the contract has the authority of the Corporation to sign contracts binding on the Corporation

COMMONWEALTH OF MASSACHUSETTS

(County) _____,

OWNER - CONTRACTOR AGREEMENT
00 52 13-3

Then personally appeared the above _____
the aforesaid _____ of _____
and acknowledged the foregoing instrument to be the free act and deed of _____
_____ before me.

Notary Public

My Commission expires: _____

AWARDING AUTHORITY APPROVALS

Approved as to form of agreement:

Approved as to available of appropriation:

I certify there is an appropriation in the amount of this
contract and that the _____ has been
authorized to execute the contract and approve all
requisitions and change orders

Awarding Authority Legal Counsel

Awarding Authority Accountant or Purchasing Agent

Date

Date

END OF SECTION

PERFORMANCE BOND

00 61 13.13

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)

a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

_____ of _____, State of _____
(Surety) (City)

_____ hereinafter called the "Surety" and licensed by the State
Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are
held and firmly bound to the Town of _____, Massachusetts, hereinafter called
"Owner", in the penal sum of

_____ Dollars
(\$ _____) in lawful money of the United States, for the payment of which
sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal has
entered into a certain contract with the Owner (the "Construction Contract"), dated the
_____ day of _____, 20____, for the construction described as follows:

_____.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties,
all the undertakings, covenants, terms, conditions, and agreements of the Construction Contract
during the original term thereof, and any extensions thereof which may be granted by the Owner,
with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under
the Construction Contract, and shall fully indemnify and save harmless the Owner from all costs
and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the
Owner all outlay and expense which the Owner may incur in making good any default, then this
obligation shall be void; otherwise, this obligation shall remain in full force and effect.

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after
(1) the Owner has declared the Principal in default of the Construction Contract or any provision
thereof, or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to
execute the work consistent with, and in conformance to, the Construction Contract (collectively
referred to as a "Contractor Default"). The determination of a Contractor Default shall be made
solely by the Owner. The Owner need not terminate the Construction Contract to declare a
Contractor Default or to invoke its rights under this Bond, and Principal agrees, notwithstanding
any agreement between it and the surety to the contrary, not to bring any claim against the Surety

on account of the Surety's good faith fulfillment of its obligations before or without termination of the Construction Contract.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of following steps: (1) arrange for the Principal to perform and complete the work of the Construction Contract; (2) arrange for a contractor other than the Principal to perform and complete the work of the Construction Contract; (3) reimburse the Owner, in a manner and at such time as the Owner shall reasonably decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Construction Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

If the Surety does not proceed as provided in this Bond with due diligence and all deliberate speed, the Surety shall be deemed to be in default of this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Construction Contract; (2) additional design, professional services, and legal costs, including attorney's fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Construction Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligations of the Principal, if any, as provided in the Construction Contract; and (5) liquidated damages as provided in the Construction Contract, or if no such damages are specified, actual damages and consequential damages resulting from the Contractor Default or any default of the Surety under this Bond.

Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction in the Commonwealth of Massachusetts.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument is executed in _____ () counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20____.

ATTEST:

Principal

(Principal Secretary)

By _____

(Address-Zip Code)

Witness as to Principal (SEAL)

(Address-Zip Code)

ATTEST:

Surety

By _____
(Attorney-in-Fact)

(Address-Zip Code)

Witness as to Surety (SEAL)

(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

180484

ADDENDUM TO SUPPLEMENTARY CONDITIONS

HAYNES RECREATION & CONSERVATION AREA PROJECT

This Addendum adds to the Supplementary Conditions, Section 00800, (by making further revisions to the General Conditions) and modifies the Supplementary Conditions by making revisions to the text of the Supplementary Conditions. Modifications are noted by reference to Section 00800. Except as modified herein, the provisions of the Supplementary Conditions remain in effect.

ARTICLE 1

1.1.1 In the third sentence delete the words "Unless specifically enumerated in the Agreement," and the word "not".

1.2.11 In the second sentence of the text in Section 00800, change "an accurate or approximate" to "a completely accurate."

1.6.1 Replace the text in Section 00800 with the following:

All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain the Owner's property. They are to be used only with respect to this Project and are not to be used on any other project without the prior written consent of the Owner. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Owner at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of any reserved rights.

ARTICLE 2

2.2.3 In the first line of subparagraph 2.2.3 insert the word "available" after the word "furnish".

Delete all text after the word "Owner" in line 3 and insert the following:

except to the extent that the Contractor's review thereof reveals, or in the exercise of reasonable diligence should have revealed, any inaccuracy or incompleteness therein. The Contractor shall exercise proper precautions relating to the safe performance of the Work.

2.2.5 In the second line of subparagraph 2.2.5 delete the word "such" and insert "[no. of contracts to be provided by Contractor]".

Add the following to the end of subparagraph 2.2.5: ", all additional copies will be furnished upon request at the cost of reproduction."

2.3.1 Add the following to the end of subparagraph 2.3.1:

The Contractor shall resume the Work after such stoppage promptly upon written notice to do so from the Owner.

ARTICLE 3

3.2.1 Delete the second sentence of subparagraph 3.2.1.

3.2.2 Insert a period after the word "Architect" in line 2, delete the balance of subparagraph 3.2.2 and substitute the following:

The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents, but shall be liable for damage to the extent he reasonably should have, but failed to, discover such error, inconsistency or omission. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for such correction.

3.2.3 Replace the text in Section 00800 with the following: Delete the third sentence.

3.2.6 Add new subparagraph as follows:

3.2.6 Any claim by the Contractor or Subcontractors that, in submitting their respective bids, they did not include all items as shown in the Contract Documents, will be given no consideration for an adjustment of any kind. If any item is specified in a Section which would not normally furnish this items it shall be the responsibility of the Contractor to coordinate the situation with the Subcontractor, and if the item under consideration is not to be provided by the Subcontractor it shall be the responsibility of the Contractor to provide the work in question, without any additional cost to the Owner.

3.3.1 Add to the text in section 00800 the following: Add to the end of the first sentence the following:

"which shall not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location."

3.5.1 Add the following to the text of the new first sentence inserted by Section 00800:

"and, promptly after written notification of non-conformance, shall be repaired or replaced by the Contractor with Work conforming to such requirements."

3.5.12 Add new subparagraph as follows:

The Contractor shall guarantee all Work for a period of one year after Date of Substantial Completion, or by the terms of any special guarantee required by the Contract Documents. The Contractor shall, upon written notice from the Owner, promptly correct defective Work or Work not in accordance with the Contract Documents.

3.6.1 In sub-item 1 of the text in Section 00800, change “c. 64(h)” to “c. 64H.”

In sub-item 2 of the text in Section 00800, change “1954” to “1986.”

3.18.1 In line 7 of the text in Section 00800, delete the words “(other than the Work itself).”

ARTICLE 4

4.6.1 Delete the second sentence of the text in Section 00800. Change “Suffolk County” to “Essex County” where appearing in the text in Section 00800.

ARTICLE 5

5.2.1 Delete the last sentence of subparagraph 5.2.1.

5.2.3 Delete sentence two and three of subparagraph 5.2.3.

5.2.5 Delete the second sentence of the text in Section 00800.

ARTICLE 6

6.1.1 In sentence one of subparagraph 6.1.1 delete the following: "including those portions related to insurance and waiver of subrogation".

6.2.3 Delete the second sentence.

6.2.5 Delete subparagraph 6.2.5 in its entirety.

ARTICLE 8

8.3.1 Delete the words "pending mediation and arbitration" in line five of subparagraph 8.3.1.

Add the following at the end of the inserted text in Section 00800: “, and this shall be the Contractor’s sole remedy for such delay.”

ARTICLE 9

9.3.1.1 Replace the text in Section 00800 with the following: Delete this subparagraph.

9.9.1 In the first sentence of subparagraph 9.9.1 delete the words “when such portion is designated by separate agreement with the Contractor” and “consented to by the insurer as required under Clause 11.4.1.5. and”.

9.10.4 Replace the text in Section 00800 with the following: Delete this subparagraph.

ARTICLE 10

10.3.1 Delete this subparagraph in its entirety and substitute the following:

If the Contractor encounters or recognizes on the site any material known or reasonably believed to be hazardous, including but not limited to asbestos or polychlorinated biphenyl (PCB), the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Architect in writing. The Contractor and the Owner shall cooperate in implementing measures to remove or contain said material and the Contractor shall comply with all directions of the Architect in the implementation of such removal or containment.

10.3.2 Delete this subparagraph in its entirety.

10.4 - 10.5 Delete these paragraphs in their entirety.

ARTICLE 11

11.1.2 Refer also to Section 00 72 16, Insurance Requirements. The higher and greater coverage requirements, wherever appearing, shall govern.

11.4.1.3 Delete the text in Section 00800.

11.4.7 Delete subparagraph 11.4.7 in its entirety.

11.4.9 Replace the text in Section 00800 with the following: Delete subparagraph 11.4.9 and substitute the following:

The Owner shall have the power to adjust and settle with its insurers any loss for which it has obtained insurance.

Upon the occurrence of an insured loss, the Owner and the Contractor shall cooperate with each other and with each other's insurer in the submission of claims and related information and the distribution of any insurance proceeds. If after such a loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate change order.

ARTICLE 12

12.2.1 Add at the end of subparagraph 12.2.1:

"The Contractor shall bear the cost of any cost, loss, or damages to the Owner resulting from such failure or defect."

12.2.2.3 Delete the word "not" in line 1.

ARTICLE 13

13.7.1 Replace the text in Section 00800 with the following:

If the Contractor is a foreign corporation, it shall comply with M.G.L. c. 30, §39L.

13.9 Add new Paragraph 13.9

13.9 DEFENSE OF SUITS

13.9.1 The Contractor shall be responsible for, shall defend and pay all costs, attorneys' fees and liabilities both direct and indirect as a result of suits arising out of this Contract.

13.9.2 Neither final acceptance nor occupation of the premises by the Owner shall relieve the Contractor of responsibility for all claims for labor, materials, and equipment arising out of this contract.

13.9.3 The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the work.

ARTICLE 14

14.1.1 Replace the text in Section 00800 with the following:

Delete subparagraphs 14.1.1.1, 14.1.1.2 and 14.1.1.4

14.1.2 Delete this subparagraph in its entirety.

14.1.4 Delete this subparagraph.

14.4.3 Replace the text in Section 00800 with the following: Delete subparagraph 14.4.3 and substitute the following:

In the event that the Contract is terminated pursuant to paragraph 14.4, the Contractor shall be reimbursed in accordance with the Contract Documents for all Work performed up to the termination date, and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. Payment for materials or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to the Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interest.

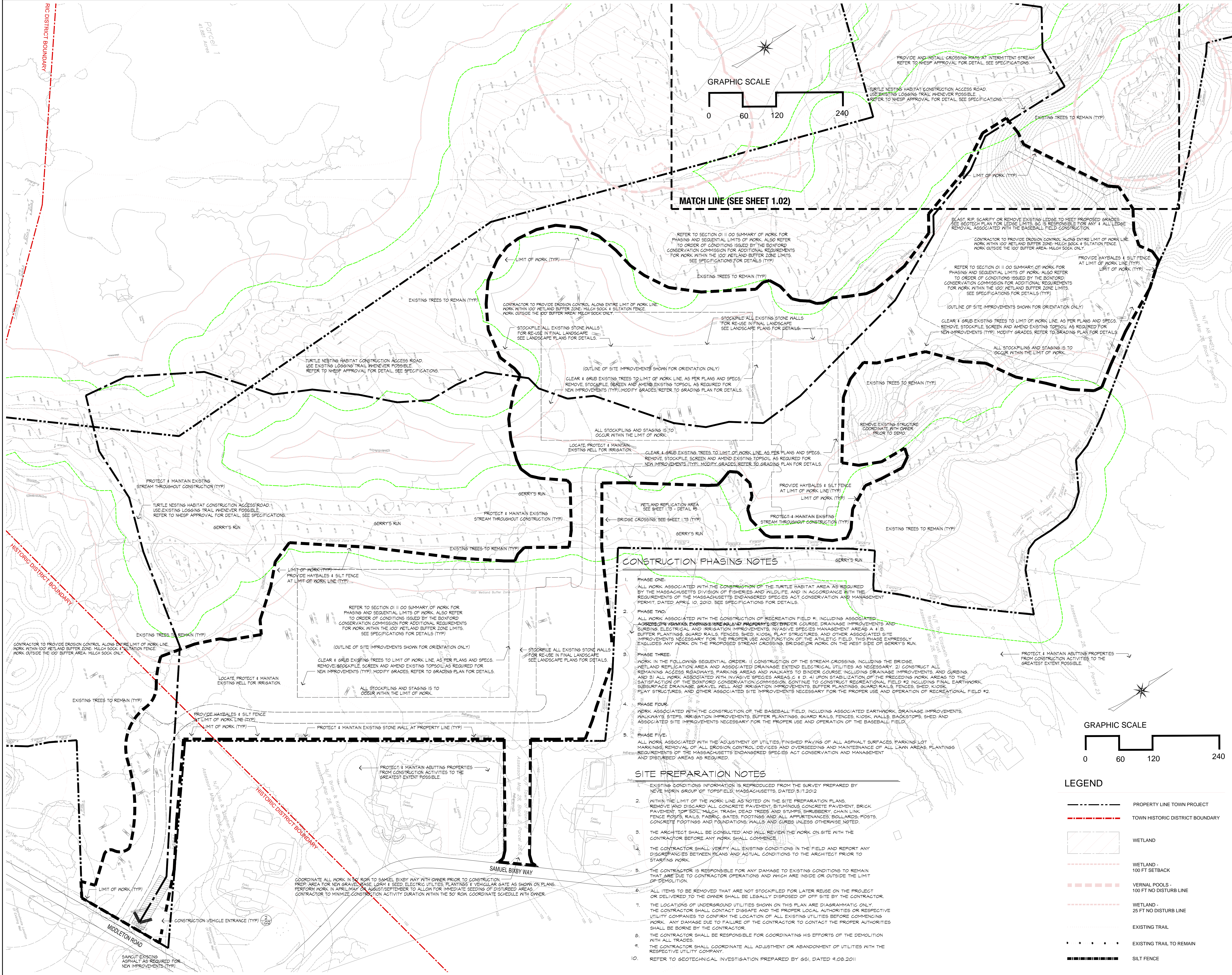
ARTICLE 16

Article 16 is to be DELETED in its entirety.



Huntress Associates, Inc.

Landscape Architecture & Land Planning
17 Tewksbury Street, Andover MA 01810
978.470.8882 470.8890 fax



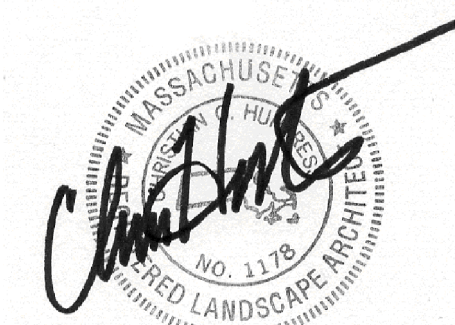
Project:

HAYNES LAND Recreation Fields

Boxford, Massachusetts

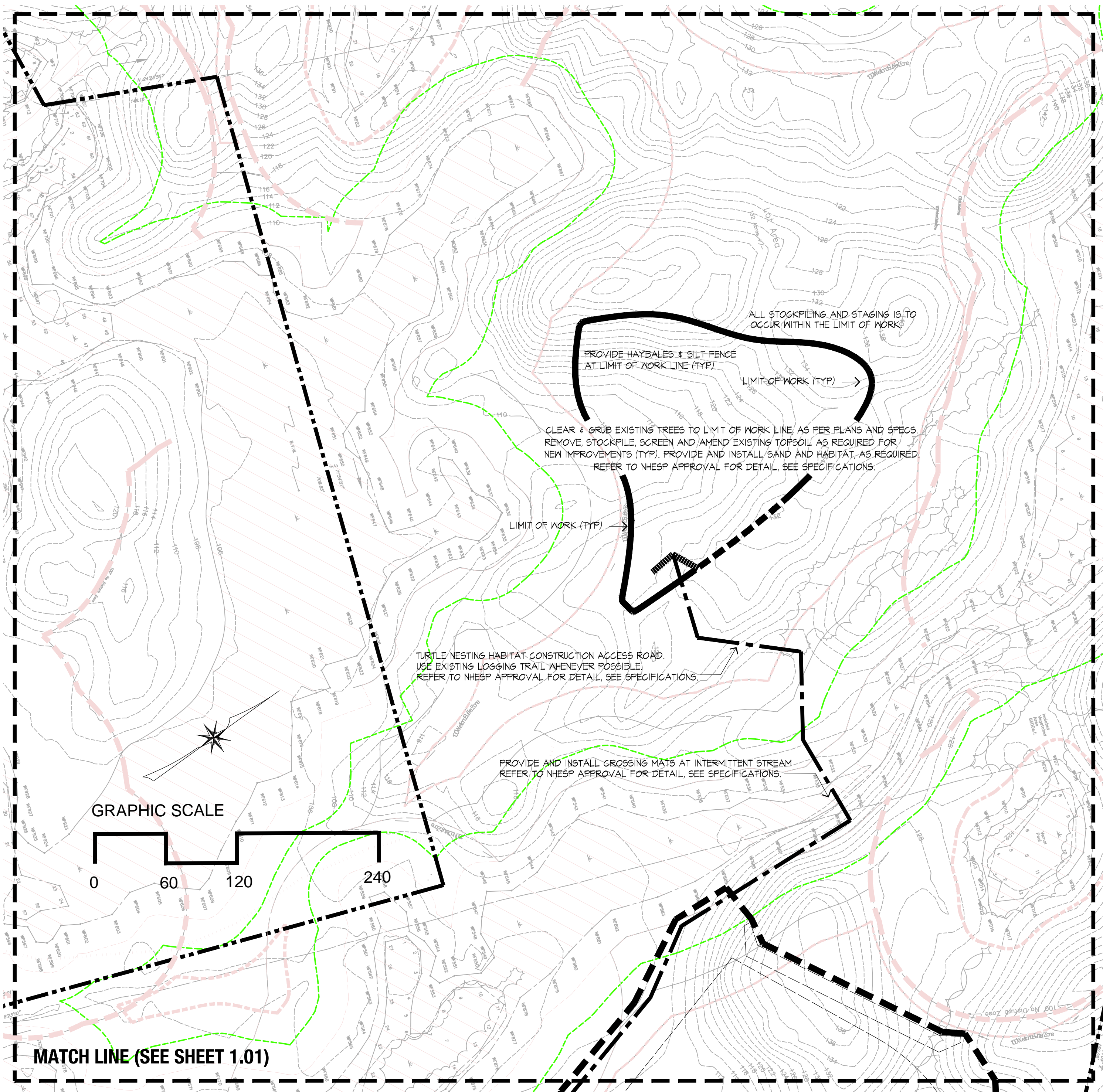
Drawing Title:

Site Preparation Plan

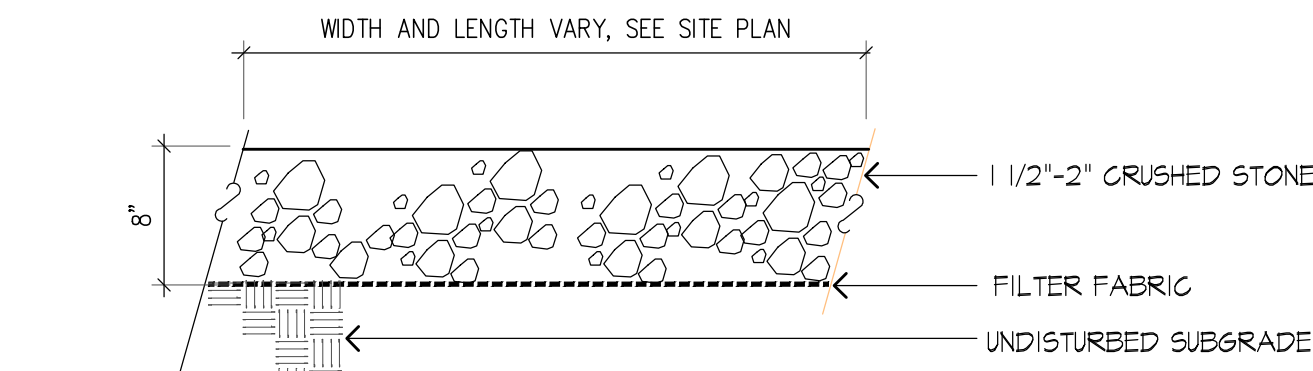


Revision	Date
ISSUED FOR CONSTRUCTION	6.17.15
RESET SHEET SIZE	6.30.15

Scale:	1" = 60'	Drawing No.
Date:	6.17.15	1.01
Job:	00-107	
File:	PR-SP	
Drawn:	CCH	of
Checked:	--	26



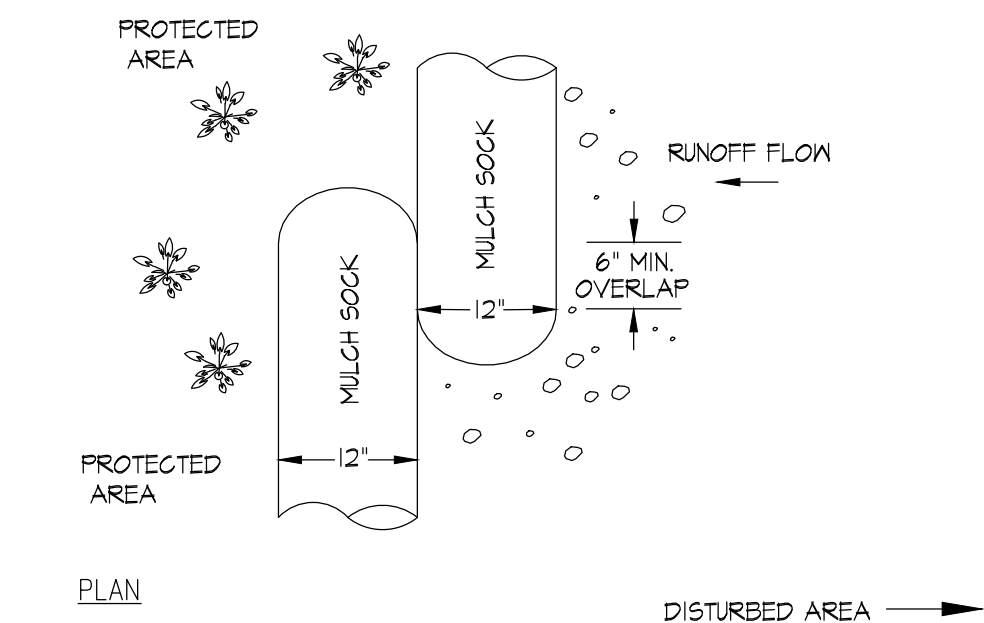
1 TURTLE HABITAT NESTING AREA - SITE PREPARATION PLAN
SCALE: 1" = 60'



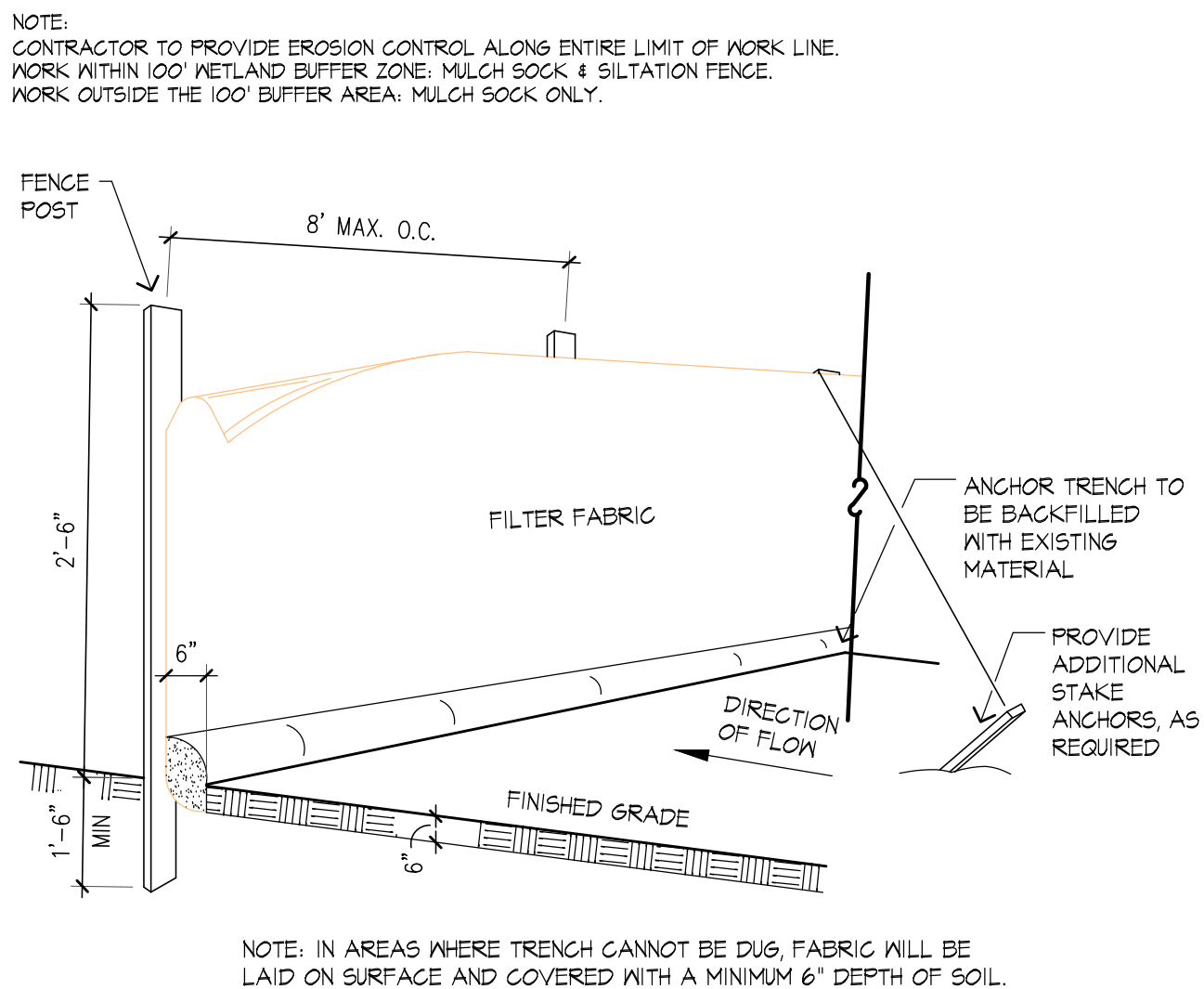
2 CONSTRUCTION ENTRANCE
SCALE: 1"=1'-0"

LEGEND

- PROPERTY LINE TOWN PROJECT
- TOWN HISTORIC DISTRICT BOUNDARY
- WETLAND
- WETLAND - 100 FT SETBACK
- VERNAL POOLS - 100 FT NO DISTURB LINE
- WETLAND - 25 FT NO DISTURB LINE
- EXISTING TRAIL
- EXISTING TRAIL TO REMAIN
- SILT FENCE



3 MULCH SOCK EROSION CONTROL
SCALE: 1"=1'-0"



4 SILTATION FENCE EROSION CONTROL
SCALE: N.T.S

CONSTRUCTION PHASING NOTES

- PHASE ONE:
ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE TURTLE HABITAT AREA AS REQUIRED BY THE MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE MASSACHUSETTS ENDANGERED SPECIES ACT CONSERVATION AND MANAGEMENT PERMIT, DATED APRIL 10, 2010. SEE SPECIFICATIONS FOR DETAILS.
- PHASE TWO:
ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF RECREATION FIELD #1, INCLUDING ASSOCIATED ACCESS DRIVEWAYS, PARKING AREAS AND WALKWAYS TO BINDER COURSE, DRAINAGE IMPROVEMENTS AND CURBING, ELECTRICAL AND IRRIGATION IMPROVEMENTS, INVASIVE SPECIES MANAGEMENT AREAS A & B, BUFFER PLANTINGS, GUARD RAILS, FENCES, SHED, KIOSK, PLAY STRUCTURES, AND OTHER ASSOCIATED SITE IMPROVEMENTS NECESSARY FOR THE PROPER USE AND FUNCTION OF THE ATHLETIC FIELD. THIS PHASE EXPRESSLY EXCLUDES ANY WORK ON THE PROPOSED STREAM CROSSING, BRIDGE OR WORK ON THE WEST SIDE OF GERRY'S RUN.
- PHASE THREE:
WORK IN THE FOLLOWING SEQUENTIAL ORDER: 1) CONSTRUCTION OF THE STREAM CROSSING, INCLUDING THE BRIDGE, WETLAND REPLICATION AREA AND ASSOCIATED DRAINAGE, EXTEND ELECTRICAL UTILITIES AS NECESSARY; 2) CONSTRUCT ALL REMAINING ACCESS ROADWAYS, PARKING AREAS AND WALKWAYS TO BINDER COURSE, INCLUDING DRAINAGE IMPROVEMENTS, AND CURBING; AND 3) ALL WORK ASSOCIATED WITH INVASIVE SPECIES AREAS C & D. 4) UPON STABILIZATION OF THE PRECEDING WORK AREAS TO THE SATISFACTION OF THE BOXFORD CONSERVATION COMMISSION, CONTINUE TO CONSTRUCT RECREATION FIELD #2, INCLUDING FINAL EARTHWORK, SUBSURFACE DRAINAGE, GRAVEL WELL AND IRRIGATION IMPROVEMENTS, BUFFER PLANTINGS, GUARD RAILS, FENCES, SHED, KIOSK, PLAY STRUCTURES, AND OTHER ASSOCIATED SITE IMPROVEMENTS NECESSARY FOR THE PROPER USE AND OPERATION OF RECREATION FIELD #2.
- PHASE FOUR:
WORK ASSOCIATED WITH THE CONSTRUCTION OF THE BASEBALL FIELD, INCLUDING ASSOCIATED EARTHWORK, DRAINAGE IMPROVEMENTS, WALKWAYS, STEPS, IRRIGATION IMPROVEMENTS, BUFFER PLANTINGS, GUARD RAILS, FENCES, KIOSK, WALLS, BACKSTOPS, SHED AND ASSOCIATED SITE IMPROVEMENTS NECESSARY FOR THE PROPER USE AND OPERATION OF THE BASEBALL FIELD.
- PHASE FIVE:
ALL WORK ASSOCIATED WITH THE ADJUSTMENT OF UTILITIES, FINISHED PAVING OF ALL ASPHALT SURFACES, PARKING LOT MARKINGS, REMOVAL OF ALL EROSION CONTROL DEVICES AND OVERSEEDING AND MAINTENANCE OF ALL LAWN AREAS, PLANTINGS REQUIREMENTS OF THE MASSACHUSETTS ENDANGERED SPECIES ACT CONSERVATION AND MANAGEMENT AND DISTURBED AREAS AS REQUIRED.

SITE PREPARATION NOTES

- EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY NEVE MOROIN GROUP OF TOPSFIELD, MASSACHUSETTS, DATED 5/17/2012
- WITHIN THE LIMIT OF THE WORK LINE AS NOTED ON THE SITE PREPARATION PLANS, REMOVE AND DISCARD ALL CONCRETE PAVEMENT, BITUMINOUS CONCRETE PAVEMENT, BRICK PAVEMENT, TOP SOIL, MULCH, TRASH, DEAD TREES AND STUMPS, SHRUBBERY, CHAIN LINK FENCE POSTS, RAILS, FABRIC, GATES, FOOTINGS AND ALL APPURTENANCES, BOLLARDS, POSTS, CONCRETE FOOTINGS AND FOUNDATIONS, WALLS AND CURBS UNLESS OTHERWISE NOTED.
- THE ARCHITECT SHALL BE CONSULTED AND WILL REVIEW THE WORK ON SITE WITH THE CONTRACTOR BEFORE ANY WORK SHALL COMMENCE.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ARCHITECT PRIOR TO STARTING WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE INSIDE OR OUTSIDE THE LIMIT OF DEMOLITION.
- ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL CONTACT DISGATE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
- THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
- REFER TO GEOTECHNICAL INVESTIGATION PREPARED BY GSI, DATED 9/08/2011

Project:

HAYNES LAND Recreation Fields

Boxford, Massachusetts

Drawing Title:

Site Preparation Plan

Revision	Date
ISSUED FOR CONSTRUCTION	6.17.15
RESET SHEET SIZE	6.30.15

Scale:	AS NOTED	Drawing No.	1.02
Date:	6.17.15		
Job:	00-107		
File:	PR-det		
Drawn:	CCH	of	26
Checked:	--		

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REVISIONS

[illegible]

PROJECT

NUMBER —

DATE 9.18.13

Town of Boxford
Haynes Recreation Area

DRAWING

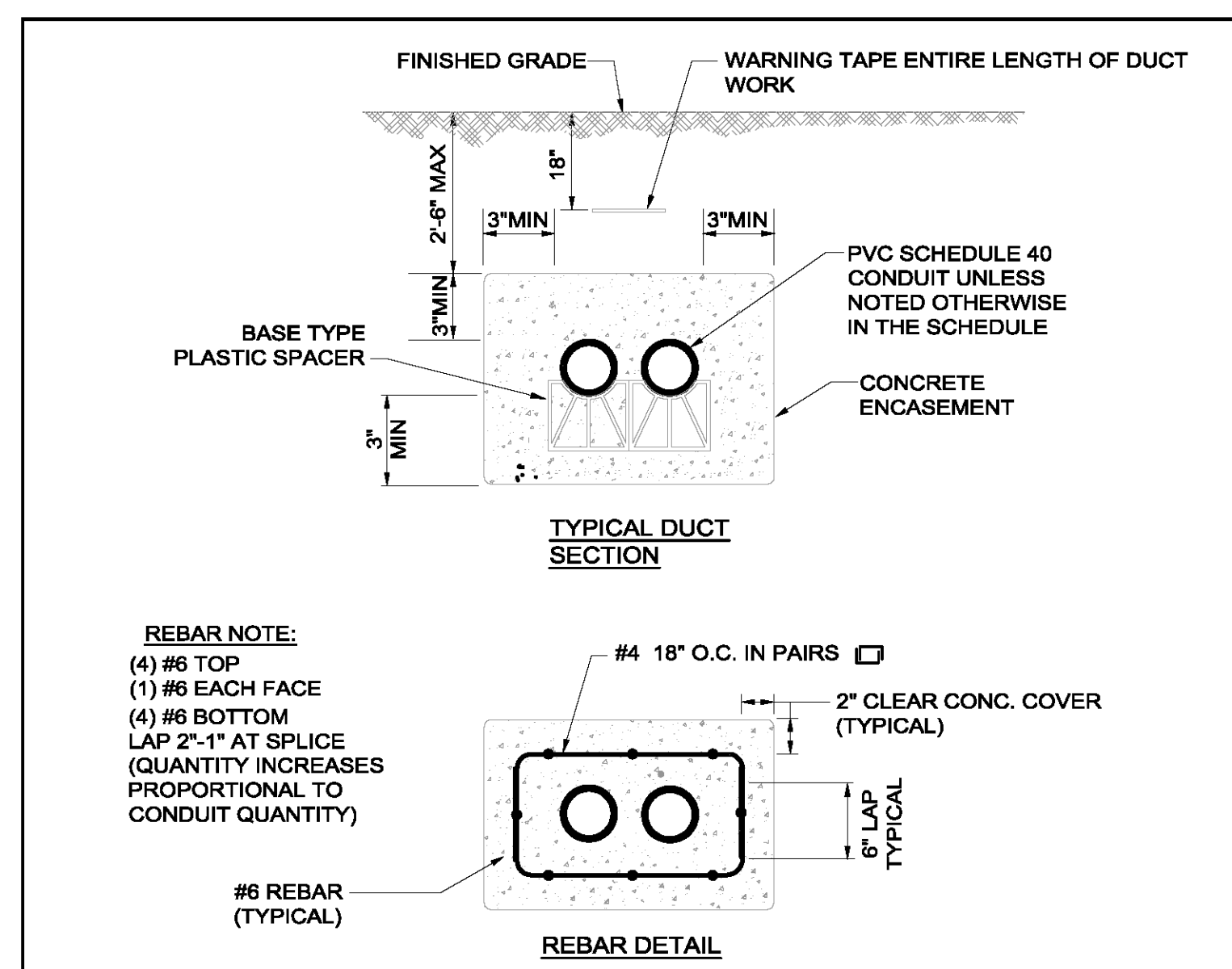
DRAWN BY —
JD

CHECKED BY —
MM

SCALE _____
1" = 40'

ELECTRICAL SITE PLAN

E1.0

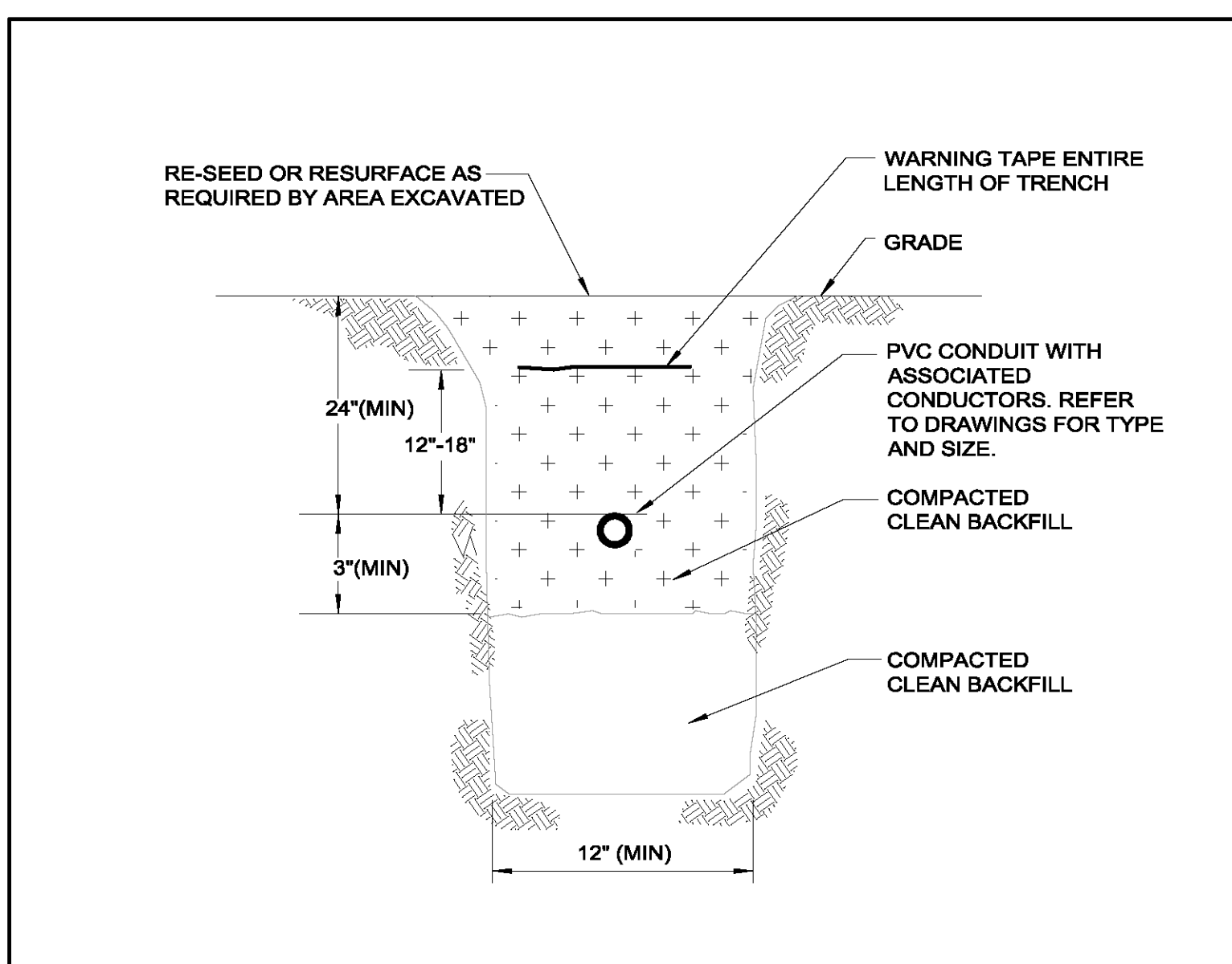


NOTES:

1. THIS DETAIL IS INTENDED TO ILLUSTRATE CONSTRUCTION OF TYPICAL DUCT BANK. REFER TO REFERENCED SECTION FOR QUANTITY AND SIZE OF CONDUIT REQUIRED. DUCT CONSTRUCTION SHALL BE MODIFIED TO ACCOMMODATE ANY SPECIAL REQUIREMENTS, UTILIZING THE CRITERIA ESTABLISHED IN THIS DETAIL AND AS WRITTEN IN THE SPECIFICATIONS.
2. REBAR SHALL BE USED FOR ALL DUCT BANKS INSTALLED UNDER TRAVELED WAYS, ROADWAYS, AND TRANSITIONS INTO MANHOLES/HANDHOLES AND FOUNDATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
3. WARNING TAPE SHALL BE DETECTABLE TYPE FOL BACKED 4 MIL POLYETHYLENE WITH TAPE RESISTANT TO BURIED ELECTRIC CABLES. DETECTABLE MINIMUM OF 12 INCHES ABOVE THE BURIED SERVICE. TAPE SHALL BE EQUAL TO & B NAF-0705

RDK TYPICAL ELECTRICAL DUCTBANK DETAIL

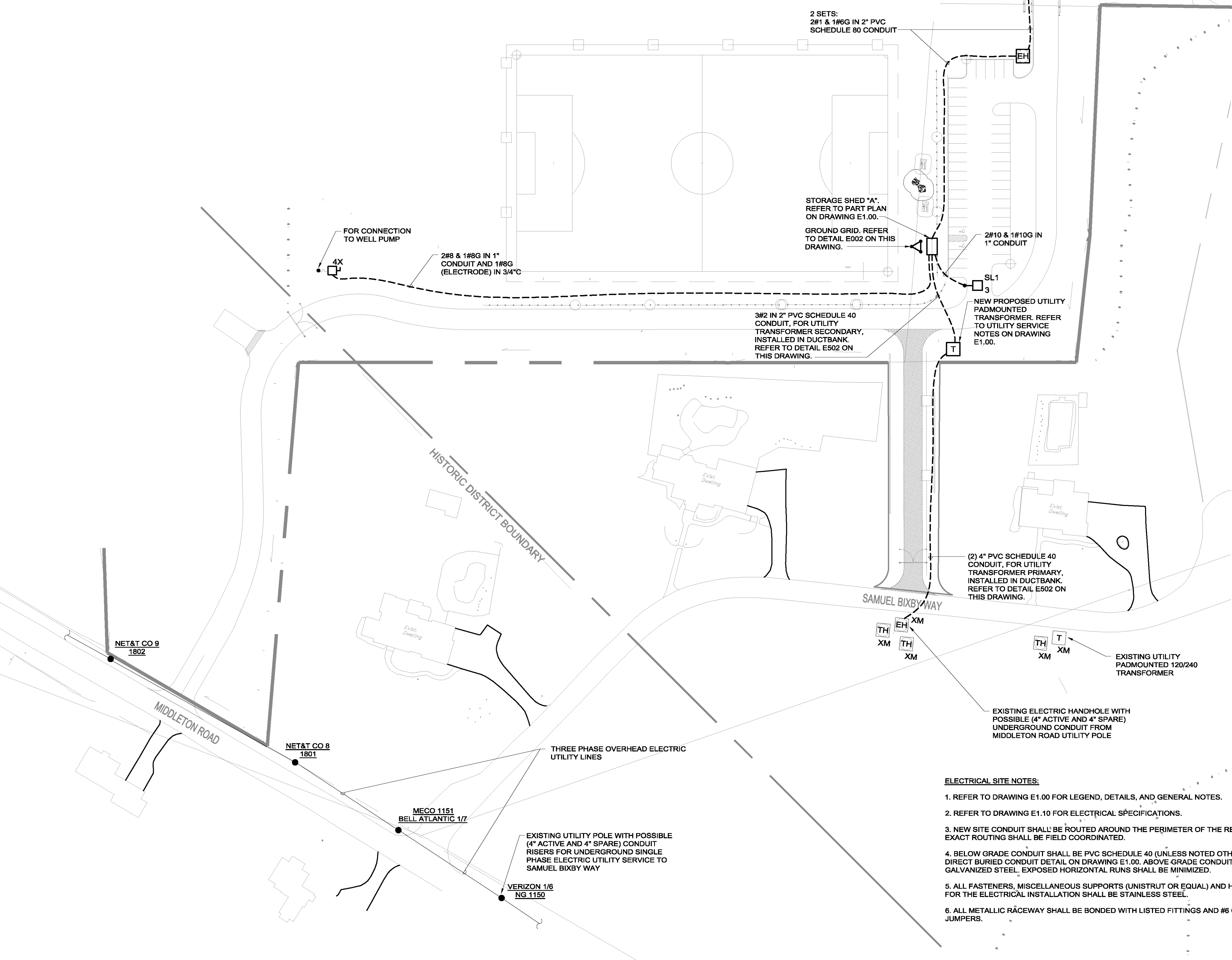
E502



NOTES:

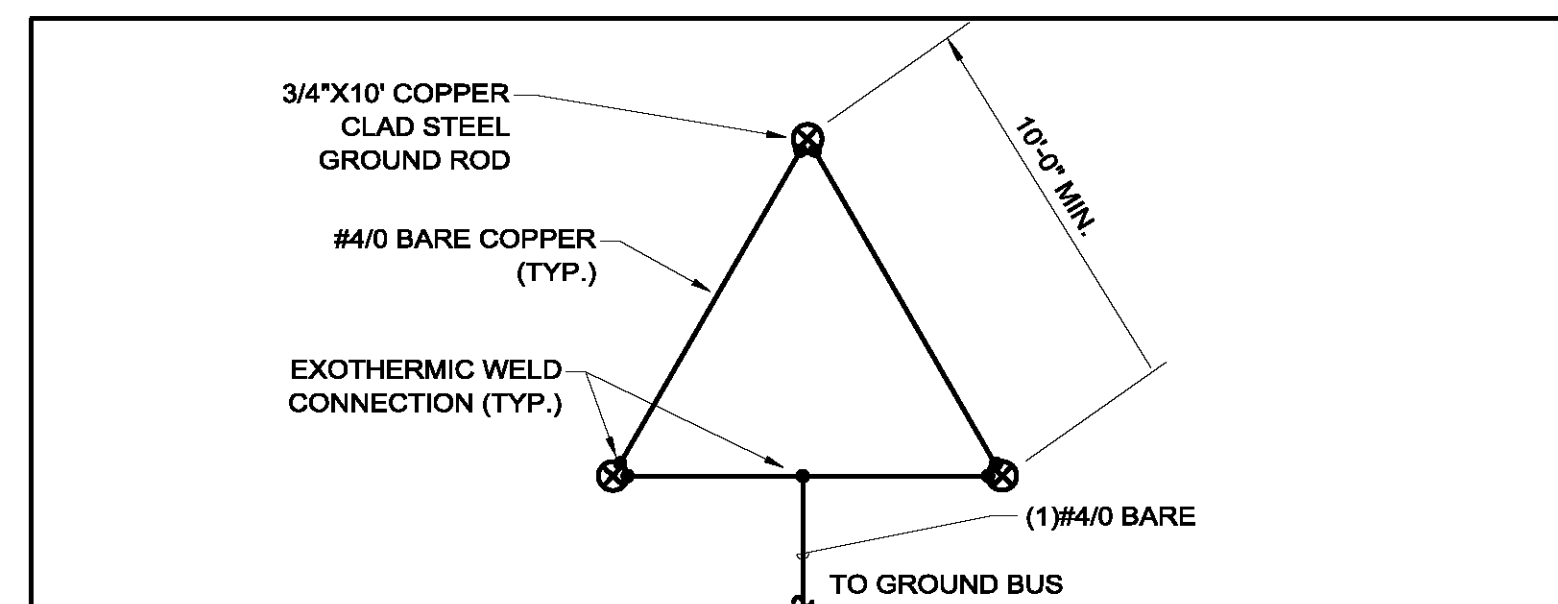
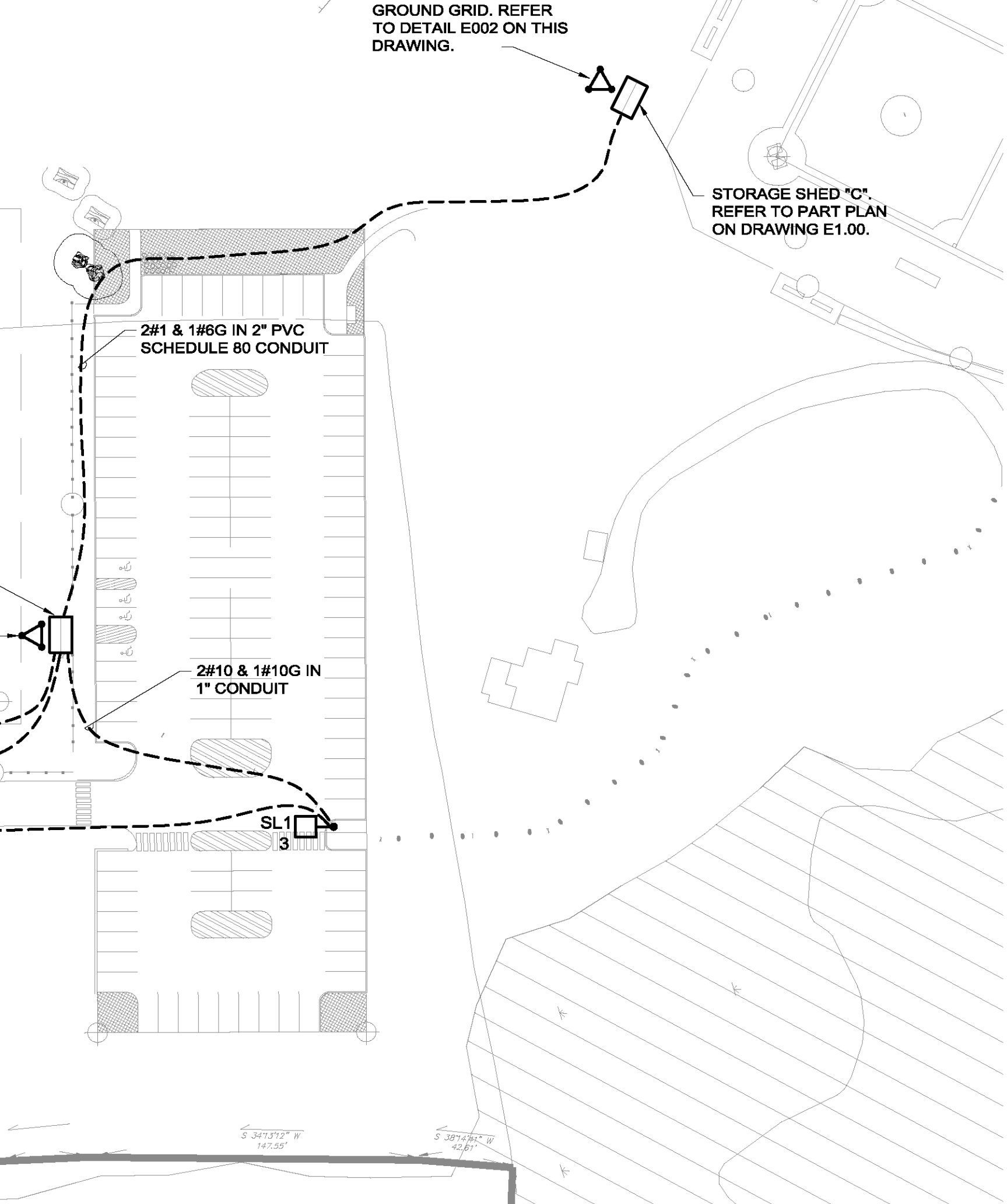
1. THIS DETAIL IS INTENDED TO ILLUSTRATE REQUIREMENTS WHICH EXCEED THOSE REQUIRED BY NEC TABLE 300-5.
2. WARNING TAPE SHALL BE DETECTABLE TYPE FOL BACKED 4MIL POLYETHYLENE WITH FADE RESISTANT "BURIED ELECTRIC LINE BELOW" A MINIMUM OF 18 INCHES ABOVE THE BURIED CONDUIT. THE TAPE SHALL BE EQUAL TO TAB NAT-0708.
3. ALL BELOW GRADE FEEDERS, SHOWN ON THE POWER RISER DIAGRAM, SHALL BE ENCASED WITH A MINIMUM OF 2 INCHES OF CONCRETE (TOP BOTTOM AND SIDES), UNLESS NOTED OTHERWISE.
4. ALL ROADWAY CROSSING SHALL BE ENCASED WITH A MINIMUM OF 2 INCHES OF CONCRETE (TOP BOTTOM AND SIDES) EXTENDING A MINIMUM OF 2 FEET BEYOND EACH SIDE OF CROSSING.
5. ALL CONDUIT RISERS SHALL UTILIZE LONG RADIUS GALVANIZED RIGID STEEL SWEEPS.

E513



ELECTRICAL SITE NOTES:

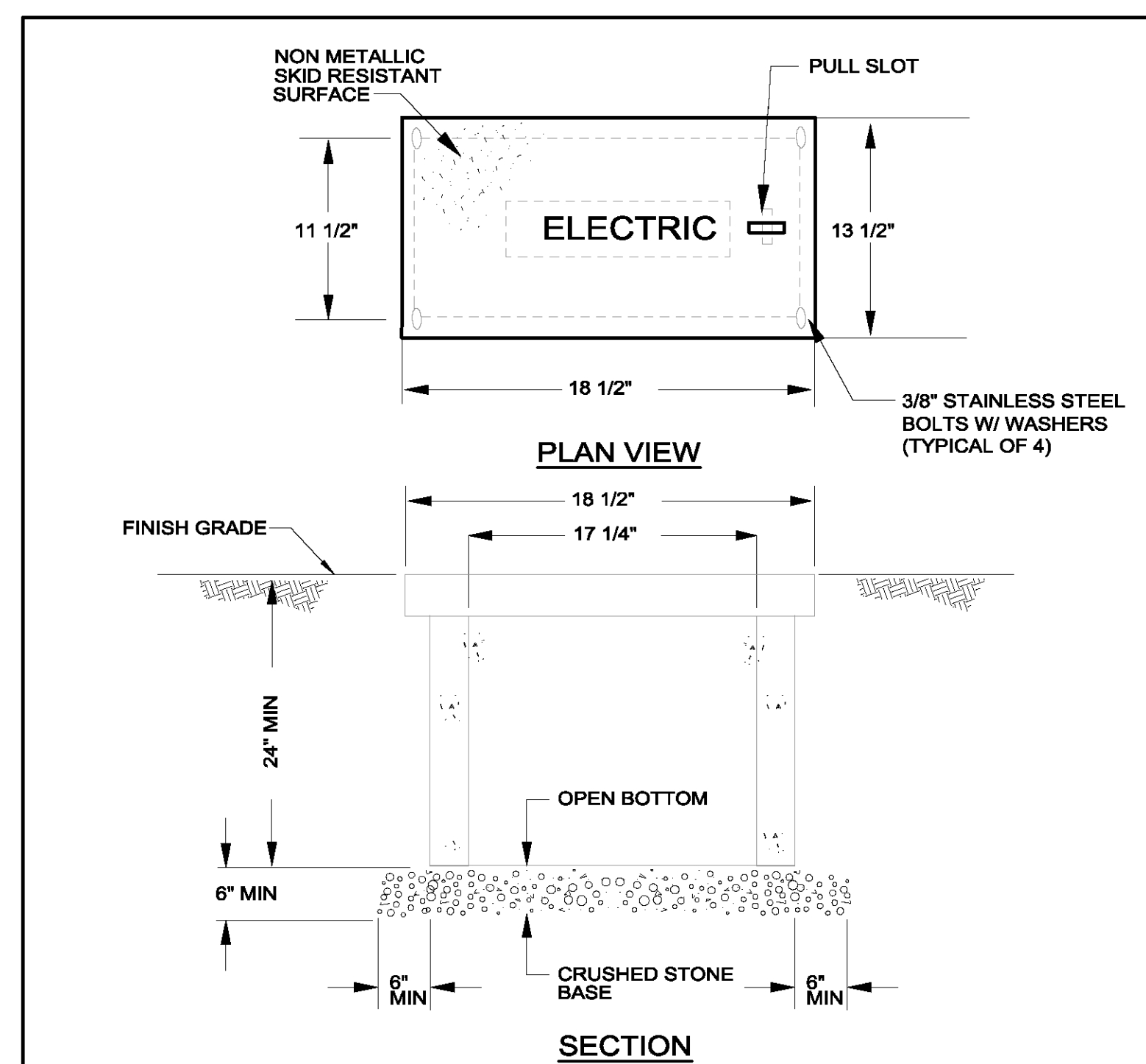
1. REFER TO DRAWING E1.00 FOR LEGEND, DETAILS, AND GENERAL NOTES.
2. REFER TO DRAWING E1.10 FOR ELECTRICAL SPECIFICATIONS.
3. NEW SITE CONDUIT SHALL BE ROUTED AROUND THE PERIMETER OF THE RECREATION FIELDS. EXACT ROUTING SHALL BE FIELD COORDINATED.
4. BELOW GRADE CONDUIT SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE). REFER TO DIRECT BURIED CONDUIT DETAIL ON DRAWING E1.00. ABOVE GRADE CONDUIT SHALL BE RIGID GALVANIZED STEEL. EXPOSED HORIZONTAL RUNS SHALL BE MINIMIZED.
5. ALL FASTENERS, MISCELLANEOUS SUPPORTS (UNISTRUT OR EQUAL) AND HARDWARE UTILIZED FOR THE ELECTRICAL INSTALLATION SHALL BE STAINLESS STEEL.
6. ALL METALLIC RACEWAY SHALL BE BONDED WITH LISTED FITTINGS AND #6 COPPER BONDING JUMPERS.



- NOTES:
1. GROUND RODS SHALL BE CLAD WITH A MINIMUM 10 MIL. COPPER. THE UPPER END OF EACH ROD SHALL BE A MINIMUM OF 6" BELOW FINISHED GRADE.

TYPICAL SUPPLEMENTAL ELECTRODE GROUND GRID

E002



- NOTES:
1. THIS IS A TYPICAL DETAIL. REFER TO DRAWING FOR ACTUAL DIMENSIONS OF HANDHOLE WHICH MAY DEVIATE FROM THESE DIMENSIONS. REFER TO THE SITE PLAN FOR QUANTITY OF CONDUITS AND THE "SERVICE" REQUIRED ON THE COVER.
2. THIS HANDHOLE IS INTENDED FOR NON-DILIBERATE VEHICULAR TRAFFIC ONLY, ANSI TIER 22 (22,500 POUND DESIGN LOAD)
3. HANDHOLE SHALL BE PREFABRICATED POLYMER CONCRETE AGGREGATE EQUAL TO QUARTZITE OR EQUAL PRE CAST CONCRETE CONSTRUCTION.



TYPICAL PREFABRICATED HANDHOLE DETAIL

E505

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1. GENERAL PROVISIONS: DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK IN CONTRACT. REFER TO ALL DRAWINGS ASSOCIATED WITH THIS PROJECT (EACH TRADE) FOR EXACT LOCATION OF ALL EQUIPMENT AND REQUIRED MOUNTING HEIGHTS.
2. SCOPE: PERFORM WORK AND PROVIDE NEW MATERIAL AND EQUIPMENT AS SHOWN ON DRAWINGS AND AS SPECIFIED IN THIS SECTION OF THE SPECIFICATIONS. PROVIDE ALL COMPONENTS AND MATERIALS, WHETHER SPECIFICALLY SHOWN OR NOT, THAT ARE NECESSARY TO MAKE THE SYSTEMS COMPLETE AND FULLY OPERATIONAL. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: 1) THE DESIGN INTENT AS ILLUSTRATED ON THESE DRAWINGS, 2) ALL TESTING AND CERTIFICATIONS NECESSARY FOR COMPLIANCE AND ANY REQUIRED REMEDIAL ACTIONS AND RETESTING DUE TO FAILURE, 3) ALL REQUIREMENTS FOR THIS PROJECT INCLUDED IN THE "NARRATIVE REPORT FOR COMPLIANCE WITH THE ENERGY CONSERVATION SECTION OF THE STATE BUILDING CODE - APPROVAL AND ACCEPTANCE WORK INCLUDED IN THIS PROJECT INCLUDED IN THE "NARRATIVE REPORT FOR COMPLIANCE WITH THE FIRE PROTECTION AND LIFE SAFETY SECTION OF THE STATE BUILDING CODE - FIRE PROTECTION CONSTRUCTION DOCUMENTS".
3. SITE VISIT: VISIT AND CAREFULLY EXAMINE SITE TO IDENTIFY EXISTING CONDITIONS THAT MAY AFFECT WORK OF THIS SECTION BEFORE SUBMITTING BID. NO EXTRA PAYMENT WILL BE ALLOWED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY DISCERNED.
4. RELATED WORK: THE FOLLOWING WORK IS NOT INCLUDED IN THIS SECTION AND WILL BE PROVIDED UNDER OTHER SECTIONS: 1) TEMPORARY LIGHTING AND POWER FOR USE DURING CONSTRUCTION AND TESTING UNLESS SPECIFICALLY NOTED IN OTHER SPECIFICATION SECTIONS, 2) TELECOMMUNICATIONS WIRING AND DEVICES UNLESS SPECIFICALLY NOTED ON THE DRAWINGS 3) AUTOMATIC TEMPERATURE CONTROL, AND DIRECT DIGITAL COMMUNICATIONS WIRING UNLESS SPECIFICALLY NOTED ON THE DRAWINGS AND 4) PAINTING.
5. CODES, STANDARDS, AUTHORITIES AND PERMITS: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE STATE BUILDING CODE, THE STATE ELECTRICAL CODE, NFPA, ANSI/NECA INSTALLATION STANDARDS AND OTHER APPLICABLE CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENT, OTHER AUTHORITIES HAVING JURISDICTION AND APPLICABLE BASE BUILDING STANDARDS AND SPECIFICATIONS. CODES, LAWS AND ORDINANCES PROVIDE A BASIS FOR THE MINIMUM INSTALLATION CRITERIA. THESE DRAWINGS AND SPECIFICATIONS ILLUSTRATE THE SCOPE REQUIRED FOR THIS PROJECT, WHICH MAY EXCEED MINIMUM CODE, LAW AND STANDARDS CRITERIA. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY BACKCHARGES AND OBTAIN NECESSARY APPROVALS FROM UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION AS REQUIRED FOR THE EXECUTION OF ALL WORK ASSOCIATED WITH THIS PROJECT.
6. INTERPRETATION OF DOCUMENTS: ADVISE THE ENGINEER IN WRITING (RFI) PRIOR TO PROCEEDING WITH PROCUREMENT OR INSTALLATION THAT THE DESIGN INTENT IS UNCLEAR OR THAT CONSTRUCTION DOCUMENTS DO NOT COINCIDE WITH MANUFACTURER'S RECOMMENDATIONS. ALL COSTS FOR REWORK NECESSARY TO RESOLVE DISCREPANCIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. REQUEST FOR INFORMATION: RFI ISSUED TO RESOLVE A CONFLICT OR DISCREPANCY SHALL BE PROVIDED WITH THE PREFERRED SOLUTION VIA WRITTEN DESCRIPTION OR SKETCH.
8. SUBMITTALS: PROVIDE SPECIFIED MATERIALS AND EQUIPMENT UNLESS "EQUAL" OR "APPROVED EQUAL" IS EXPLICITLY INDICATED ON THE DRAWINGS. DEVIATIONS TO SPECIFIED MATERIALS SHALL BE AT THE SOLE RISK OF THE CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR ALL ASSOCIATED CHANGES TO THIS AND OTHER TRADES. SUBMITTALS SHALL INDICATE REVIEW AND APPROVAL BY THE RESPONSIBLE CONTRACTOR, SUBMIT FOR REVIEW (6) SETS OF MANUFACTURER'S PRODUCT DATA FOR ALL LIGHTING, LAMPS, BALLASTS AND CONTROLS; DEVICES (RECEPTACLES AND SWITCHES) AND PLATES; FIRE ALARM SYSTEM COMPONENTS; PANELBOARDS, CIRCUIT BREAKERS AND TRANSFORMERS; DISCONNECT SWITCHES AND STARTERS. ALLOW ENGINEER A MINIMUM OF 10 WORKING DAYS FOR PROCESSING AND REVIEW OF EACH SUBMISSION.
9. OPERATION AND MAINTENANCE DATA: SUBMIT (3) SETS OF OPERATING AND MAINTENANCE MANUALS INCLUDING SYSTEM DESCRIPTION, WIRING DIAGRAMS, WRITTEN WARRANTY, RECOMMENDED SPARE PARTS AND ROUTINE MAINTENANCE REQUIREMENTS WITH RECOMMENDED INTERVALS FOR ALL SUPPLIED EQUIPMENT.
10. RECORD DRAWINGS: CAD RECORD DRAWING FILES SHALL BE SUBMITTED AT THE COMPLETION OF THE PROJECT SHOWING THE "AS-BUILT" CONDITION INCLUDING WORK INSTALLED AND ALL MODIFICATIONS OR ADDITIONS TO ORIGINAL DESIGN. OBTAIN THE AUTOCAD FILES FOR PREPARATION OF AS-BUILT DRAWINGS FROM THE ARCHITECT. THE ARCHITECT AND ENGINEER ARE NOT GRANTING ANY OWNERSHIP OR PROPERTY INTEREST IN THE CAD DRAWINGS BY THE DELIVERY

OF THE CAD FILES. THE RIGHTS TO USE THE CAD FILES AND DRAWINGS ARE LIMITED TO USE FOR THE SOLE PURPOSE OF ASSISTING IN THE PERFORMANCE OF CONTRACTUAL OBLIGATIONS WITH RESPECT TO THIS PROJECT. ANY REUSE AND/OR OTHER USE WILL BE AT THE CONTRACTOR'S SOLE RISK AND WITHOUT LIABILITY TO THE ARCHITECT AND ENGINEER.

11. WARRANTIES: WARRANTY INSTALLATION IN WRITING FOR ONE YEAR FROM DATE OF OWNER'S ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. REPAIR, REPLACE OR PROVIDE TEMPORARY ACCOMMODATIONS FOR DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN 24 HOURS OF NOTIFICATION. WARRANTY SHALL INCLUDE A CONTACT PERSON (NAME AND 24 HOUR TELEPHONE NUMBER) FOR SERVICE REQUESTS. CORRECT DAMAGE CAUSED WHILE MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER WARRANTY PERIOD AT NO ADDITIONAL COST.
12. COORDINATION: CONFER WITH ALL OTHER TRADES RELATIVE TO LOCATION OF ALL APPARATUS AND EQUIPMENT TO BE INSTALLED AND SELECT LOCATIONS SO AS NOT TO CONFLICT WITH OR HINDER PROGRESS OF WORK OF OTHER SECTIONS. WORK INSTALLED THAT CREATES INTERFERENCE WITH STRUCTS ACCESS REQUIRED BY CODE OR TO CONDUCT MAINTENANCE AND/OR ADJUSTMENTS SHALL BE MODIFIED AT NO ADDITIONAL COST TO THE OWNER.
13. SUPPORTS: INCLUDE ALL STRUCTURAL STEEL SUPPORTS, HANGER BRACKETS, ETC., REQUIRED FOR THE EXECUTION OF THE WORK OF THIS SECTION. HANGERS SHALL BE PREFINISHED CHANNEL AND THREADED ROD USED WITH APPROVED CLAMPS, HARDWARE, ETC. CHANNEL INSTALLED IN EXTERIOR LOCATIONS SHALL BE GALVANIZED STEEL WITH STAINLESS STEEL HARDWARE.
14. CUTTING AND PATCHING: INCLUDE ALL CORING, CUTTING, PATCHING AND FIREPROOFING NECESSARY FOR THE EXECUTION OF THE WORK OF THIS SECTION. STRUCTURAL ELEMENTS SHALL NOT BE CUT WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. PROVIDE FIRE STOPPING TO MAINTAIN THE FIRE RATING OF THE FIRE RESISTANCE-RATED ASSEMBLY. ALL PENETRATIONS AND ASSOCIATED FIRE STOPPING SHALL BE INSTALLED IN ACCORDANCE WITH THE FIRE STOPPING MANUFACTURER'S LISTED INSTALLATION DETAILS AND BE LISTED BY UL OR FM.
15. HOISTING, SCAFFOLDING AND PLANKING: INCLUDE THE FURNISHING, SET-UP AND MAINTENANCE OF ALL HOISTING MACHINERY, CRANES, SCAFFOLDS, STAGING AND PLANKING AS REQUIRED FOR THE EXECUTION OF WORK FOR THIS SECTION.
16. SAFETY PRECAUTIONS: LIFE SAFETY AND ACCIDENT PREVENTION SHALL BE A PRIMARY CONSIDERATION, COMPLY WITH ALL OF THE SAFETY REQUIREMENTS OF THE OWNER AND OSHA THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. FURNISH, PLACE AND MAINTAIN PROPER GUARDS AND ANY OTHER NECESSARY CONSTRUCTION REQUIRED TO SECURE SAFETY OF LIFE AND PROPERTY.
17. ACCESSIBILITY: ALL WORK PROVIDED UNDER THIS SECTION OF THE SPECIFICATION SHALL BE INSTALLED SO THAT PARTS REQUIRING PERIODIC INSPECTION, MAINTENANCE AND REPAIR ARE READILY ACCESSIBLE. WORK OF THIS TRADE SHALL NOT INFRINGE UPON CLEARANCES REQUIRED BY EQUIPMENT OF OTHER TRADES.
18. PROTECTION OF WORK AND PROPERTY: THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE AND PROTECTION OF ALL WORK INCLUDED UNDER THIS SECTION UNTIL THE COMPLETION AND FINAL ACCEPTANCE OF THIS PROJECT. PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE FROM ALL CAUSES INCLUDING, BUT NOT LIMITED TO FIRE, VANDALISM AND THEFT. ALL MATERIALS AND EQUIPMENT DAMAGED OR STOLEN SHALL BE REPAIRED OR REPLACED WITH EQUAL MATERIAL OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. PROTECT ALL EQUIPMENT, OUTLETS AND OPENINGS, AND ROOF PENETRATIONS WITH TEMPORARY PLUGS, CAPS AND COVERS. PROTECT WORK AND MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY WORK OR WORKMEN UNDER THIS SECTION AND MAKE GOOD DAMAGE THERE CAUSED. DAMAGED MATERIALS ARE TO BE REMOVED FROM THE SITE, NO SITE STORAGE OF DAMAGED MATERIALS WILL BE ALLOWED. ANY DAMAGE TO EXISTING SYSTEMS AND EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.
19. SEISMIC RESTRAINT REQUIREMENTS: PROVIDE SEISMIC RESTRAINTS AS REQUIRED IN ACCORDANCE WITH THE STATE BUILDING CODE. A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER, LICENSED IN THE APPLICABLE STATE FOR THE PROJECT LOCATION SHALL PREPARE THE SEISMIC RESTRAINT DESIGN AND CERTIFY THAT THE DESIGN IS IN COMPLIANCE WITH THE STATE BUILDING CODE REQUIREMENTS.

PART 2 - PRODUCTS

1. IDENTIFICATION: NAMEPLATES SHALL INDICATE EQUIPMENT TAG, VOLTAGE CHARACTERISTICS AND SOURCE OF POWER. REFER TO NAMEPLATE DETAIL FOR ADDITIONAL INFORMATION.

PART 3 EXECUTION

1. GENERAL: ALL INTERRUPTIONS AND SHUTDOWNS OF EXISTING ELECTRICAL SYSTEMS AND SERVICES SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER AND ENGINEER. THE CONTRACTOR SHALL INCLUDE ALL PREMIUM TIME ASSOCIATED WITH THE SYSTEM AND SERVICE INTERRUPTIONS AND SHUTDOWNS.
2. IDENTIFICATION: FURNISH AND INSTALL NAMEPLATES ON ALL ELECTRICAL EQUIPMENT INCLUDING PANELS, JUNCTION BOXES, DISCONNECT SWITCHES, TRANSFORMERS AND STARTERS.
3. RACEWAYS AND CONDUIT: REFER TO DRAWINGS FOR ALLOWABLE WIRING METHODS. ALL RACEWAYS, WHICH PASS THROUGH BUILDING EXPANSION JOINTS, SHALL BE EQUIPPED WITH EXPANSION FITTINGS. ALL CONDUITS SHALL BE SUPPORTED IN AN APPROVED MANNER TO THE BUILDING STRUCTURE. SUPPORT WORK OR WORKMEN UNDER THIS SECTION AND MAKE GOOD DAMAGE THERE SHALL BE RUN PERPENDICULAR AND/OR PARALLEL TO THE BUILDING STRUCTURE. NECA STANDARDS SHALL DEFINE MINIMUM QUALITY LEVEL FOR INSTALLATION WHERE APPLICABLE.
4. WIRE AND CABLE: BRANCH CIRCUIT WIRING IS NOT ILLUSTRATED ON THE DRAWINGS AND IS INDICATED BY CIRCUIT NUMBERS NEXT TO FIXTURES, EQUIPMENT AND DEVICES. PROVIDE COMPLETE WIRING SYSTEM TO MEET ILLUSTRATED INTENT. CONDUIT HOMERUNS SHOWN ON THE DRAWINGS WITH MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE SHOWN DIAGRAMMATICALLY. THE INSTALLATION OF MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A COMMON RACEWAY SHALL REQUIRE THE DERATING OF ALL ASSOCIATED CONDUCTORS. ALL CIRCUITS SHALL CONTAIN A FULL SIZE, INSULATED GROUND CONDUCTOR.
5. WIRING DEVICES AND PLATES: ALL DEVICES OTHER THAN 20A 120V SHALL BE CLEARLY LABELED WITH PERMANENTLY ENGRAVED NAMEPLATES (OR ENGRAVED FACEPLATES) DETAILING THE VOLTAGE CHARACTERISTICS AND CIRCUIT NUMBER.
6. SAFETY DISCONNECT SWITCHES: FUSES SHALL BE CLASS RK-1 SIZED PER

DRAWING AND NAMEPLATE REQUIREMENTS. INSTALL REJECTION CLIPS TO PROHIBIT INSTALLATION OF OTHER THAN CURRENT LIMITING FUSES.

7. DRY TYPE TRANSFORMERS (MINI POWER-ZONE): PROVIDE VIBRATION ISOLATION TO PROHIBIT THE TRANSMISSION OF VIBRATION TO THE STRUCTURE. INSTALLATION SHALL BE PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. ALL ELECTRICAL CONNECTIONS SHALL BE MADE WITH 12" TO 18" LENGTHS OF FLEXIBLE METAL CONDUIT.
8. LIGHTING: ALL LIGHT FIXTURES SHALL BE SUPPORTED IN AN APPROVED MANNER TO THE BUILDING STRUCTURE WITH A MINIMUM OF TWO SAFETY CHAINS, CONNECTED AT OPPOSITE ENDS OF THE FIXTURE. SUPPORT FROM CONDUITS, DUCTWORK, PIPING, ETC. WILL NOT BE PERMITTED.
9. LIGHTING CONTROL EQUIPMENT: PROGRAM AND TEST CONTROLS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. TIMECLOCK SCHEDULING SHALL BE COORDINATED WITH THE OWNER PRIOR TO FINAL DEVICE PROGRAMMING/TESTING.
10. EQUIPMENT TESTING AND CLEANING:
- A. CLEAN THE INTERIOR AND EXTERIOR OF ALL EQUIPMENT AT PROJECT COMPLETION OF ALL CONSTRUCTION DEBRIS AND RESIDUE. DAMAGED SURFACES SHALL BE REPAIRED AND FINISHES TOUCHED UP PAINT TO MATCH THE MANUFACTURER'S FINISH. EXTENSIVELY DAMAGED ENCLOSURES SHALL BE REPLACED.
- B. TEST THE INSULATION RESISTANCE BETWEEN EACH PHASE AND GROUND OF ALL FEEDERS ILLUSTRATED ON THE ONE LINE DIAGRAM. PROVIDE A TEST REPORT INDICATING THE RESULTS. REPLACE ALL CONDUCTORS THAT FAIL TO COMPLY WITH NETA TESTING STANDARDS.
- C. VERIFY VOLTAGE AT THE ASSOCIATED PANELBOARD UNDER LOAD AND ADJUST TAP SETTINGS AS REQUIRED TO DELIVER NOMINAL VOLTAGE DURING NORMAL AND LIGHTLY LOADED CONDITIONS.

PART 4 PROJECT CLOSEOUT

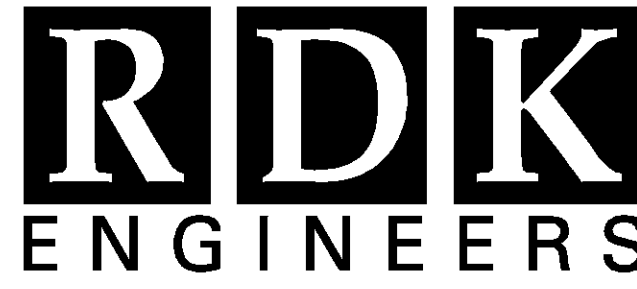
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH PROJECT CLOSEOUT. ALLOW SUFFICIENT TIME IN THE CONSTRUCTION SCHEDULE TO ENSURE THAT THE INSTALLATION IS SUBSTANTIALLY COMPLETE AND ALL REQUIRED TESTING AND ACCURATELY COMPLETED DOCUMENTATION IS DELIVERED TO THE ENGINEER AT LEAST TWO WEEKS PRIOR TO ENGINEER'S SUBSTANTIAL COMPLETION SITE VISIT. FAILURE TO ADEQUATELY PLAN OR SUBMISSION OF INCOMPLETE/INCORRECT DOCUMENTATION WILL RESULT IN BACK CHARGES OF ALL COSTS ASSOCIATED WITH ADDED WORK PERFORMED BY RDK ENGINEERS.
2. PROVIDE THE CONTRACTOR CERTIFICATE OF COMPLETION IN ACCORDANCE WITH 780CMR 107.6.3 INDICATING THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES AND CODES. PROVIDE CERTIFICATION FROM BOTH THE GENERAL CONTRACTOR AND ASSOCIATED TRADE CONTRACTOR FOR COMPLIANCE WITH 780CMR CHAPTERS 1, 9 & 13.
3. SUBSTANTIAL COMPLETION SITE VISIT BY THE ENGINEER SHALL BE CONDUCTED AFTER RECEIPT AND REVIEW OF THE CONTRACTOR'S CERTIFICATE OF COMPLETION AND ALL ADDITIONAL MANDATED TEST REPORTS AND SUBMISSIONS LISTED ABOVE. SUBSTANTIAL COMPLETION SITE VISITS SHALL NOT BE REQUESTED UNTIL THE PROJECT IS SUBSTANTIALLY COMPLETE.

ELECTRICAL LEGEND

- BRANCH CIRCUIT OR FEEDER, ABOVE GRADE
- BRANCH CIRCUIT OR FEEDER, BELOW GRADE
- FLEXIBLE CONNECTION TO EQUIPMENT, RACEWAY AND CONDUCTOR RATING TO MATCH ASSOCIATED BRANCH CIRCUIT OR FEEDER
- SURFACE MOUNTED FLUORESCENT INDUSTRIAL LIGHT FIXTURE SUITABLE FOR EXTREME WEATHER CONDITIONS. PROVIDE LITHONIA CAT# DNMW-32-MVOLT-1-GBB10980.
- "FS1" - INDICATES LIGHTING FIXTURE TYPE
- "1" - INDICATES CIRCUIT NUMBER
- "W" - INDICATES SWITCH CONTROL
- 21'-0" POLE MOUNTED, HIGH-EFFICIENCY LED ROADWAY FIXTURE. PROVIDE LITHONIA POWER CAT# MRVGL-LED-1-48026040K-SRS-MVOLT-2-SPA-D9JXD WITH POLE CAT# 88S-18-4C-DM19AS-DBL 36" CONCRETE POLE BASE TO BE PROVIDED FOR PROTECTION FROM VEHICLE DAMAGE.
- "SL1" - INDICATES LIGHTING FIXTURE TYPE
- "3" - INDICATES CIRCUIT NUMBER
- AUTO-OFF TIME SWITCH WITH MANUAL "HOLD" OVERRIDE. PROVIDE INTERMATIC CAT# FT328H.
- AUTOMATIC 7 DAY TIMECLOCK WITH MANUAL OVERRIDE. PROVIDE TORK CAT# TW22L.
- DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 120V.
- "2" - INDICATES CIRCUIT NUMBER
- "GFI" - INDICATES INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
- "WP" - INDICATES WEATHERPROOF (METAL "IN USE" COVER)
- CONTROL PANEL
- JUNCTION BOX
- PULLBOX
- DISCONNECT SWITCH RATED 30A, 2-POLE, IN NEMA 4X ENCLOSURE, UNLESS OTHERWISE NOTED.
- 480/277V, 1PH, 3W PANELBOARD, SURFACE MOUNTED. REFER TO POWER RISER DIAGRAM AND SERVICE DISTRIBUTION PANELBOARD SCHEDULE.
- MINI POWER-ZONE TRANSFORMER AND PANEL. REFER TO POWER RISER DIAGRAM AND PANELBOARD BRANCH CIRCUIT SCHEDULES.
- PADMOUNTED UTILITY SERVICE TRANSFORMER
- ELECTRIC HANDHOLE. REFER TO DETAIL E505 ON DRAWING E1.10.
- TELEPHONE HANDHOLE
- 3/4" x 10'-0" COPPER CLAD STEEL GROUND ROD

UTILITY SERVICE NOTES

1. REFER TO NATIONAL GRID ELECTRIC UTILITY SPECIFICATIONS FOR ELECTRICAL INSTALLATION REQUIREMENTS FOR AN OUTDOOR SINGLE PHASE PAD MOUNTED TRANSFORMER WITH AN OIL CONTAINMENT TRANSFORMER BASE.
2. PRIOR TO COMMENCEMENT OF WORK, THE ELECTRICAL CONTRACTOR SHALL ORGANIZE A SITE MEETING WITH NATIONAL GRID, THE OWNERS REPRESENTATIVE AND THE GENERAL CONTRACTOR TO CONFIRM THE NEW SERVICE REQUIREMENTS AND PROPOSED WORK SCHEDULE.



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REVISIONS

DATE	CHK	DESCRIPTION
6.30.15	reissued at full size	

PROJECT

NUMBER

DATE

9.18.13

Town of Boxford
Haynes Recreation Area

DRAWING

DRAWN BY

JD

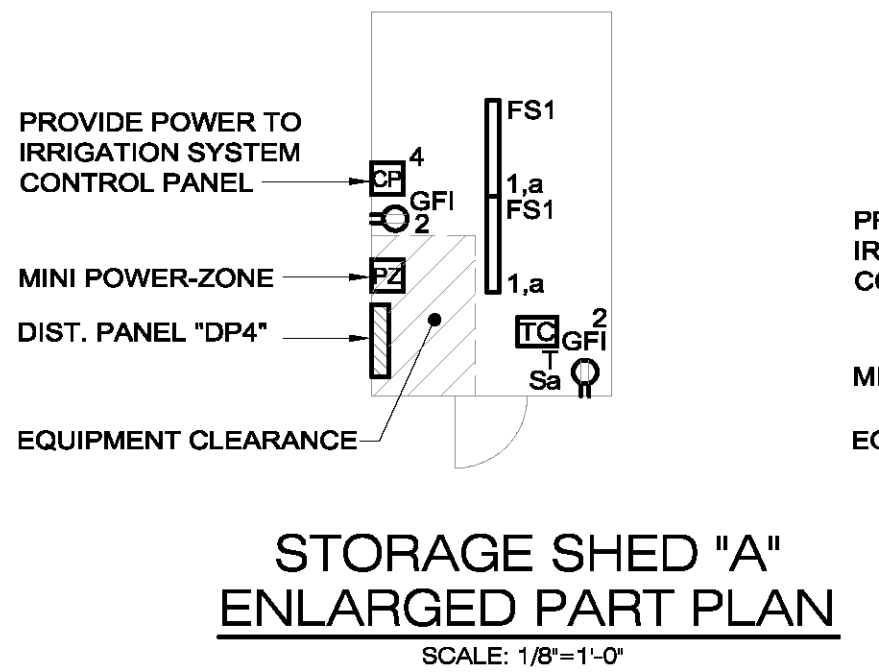
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SCALE

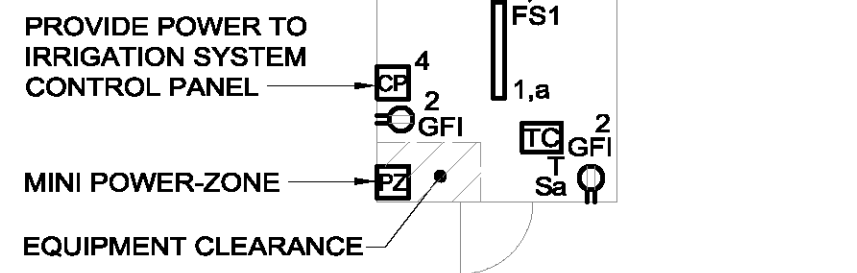
Electrical Details

E 2.0



STORAGE SHED "A"
ENLARGED PART PLAN

SCALE: 1/8"=1'-0"



STORAGE SHED "B" and "C"
ENLARGED PART PLAN

SCALE: 1/8"=1'-0"

PART PLAN NOTES:

1. ALL DEVICES SHALL BE SURFACE MOUNTED WITH SURFACE MOUNTED CONDUIT. EXACT MOUNTING LOCATIONS SHALL BE FIELD COORDINATED PRIOR TO ROUGH-IN.
2. DEVICES SHALL BE FED FROM CIRCUIT BREAKERS WITHIN MINI POWER-ZONE PANELBOARD. PROVIDE #12 & #10 & #12G IN 3/4" CONDUIT FOR EACH BRANCH CIRCUIT, UNLESS NOTED OTHERWISE.

